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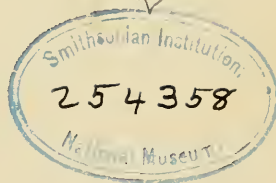
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INDEX TO ARTICLES IN VOLUME XIX

BY AUTHORS

- Ainsworth, Mrs. Henry A., Christmas Census, 29.
 Allen, Arthur A., Photographs by, 10, 199, 202, 253.
 Allen, Mary Pierson, Christmas Census, 21.
 Anderson, A. J., Bird-Boxes and Signboards, 148.
 Anderson, Harold, Notes on the Varied Thrush at Bellingham, Wash., 273.
 Andrews, Theodore, Christmas Census, 27.
 Armstrong, Emily C. H., A Singing Blue Jay, 336.
 Ashby, Clifton and Robert, and Joseph C. Jones, Christmas Census, 27.
 Bagg, Aaron C., Christmas Census, 14.
 Bailey, Prof. H. C., see Handley, Charles O.
 Baker, Myles P., Christmas Census, 13.
 Barnekoff, Irene, Gulls at Bandon, Oregon, 224.
 Barrows, Charlotte M., Evening Grosbeak in Pittsfield, Mass., 42.
 Barrows, Mrs. W. F., Photograph by, 85.
 Beard, Pearl M., Christmas Census, 26.
 Beck, Herbert H., and Abraham Beck Miller, Christmas Census, 22.
 Beebe, Ralph, Christmas Census, 33.
 Bennett, Walter W., see Lindsey, Arthur.
 Bergtold, W. H., Christmas Census, 36; Denver Region, 340.
 Bicknell, E. P., Christmas Census, 18.
 Bicknell, Mrs. F. T., and Mrs. Robert Fargo; Miss Helen S. Pratt and Mrs. W. L. Brownlee; Mr. L. E. Wyman; Dr. E. A. Dial and Mrs. Warren Martz; Mr. Alfred Cookman and Mr. John B. Frederick, Christmas Census, 38.
 Bigelow, R. P., A Boston Wood Duck, 121.
 Black, Edward, see Mead, Raymond.
 Blanchard, George C., Christmas Census, 13.
 Bohlman, H. T., Photographs by, 418, 419.
 Bourne, Thomas L., Christmas Census, 18.
 Bowditch, B. S., Interesting Winter Bird Records in Northern New Jersey, 149; Annual Report, 456.
 Bowditch, L. F., and Edward Fleisher, Christmas Census, 21.
 Brainerd, Barron, see Kittredge, J., Jr.
 Brehmer, Louis F., photographs by, 311, 312, 313.
 Brewer, Charles, Jr., see Eaton, Warren F.
 Brewster, W. L., Jr., see Strong, W. D.
 Brimley, C. S. and Edward Brimley, Christmas Census, 27.
 Brisgualine, George, Letter from, 177.
 Brooks, Major Allan, Birds in the War-Zone, 2.
 Brown, Mrs. A. C., Starlings at Providence, R. I., 148.
 Brown, Howard C., A Bird Record of Note, 227.
 Brownlee, Mrs. W. L., see Bicknell, Mrs. F. T.
 Bruen, Frank, see Smith, E. E.
 Burdick, R. T., A White Swallow, 208.
 Burleigh, Thos. D., and Albert D. McGrew, Christmas Census, 23.
 Burns, F. L., The Schuylkill Heronries, 197.
 Burch, Verdi, Photographs by, facing 127; 318, 341; The Great Blue Herons of Honeoye, 73; The Summer Life of the Virginia Rail, 243.
 Campbell, A. L., Photographs by, 362, 363.
 Cannon, Gabriel, Christmas Census, 28.
 Carr, Mary E., see Taylor, Alex. R.
 Carlson, Marjorie, Poem by, 227.
 Cartwright, W. J., Christmas Census, 15.
 Case, Clifford M., Christmas Census, 16.
 Caskey, R. C., Christmas Census, 21; Evening Grosbeaks at Morristown, N. J., 93.
 Chapman, Frank M., A Condor's Quill, 5; Editorials by, 47, 98, 157, 215, 281, 345; Notes on the Plumage of North American Birds, 39, 86, 262, 330; Reviews by, 45, 95, 96, 155, 156, 213, 278, 279.
 Chelton, R. B., Evening Grosbeak in Ontario, 93.
 Childs, Helen P., Secretary, Report of, 440.
 Christy, Bayard H., and Francis H. Hegner, Christmas Census, 32.
 Clark, L. Elizabeth, A Leaf from Rose-breast's Life, 268.
 Clise, J. W., see Colwell, Mrs. J. I.
 Collings, Robert S., The Summer Tanager, 226.
 Colwell, Mrs. J. I. and Mr. J. W. Clise, Jr., Christmas Census, 37.
 Congdon, Frances, see Potter, Mabel L.
 Cookman, Mr. Alfred, see Bicknell, Mrs. F. T.
 Coon, W. Edwin, A Note on the Barred Owl, 266.
 Cooper, Carrie, A Method of Bird-Study, 56.
 Corriston, J. Wilson, Christmas Census, 23.
 Cowing, Herbert L., Strange Behavior of a Robin, 336.
 Craigmile, Miss Esther and Mrs. C. E. Raymond, Christmas Census, 30.
 Cramer, William G., Secretary, Report of, 459.
 Crawford, Phillip and I. H. Johnston, Christmas Census, 26.
 Crecilius, Alice, Method of Indoor Study, 280.
 Criss, Avis, Photographs by, 138, 212.
 Crosby, Maunsell S., Christmas Census, 20; Photograph by, 309.
 Dadisman, A. J., Lark Sparrows near Grafton, W. Va., 92.
 Dale, E. M., see McIlwraith Ornithological Club.
 Daly, E., see McIlwraith Ornithological Club.
 Danforth, Stuart T., Christmas Census, 12.
 Danner, May S., A Practical Bird-Bath, 207.
 Danner, May S., and Mary King, Christmas Census, 31.
 Darlington, Philip J., A Partridge Family, 224.
 Darnell, Alice C., see Mickle, Anna A.
 Dean, J. and F. D. Terry, Bohemian Waxwings in Seattle, Wash., 92.
 Dean, R. H., Christmas Census, 29.
 Deber, Miss Cora and V. F., Christmas Census, 32.
 Decker, Harold K., Christmas Census, 19.
 Deeter, Anna P., and Mary E., Christmas Census, 23.
 Delamare, Henrietta E., A Song from the Nest, 206.
 DeNormandie, James, Kingfishers in Lincoln, Mass., 170.
 Dial, Dr. E. A., see Bicknell, Mrs. F. T.
 Dixon, Joseph, Children of the Midnight Sun, 185.

- Doane, Walter, Christmas Census, 24.
 Douglass, Miss Mary, A Junior Audubon Society in an Historic Schoolhouse, 290.
 Downhour, Elizabeth H., Secretary, Report of, 446.
 Duke, Allen, What I am doing for Birds, 54.
 Dunbar, Lulu, Christmas Census, 33.
 Duntun, Edith K., Taming Evening Grosbeaks, 310.
 Dwight, Dr. Jonathan, reviews by, 214, 279, 344.
 Eaton, E. H., see Eddy, William.
 Eaton, Warren F., Paul Winsor, Jr., and Charles Brewer, Jr., Christmas Census, 15.
 Eddy, William, and E. H. Eaton, Christmas Census, 18.
 Edson, Wm. L. G., and R. E. Horsey, Christmas Census, 20.
 Egan, Scoutmaster John, Scouts Harold Groth, Ed. Schmidt and Theodore Krueger, Christmas Census, 33.
 Ehinger, George E. and Eddie L., Christmas Census, 30.
 Eliot, Samuel A., Jr., Seventeen Warblers in A Single Willow Tree, 203.
 Ericson, Leonard A., Migration on the Great Lakes, 272.
 Evans, Conroy, From a Starch-Box to a Twenty-six Room Martin House, 53.
 Evans, William B., see Mickle, Anna A.
 Evans, William B., and George H. Hallett, Jr., Christmas Census, 21.
 Fair, Wm. W., Christmas Census, 22.
 Fanton, Gladys, How to Attract Hummingbirds and Goldfinches Around a House, 170.
 Fargo, Mrs. Robert, see Bicknell, Mrs. F. T.
 Figgins, J. D., Winter Visitors to City Park, Denver, Colo., 305.
 Finks, Louis, see Noble, James.
 Finley, William L., Field Agent, Annual Report, 417.
 Fisher, A. K., W. L. McAtee, E. A. Preble, and Alex Wetmore, Christmas Census, 25.
 Fisher, G. Clyde, Christmas Census, 20.
 Fisher, Mrs. G. Clyde and Ruth Anna, see Wiley, Farida.
 Fisher, M. L., Christmas Census, 31.
 Fleischer, Edward, Yellow-throated Warbler in Brooklyn, N. Y., 150.
 Fleischer, Edward, and Henry L. Otten, Christmas Census, 10; see Bowdish, L. F.
 Forbush, Edward Howe, Field Agent, Annual Report, 407.
 Fordyce, George L., Volney Rogers, C. A. Leedy, and Mr. and Mrs. Willis H. Warner, Christmas Census, 33.
 Frederick, John B., see Bicknell, Mrs. F. T.
 Freshwater, Mrs. M. R., see Williams, Ruth Myhan.
 Fuertes, Louis Agassiz, Colored Plates by, facing 1, 73, 243, 305.
 Fulton, J. W., and Leonard Lyons, Christmas Census, 30.
 Gabrielson, Ira N., and E. R. Kalmbach Christmas Census, 24.
 Gallup, Fred, A Substitute for a Hollow Limb, 130; Christmas Census, 37.
 Ganier, A. G., Christmas Census, 20.
 Gardner, Mrs. Arthur F., A Successful Bird-Bath, 141.
 Glover, Helen W., Secretary, Report of, 440.
 Gormley, Liguori, see Macnamara, Charles, 12.
 Gorst, Charles Crawford, Field Agent, Annual Report, 433.
 Goulding, Emilie, see Sadler, Nettie M.
 Granger, Walter, The Giant Bird Diatryma, 193.
 Grant, W. W., Photograph by, 69.
 Graves, Bessie M., Christmas Census, 15.
 Graves, Frances M., Christmas Census, 16.
 Gray, Drs. Earle V., and Anne E. Perkins, Christmas Census, 17.
 Gray, George W., Christmas Census, 19.
 Gray, W. E., and W. E. Gray, Jr., Christmas Census, 30.
 Gregory, Florence L., see Williams, Ruth Myhan.
 Greenleaf, Miles, L. O. Horsky, Wm. Marsh, and Dr. S. R. Towne, Christmas Census, 34.
 Grinnell, Private Lawrence, Bird Life on the Border as Seen by a National Guardsman, 144.
 Griscom, Ludlow, see Johnson, J. M.; see Nichols, J. T.
 Griswold, Geo. T., Christmas Census, 16; see Vibert, C. W.
 Groth, Harold, see Egan, Scoutmaster John.
 Hagar, Joseph A., see Kittredge, J., Jr.
 Hall, Mrs. Cuthbert, Smoke Trees and Purple Finches, 93.
 Hall, James, and Wilbur F. Smith, Christmas Census, 17.
 Hallett, George H., see Evans, William B.; see Mickle, Anna A.
 Handley, Charles O., Harry E. Handley, and Prof. H. C. Bailey, Christmas Census, 26.
 Hannum, W. E., and James M. Sanford, Christmas Census, 28.
 Hansen, Harold E., Walter A. Squires, C. R. Thomas, and Jesse Klapp, Christmas Census, 38.
 Harper, Francis, David Lee, and Farley Lee, Christmas Census, 28.
 Harrington, Mrs. J. L., An Experience with a Robin, 259.
 Harris, Edward, Sr., Prairie Horned Lark in Maryland, 92.
 Harris, Harry, see Hoffman, Ralph.
 Harrison, Richard Edes, and John B. Derby, Evening Grosbeak in Connecticut in May, 204.
 Harter, Mrs. George A., Helpful Young Bluebirds, 94.
 Hathaway, Harry S., Christmas Census, 15.
 Hauxhurst, G. I., see Kelly, Robert.
 Heacock, Esther, Photograph by, 68; see Noble, Jane G.
 Hegner, Francis H., see Christy, Bayard H.
 Hemstreet, Albert B., Near a Woodpecker, 362.
 Hemstreet, Mrs. Delia, Bird-Study Brings Its Own Reward, 55.
 Henderson, H. H., Unusual Visitors at Feeding Table 269.
 Higgins, J. C., see McIlwraith Ornithological Club.
 Higgins, Miss Joy Montgomery, Secretary, Report of, 450.
 Hitchcock, Margaret S., A Stone Bird-Bath, 144; Two Baby Hummers, 79.
 Hix, George E., Clark L. Lewis, and Edward G. Nichols, Christmas Census, 19.
 Hoffman, Ralph, Charles Tindall, Wm. Michaels, and Harry Harris, Christmas Census, 34.
 Holt, Ernest G., see Marbott, Douglas C.
 Horsfall, R. Bruce, Colored Plates by, facing, 60, 112, 364.
 Horsky, L. C., see Greenleaf, Miles.
 Houghton, Clarence, Christmas Census, 17.

- Howe, Inez Addie, and Mabel Agnes Shields, Christmas Census, 13.
- Humphrey, Constance, Pickerel Catching Swallow, 94.
- Jeness, Perley M., Christmas Census, 12.
- Job, Herbert K., Annual Report, 421; Photographs by, 423, 426, 427.
- Johnston, I. H., see Crawford, Phillip.
- Johnson, J. M., J. T. Nichols, and Ludlow Griscom, Christmas Census, 26.
- Johnson, Lena Leoti, Dressed in White, 208.
- Jones, Joseph C., see Ashby, Clifton.
- Jones, Lynds, Oberlin Region, 153, 212, 340.
- Jones, S. Paul, see Morgan, Miss May.
- Judd, Robert S., Kildeer in Connecticut, 265.
- Kalmbach, E. R., see Gabrielson, Ira N.
- Kelley, Robert, and G. I. Hauxhurst, Christmas Census, 32.
- Kent, Edward G., The Cape May Warbler, 264.
- Kimes, Edward D., Christmas Census, 31.
- King, Louise Robinson, The Truth about Cats and Birds, 110.
- King, Mary, see Danner, May 8.
- Kittredge, J., Jr., Joseph A. Hagar, Barron Brainerd and James L. Peters, Christmas Census, 15.
- Klapp, Jesse, see Hansen, Harold E.
- Krueger, Theodore, see Egan, Scoutmaster John.
- Kugler, Marie, The Education of a Robin, 65.
- LaDow, Mr. and Mrs. Stanley V., Christmas Census, 26.
- LaDue, Harry J., Christmas Census, 33.
- Larrabee, Austin, P., Christmas Census, 34.
- Latham, Roy, Bird Notes for 1916 from Orient, L. I., 143.
- Lathrop, Mrs. Robert, Pine Grosbeak in Illinois, 43.
- Laughlin, J. A., Christmas Census, 35.
- Learned, A. G., Photographs of a drawing by, 233, 373.
- Lee, David and Farley, see Harper, Francis, 28.
- Lee, John C., An Effective Feeding Device, 8; The Wellesley Bird-Box, 90.
- Leedy, C. A., see Fordyce, George L.
- Lewis, Clark L., see Hix, George E.
- Lewis, Clark L., Jr., American Egrets in New York City, 251.
- Lindsay, Mrs. Eugene D., The Western Meadowlark and Other Birds near Edmonds, Wash., 274.
- Lindsey, Arthur, and Walter W. Bennett, Christmas Census, 33.
- Linton, M. Albert, see Mickle, Anna A.
- Lippincott, Joseph W., The Barn Owl's Voice, 275.
- Logue, Mrs. Ida L., Christmas Census, 36.
- Loveland, Lillian S., An Albino Grackle, 208.
- Lundwall, Nelson, Christmas Census, 36.
- Luther, Caroline D., The Value of Charts and Pictures of Birds, 104.
- Lyons, Leonard, see Fulton, J. W.
- Macclin, Theodore, Our Neighbors of the Grape Vine, 127.
- Macnamara, Charles, and Liguori Gormley, Christmas Census, 12.
- Madison, H. L., Cardinal in Rhode Island, 94.
- Madison, H. L., Secretary, Report of, 461.
- Mallory, W. B., Christmas Census, 34; The Tenant of a Back-Yard Brush-Heap, 145.
- Marble, Richard M., Christmas Census, 13.
- Marbott, Douglas C., and Ernest G. Holt, Christmas Census, 24.
- Marsh, Earl, and D. W. Marsh, Christmas Census, 15.
- Marsh, Wm., see Greenleaf, Miles.
- Martin, G. A., Secretary, Report of, 458.
- Martz, Mrs. Warren, see Bicknell, Mrs. F. T.
- May, John B., M.D., Cedar Waxwings at the Pool, 142; Christmas Census, 14.
- McAtee, W. L., see Fisher, A. K.
- McCamant, Tom, see Strong, W. D.
- McConnell, Harry B., John Worley, and Raymond Timmons, Christmas Census, 31.
- McConnell, Thos. L., and L. F. Savage, Christmas Census, 23.
- McDowell, R. W., The History of a Martin-House, 146.
- McGrew, Albert D., see Burleigh, Thos. D.
- McIlwraith Ornithological Club, Christmas Census, 12.
- McIver, John, see Noble, James.
- Mead, Raymond, Bert Moore, and Edward Black, Christmas Census, 30.
- Mellott, S. W., Christmas Census, 24.
- Mengel, Mr. and Mrs. Henry, Christmas Census, 23.
- Metzger, Edward, Christmas Census, 32.
- Michaels, Wm., see Hoffman, Ralph.
- Mickle, Anna A., Alice C. Darnell, M. Albert Linton, George H. Hallett, Jr., and William B. Evans, Christmas Census, 21.
- Miller, Abraham Beck, see Beck, Herbert H.
- Miller, Ansel B., Christmas Census, 23.
- Miller, W. DeW., Christmas Census, 22.
- Miner, Mr. and Mrs. Leo D., and Raymond W. Moore, Christmas Census, 25; see Moore, Mrs. Edgar W.
- Moore, Adelaide L., Poem by, 111.
- Moore, Arthur, see Williams, Ruth Myhan.
- Moore, Bert, see Mead, Raymond.
- Moore, Mrs. Edgar W., Clarence R. Shoemaker, Mr. and Mrs. Leo D. Miner, and Raymond W. Moore, Christmas Census, 25.
- Moore, Raymond W., see Miner, Mr. and Mrs. Leo D.; see Moore, Mrs. Edgar W.
- Morgan, May, and S. Paul Jones, Christmas Census, 33.
- Morgan, William I., A Remarkable Nesting-Site, 139.
- Moses, Bert M., Winter Boarders, 333.
- Munger, Edwin H., Christmas Census, 16.
- Nature Club, Christmas Census, 13.
- Neff, Johnson, Christmas Census, 35.
- Nelson, Mr. and Mrs., and D. W. Pumyea, Christmas Census, 22.
- Nichols, Edward G., and Mr. and Mrs. L. N., Christmas Census, 18; see Hix, George E.
- Nichols, J. T., and Ludlow Griscom, Christmas Census, 18; see Johnson, J. M.
- Nicol, Jessie, see Williams, Ruth Myhan.
- Nisbet, M. C., A Wren Nest Tragedy, 264.
- Noble, James, John McIver, and Louis Finks, More Methods of Studying Birds in Junior Audubon Societies, 291.
- Noble, Jane G., and Esther Heacock, Christmas Census, 24.
- Norton, Arthur H., Remarks on the Nesting Habits of Swallows, 257; Annual Report, 414.
- Norton, William, An Iowa Cardinal, 271.
- Novak, Frank, Christmas Census, 16.
- Oberholser, Harry C., Washington Region, 153, 211, 277, 340; A Remarkable Roost in the City of Washington, 315; The Migration of North American Birds, 320.

- Oldys, Henry, Report of, 421.
 Otten, Henry L., see Fleischer, Edward.
 Over, W. H., and W. M. Willy, Christmas Census, 34.
 Overton, Dr. Frank, Photograph by, 406.
- Packard, Reginald, see Sedwick, James.
 Packard, Winthrop, Field Agent, Annual Report, 410; Secretary, Report of, 446.
 Padon, Ella Florence, A Bird Masque in Two Acts, 351.
 Palmer, Dr. T. S., Reviews by, 46, 156, 214, 280.
 Pangburn, Dwight B. and Clifford H., Christmas Census, 17.
 Parker, Emelin Know, Starlings at Carlisle, Pa., 148.
 Parker, J. Hollowell, The Starling in Baltimore, 91.
 Pattee, Bertha Traer, Secretary, Report of, 444.
 Patteson, S. Louise, Mockingbird in Cleveland, 141.
 Pearce, Richard M., and William Pepper, Christmas Census, 23.
 Pearson, T. Gilbert, Reviews by, 45; The English Sparrow, 60; Editorials by, 64, 116, 176, 232, 294, 368; Annual Report, 379; The Sage Grouse, 112; The Phoebe, 228; Pileated Woodpecker, 364; Photographs by, 398, 401, 422.
 Pepper, William, see Pearce, Richard M.
 Perkins, Dr. Anne E., see Gray, Dr. Earle V.
 Peters, James L., see Kittredge, J., Jr., 15.
 Pettee, L. B., A Bird on the Head, 266.
 Phillips, Charles L., Christmas Census, 14.
 Pierce, Nettie Sellinger, Christmas Census, 20.
 Pike, Mrs. Granville R., Field Agent, Annual Report, 428; Photograph by, 430.
 Pinkham, Roger D., An Albino Crow, 109.
 Pittman, H. and E., Photographs by, 263, 319, 332.
 Pittman, H. H., The American Crossbill, 332.
 Plimpton, G. E., T. F. Plimpton, Thomas Wood, and Edward H. Perkins, Christmas Census, 13.
 Potter, Julian K., Christmas Census, 20; Philadelphia Region, 152, 210, 276, 338.
 Potter, L. H., Christmas Census, 13.
 Potter, Mabel L., and Frances Congdon, Christmas Census, 14.
 Powers, Arthur G., Florida Gallinule in Connecticut in April, 206.
 Pratt, Helen S., see Bicknell, Mrs. F. T.
 Preble, E. A., see Fisher, A. K.
 Pumyea, D. W., see Nelson, Mr. and Mrs.
- Raker, Mary E., Helen D. Tonseth, and Margarethe E. Wolle, Christmas Census, 37.
 Raymond, Mrs. C. E., see Craigmile, Esther.
 Reading, Gertrude, Secretary, Report of, 448.
 Reuter, Raymond, Horned Larks at Rochester, 205.
 Rice, Ward J., Christmas Census, 31.
 Richards, G. T., The Black-capped Chickadee, 288.
 Ringwalt, A. R., see Stockbridge, Chas. A.
 Roads, Letha E., Christmas Census, 31.
 Robbins, C. A. and Frank, Christmas Census, 15.
 Robbins, R. E., Is the Cape May Warbler Increasing in Numbers?, 93.
 Roehner, Theodore, Christmas Census, 18.
 Rogers, Charles H., Christmas Census, 19; BIRD-LORE's Seventeenth Christmas Census, 11; Eighteenth, 317; New York City Region, 152, 209, 276, 338.
 Rogers, Volney, see Fordyce, George L.
- Ross, Dr. and Mrs. Lucretius H., Christmas Census, 13; Warbler Notes from Bennington, Vt., 203; Vermont Notes, 205.
 Ruegg-Button, Mrs. Lily, Christmas Census, 34.
 Russell, John W., Christmas Census, 15.
- Sadler, Nettie M., and Emilie Goulding, Christmas Census, 20.
 Sage, Mary S., Field Agent, Annual Report, 427.
 Sanford, James M., see Hannum, W. E.
 Saunders, Aretas A., Christmas Census, 16.
 Saunders, W. E., see McIlwraith Ornithological Club.
 Savage, L. F., see McConnell, Thos. L.
 Sawyer, E. J., Colored plates by, facing 172, 228.
 Schaefer, Oscar F., Christmas Census, 36.
 Schafer, J. J., Christmas Census, 30.
 Schmidt, Ed., see Egan, Scoutmaster John.
 Schoonhoven, George, see Walsh, Lester
 Schwerdtfeger, F., A Wren's Nest inside a Hornets' Nest, 143.
 Scott, Hazel and Foster H., Christmas Census, 31.
 Scott, Ruth H., The Story of 'Beauty,' Our Tame Oriole, 221.
 Sedwick, James, and Reginald Packard, Christmas Census, 30.
 Sellers, Helen M., A Bird Exhibit, 335.
 Shaw, Bertha, see Williams, Ruth Myhan.
 Shaw, H. S., Jr., An Unexpected Visitor, 88.
 Shaw, J. E. Norton, and William B. Sherman, Christmas Census, 14.
 Sherman, Minette, Chronicles of a Hummingbird Family, 200.
 Sherman, William B., see Shaw, J. E. Norton.
 Shields, Mabel Agnes, see Howe, Inez Addie, 13.
 Shirling, A. E., Christmas Census, 35; Kansas City Region, 154; Summer Birds of Swope Park, 273.
 Shoemaker, Clarence R., see Moore, Mrs. Edgar W.
 Shove, Ellen M., Evening Grosbeaks in Fall River, Mass., 42.
 Simonds, Susie L., Christmas Census, 33.
 Simpson, Eugene, Assistant Secretary, Report of, 447.
 Slate, John B., Christmas Census, 34.
 Smith, E. E., Christmas Census, 31.
 Smith, E. E., and Frank Bruen, Christmas Census, 16.
 Smith, Mrs. Edith H., A Practical Solution of the Sparrow Problem, 43.
 Smith, Miriam, An Unusual Experience, 170.
 Smith, Wilbur F., see Hall, James, 17; More Alien Depredation, 69; Notes from Southern Connecticut, 89; An Experience with an American Bittern, 264; Photographs by, 438, 439.
 Speck, Frank G., Bird Gardening on Cape Ann, 132.
 Squires, Walter A., see Hansen, Harold E.
 St. John, Edward P., Christmas Census, 17.
 Stalker, Alex., Christmas Census, 36; Snowy Owls in Idaho, 206.
 Stewart, Ruth and Louis, and Fay and Fern Wells, Christmas Census, 37.
 Stockbridge, Chas. A., and A. R. Ringwalt, Christmas Census, 30.
 Stone, C. F., Photograph by, 44.
 Stone, Dr. Witmer, Field Agent, Annual Report, 432.
 Stoner, Dayton, Cardinal Capturing a Cicada, 337.
 Strong, W. D., Tom McCamant, and W. L. Brewster, Jr., Christmas Census, 37.

- Sullivan, Richard H., The Purple Martin at Wichita, Kan., 83.
 Swope, Eugene, Field Agent, Annual Report, 411; Photograph of, 413.
- Taylor, Alex. R., and May E. Carr, Christmas Census, 27.
 Taylor, W. S., and W. H. Warren, Christmas Census, 35.
 Terry, F. D., see Dean, J.
 Thomas, C. R., see Hansen, Harold E.
 Thompson, Alonzo, A Community of Albino Robins, 71.
 Thomson, Ethan W., Evening Grosbeaks at Cadillac, Mich., 337.
 Thornber, Harriet B., Secretary, Report of, 436.
 Tichenor, Martha K., Christmas Census, 28.
 Timmons, Raymond, see McConnell, Harry B.
 Tindall, Charles, see Hoffman, Ralph.
 Tonseth, Helen D., see Raker, Mary E.
 Towne, Dr. S. R., see Greenleaf, Miles.
 Townsend, Manley B., see Nature Club, 13.
 Townsend, Manley B., An Evening Grosbeak Summers in New Hampshire, 204; Nesting Habits of the Cliff Swallow, 252; Annual Report, 455.
 Tullsen, Mr. and Mrs. H., Christmas Census, 36.
 Turner, Blanche A., A Wren's Nesting-place, 94.
 Tyler, Winsor M., M.D., Boston Region, 151, 275, 338.
- Upton, Lucy, The Skylark at Home, 108; Chimney Swifts Gathered for the Fall Migration, 293.
- Vibert, C. W., Christmas Census, 17.
 Vibert, C. W., and G. T. Griswold, Notes from Southern Connecticut, 80.
 Vinal, William Gould, The Black-crowned Night Heron, 163.
- Wagner, Ralph E., A School-Sustained Bird Reservation, 135.
 Waite, Emily S. M., Photograph by, 171.
 Wallace, Harriet E., Evening Grosbeak in Pennsylvania, 43.
 Walsh, Lester, and George Schoonhoven, Christmas Census, 20.
- Walter, Alice Hall, Editorials by, 49, 99, 158, 216, 282, 346.
 Wanless, Harold R., Christmas Census, 22.
 Warner, Mr. and Mrs. Willis H., see Fordyce, George L.
 Warren, Edward R., President, Report of, 437.
 Warren, W. H., see Taylor, W. S.
 Watson, C. G., see McIlwraith Ornithological Club.
 Way, W. Scott, Secretary, Report of, 443.
 Weaver, Sarah Waldran, The White-breasted Nuthatch and the Food-Counter, 55; My Real Estate Business, 109; My First Trip to a Real Bird-haven, 168.
 Weisgerber, H. W., Christmas Census, 32.
 Wells, Fay and Fern, see Stewart, Ruth and Louis.
 Welty, Dr. Emma J., Secretary, Report of, 460.
 Wetmore, Alex., see Fisher, A. K.
 Wetter, Albert, Christmas Census, 33.
 White, Bertha E., Secretary, Report of, 461.
 Whitney, T. H., Red-bellied Woodpecker in Iowa, 206.
 Wilcox, Alice W., Bird-Protection in the War Countries, 150.
 Wiley, Farida, Mrs. G. Clyde Fisher, and Ruth Anna Fisher, Christmas Census, 19.
 Williams, Belle, Christmas Census, 27.
 Williams, Mrs. A. N., Ruth Myhan, Jessie Nicol, Mrs. M. R. Freshwater, Bertha Shaw, Arthur Moore, and Florence L. Gregory, Christmas Census, 33.
 Williams, R. S., The Evening Grosbeak in New York City, 42.
 Willy, W. M., see Over, W. H.
 Wilson Etta S., Christmas Census, 30.
 Winsor, Paul, Jr., see Eaton, Warren F., 15.
 Wölle, Margarethe E., see Raker, Mary E.
 Wood, Sheridan F., Christmas Census, 32.
 Wood, Theresa, The Goldfinch, 267.
 Worley, John, see McConnell, Harry B., Christmas Census, 31.
 Wright, Horace M., Christmas Census, 13.
 Wyman, L. E., see Bicknell, Mrs. F. T.
- Young, J. P., Christmas Census, 25.
 Young, John P. and Chas. V. P., Christmas Census, 24.

INDEX TO CONTENTS

- Advisory Committees, National, 295.
 Advisory Council, BIRD-LORE'S, 40.
 Albinism, 71, 109.
 American Ornithologists' Union, The, Thirty-fifth Annual Meeting of, 342.
 Amston Experiment Station, The, 118, 423.
 Arizona, 36, 436.
 Audubon Pocket Bird Collection noticed, 45.
 Audubon Societies, Annual Report of the National Association of, 377; Reports of State, 436.
 Auk, The, reviewed, 97, 213, 279, 343.
 Baldpate, 154.
 Ball's 'A Year with the Birds,' reviewed, 45.
 Bergtold's 'A Study of the Incubation Periods of Birds: What Determines Their Lengths,' reviewed, 278.
 Bird Calendar, figured, 473.
 Bird Census, BIRD-LORE'S Seventeenth, 11; Eighteenth, 317.
 Bird Clubs, 68, 176, 241, 379, 382.
 Bird Enemies, 174.
 Bird Houses, figured, 53, 69, 90, 91, 138, 147, 236, 458; 109, 146, 148.
 Bird Life, Effect of War on, 232.
 Bird Migration, 151, 209, 272, 275, 293, 294, 338.
 Bird Protection, 72, 116, 123, 135, 150, 182, 234, 237, 242, 295.
 Bird Refuges, 117, 135.
 Bird Study, 55, 56, 58, 163, 282.
 Bird's Bath, figured, 68, 142, 145, 207, 439; 141, 144.
 Birds' Feathers, 216, 372; Exportation of, 295; Importation of, 178.
 Birds' Songs, 160, 161, 162, 169, 172, 204, 206, 271, 274, 280.
 Bittern, American, 264; figured, 265; Least, figured facing, 127.
 Blackbird, Brewer's 341; Red-winged, 134, 144, 152, 153, 154; Rusty, 152, 153, 154, 209, 210; Thick-billed Red-winged, 154.
 Bluebird, 94, 134, 141, 144, 152, 153, 341; figured, 138.
 Bobolink, 134, 338.
 Bob-white, 124, 276.
 Bowditch, Beecher S., Photograph of, 457.
 Brooks, Major Allan, Photograph of, 3.
 Brown, Julian, Photograph of, 401.
 Bufflehead, 211.
 Bunting, Indigo, 210, 211; Painted, 205; Snow, 144.
 California, 37, 38, 436.
 Canvasback, 154.
 Cardinal, 94, 149, 152, 271, 337.
 Catbird, 133, 144.
 Cats, 110, 132, 178.
 Chat, Yellow-breasted, 211.
 Chickadee, Acadian, 43, 90; figured, 44, 309; Black-cap, 152, 288, 338; Brown-cap, 11, 151, 152; Hudsonian, 11; Hudsonian Brown-cap, 11; Labrador Brown-cap, 11.
 Colorado, 36, 305, 340, 437.
 Condor, 5; Trap for, figured, 6; Wing of, figured, 7.
 Condor, The, reviewed, 46, 156, 214, 280, 344.
 Connecticut, 16, 17, 89, 204, 206, 265, 437.
 Conservation Commission, New York State, 304.
 Coot, 154.
 Cormorant, Double-crested, 211.
 Council, Advisory, see Advisory Council.
 Cowbird, 144, 153.
 Crandall's 'Pets: Their History and Care,' reviewed, 213.
 Creeper, Brown, 152.
 Crossbill, Red, 11, 152, 153, 332, 338; figured, 332; White-winged, 11, 152, 153, 204, 338.
 Crow, 153, 154; Albino, 109.
 Cuckoo, Black-billed, 211; Yellow-billed, 211.
 Davis's Bird Poems, reviewed, 155.
 Diatryma, The Giant Bird, 193; figured, 194, 195.
 District of Columbia, 440.
 Dove, Mourning, 153, 154, 341.
 Duck, Baldpate, 154; Black, 154, 210; Blue-winged Teal, 154; Bufflehead, 211; Gadwall, 154; Golden-eye, 211; Greater Scaup, 154; Lesser Scaup, 154; Mallard, 276; Pintail, 154, 276; Ring-necked, 211; Wood, 141, 143.
 DuPont, General Coleman, Photograph of, 378.
 Eagle, Golden, 341.
 Egret, American, figured, 250; 251, 277.
 Egrets, Protection in Venezuela of, 295.
 Eider, King, 89.
 Feeding Birds, 8, 43, 54, 55, 124, 158, 269, 303, 374; figured, 260; An effective device for, 8.
 Field Agents, Reports of, 407.
 Finch, Purple, 93, 339.
 Finley, Phoebe Katherine, Photograph of, 418.
 Finley, William L., 302; Photograph of, 416.
 Finley's 'Birds of the Campus,' reviewed, 279.
 Flicker, Northern, 154.
 Florida, 28, 29, 123, 442.
 Flycatcher, Acadian, 339; Ash-throated, figured, 140; Crested, 210; Least, 277, 338; Yellow-bellied, 211.
 Forest Fires, Loss of Bird-Life in, 71.
 Forbush, Edward Howe, Photograph of, 408.
 Forbush's 'Food Plants to Attract Birds and Protect Fruit,' noticed, 97; 'Ninth Annual Report of the State Ornithologist of Massachusetts,' reviewed, 155; 'The Natural Enemies of Birds,' reviewed, 96.
 Gadwall, 154.
 Gallinule, Florida, 206.
 Georgia, 28, 29, 372.
 Gnatcatcher, Blue-gray, 153, 210.
 Golden-eye, 211.
 Goldfinch, 179, 267, 340.
 Goose, Canada, 143, 153, 154; figured, 406; White-fronted, 154.
 Gorst, Charles Crawford, Photograph of, 434.
 Goshawk, 11, 152, 154.
 Grackle, Albino Bronzed, 208; Bronzed, 153, 154, 341; figured, 263. Purple, 143, 153, 277, 340; Rusty, 144.
 Grebe, Holboell's, 89, 152; Horned, 152; Pied-billed, 154.

- Grosbeak, Black-headed, 341; Evening, 11, 42, 43, 47, 90, 148, 149, 151, 152, 153, 204, 209, 210, 310; figured, 85, 310, 311, 312, 313, 337; Pine, 11, 43, 151, 152; Rose-breasted, 210, 211, 268, 277.
- Grouse, Sage, figured, facing 112.
- Gull, Bonaparte's, 89; Great Black-backed, 143; Herring, 210, 339; Laughing, 89, 211, 338; Ring-billed, 89, 211.
- Hardenberg's 'Bird Playmates,' reviewed, 155.
- Hawk, Pigeon, 143; Red-tailed, figured, 319.
- Hen, Heath, 407.
- Heron, Black-crowned Night, 135, 163, 197; Nest and young figured, 164; Great Blue, 73, 152, 153, 209, 277; figured, 74, 75, 76; Nest figured, 77; Little Blue, 211, 276, 277, 339.
- Higgins, Joy Montgomery, Photograph of, 342.
- Horton, Charles B., Photograph of, 376.
- Hummingbird, Costa's, 200; Ruby-throated, 202, 211, 266, 276.
- Idaho, 206.
- Illinois, 30, 43, 44, 242.
- Indiana, 30, 31, 446, 501.
- Ingersoll's 'An Index to Bird-Lore,' reviewed, 96.
- Iowa, 33, 34, 206, 271.
- Jay, Blue, 154, 209, 336; figured, 249.
- Job, Herbert K., Photograph of, 422.
- Junco, Slate-colored, 209, 338.
- Kansas, 83.
- Kentucky, 30, 447.
- Killdeer, 89, 153, 154, 265.
- Kingbird, 210; Arkansas, 341; Cassin's, 341.
- Kingfisher, 153, 170; Belted, 12, 154.
- Kinglet, Golden-crowned, 210; Ruby-crowned, 153, 209, 210, 339.
- Kuser's 'The Way to Study Birds,' reviewed, 278.
- Lark, Horned, 152, 205; Prairie Horned, 92; figured, 318.
- Legislation, 72, 116, 178, 294, 372, 395, 407.
- Louisiana, 117; Water-fowl in, 117.
- Maine, 414.
- Mallard, 276.
- Martin, 53; Eastern Purple, 262; Gray-breasted, figured, facing 243; Purple, 83, 133, 153, 212, 262, 277, 315, 339; figured, facing 243; Western Purple, 262.
- Maryland, 92.
- Massachusetts, 13, 14, 15, 42, 93, 203, 275, 338, 410, 447.
- McMahon, Walt F., 123.
- Meadowlark, 154; figured, 10; Western, 274.
- Merganser, Hooded, 143, 154; Red-breasted, 154.
- Michigan, 33, 337, 448.
- Migration, see Bird Migration.
- Migratory Bird Law, see Legislation.
- Minnesota, 33.
- Missouri, 34, 273.
- Mockingbird, 90, 110, 141, 149, 154, 270; figured, 144, 269.
- Montana, 36.
- Munger, Mrs. Edith C., Photograph of, 449.
- Nature Study Review, noticed, 156.
- Nebraska, 34, 302, 450.
- Nesting Habits of Swallows, 252, 257.
- New Hampshire, 12, 81, 204, 455.
- New Jersey, 20, 21, 22, 93, 149, 456.
- New York, 17, 18, 19, 20, 276, 338.
- Nighthawk, 211, 341.
- North Carolina, 26, 27, 458.
- Nuthatch, Red-breasted, 12, 338.
- Ohio, 31, 32, 33, 124, 141, 242, 340, 411, 459.
- Ontario, 12, 93.
- Oregon, 37, 460.
- Oriole, Baltimore, 133, 134, 149, 276; Bullock's, 340; Orchard, 339.
- Ovenbird, 209, 212, 338, 339.
- Owl, Barn, 275; Voice of the, 275; Barred, 266; Long-eared, 88; Screech, figured, 88; Short-eared, 154; Snowy, 206; figured, facing 185.
- Pearson's 'The Bird Study Book,' reviewed, 155.
- Pellet's 'Our Back-Door Neighbors,' reviewed, 343.
- Pellets, Owl, 266.
- Pennsylvania, 22, 23, 24, 32, 43, 148, 205, 276, 338.
- Petrel, Wilson's, 89.
- Pewee, Wood, 210, 341; Nest and young, figured, 199.
- Phoebe, 152, 153, 154, 228; figured, facing 229.
- Pintail, 154.
- Pipit, 144.
- Plover, Black-bellied, 338; Piping, 339; Semipalmated, 340.
- Pullen's 'Some Bird Friends,' noticed, 97.
- Quail, California, figured, 427; Scaled, figured, 426.
- Rail, Virginia, 243; figured, 244, 246, 247, 248; Nest and eggs, figured, 245.
- Redpoll, 11, 151, 152.
- Redstart, 81, 154, 339.
- Refuges, Bird, see Bird Refuges.
- Reservation, Bird, 117, 135.
- Rhode Island, 15, 94, 148, 241, 461.
- Robbins, Miss Leona, Death of, 123.
- Robin, 65, 92, 127, 152, 153, 154, 209, 259, 276, 336, 341; figured, 127, 128, 129, 131, 259, 437; Albino, 71, 208; Killing of, 238.
- Sage, Mary S., Photograph of, 429.
- Sandpiper, Red-backed, 211; Semipalmated, 185, 340; figured, 188, 189, 190, 191; Nest and eggs, figured, 185, 187; Stilt, 338; Western, 338; White-rumped, 210.
- Sapsucker, Yellow-bellied, 209, 210.
- Scaup, Greater, 154; Lesser, 154.
- Schantz, O. M., Photograph of, 445.
- Scoter, White-winged, 143.
- Scudder's 'Conservation of our Wild Birds,' reviewed, 95.
- Season, The, 151, 209, 275, 338.
- Shoveler, 154.
- Shrike, Loggerhead, 339; Northern, 11, 152, 154.
- Siskin, Pine, 11, 151, 152, 153, 209, 338, 340.
- Skylark, 108.
- Snipe, Wilson's, 154.
- Song Birds for Food, Killing of, 303.
- Sora, 211.
- South Carolina, 27, 28, 432.
- Sparrow, Chipping, 133, 134, 154, 209, 276, 338, 341; English, see Sparrow, House; Field, 154, 209, 276; Fox, 152, 153, 154, 209; Gambel's, 154; Harris's, 154; Henslow's, 153, 276; House, 43, 60, 146, 147, 153, 276; figured, facing 60; Lark, 92; Leconte's, 154; Savannah, 209; Song, 133, 152, 154, 276; Swamp, 154, 211; Tree, 154; figured, 318, 341; Vesper, 154; White-crowned, 154, 210, 211; White-throated, 154, 172; 205, 209, 338, figured, facing 172.

- Starling, European, 91, 148, 277.
 Swallow, 94; Albino Barn, 208; Bank, 211, 326, 331; figured, facing 305; Barn, 209, 210; figured, facing 243; 253, 258, 262; Cliff, 252, 258, 320, 330; figured, facing 305; Nests figured, 254; Eastern Cliff, 320; Lesser Cliff, 320; Mexican Cliff, 320; Rough-winged, 328, 331, 339; figured, facing 305; Tree, 132, 209, 212, 258, 322, 331; figured, facing 305; Violet-Green, 325, 330; figured, facing 305.
 Swan, Whistling, 153.
 Swift, Black, 341; Chimney, 133, 209, 293, 338, 340.
 Tanager, Scarlet, 210, 276.
 Teal, Blue-winged, 154.
 Tennessee, 29, 372, 441.
 Tern, Black, 210, 211; Caspian, 211, 340; Common, 211; Least, 409.
 Texas, 35, 36.
 Thorburn's 'British Birds,' reviewed, 95.
 Thrasher, Bendire's, 39; Brown, 133, 144, 145; figured, 146; California, figured, facing 1; 39; figured, 170; Crissal, figured, facing 1; 39; Desert, 39; Leconte's, figured, facing 1; 39.
 Thrush, Gray-cheeked, 277; Hermit, 144, 154, 338, 339; Varied, 273; Wood, 210, 276.
 Towhee, 154, 276; figured, 212, 270.
 Townsend, Manley B., Photograph of, 455.
 Trafton's 'Bird Friends,' reviewed, 45.
 Vermont, 13, 203, 295.
 Vireo, Blue-headed, 210; Plumbeous, 341; Red-eyed, 210, 276; Warbling, 206, 211, 341; Yellow-throated, 210, 212, 276.
 Virginia, 25, 26, 291.
 Vulture, Black, 143; Turkey, 143, 153, 154, 341.
 Wallace Evans Game Farm, The, 370.
 Warbler, Bay-breasted, 204, 209, 210, 277, 338; Black and White, 338; Blackburnian, 210, 277; Black-poll, 209, 210, 277, 338; Black-throated Green, 277, 339; Blue-winged, 211; Canadian, 205, 210, 277, 339; Cape May, 93, 203, 209, 210, 264, 338; Chestnut-sided, 134, 277, 339; Golden-winged, 210; Lawrence's, 90; Magnolia, 210, 277; Mourning, 211, 277; Myrtle, 209, 338; Nashville, 276; Parula, 209; Pine, 209, 276; Prothonotary, 211; Tennessee, 204, 205, 209, 210, 276, 277, 338; Wilson's, 204; Yellow, 133, 134, 276, 341; Yellow Palm, 209; Yellow-throated, 150.
 Washington, 37, 92, 273, 274, 428.
 Water-Fowl, Breeding of Wild, 118.
 Water-Thrush, Louisiana 153; Northern, 211, 277.
 Waxwing, Bohemian, 92, 153, 154; figured, 305, 306, 307, 308; Cedar, 92, 133, 134, 142, 209, 277; figured, 142.
 Way, W. Scott, Photograph of, 443.
 Wayne's 'A List of Avian Species for Which the Type Locality Is South Carolina,' reviewed, 343.
 Wellesley Bird-Box, The, 90.
 West Virginia, 26, 92, 461.
 Whip-poor-will, 211.
 Winnetaska Bird Charts, The, noticed, 280.
 Winter Feeding Poster, A, noticed, 46.
 Wisconsin, 33.
 Wren, Alaska, figured, facing 73; 87; Aleutian, 87; Bewick's, figured, facing 73; 86; Carolina, 152; House, figured, facing 73; 86, 94, 143, nest figured, 143; 264, 276; Long-billed Marsh, figured, facing 73; 87, 276; Marsh, 339; Short-billed Marsh, figured, facing 73; 87; Western House, 340; Winter, 87, 154; figured, facing 73.
 Woodcock, 153, 276.
 Woodpecker, Downy, figured, 341; Northern Pileated, 211; Pileated, 364; figured, facing 364; Red-bellied, 206; Red-headed, 143.
 Yellow-legs, Greater, 211.
 Yellow-throat, Maryland, 133, 134; Northern, 339.

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CONTENTS

GENERAL ARTICLES

FRONTISPIECE IN COLOR—CRISSAL, CALIFORNIA AND LECONTE'S THRASHERS.....	PAGE
<i>Louis Agassiz Fuertes..</i>	
BIRDS IN THE WAR-ZONE.....	Major Allan Brooks.. 1
A CONDOR'S QUILL. Illustrated.....	Frank M. Chapman.. 5
AN EFFECTIVE FEEDING DEVICE.....	John C. Lee.. 8
MEADOWLARK. Photograph.....	Arthur A. Allen.. 10
BIRD-LORE'S SEVENTEENTH CHRISTMAS CENSUS.....	11
NOTES ON THE PLUMAGE OF NORTH AMERICAN BIRDS. Forty-second Paper.....	Frank M. Chapman.. 39

NOTES FROM FIELD AND STUDY

(Postponed to next issue, to make room for Christmas Census.)

WINTER NOTES

EVENING GROSBEAK IN PITTSFIELD, MASS., <i>Charlotte M. Barrows</i> ; EVENING GROSBEAKS IN FALL RIVER, MASS., <i>Ellen M. Shove</i> ; THE EVENING GROSBEAK IN NEW YORK CITY, <i>R. S. Williams</i> ; EVENING GROSBEAK IN PENNSYLVANIA, <i>Harriet E. Wallace</i> ; PINE GROSBEAK IN ILLINOIS, <i>Mrs. Robert Lathrop</i> ; A PRACTICAL SOLUTION OF THE SPARROW PROBLEM, <i>Mrs. Edith H. Smith</i> ; ACADIAN CHICKADEE AT BRANCHPORT, N. Y., <i>Clarence S. Stone</i> .	42
--	----

BOOK NEWS AND REVIEWS

TRAFTON'S 'BIRD FRIENDS'; ALICE E. BALL'S 'A YEAR WITH THE BIRDS'; AUDUBON POCKET BIRD COLLECTION; ORNITHOLOGICAL MAGAZINES; A WINTER FEEDING POSTER.	45
---	----

EDITORIAL

	47
--	----

THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT

ONE WAY TO BEGIN THE NEW YEAR; FOR TEACHERS AND PUPILS; FOR AND FROM ADULT AND YOUNG OBSERVERS.	48
---	----

EDUCATIONAL LEAFLET No. 90. THE ENGLISH SPARROW. With Colored Plate by

Bruce Horsfall.....	T. Gilbert Pearson.. 60
---------------------	-------------------------

THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT

MOTION-PICTURES OF WILD BIRD-LIFE NOW AVAILABLE; THE EDUCATION OF A ROBIN; NEW MEMBERS AND CONTRIBUTORS; NOTES ON AUDUBON WORK.	64
---	----

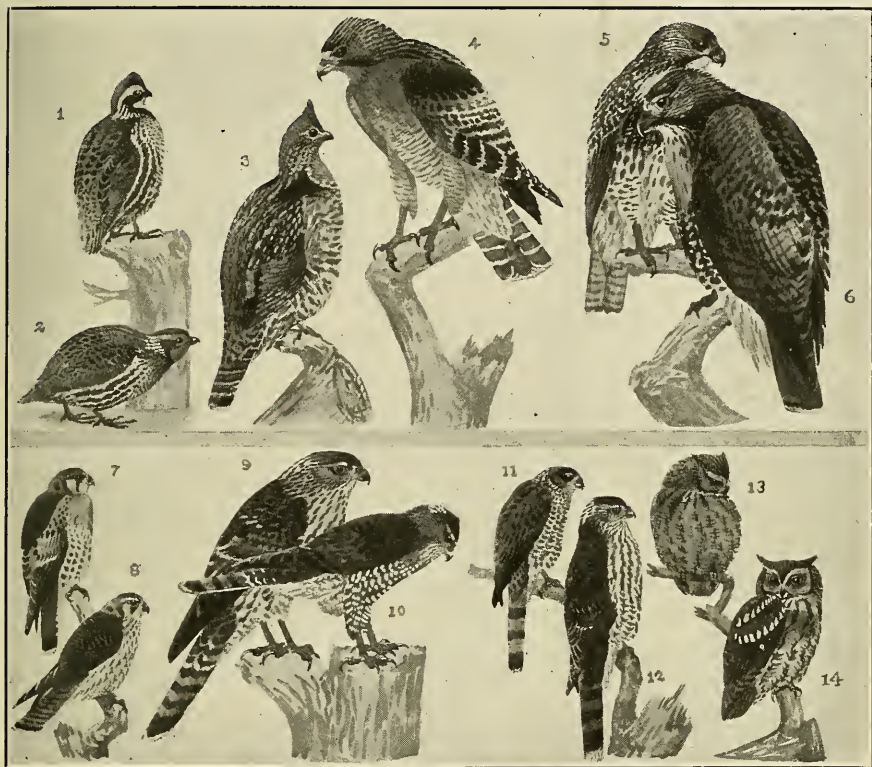
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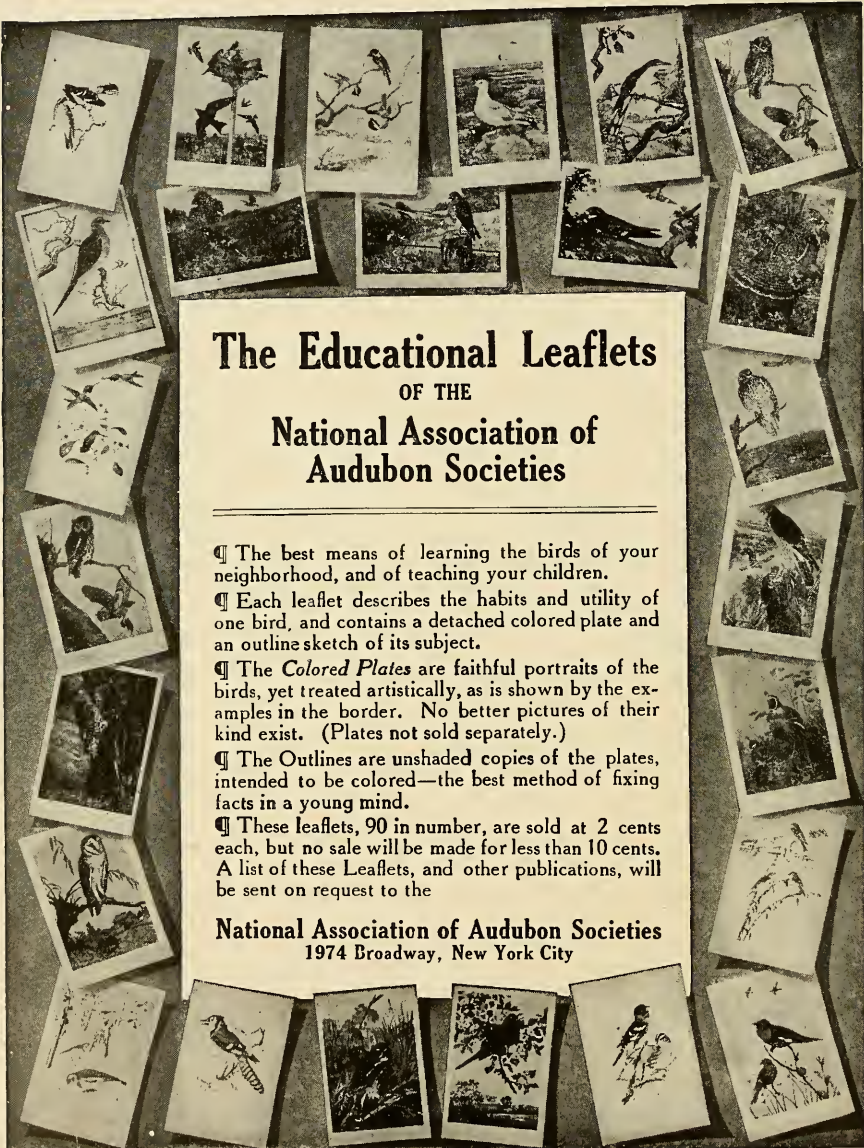
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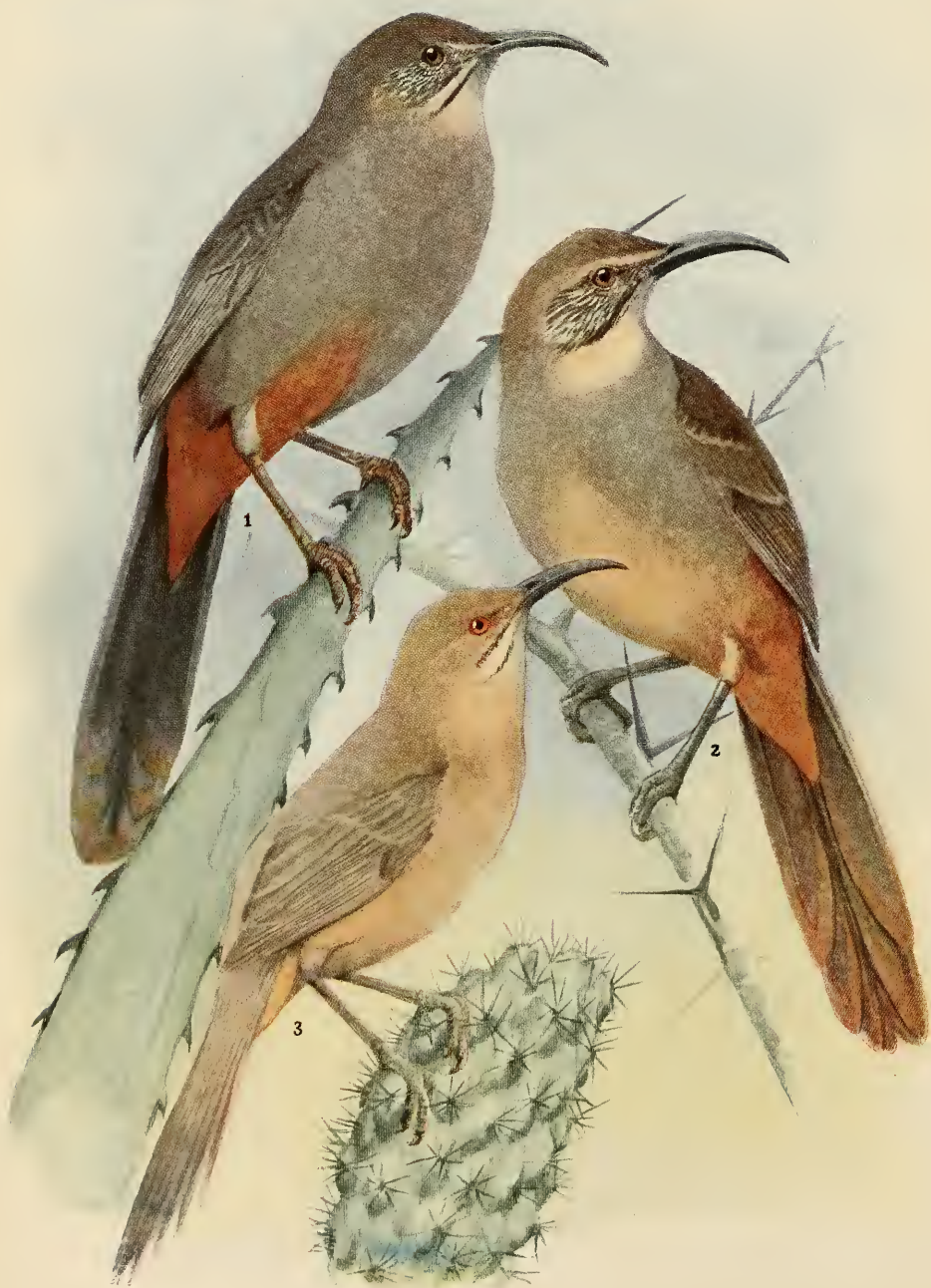
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Bird-Lore



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Vol. XIX

JANUARY—FEBRUARY, 1917

No. 1

Birds in the War-Zone

By MAJOR ALLAN BROOKS

A FEW notes on the effect of the present unnatural conditions on the bird-life of the war-zone in Flanders may be of interest to the readers of BIRD-LORE.

These conditions may be summarized briefly as follows:

1. Complete cessation of all hunting.
2. Increase of natural enemies, especially rats.
3. Heavy gun-fire.
4. Aëroplanes in large numbers.

An army order, early in the war, prohibited all hunting and shooting in the war-zone during the duration of the war.

This is rigidly enforced, and violations are rare. Personally, I have only once seen a bird of any kind shot here, which will indicate the immunity birds enjoy in this respect.

A large increase of birds, especially game birds, should be the result, but the reverse seems to be the case.

Whether this is due to an increase of natural enemies such as Crows, Magpies, weasels, and rats, I cannot say. All of these seem to have increased, especially the last.

This increase is not due to the immense amount of carrion, as I have never seen a Crow or Magpie indulging in a carrion diet out here. The wastage of food and grain accounts for the increase of rats, and the large numbers of stoats and weasels seen in the trenches may be a concomitant of this increase.

Cats also abound, but seem to confine their hunting almost exclusively to mice.

Game birds—Pheasants and Gray Partridges—are scarce, as a rule; by far the greater number can be seen in the immediate vicinity of the firing line. Wood-pigeons and Turtle-doves are common everywhere.

Small birds (including Thrushes, Blackbirds, and Larks, which are treated

as game in France) are fairly common, but nothing approaching their abundance in England.

The effect of cannon-fire on birds is amazing. Almost without exception they absolutely disregard it. Even easily disturbed birds, like Crows and Wood-pigeons, are quite indifferent. My first experience of a heavy cannonade was in the early spring of last year (1915). The Blackbirds were all singing in the trees that lined the Yser Canal when on a sudden hundreds of guns of every calibre burst into a terrific and continuous cannonade; the enemy answered, and shells tore through the trees for hour after hour.

The effect was absolutely stunning to us humans, and when after three hours there was a sudden and complete cessation, the first thing that one's reeling senses realized was that the Blackbirds were still serenely fluting away—I don't think they had ever ceased.

Another time I was listening to the rich chucklings and gurglings of a Nightingale—the first of the season—and had located the songster with my glass, when the morning calm was shattered by a burst of rifle-fire close by; the retiring and elusive bird paid no attention, nor did he seek a lower or less conspicuous perch.

The only exception I have noticed out here to this general disregard (natural or acquired?) of noise, was in the case of one species, the Green Sandpiper, the Old World congener of our Solitary Sandpiper.

Twice I have seen this bird, and each time in a highly nervous state from shell-fire.

One of these instances afforded me some amusement at a time when a diversion was welcome. We were enduring nine hours of heavy hostile shelling with very inadequate shelter. As I lay behind a breastwork of sandbags, I watched the antics of a Green Sandpiper who was trying to get his breakfast in the water-filled shell-holes close by. Every time he settled, a big high explosive shell would burst nearby with a deafening crash and a geyser of black loam, and away would go the poor bird to circle in the blue for perhaps ten minutes, and then pitch down in front of me again, to repeat the same performance as another shell would land near him almost immediately.

Meanwhile an unruffled Cuckoo called continuously in some nearby pollard willows, and Larks (Crested Larks, very much like Sky-larks) rose one after the other, sometimes from the close vicinity of a bursting shell, singing serenely as if there was nothing to mar a perfect day.

My friend, M'C. de B. Green, who is driving an ambulance for the French in the Vosges, tells me the same indifference to shell-fire exists in the birds of that region, and with a corresponding scarcity of game. Wild boar however are apparently on the increase.

He also made the discovery of a new enemy to bird-life, although he had suspected its existence for some years past. This is the large slug of these parts, which destroys a large proportion of the eggs of ground and low-nesting small



MAJOR ALLAN BROOKS

birds. It took him some time to get sufficient evidence, but it is pretty nearly conclusive. Of six Nightingales' nests he had under observation, only one escaped the slugs, and this was on account of its unusually high position.

While living on Queen Charlotte Island, B. C., some years ago, he suspected the large slug of those parts of similar depredations. This would indicate how much we have to learn in our efforts to protect birds.

Few people in America realize what a very small proportion of the destruction of bird-life—especially small-bird-life—is due to human agency, and how futile is the effort which is solely directed against the small boy, the sportsman, and the collector, as the only enemies of birds. One has to go to England, with its teeming wealth of bird-life, to see what intelligent preservation and protection can really accomplish.

A feature that strikes one over here, both in France and England, is the immense amount of cover for birds, and also the quantity of the food-supply that is afforded by the different wild fruits and berries. Just now every hedge is glistening with loads of blackberries, and all through the winter the hollies and hawthorns afford a plentiful food-supply to many fruit-eating species.

The winter Thrushes—Field-fares and Redwings—are coming south now in large flocks. The first Field-fares arrived on September 18, 1916, just ten days after the last Swift had left.

A few Swallows and Martins stay until October 20, much later than they would do with equal weather conditions in America.

The subject of migrations recalls an incident of last April. While following the course of a brisk little engagement between six or seven aëroplanes, my glass suddenly encountered a flight of six white Storks, which were caught between the opposing 'planes,' and it was wonderful to see the spurt of speed the great ungainly birds put on, but the aircraft seemed to pass them easily. Usually birds pay no attention to aircraft, possibly familiarity may have induced this condition.

One species that may have been driven away by the heavy gun-fire is the Lapwing. This Plover is very abundant in England now, and almost absent from this region where it should be common.

Flanders, Oct. 29, 1916.



A Condor's Quill

By FRANK M. CHAPMAN

WHEN I see a woman wearing a Condor's quill, I wonder if she ever thinks of the bird it once helped to soar far above the Andes through the dome of the sky. And I wonder, too, what unfortunate chain of circumstances has brought this noble plume from the top of a mountain to the side of a bonnet! I shall rarely, if ever, know whether the broad pinion raises the mind that lies so near (and yet alas! so far!) to it to flights in the realm of fancy; but I have lately learned how the majestic bird that bore it was sacrificed to the demands of a fashion which threatens its kind with extermination.

It was in Mendoza, Argentina, that on a recent journey to South America I met a man who, by profession, is a hunter of Condors. We have all heard of elephant hunters, seal hunters and bear hunters, we know only too well the work of the plume-hunter, and I once met a man who was a hunter of iguanas, but never had I supposed that so useful and inoffensive a creature as the Condor would become some man's special quarry. Its flesh is not edible, for it is one of nature's scavengers and feeds upon carrion; its plumage is neither bright in color nor dainty in form; but fashion has set a price upon its great wing- and tail-feathers, and not even the remote cañons and great altitudes of the mountains in which it lives can give it sanctuary.

For years, this Mendoza hunter has relentlessly pursued the Condor in the Argentine Andes. Some he has shot, more he has trapped, and others he has bought. The total number of these magnificent birds for whose destruction he is responsible he told me, with the matter of fact air of one giving crop statistics, is 16,000!

As a result of this one man's persecution, the Condor is now a comparatively rare bird throughout an area over two thousand miles in length, and it was admitted that further killing would practically exterminate it in western Argentina.

Only the wing- and tail-quills have a commercial value, and consequently these alone are saved. They number usually eighty-four, and for these eighty-four feathers, the equivalent of one Condor, the price paid prior to the war, was twenty dollars. All shipments were made to dealers in Paris. The present price is ten dollars, a sum which we may be thankful is too low to tempt our Mendoza collector. With a fine show of feeling and an evidently vague conception of the ethics involved, he exclaimed dramatically: "I refuse to exterminate such a wonderful bird for so small a sum!"

So here are the two ends of the chain which is dragging the poor Condor to its doom—Miss Blank of the Center of Civilization and the Hunter of the Heart of the Andes. Who is to blame? We all know Miss Blank. She may be just as tender-hearted as she is innocent of intentional wrong-doing; quite proba-

bly she has accepted her milliner's verdict that the quill she is wearing came from a barn-yard fowl. Certainly, if you were to accuse her of promoting the extinction of the Condor, she would question your sanity. Blissful ignorance best describes her mental condition, so far as Condors are concerned; but how about our Andean hunter? Does he show no regret for the destruction he has wrought? If he does, it is largely tempered by the reward his activity has brought him. His is not an environment designed to arouse an esthetic appreciation of the Condor's flight, or to impress him with its economic value. To his mind a living Condor is an asset to be realized upon only by death. I rather



A CONDOR TRAP IN THE ARGENTINE ANDES

There were thirty-seven Condors in the trap when the photograph was made

Photographed by Fernando Porta.

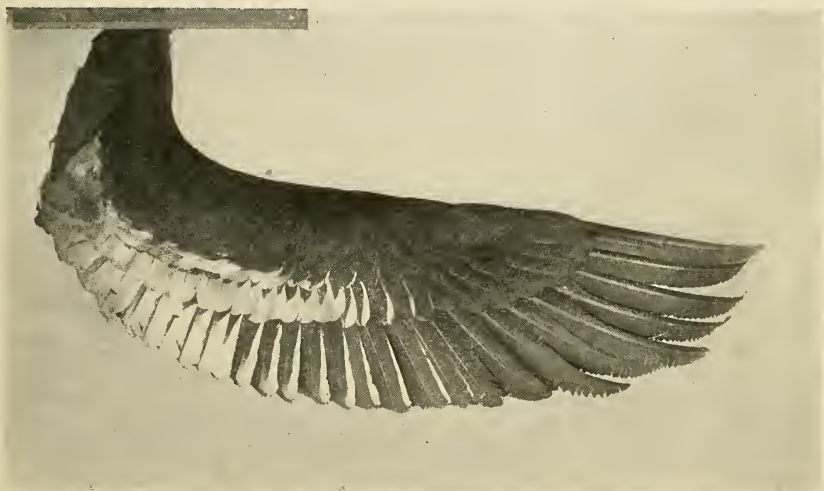
suspect that his refusal to kill the birds for half the price he had been accustomed to receive was more a matter of business than of sentiment, and that when the price reaches its former level he will resume the chase. There is neither law nor public opinion to say him nay, and why should we expect this one man to differ from his fellows?

Between innocence and ignorance, then, it will go hard with the Condor unless some one comes to its rescue. Here it is that educated and organized bird protectors come to the fore. Possibly they can exert small influence in the Heart of the Andes, and by moral suasion alone they have not been completely successful in the Center of Civilization! But they have secured the passage, as well as enforcement, of laws the effects of which reach to the furthestmost

corners of the earth. While the existing stock lasts, Miss Blank may continue to wear her silvery pinion, but if she lives within the border of the United States let her cherish it carefully, for Federal law prohibits the importation of Condor's feathers, as well as those of other wild birds; and with the enactment of this statute no small part of the world's millinery mart was closed to Condor quills! Let us hope that other nations will follow this example.

Like most hunters whose pursuit of a certain animal leads them to a study of its habits, this Mendoza slayer of Condors had acquired much information concerning the object of his pursuit, and could relate many interesting reminiscences of the chase.

The latest South American guide book (and in most respects a very reliable book it is) tells us that the Condor attacks "pigs, sheep, children and rarely a



A CONDOR'S WING

This wing contains Thirty-five large quills, and measures 4 feet, 8 inches, from base to tip

grown man," but our killer of thousands said that he had never known but one to 'show fight.' This was a trapped bird which, supposing it to be dead, he picked up by the neck, when the startled creature planted both feet on his breast and beat him vigorously with its wings. Doubtless the bird's chief object was escape, and if it had been given its freedom it no doubt would soon have been in full flight.

Although he had shot as many as one hundred and fourteen Condors in a single day, by far the larger number were netted. The net was baited with a dead horse which, it was explained, must have been in good condition, and from concealment in a nearby hole it was sprung with a wire. No big game hunter could have described a thrilling, dangerous moment in the chase more dramatically than did our Condor hunter tell of his excitement when the big birds

gathered to the feast, and he waited for the last one to come within reach of the net.

The largest number ever taken at a single 'throw' he said was sixty-four. The net shown in the accompanying picture, which he presented to me, contained thirty-seven Condors, some of which can be dimly seen.

Condors, like their humble relatives the Turkey Buzzard and Black Vulture, evidently return to certain regularly frequented roosts for the night. Our hunter said that he counted eight hundred in a single roost; surely few gatherings of birds could be more impressive.

The Condor of the Andes, like the Condor of California, lays its single white egg in a cave or similar retreat, and builds no nest. The nesting season begins in September, or early spring.

After deducting a fair margin for expenses, shipping charges, etc., one might imagine that to sell 16,000 Condors for twenty dollars each would leave the hunter a comparatively wealthy man. But our Mendoza hunter has only a small share of the world's goods. Apparently the pursuit of the Condor is not designed to bring good fortune to those who engage in it. The proceeds of his hunting he invested in a powder mill which subsequently exploded! All that the world has to show, therefore, for the 16,000 Condors it has lost, is the few frayed quills which have not yet reached the ash-heap.

An Effective Feeding Device

By JOHN C. LEE, Wellesley, Mass.

THE accompanying sketch shows an inexpensive and simplified form of the well-known von Berlepsch food-bell, which can be readily made by anybody who can use a soldering iron and a few simple tools.

This device is particularly useful during the winter months for feeding the Chickadees and Nuthatches. It holds a lot of food and requires very little attention. The amount of food in the bottle can always be observed without taking it down. I have used this type of feeder with considerable success in wooded areas which are badly infested with gypsy moths. I find that the Chickadees attracted by the feeder are including in their diet a great many of the gypsy moth eggs.

For food I have been using a mixture of about 25 per cent hemp seed, 25 per cent sunflower seed, and 50 per cent cracked corn.

The essential portions of the feeder are lettered as follows:

A is what is known as a one-gallon amber packing-bottle, and can be had at almost any drug store for about ten cents.

B is a tube about five inches long which fits into the neck of the bottle. This can be readily made by bending a piece of thin galvanized sheet-iron about a round stick.

C is a weather shield made by first cutting a disk of galvanized iron about ten inches in diameter and making a hole in the center for the tube B to pass through, then cutting a pie-shaped piece from the disk and drawing the edges together to form a cone. The edges should be soldered together and the shield soldered to the tube.

D is a 4-inch flower-pot saucer supported by three wire arms bent as indicated and soldered to the tube B. The wire arms are adjusted so that the end of the tube comes about $\frac{1}{4}$ inch from the bottom of the saucer.

E is a supporting wire which starts in a small loop near the top of the feeder on one side, passes down through the shield C around one side of the tube B, through the shield again, and up to a loop corresponding and the one on the opposite side. The holes where the wire passes through the shield should be closed with a little solder.

F is a wire band passing completely around the bottle and rather loosely fitted. It is looped around each end of the supporting wire E.

G is a wire supporting loop attached to each end of the wire E.

All of the wire used in making the device should be galvanized, and not smaller than No. 9 Brown and Sharpe gauge.

The feeder can be easily filled by inverting it so that the bottle is right side up, then slipping off the metal portions and pouring the food in through a funnel. The food should be free from bits of grass or other substances likely to obstruct the tube.

It is necessary to use an amber bottle in making the feeder rather than one of plain glass, for the reason that with plain glass the sun causes the moisture from the seeds to collect on the walls of the bottle. This moisture in time makes some of the seeds mold and clot together.

The feeders can, of course, be readily made by any tinsmith. As to their probable cost, I can only say that a tinsmith in this vicinity is making them in considerable quantities and selling them in lots of one dozen at 75 cents each, or a single one for \$1.00.



THE WELLESLEY
BIRD-FEEDER





MEADOWLARK.—A MALE NEAR THE NEST
Photographed by Arthur A. Allen, Ithaca, N. Y.

Bird-Lore's Seventeenth Christmas Census

THE Census for 1916 shows that this winter will go down into ornithological history as memorable for its great southward flight of the irregular winter visitors from the North. The most interesting of these is *Penthestes hudsonicus*, which has come further south and in greater numbers than it has ever before been known to do. So far, the 'farthest south' reported for it is the Moravian Cemetery at New Dorp, Staten Island, New York City, with others nearly as far south just north of Scotch Plains, near Plainfield, N. J. Till this season there had been no record of this species for the Hudson Valley below Poughkeepsie, for Long Island or for New Jersey. The name I have used for it throughout the Census is 'Hudsonian Chickadee,' as that is the accepted name of the species; the subspecies visiting us not having been fully determined. Individuals taken (some about Boston, one at New Dorp and one at Scotch Plains) are *not* Acadians, but belong to the subspecies* from the forests of Labrador recently described by Townsend. The use of 'Hudsonian Chickadee' for the species and also for one of its subspecies is confusing, and I take this occasion to propose that the species (*P. hudsonicus*) be called the 'Brown-cap Chickadee' (the extra -ped is superfluous; note 'Black-poll Warbler'), that *P. h. hudsonicus* be called the 'Hudsonian Brown-cap Chickadee,' *P. h. nigricans* the 'Labrador Brown-cap Chickadee,' etc. Even though the specimens taken belong to the Labrador form, some Acadians may have come down, too, especially to localities near their summer home in the mountains of New England and New York, and northward. The plate labeled 'Acadian Chickadee' in BIRD-LORE for January-February, 1916, is much nearest *nigricans*, but the crown should be distinctly brownish. In the other subspecies the crown is a rather light brown, and there are other differences.

The writer knows that Pine Siskins were unusually abundant throughout northern New Hampshire and adjacent Maine last September, and Mr. Horace W. Wright told him that White-winged Crossbills were more common in the White Mountains than in any of his previous thirty-four seasons' residence there, but Red Crossbills were scarce. The Siskins reached the vicinity of New York in October, and the Census shows them south to Georgia, Wisconsin, Missouri, Nebraska and Oregon. White-winged Crossbills have appeared in Virginia (near Washington), but seem to have skipped much territory, as the Census shows none between Poughkeepsie and southern New Jersey. The most generally abundant of the irregular species is the Redpoll, and its southernmost record (Currituck Sound) is the second for North Carolina. Evening Grosbeaks have again visited the East, and further south than ever (southern New Jersey), and Red Crossbills, Pine Grosbeaks and Northern Shrikes have appeared in small numbers. There has been a remarkable flight of American Goshawks, with individuals as far south as southern Pennsylvania and Arizona. Black-capped Chickadees, which seemed rather unusually abundant last season, are

**P. h. nigricans*; 'The Auk,' Volume XXXIII, 1916, page 74.

even more so now, and Red-breasted Nuthatches are noticeably prevalent. On the other hand, Belted Kingfishers occur in many censuses from localities *north* of their regular winter range.

In the absence from the lists of the star censuses from southern California and Florida, first place goes to San Francisco with 65 species.*

Twenty-odd censuses were received too late for publication, and many others were discarded as seeming not at all fairly representative of the Christmas-time bird-life of the regions concerned, or for violating in some other and too flagrant way our carefully stated requirements. We shall cheerfully answer any inquiries from disappointed observers, and trust that such will resolve to do better next time, especially in the matter of staying long enough afield to make it worth while.—CHARLES H. ROGERS.

Arnprior, Ont.—Dec. 24; 9:30 A.M. to 4:30 P.M. Clear, becoming overcast about 3 P.M.; 12 in. of snow; calm in the morning, with an increasing east wind in the afternoon; temp. -1° to 10° . Canada Ruffed Grouse, 3; Goshawk(?), 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 1; Evening Grosbeak, 60+; Pine Grosbeak, 17; Pine Siskin, 11; Brown Creeper, 1; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 13; Black-capped Chickadee, 23. Total, 12 species, 136 individuals. This is the first time since 1912, that Pine Grosbeaks have been here in any numbers. Evening Grosbeaks, however, have been here every year since 1912, but this year in greater numbers than ever before.—CHARLES MACNAMARA and LIGUORI GORMLEY.

London, Ont. (vicinity of).—8 to 11:30 A.M.; 2:30 to 5:30 P.M. Clear; 10 in. of snow; wind west, light; temp. 15° at start. The ground has been covered with snow for about two weeks, and the thermometer below zero several times. The following census is compiled from the lists of five parties (two on snowshoes) covering about 5 miles, roughly, in a zigzag line. American Merganser, 2; Marsh Hawk, 1; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 10; Blue Jay, 3; Crow, 312; Purple Finch, 15; Redpoll, 45; Snow Bunting, 100; Tree Sparrow, 22; Junco, 28; Song Sparrow, 2; Cardinal, 7 (the increasing number of Cardinals is very gratifying); Northern Shrike, 1 (first record for three years); Brown Creeper, 7; White-breasted Nuthatch, 10; Black-capped Chickadee, 78; Golden-crowned Kinglet, 10. Total, 19 species, 656 individuals.

The following have also been recorded recently: Snowy Owl (shot Dec. 16 and identified by Mr. A. A. Wood), Goshawk (shot Dec. 15 and identified by Mr. W. E. Saunders), and others.—MCLWRAITH ORNITHOLOGICAL CLUB, J. F. CALVERT, C. G. WATSON, W. E. SAUNDERS, J. C. HIGGINS, E. DALY and E. M. S. DALE.

Dover, N. H.—Dec. 26; 11 A.M. to 3 P.M. Clear; ground covered with snow and ice except a few bare spots; west breeze; temp. 20° . Canada Ruffed Grouse, 2; Hairy Woodpecker, 1; Flicker, 1; Crow, 4; Redpoll, 2; Tree Sparrow, 8; Black-capped Chickadee, 24; Golden-crowned Kinglet, 2; Robin, 1. Total, 9 species, 45 individuals.—PERLEY M. JENNESS.

East Jaffrey, N. H.—Dec. 26; 8:20 to 11:15 A.M.; 1:15 to 4 P.M. Clear; 10 in. of snow; wind west, brisk; temp. 9° to 19° . Canada Ruffed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Pine Grosbeak, 1; Redpoll, 7; Black-capped Chickadee, 48; Hudsonian Chickadee, 2. Total, 7 species, 64 individuals.—STUART T. DANFORTH.

Nashua, N. H.—Dec. 25; 9:40 A.M. to 12:30 P.M. Partly cloudy; 6 in. of snow; wind north, light; temp. 30° . Dec. 26; 10 A.M. to 3:30 P.M. Clear; 6 in. of snow; wind northwest, brisk; temp. 20° . Each observer covered different ground. Herring Gull, 2; American Merganser, 19; Great Blue Heron, 1; Canada Ruffed Grouse, 8; Ring-necked

*A list of 105 has since come from Los Angeles, but we fear this covers too much territory to be comparable with our other censuses; last year two of their points covered were 35 miles apart!

Pheasant, 6; Downy Woodpecker, 1; Blue Jay, 28; Crow, 79; Redpoll, 20; Goldfinch, 6; Slate-colored Junco, 4; White-breasted Nuthatch, 8; Black-capped Chickadee, 49. Total, 13 species, 231 individuals.—NATURE CLUB, MANLEY B. TOWNSEND, leader.

Tilton, N. H.—Dec. 25; 10 A.M. to 5 P.M. Clear; a foot of snow; wind west, light to strong; temp. 20°. Party together in A.M., E. H. P. alone in P.M. American Merganser, 11; Canada Ruffed Grouse, 2; Downy Woodpecker, 1; White-winged Crossbill, 11; White-breasted Nuthatch, 2; Chickadee, 18.—G. E. PLIMPTON, T. F. PLIMPTON, THOMAS WOOD and EDWARD H. PERKINS.

Wilton, N. H.—Dec. 25; 8 A.M. to 12 M. Clear; 3 to 6 in. of snow; no wind; temp. 26° to 32°. Canada Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 6; Pine Grosbeak, 8; Pine Siskin, 7; Tree Sparrow, 5; Winter Wren, 1; White-breasted Nuthatch, 1; Chickadee, 10. Total, 9 species, 40 individuals.—GEORGE G. BLANCHARD.

Bennington, Vt.—Dec. 28; 10 to 11:30 A.M. Cloudy; 3 to 5 in. of snow; wind northwest, moderate; temp. 35° to 40°. Ruffed Grouse, 4; Saw-whet Owl, 1 (at 5 A.M.); Screech Owl, 1 (at 10 P.M.); Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 6; Crow, 1; Starling, 4; Pine Grosbeak, 17; Pine Siskin, 1; White-breasted Nuthatch, 1; Chickadee, 8. Total, 12 species, 46 individuals.—DR. and MRS. LUCRETIVS H. ROSS.

Clarendon, Vt.—Dec. 24; 10:20 A.M. to 4:30 P.M. Slightly overcast; 8 in. of snow; wind northeast, very light; temp. 16°. Ruffed Grouse, 8; Hairy Woodpecker, 4; Downy Woodpecker, 12; Blue Jay, 5; Pine Grosbeak, 19; White-winged Crossbill, 3; Redpoll, 16; Tree Sparrow, 2; White-breasted Nuthatch, 4; Chickadee, 22; Golden-crowned Kinglet, 1. Total, 11 species, 96 individuals.—L. H. POTTER.

St. Johnsbury, Vt.—Dec. 26; 8 to 11 A.M. Clear; 8 in. of snow; wind northwest; temp. 4°. Ruffed Grouse, 1; Hairy Woodpecker, 2; Blue Jay, 4; Evening Grosbeak, 7; Redpoll, 44; Goldfinch, 10; White-breasted Nuthatch, 2; Chickadee, 40. Total, 8 species, 110 individuals.—INEZ ADDIE HOWE and MABEL AGNES SHIELDS.

Woodstock, Vt.—Dec. 25; 8:30 A.M. to 4 P.M. Clear; 6 in. of snow; wind northwest, light; temp. 20°. Ruffed Grouse, 2; Great Horned Owl, 1; Northern Hairy Woodpecker, 2; Downy Woodpecker, 5; Blue Jay, 1; Evening Grosbeak, 3; Pine Grosbeak, 20; Red Crossbill, 4; White-winged Crossbill, 5; Redpoll, 38; White-throated Sparrow, 1; Tree Sparrow, 3; Junco, 1; Brown Creeper, 1; White-breasted Nuthatch, 8; Red-breasted Nuthatch, 2; Black-capped Chickadee, 15; Hudsonian Chickadee, 1; Golden-crowned Kinglet, 2. Total, 19 species, 115 individuals. The Evening Grosbeaks (1 bright male and 2 females) have been seen frequently in two large box elders on my lawn since Dec. 1. The single White-throated Sparrow, the Junco and the Hudsonian Chickadee were seen at Mr. Fred Dana's feeding-station, where they have been continually since the middle of November.—RICHARD M. MARBLE.

Boston, Mass. (Chestnut Hill Reservoir).—Dec. 18; 12:30 to 2 P.M. Fair; 6 in. of snow; wind west, light; temp. 27°. Herring Gull, 1; Merganser, 18; Mallard, 3; Black Duck, 133; Green-winged Teal, 2; Pintail, 1; Lesser Scaup, 1; Goldeneye, 2; Northern Flicker, 1; Blue Jay, 3; Crow, 3; Starling, 32; Redpoll, 9. Total, 13 species, 209 individuals.—HORACE W. WRIGHT.

Cambridge, Mass. (Waverley, Belmont, Fresh Pond and Charles River Basin).—Dec. 24; 8:15 A.M. to 4 P.M. Clear; 4 in. of snow; wind northwest, strong; temp. 34°. Black-backed Gull, 1; Herring Gull, 175; American Merganser, 20; Black Duck, 2; Red-shouldered Hawk, 1; Ring-necked Pheasant, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 5; American Crow, 51; Starling, 250; Purple Finch, 3; Redpoll, 27; Goldfinch, 5; Pine Siskin, 8; White-throated Sparrow, 2; Tree Sparrow, 3; Junco, 1; Song Sparrow, 3; Cedar Waxwing, 3; White-breasted Nuthatch, 1; Chickadee, 9; Hudsonian Chickadee, 1; Golden-crowned Kinglet, 19; Ruby-crowned Kinglet, 1. Total, 25 species, 596 individuals.—MYLES P. BAKER.

Cohasset, Mass.—10 A.M. to 3 P.M. Clear; ground generally bare but some snow; wind northwest, brisk; temp. 22°. Black-backed Gull, 2; Herring Gull, 50; Red-breasted Merganser, 2; Ring-necked Pheasant, 1; Downy Woodpecker, 5; Northern Flicker, 12; Blue Jay, 3; Crow, 10; Baltimore Oriole, 1; Purple Finch, 20; Redpoll, 2; Goldfinch, 3; Pine Siskin, 35; Tree Sparrow, 10; Song Sparrow, 4; Slate-colored Junco, 25; Cedar Waxwing, 40; Northern Shrike, 1; Orange-crowned Warbler, 1; Myrtle Warbler, 50; Red-breasted Nuthatch, 1; Chickadee, 20; Hudsonian Chickadee, 4; Golden-crowned Kinglet, 1; Robin, 20. Total, 25 species, 323 individuals. The Oriole was feeding on the ground, on a small patch of salt marsh, within 20 feet of me part of the time, where today's high run of tide had flowed two hours before. It was able to fly perfectly. The marsh was bordered by cat-brier, cedars, sumac, bayberries, etc. The Orange-crowned Warbler was seen on Dec. 8 and 14 near the same place.—JOHN B. MAY, M.D.

Dighton, Mass.—8 A.M. to 12 M. Partly cloudy; snow in spots; wind southwest, medium; temp. 30°. Herring Gull, 35; American Merganser, 10; Goldeneye, 60; Ruffed Grouse, 1; Downy Woodpecker, 1; Northern Flicker, 10; Horned Lark, 4; Blue Jay, 8; Crow, 175; Cowbird, 2; Meadowlark, 30; Purple Finch, 1; Goldfinch, 110; Pine Siskin, 6; Tree Sparrow, 5; Slate-colored Junco, 20; Song Sparrow, 7; Myrtle Warbler, 60; Chickadee, 20; Robin, 2. Total, 20 species, 567 individuals.—CHARLES L. PHILLIPS.

Fairhaven, Mass.—Dec. 24; 10 A.M. to 2 P.M. Clear; ground bare; wind northwest, strong; temp. 32°. Herring Gull, 10; Downy Woodpecker, 2; Crow, 5; Blue Jay, 6; Meadowlark, 2; Song Sparrow, 2; White-throated Sparrow, 1; Purple Finch, 8; Brown Creeper, 2; Chickadee, 12; Golden-crowned Kinglet, 6; Robin, 40. Total, 12 species, 83 individuals.—MABEL L. POTTER and FRANCES CONGDON.

Holyoke, Mass. (vicinity of Mt. Tom Range).—Dec. 25; 8 A.M. to 1 P.M. Fair with cloud-flecked sky; wind west and northwest, comparatively still in A.M. and strong at noon; several in. of snow, drifted in places; temp. at start 25°, on return, 32°. Ruffed Grouse, 4; Cooper's Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 4; American Crow, 8; Starling, 15; Redpoll, 3; Tree Sparrow, 1; Slate-colored Junco, 6; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Black-capped Chickadee, 9; Golden-crowned Kinglet, 6. Total, 14 species, 63 individuals. Recently seen in evening: Evening Grosbeak, Pine Siskin, and Hudsonian Chickadee.—AARON C. BAGG.

Lynn, Mass.—Dec. 25; 8 A.M. to 2 P.M. Clear; 3 in. of snow; light northwesterly wind; temp. 30° to 40°. Herring Gull, 15; Ring-necked Pheasant, 1; Hairy Woodpecker, 1; Blue Jay, 4; Crow, 11; Goldfinch, 16; Tree Sparrow, 4; Junco, 7; Brown Creeper, 2; Red-breasted Nuthatch, 2; White-breasted Nuthatch, 11; Chickadee, 8; Golden-crowned Kinglet, 1. Total, 13 species, 73 individuals.—THOMAS J. CULLITON.

Mattapoisett, Mass.—Dec. 25; 8:30 A.M. to 12:30 P.M. Clear to cloudy; ground bare; wind northwest, strong and gusty; temp. 35°. Observers together. Grebe sp. 3; loon sp., 3; Black-backed Gull, 1; Herring Gull, 2; Merganser, 1; Old-squaw, 8; Scoter, 40; Surf Scoter, 8; Ruffed Grouse, 1; Flicker, 4; Blue Jay, 3; Crow, 3; Junco, 9; Song Sparrow, 2; Myrtle Warbler, 12; Chickadee, 4. Total, 16 species, 104 individuals.—J. E. NORTON SHAW and WILLIAM B. SHERMAN.

Provincetown, Truro, and Wellfleet, Mass.—From 1 P.M. Dec. 26 to 4 P.M. Dec. 28. Dec. 26, clear with high northwest wind; Dec. 27 and Dec. 28, intermittent rain and mist, wind southwest, moderate. Ground bare. Temp. 28° to 40°. Holboell's Grebe, 1; Loon, 11; Red-throated Loon, 3; Black-backed Gull, 155; Glaucous Gull, 5; Iceland Gull, 1; Herring Gull, 850; Gannet, 2; Red-breasted Merganser, 29; Hooded Merganser, 1; Black Duck, 122; Goldeneye, 21; Old-squaw, 28; Eider, 13; Scoter, 5; White-winged Scoter, 2; Kingfisher, 2; Flicker, 9; Horned Lark, 257; Crow, 23; Starling, 7; Meadowlark, 6; Red Crossbill, 52; White-winged Crossbill, 2; Redpoll, 35; Pine Siskin, 2; Goldfinch, 12; Snow Bunting, 143; Ipswich Sparrow, 1; Tree Sparrow, 39; Song

Sparrow, 5; Northern Shrike, 1; Myrtle Warbler, 80; Brown Creeper, 4; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 3; Chickadee, 52; Golden-crowned Kinglet, 21; Robin, 24. Total, 39 species, 2,031 individuals.—J. KITTREDGE, JR., JOSEPH A HAGAR, BARRON BRAINERD and JAMES L. PETERS.

Southampton, Mass.—9 A.M. to 12 M; 1 to 4 P.M. Clear; ground bare; wind light, northwest; temp. 25°. Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 7; American Crow, 3; Starling, 2; Redpoll, 25; Pine Siskin, 4; Tree Sparrow, 2; Chickadee, 9. Total, 9 species, 54 individuals.—BESSIE M. GRAVES.

Wareham, Mass.—Dec. 24; sunrise to sunset. Fair; ground mostly bare; wind westerly, calm at first, light later; temp. 26°. Observers together except for about an hour. Horned Grebe, 1; Loon, 1; Herring Gull, 225; Red-breasted Merganser, 15; Black Duck, 14; American Goldeneye, 150; Old-squaw, 45; White-winged Scoter, 7; Surf Scoter, 1; Black-crowned Night Heron, 1; Bob-white, 6; Ring-necked Pheasant, 2; Cooper's Hawk, 1; Kingfisher, 2; Downy Woodpecker, 1; Northern Flicker, 5; Horned Lark, 1; Blue Jay, 14; Crow, 75; Starling, 24; Meadowlark, 1; Purple Finch, 2; Red Crossbill, 5; Redpoll, 1; Goldfinch, 32; Pine Siskin, 5; Tree Sparrow, 80; Field Sparrow, 1; Slate-colored Junco, 75; Song Sparrow, 13; Swamp Sparrow, 1; Myrtle Warbler, 28; Brown Creeper, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2; Chickadee, 110; Golden-crowned Kinglet, 14; Robin, 1. Total, 38 species, 965 individuals.—C. A. ROBBINS and FRANK ROBBINS.

Weston, Mass.—Dec. 26; 6:50 to 8:45 A.M.; 9:15 A.M. to 12:15 P.M.; occasionally during P.M. Clear, 4–8 in. of snow; wind northwest, strong; temp. 14° to 20°. Observers together during A.M. Ruffed Grouse, 2; Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 4; Crow, 17; Pine Grosbeak, 12; Redpoll, 10; Goldfinch, 2; Tree Sparrow, 4; Junco, 20; Brown Creeper, 2; White-breasted Nuthatch, 2; Golden-crowned Kinglet, 6; Chickadee, 19; Robin, 1. Total, 17 species, 105 individuals.—WARREN F. EATON, PAUL WINSOR, JR., and CHARLES BREWER, JR.

Williamstown, Mass.—Dec. 26; 1 to 4 P.M. Clear; 3 to 6 in. of snow; wind northwest; temp. 10°. Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 2; Starling, 1 (singing); Tree Sparrow, 5; Goldfinch, 3; White-breasted Nuthatch, 2; Chickadee, 8. Total, 8 species, 23 individuals.—W. J. CARTWRIGHT.

Pawtucket to Seekonk, R. I.—8 A.M. to 2 P.M. Clear to cloudy; 4 in. of old snow, in places ground bare; wind west, light; temp. 28° to 35°. Herring Gull, 5; Sparrow Hawk, 1; Snow Owl, 1; Downy Woodpecker, 2; Flicker, 1; Horned Lark, 100; Blue Jay, 17; Crow, 24; Starling, 250; Meadowlark, 1; Purple Finch, 1; Redpoll, 24; Goldfinch, 7; Pine Siskin, 6; Tree Sparrow, 15; Junco, 21; Song Sparrow, 2; Swamp Sparrow, 2; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 12; Golden-crowned Kinglet, 11. Total, 22 species, 502 individuals. During the past week: Snow Bunting, Evening Grosbeak, Red Crossbill and others. The winter birds are unusually common this winter in our section.—EARL MARSH, and D. W. MARSH.

Providence, R. I.—Dec. 24; 11 A.M. to 3:30 P.M. Partly cloudy; snow on ground; wind southwest, light; temp. 53°. Flicker, 4; Blue Jay, 3; Crow, 15; Tree Sparrow, 10; Junco, 15; Song Sparrow, 5; Myrtle Warbler, 3; Chickadee, 25. Total, 8 species, 80 individuals.—JOHN W. RUSSELL.

Warwick, R. I.—Dec. 24; 9:45 A.M. to 2:45 P.M. Clear followed by cloudy; 3 in. of snow; wind northwest, light; temp. 30°. Herring Gull, 43; Scaup, 6,000; Bob-white, 15; Sparrow Hawk, 1; English Pheasant, 2; Downy Woodpecker, 2; Flicker, 14; Blue Jay, 11; American Crow, 22; Starling, 309; Meadowlark, 3; Purple Finch, 6; Goldfinch, 3; Pine Siskin, 20; Tree Sparrow, 28; Junco, 15; Song Sparrow, 5; Myrtle Warbler, 66; White-breasted Nuthatch, 1; Chickadee, 31; Golden-crowned Kinglet, 3; Bluebird, 3. Total, 22 species, 6,603 individuals.—HARRY S. HATHAWAY.

Bristol, Conn.—Dec. 25; 7 A.M. to 4:30 P.M. Cloudy, snow flurry forenoon, becoming fair in afternoon; wind brisk, increasing to a gale 11 A.M. to 3:30 P.M., diminishing to fresh at sundown; 4 to 6 in. of old snow; temp. 32°. Sparrow Hawk, 1; Downy Woodpecker, 2; Blue Jay, 25; Crow, 18; Starling, 60; Pine Grosbeak (?), young males or females, 2 (in flight overhead, size, general coloration and calls, made us feel quite certain); Redpoll, 179+; Goldfinch, 20; Tree Sparrow, 38; Song Sparrow, 2; Winter Wren, 1; White-breasted Nuthatch, 3; Chickadee, 23; Golden-crowned Kinglet, 1. Total, 14 species, 375 individuals.—E. E. SMITH and FRANK BRUEN.

Clinton and Grove Beach, Conn.—Dec. 25; 9:30 A.M. to 12:50 P.M.; 2:30 to 4:15 P.M. Partly cloudy to clear; ground bare; wind northwest, heavy; temp. 36°. Horned Grebe, 1; Loon, 1; Red-throated Loon, 2; Herring Gull, 63; Red-breasted Merganser, 1; Black Duck, 4; Scaup, 122; Goldeneye, 7; Bufflehead, 17; Old-squaw, 2; Scoter, 2; White-winged Scoter, 13; Surf Scoter, 32; Bob-white, 12; Cooper's Hawk, 1; Screech Owl, 1 (at dusk); Downy Woodpecker, 1; Horned Lark, 3; Blue Jay, 1; Crow, 5; Starling, 23; Red Crossbill, 1; Purple Finch, 2; Pine Siskin, 3; Goldfinch, 5; Tree Sparrow, 9; White-throated Sparrow, 4; Junco, 19; Song Sparrow, 1; Cardinal, 1 (7 A.M.); Myrtle Warbler, 3; Chickadee, 6; Golden-crowned Kinglet, 3. Total, 33 species, 361 individuals. The Cardinal was an adult female, seen from a distance of 50 feet, through seven-diameter prism-binoculars. The bird was seen again, in the same place, on the morning of Dec. 26. On that day, in the vicinity of Guilford, Conn., at least 100 Redpolls.—ARETAS A. SAUNDERS.

Fairfield, Conn. (Birdcraft Sanctuary, 10 acres).—Dec. 25; sunrise to sunset. Partly cloudy; temp. 38°. Herring Gull, 15; Downy Woodpecker, 3; Blue Jay, 5; Crow, 7; Starling, flock of 250; Redpoll, 18; Purple Finch, 10; Goldfinch, 15; White-throated Sparrow, 3; Tree Sparrow, 12; Junco, 30; Song Sparrow, 6; Myrtle Warbler, 10; White-breasted Nuthatch, 2; Chickadee, 5; Robin, 1. Total, 16 species, 398 individuals.—FRANK NOVAK, Warden.

Hartford, Conn.—Dec. 25; 9 A.M. to 1 P.M. Clear; ground snow-covered; wind west, strong; temp. 35°. Downy Woodpecker, 3; Blue Jay, 9; Crow, 6; Starling, 26; Redpoll, 46; Goldfinch, 14; Tree Sparrow, 2; Slate-colored Junco, 71; White-breasted Nuthatch, 4; Chickadee, 18. Total, 10 species, 199 individuals.—CLIFFORD M. CASE.

Hartford, Conn.—Dec. 24; 10:30 A.M. to 5 P.M. Clear A.M., cloudy P.M.; 6 in. of snow and crust; light northwest wind; temp. 30° to 35°. Walk of 15 miles or more covering a considerable variety of territory. Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 8; Northern Pileated Woodpecker, 2; Blue Jay, 34; Crow, 150+; Starling, 50+; Redpoll, flock of 50+; Pine Siskin, flock of 75+; Tree Sparrow, 2; Junco, 45; Brown Creeper, 8; White-breasted Nuthatch, 11; Black-capped Chickadee, 18; Hudsonian Chickadee, 7+; Golden-crowned Kinglet, 9. Total, 16 species, 472+ individuals. The Pileated Woodpecker and the Hudsonian Chickadee have been observed by the writer every week for over a month; both are seldom seen here.—GEO. T. GRISWOLD.

West Hartford, Conn.—Dec. 24; 7:30 to 10:30 A.M. and 1:30 to 5 P.M. Fair; ground partly covered with snow and ice; temp. 28°. Ruffed Grouse, 1; Sparrow Hawk, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 3; Northern Pileated Woodpecker, 2; Blue Jay, 1; Crow, 200; Starling, 91; Purple Finch, 3; Goldfinch, 6; Tree Sparrow, 10; Song Sparrow, 2; nuthatch sp., 4; Chickadee, 15; Golden-crowned Kinglet, 3. Total, 16 species, 345 individuals. Hudsonian Chickadees have been in Reservoir Park for over a month; as high a number as 40 were seen in one day. Three Pine Grosbeaks were seen on Saturday, a number of flocks of Redpolls have been seen in West Hartford and in Hartford the past week, and A. C. Hall reported to me this morning that last Friday he saw a Phoebe. The identification was positive; the bird was with a flock of Juncos, and Mr. Hall had a good chance to observe it, saw it wag its tail and observed its markings.—EDWIN H. MUNGER.

New Haven, Conn. (Edgewood Park and Mitchell's Hill).—Dec. 25; 10 A.M. to 12:30 P.M. Partly cloudy; wind west, brisk; ground partly snow-covered; temp. 39°. Herring Gull, 1; Sparrow Hawk, 2; Red-tailed Hawk, 1; Kingfisher, 1; Downy Woodpecker, 2; Blue Jay, 13; Crow, 18; Starling, 97; Goldfinch, 2; Junco, 56; White-throated Sparrow, 1; Tree Sparrow, 3; Song Sparrow, 5; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 6; Golden-crowned Kinglet, 3; Robin, 3. Total, 18 species, 166 individuals.—DWIGHT B. and CLIFFORD H. PANGBURN.

New London, Conn.—Dec. 27; 10:15 A.M. to 2:30 P.M. Rainy; ground nearly bare; wind east, light; temp. 30° at start. Herring Gull, 6; Black Duck, 10; Greater Scaup, 10; Goldeneye, 29; Bufflehead, 6; Bob-white, 1; Horned Lark, 25; Blue Jay, 7; Crow, 11; Starling, 60; Pine Grosbeak, 1; Goldfinch, 11; White-throated Sparrow, 1; Tree Sparrow, 19; Slate-colored Junco, 18; Song Sparrow, 2; Myrtle Warbler, 16; Brown Creeper, 1; Chickadee, 14. Total, 19 species, 248 individuals.—FRANCES M. GRAVES.

Norwalk, Conn.—Dec. 24; 9 A.M. to 4 P.M. Partly cloudy; temp. 30°; 12 miles. Red-breasted Merganser, 40; Black Duck, 200; Scaup, 200; American Goldeneye, 6; Old-squaw, 20; Herring Gull, 40; Red-shouldered Hawk, 1; Screech Owl, 1; Downy Woodpecker, 1; Flicker, 1; Horned Lark, 30; Blue Jay, 11; Crow, 24; Starling, 50; Meadowlark, 1; Purple Finch, 2; Goldfinch, 16; Pine Siskin, 50; White-throated Sparrow, 11; Song Sparrow, 16; Tree Sparrow, 15; Junco, 7; Towhee, 1; Cardinal, 1; Brown Thrasher, 1; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 7; Chickadee, 10; Golden-crowned Kinglet, 2. Total, 30 species, 767 individuals. Cardinal discovered by Mr. Geo. Ells in November and has lived in same place ever since; *seen daily*. Towhee and Thrasher found at edge of large swamp.—JAMES HALL and WILBUR F. SMITH.

South Windsor, Conn.—8 A.M. to 3 P.M. Clear; wind west, light; temp. 32°. Herring Gull, 1; American Merganser, 1; Sharp-shinned Hawk, 1; Goshawk, 1; Sparrow Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 8; Horned Lark, 20; Blue Jay, 8; Crow, 75; Starling, 20; Meadowlark, 6; Rusty Blackbird, 2; Purple Finch, 2; Goldfinch, 45; White-throated Sparrow, 2; Tree Sparrow, 200; Junco, 6; Song Sparrow, 35; Swamp Sparrow, 1; Brown Creeper, 2; White-breasted Nuthatch, 7; Chickadee, 50. Total, 24 species, about 500 individuals.—C. W. VIBERT.

Windsor, Conn.—7 A.M. to 4 P.M. Ground snow-covered; rain all day; light winds; temp. 35°. American Merganser, 1; Ruffed Grouse, 1; Rough-legged Hawk, 2; Barred Owl, 1; Screech Owl, 1; Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Blue Jay, 6; Starling, 30; Crow, 565; Tree Sparrow, 73; Junco, 6; Brown Creeper, 4; White-breasted Nuthatch, 2; Black-capped Chickadee, 29; Golden-crowned Kinglet, 3. Total, 17 species, 731 individuals. Pileated Woodpecker, 1; Pine Grosbeak, 3; Redpoll, 6; Hudsonian Chickadee, 2, observed at West Hartford, Conn., within a week of Christmas.—EDWARD P. ST. JOHN.

Albany, N. Y. (just west of the city).—Dec. 24; 9:30 A.M. to 2:30 P.M. Partly cloudy; 2 to 3 in. of snow and ice; wind northwest, 5 miles per hour; temp. 28°. Sparrow Hawk, 1; Downy Woodpecker, 1; Crow, 1,000+; Starling, 100 (one flock, an unusual sight in this section); Redpoll, 50; Tree Sparrow, 41; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 28. Total, 9 species, 1,224+ individuals.—CLARENCE HOUGHTON.

Collins, N. Y. (Hospital grounds and Cattaraugus Indian Reservation).—Dec. 24; 12:30 to 1 and 2 to 5 P.M. Cloudy, dull, overcast; light southwest wind; 2 ft. of snow, mostly level; creek open; temp. 30°. Great Blue Heron, 1; Sharp-shinned Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Flicker, 1; Prairie Horned Lark, 6; Blue Jay, 1; American Crow, 3; Tree Sparrow, 15; Song Sparrow, 1; Cedar Waxwing, 2; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 200. Total, 15 species, 243 individuals.—DRS. EARLE V. GRAY and ANNE E. PERKINS.

Geneva, N. Y. (between Main St. and the Lake within the city limits).—Dec. 24; 9:30 A.M. to 1:30 P.M. Horned Grebe, 22; Herring Gull, 1; American Merganser, 2; Redhead, 800; Canvasback, 26; Greater Scaup, 600; Lesser Scaup, 35; American Goldeneye, 13; Barrow's Goldeneye, 1 male; Ruddy Duck, 1; Ring-necked Pheasant, 11; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 1; Crow, 35; Goldfinch, 2; Tree Sparrow, 3; Junco, 2; Brown Creeper, 7; White-breasted Nuthatch, 11; Chickadee, 17; Hudsonian Chickadee, 2; Golden-crowned Kinglet, 9; Robin, 1. Total, 24 species, 1,608 individuals.—WILLIAM EDDY and E. H. EATON.

Hamburg, N. Y.—Dec. 24; 7:30 A.M. to 1:30 P.M. Partly cloudy; about 12 in. of snow; wind light, north; temp. 18°. Ruffed Grouse, 1; Cooper's Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 3; Crow, 32; Redpoll, 40; Tree Sparrow, 2; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 16. Total, 11 species, 108 individuals. The Redpolls were first noted this fall on Nov. 30.—THOMAS L. BOURNE.

Hempstead, Nassau Co., L. I., N. Y.—Dec. 25; 9 A.M. to 5 P.M. Ideal in early morning, cold and windy by noon. The land was mostly woods, also some pine, two small swamps, and a small stretch of plain. Herring Gull, 7; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Horned Lark, 38; Blue Jay, 8; Crow, 156; Starling, 31; Goldfinch, 65+; Pine Siskin, 28; Tree Sparrow, 20; Slate-colored Junco, 41; Song Sparrow, 14; Brown Creeper, 2; White-breasted Nuthatch, 1; Chickadee, 18; Golden-crowned Kinglet, 6. Total, 20 species, 442 individuals.—THEODORE ROEHNER.

Long Beach, Nassau Co., L. I., N. Y.—Dec. 21; 9:30 A.M. to 4:20 P.M. Rain before daylight on 6 to 8 in. of remaining snow, followed by thick fog, lifting transiently about noon; temp. 37° A.M. and P.M.; wind light, northerly; surface of ocean smooth over broad swells. Horned Grebe, 11; Loon, 1; Red-throated Loon, 3; Black-backed Gull, fewer than usual; Herring Gull, abundant; Red-breasted Merganser, several small flocks and one of perhaps 100; Black Duck, not many seen, doubtless because of the fog off shore; Scaup, several flocks, the largest estimated at 80; Old-squaw, not many, one company of 20; Surf Scoter, 2; American Scoter, 3; Sanderling, flock of 14; Crow, common; Starling, in the town and several flocks along shore; Meadowlark, flock 8 to 10; Horned Lark, numerous; Lapland Longspur, one with Horned Larks; Ipswich Sparrow, 4 together; Tree Sparrow, few; Junco, 1; Song Sparrow, 5 or 6 together; Fox Sparrow, 1; Myrtle Warbler, numerous. Total, 23 species, number of individuals impossible to specify.—E. P. BICKNELL.

Mastic, L. I., N. Y.—Dec. 24; 11 A.M. until dark. Clear; ground bare; marshes and most of bay frozen; wind west, light; temp. 25° to 30°. Black-backed Gull, 1; Herring Gull, 3; American Merganser, 1; Red-breasted Merganser, 2; Black Duck, 35; Redhead, 3; Canvasback, 4; Scaup (? Greater, 6; ? Lesser, 35), 41; Goldeneye, 1,100; Bufflehead, 60; Great Blue Heron, 1; Marsh Hawk, 1; Red-tailed Hawk, 1; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Northern Flicker, 2; Blue Jay, 6; Crow, 25; Starling, 275; Meadowlark, 40; Goldfinch, 12; Tree Sparrow, 30; Junco, 7; Song Sparrow, 6; Myrtle Warbler, 250; Brown Creeper, 7; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2; Chickadee, 16; Golden-crowned Kinglet, 32. Total, 31 species, 1,971 individuals.—J. T. NICHOLS and LUDLOW GRISCOM.

New York City (Bronx Park, Saw Mill Lane section and Clason Point). Train used between Saw Mill Lane and Clason Point).—Dec. 25; 9:50 A.M. to 2:30 P.M. Cloudy in A.M., clear in P.M.; 1 to 2 in. of snow in places; wind northwest, brisk; temp. 30° to 40°. Herring Gull, 625; Merganser, 30; Black Duck, 8; Canvasback, 1; Black-crowned Night Heron, 52; Cooper's Hawk, 2; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 12; Crow, 11; Starling, 84; Meadowlark, 1; Rusty Blackbird, 1; Goldfinch, 8; White-throated Sparrow, 8; Tree Sparrow, 27; Junco, 30; Song Sparrow, 12; Fox Sparrow, 3; Winter Wren, 1; Brown Creeper, 9;

White-breasted Nuthatch, 9; Chickadee, 16; Golden-crowned Kinglet, 3; Robin, 3. Total, 27 species, 966 individuals. About 200 more ducks too far away for identification.—EDWARD G. and MR. and MRS. L. N. NICHOLS.

New York City (Kingsbridge, Jerome Reservoir, Van Cortlandt Park, Moshulu Parkway, Bronx Park, Pelham Park and City Island).—Train between Bronx and Pelham Parks, rest of route on foot).—Dec. 23; 8:40 A.M. to 4:50 P.M. Clear; ground bare, some snow in shaded areas; wind west to southwest, brisk; temp. 27°. Herring Gull, 2,000; American Merganser, 16 (2 drakes); Scaup, 50; Black-crowned Night Heron, 45; Red-tailed Hawk, 5; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker 3; Flicker, 1; Blue Jay, 3; Crow, 28; Starling, 290; Cowbird, 1 male; Red-winged Blackbird, 1 female; Meadowlark, 5; Goldfinch, 9; Pine Siskin, 29; White-throated Sparrow, 4; Tree Sparrow, 86; Junco, 29; Song Sparrow, 7; Brown Creeper, 3; White-breasted Nuthatch, 3; Black-capped Chickadee, 28. Total, 24 species, about 2,648 individuals.—GEORGE E. HIX, CLARK L. LEWIS and EDWARD G. NICHOLS.

New York City (Central Park).—Dec. 25; 9:30 A.M. to 12:45 P.M. Cloudy; ground partly snow-covered; wind southwest, brisk; temp. about 34°. Herring Gull, 500; Hairy Woodpecker, 1; Downy(?) Woodpecker, 1; Blue Jay, 1; American Crow, 1; Starling, 107; Junco, 2; American Goldfinch, 2; Red-breasted Nuthatch, 2; Black-capped Chickadee, 13; Robin, 1. Total, 10 species, about 631 individuals.—FARIDA A. WILEY, MRS. G. CLYDE FISHER and RUTH ANNA FISHER.

New York City (Staten Island: West New Brighton to Bulls Head to Great Kills via Richmond, to New Dorp to West New Brighton).—Dec. 25; 6:15 A.M. to 5:15 P.M. Cloudy at start, clearing; remains of old snow; wind westerly, fresh; temp. 28°, rising to above freezing. Holboell's Grebe, 3; Black-backed Gull, 1; Herring Gull, 300; Mourning Dove, 4; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Long-eared Owl, 8; Short-eared Owl, 1; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 11; Northern Flicker, 1; Horned Lark, 6; Blue Jay, 13; American Crow, 75; Fish Crow, 2; Starling, 56; Cowbird, 2; Meadowlark, 31; Purple Finch, 4; Redpoll, 15; Goldfinch, 15; Pine Siskin, 30; Savannah Sparrow, 3; White-throated Sparrow, 3; Tree Sparrow, 32; Field Sparrow, 1 (seen; in song); Slate-colored Junco, 67; Song Sparrow, 20; Swamp Sparrow, 1; Fox Sparrow, 2; Cardinal, 3; Myrtle Warbler, 10; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 2; Tufted Titmouse, 1; Black-capped Chickadee, 20; Hudsonian Chickadee, 2; Golden-crowned Kinglet, 5; Robin, 6. Total, 40 species, 774 individuals.—HAROLD K. DECKER.

New York City and Atlantic Ocean (from the Battery to Ambrose Lightship Bank and back).—Dec. 23; 8 A.M. to 3:40 P.M. Fine; wind northwest, strong (gale of 84 miles and more per hour last evening); 30° at 1 P.M. Black-backed Gull, 7; Herring Gull, 1,200; Bonaparte's Gull, 450; White-winged Scoter, 8; Starling, 1. Total, 5 species, about 1,670 individuals.—CHARLES H. ROGERS.

Northport, L. I., N. Y. (Northport, Eaton Neck, Centerport).—Dec. 27; 8 A.M. to 4:30 P.M. Rain all day, freezing in the morning; ground and trees ice-covered; wind light; temp. 32°. Observers together. Horned Grebe, 16; Herring Gull, 73; Red-breasted Merganser, 14; American Goldeneye, 104; Bufflehead, 16; Oldsquaw, 44; American Scoter, 13; White-winged Scoter, 33; Surf Scoter, 31; ducks sp., 200; Downy Woodpecker, 3; Blue Jay, 2; American Crow, 69; Starling, 2; Meadowlark, 5; Goldfinch, 2; Pine Siskin, 23; Tree Sparrow, 89; Junco, 31; Song Sparrow, 4; Myrtle Warbler, 24; Brown Creeper, 1; White-breasted Nuthatch, 1; Black-capped Chickadee, 5; Golden-crowned Kinglet, 2; Robin, 6. Total, 25 species, 813 individuals.—EDWARD FLEISCHER and HENRY L. OTTEN.

Poughkeepsie, N. Y. (Greenvale Farm and vicinity).—Dec. 23; 9 A.M. to 3:30 P.M. Sunny; 6 in. of crusty snow; wind southeast, brisk; temp. 30°. Cooper's Hawk, 1; Red-tailed Hawk, 3; Red-shouldered Hawk, 1; Broad-winged [?—Ed.] Hawk, 1; Sparrow Hawk.

1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 7; Crow, 500+; Starling, 18; Purple Finch, 5; White-winged Crossbill, 1 male (12 seen recently); Redpoll, 15+; Goldfinch, 7; White-throated Sparrow, 1; Tree Sparrow, 8; Junco, 14; Song Sparrow, 2; Brown Creeper, 3; White-breasted Nuthatch, 11; Black-capped Chickadee, 20; Hudsonian Chickadee, 3; Golden-crowned Kinglet, 3; Hermit Thrush, 1. Total, 24 species, 632 individuals.—GEORGE W. GRAY.

Rhinebeck, N. Y.—8 A.M. to 12:15 P.M.; 2:45 P.M. to 3:30 P.M. Stormy to clear; ground snow-covered; wind southeast to north, strong; temp. 33°. Ring-necked Pheasant, 9; Gray Partridge, 7; Red-tailed Hawk, 3; Barred Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 9; Starling, 12 (sings); Blue Jay, 17; Crow, 20; Purple Finch, 12; Redpoll, 10; Snow Bunting, 6; Tree Sparrow, 20; Junco, 50; Vesper Sparrow, 1 (carefully identified); White-throated Sparrow, 2 (sings); Brown Creeper, 1; White-breasted Nuthatch, 17; Red-breasted Nuthatch, 2; Chickadee, 48 (whistles); Hudsonian Chickadee, 5. Total, 21 species, 256 individuals.—MAUNSELL S. CROSBY.

Rochester, N. Y. (Highland, Durand-Eastman Parks and vicinities).—Dec. 23; 7 A.M. to 5 P.M. Fair; 1 ft. of snow; wind west, brisk; temp. 20°. Herring Gull, 36; Pheasant, 8; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Crow, 20; Redpoll, 40; Tree Sparrow, 35; Slate-colored Junco, 1; Song Sparrow, 6; Cardinal, 1; Brown Creeper, 4; White-breasted Nuthatch, 5; Red-breasted Nuthatch, 2; Chickadee, 20. Total, 15 species, 186 individuals.—WM. L. G. EDSON and R. E. HORSEY.

Rochester, N. Y. (Maplewood Park and Riverside).—Dec. 24; 9:30 A.M. to 1 P.M. Cloudy; a foot of snow; wind southwest veering to southeast, light; temp. 25°. Ring-necked Pheasant, 1; Sharp-shinned Hawk, 1; Downy Woodpecker, 3; Crow, 7; Bronzed Grackle, 3; White-breasted Nuthatch, 5. Total, 6 species, 20 individuals.—NETTIE SELLINGER PIERCE.

Syracuse, N. Y. (north of city near the lake) same route as in past five years.—Dec. 24; 9:45 A.M. to 3:30 P.M. Six in. of snow, lake partially frozen; wind west, very light; temp. 26°. Herring Gull, 9; Black Duck, 4; American Goldeneye, 17; Sparrow Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Crow, 25; Tree Sparrow, 18; Brown Creeper, 4; White-breasted Nuthatch, 4; Chickadee, 16. Total, 11 species, 105 individuals. Dec. 23; Snow Bunting, 75.—NETTIE M. SADLER and EMILIE GOULDING.

Camden, N. J., and vicinity.—Dec. 25; 9 to 10 A.M. and 12 M. to 4:30 P.M. Overcast at start, clearing at noon; wind northwest; temp. 40°. Herring Gull, 9; Black-crowned Night Heron, 1; Mourning Dove, 1; Marsh Hawk, 1; Red-tailed Hawk, 5; Sparrow Hawk, 2; Long-eared Owl, 1; Barn Owl, 1; Downy Woodpecker, 3; Blue Jay, 1; Crow, 150; Starling, 300; Red-winged Blackbird, 5; Meadowlark, 5; Pine Siskin, 26; White-throated Sparrow, 10; Tree Sparrow, 32; Slate-colored Junco, 50; Song Sparrow, 10; Cardinal, 5; Evening Grosbeak, 6; Brown Creeper, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 3; Chickadee, 3; Golden-crowned Kinglet, 4. Total, 26 species, 638 individuals. Evening Grosbeak note: Heard loud House Sparrow-like notes behind me. Turned and saw six rather large birds approaching. As they passed at the distance of 15 feet—sun at my back—noted heavy bills, yellow plumage and conspicuous white markings of the wings. Am sure the birds were Evening Grosbeaks.—JULIAN K. POTTER.

Englewood Region, N. J. (Leonia to Teaneck to Englewood; by car to Tenaflly; to Alpine to Englewood Ferry).—Dec. 23; 9:30 A.M. to 4:30 P.M. Clear; windy; temp. 25°, Black-backed Gull, 2; Herring Gull, 50; Red-breasted [American?—Ed.] Merganser, 12; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Duck Hawk, 2; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 12; American Crow, 12; Starling, common; Purple Finch, 2; Goldfinch, 50; White-throated Sparrow, 12; Tree Sparrow, 100; Junco, 50; Song Sparrow, 6; Fox Sparrow, 1; Cedar Waxwing, 3; Myrtle Warbler, 25; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Black-

capped Chickadee, 25; Hudsonian Chickadee, 1; Golden-crowned Kinglet, 2; Bluebird, 3. Total, 28 species, about 380 individuals + Starlings.—LESTER WALSH and GEORGE SCHOONHAVEN.

Englewood Region, N. J. (Marshes, Phelps Estate, West Englewood).—Dec. 23; 8:30 A.M. to 2:30 P.M. Clear; ground partly covered with ice and snow, marshes and creek frozen; wind west, strong; temp. 25°. Observers together. Herring Gull, 10; Red-tailed Hawk, 2; Rough-legged Hawk, 1; Sparrow Hawk, 2; Downy Woodpecker, 6; Blue Jay, 5; American Crow, 17; Starling, 76; Meadowlark, 8 (flock); Goldfinch, 4; Pine Siskin, 12; White-throated Sparrow, 7; Tree Sparrow, 56; Slate-colored Junco, 52; Song Sparrow, 5; Myrtle Warbler, 5; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 47; Golden-crowned Kinglet, 4. Total, 20 species, 325 individuals. (In the swampy woods south of the West Englewood station, I heard among the notes of a flock of Chickadees a call identical with that of the Hudsonian Chickadees observed by me recently on Staten Island. I was unable to locate the bird before it flew off and hesitate to record it definitely. I wish, however, to call attention to its probable presence. E. F.)—L. F. BOWDISH and EDWARD FLEISCHER.

Hackettstown, N. J.—Dec. 26; 7:50 A.M. to 12:20 P.M.; 1:15 to 4 P.M. Fair; ground mostly snow-covered; wind northeast, light; temp. 21°. English Pheasant, 6; Downy Woodpecker, 6; Blue Jay, 3; Crow, 7; Starling, 20; Purple Finch, 7; Goldfinch(?), 1; Tree Sparrow, 8; Junco, 38; Song Sparrow, 3; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 4; Chickadee, 17; Golden-crowned Kinglet, 2; Bluebird, 2. Total, 16 species, 128 individuals. Pine Siskins Nov. 19; Evening Grosbeaks Dec. 18.—MARY PIERSON ALLEN.

Moorestown, N. J.—Dec. 25; 7:45 A.M. to 12:45 P.M.; 4:15 to 5:30 P.M. Partly cloudy; chill; wind west, fresh; ground half snow-covered; temp. at start, 35°. G. H. H. was present only on the short walk in the afternoon with W. B. E. The longer walk was taken by the four other observers together. Herring Gull, 1; Turkey Vulture, 1; Marsh Hawk, 2; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 3; Downy Woodpecker, 8; Flicker, 4; Horned Lark, 50; Crow, 35; Starling, 58; Purple Finch, 3; Goldfinch, 24; White-throated Sparrow, 13; Tree Sparrow, 30; Junco, 72; Song Sparrow, 34; Cardinal, 5; Catbird, 1; Carolina Wren, 1; Winter Wren, 1; Brown Creeper, 2; Red-breasted Nuthatch, 1; Tufted Titmouse, 1; Robin, 1. Total, 25 species, 354 individuals.—ANNA A. MICKLE, ALICE C. DARNELL, M. ALBERT LINTON, GEORGE H. HALLETT, JR., and WILLIAM B. EVANS.

Moorestown, N. J.—Dec. 26; 6:43 A.M. to 5:57 P.M. Clear; ground half snow-covered; wind north-northwest, light; temp. at start, 22°. Great Blue Heron, 3; Turkey Vulture, 3; Red-tailed Hawk, 8; Red-shouldered Hawk, 2; Sparrow Hawk, 4; Kingfisher, 2; Hairy Woodpecker, 2; Downy Woodpecker, 13; Flicker, 9; Horned Lark, 110; Crow, 188; Starling, 144; Red-winged Blackbird, 1; Meadowlark, 5; Purple Finch, 3; White-winged Crossbill, 36; Goldfinch, 28; White-throated Sparrow, 20; Tree Sparrow, 147; Junco, 333; Song Sparrow, 83; Cardinal, 17; Carolina Wren, 2; Winter Wren, 3; Brown Creeper, 3; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Tufted Titmouse, 2; Chickadee, 2; Bluebird, 3. Total, 30 species, 1,179 individuals. The five flocks of chattering Crossbills (and scattered individuals) noted flying in a southwesterly direction, between the hours of 7:50 A.M. and 3:30 P.M. were presumably of the same species as the three birds watched at close range.—WILLIAM B. EVANS and GEORGE H. HALLETT, JR.

Norristown, N. J.—Dec. 25; 8 A.M. to 12 M. Fair; ground snow-covered; wind southwest to northwest, strong; temp. 31° to 36°. Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Blue Jay, 39; Crow, 30; Starling, 32; Purple Finch, 7; Goldfinch, 5; Redpoll, 12; White-throated Sparrow, 2; Tree Sparrow, 5; Junco, 56; Song Sparrow, 21; Brown Creeper, 1; White-breasted Nuthatch, 22; Tufted Titmouse, 3; Black-capped

Chickadee, 52; Golden-crowned Kinglet, 12. Total, 18 species, 308 individuals.—R. C. CASKEY.

Mt. Holly, N. J.—Dec. 24; 8 A.M. to 4 P.M. Clear; no wind; about 3 in. of snow; temp. 22°. English Pheasant, 1; Turkey Vulture, 11; Sharp-shinned Hawk, 1; Broad-winged [?—Ed.] Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 32; Crow, 650; Starling, 6; Evening Grosbeak, 2; Goldfinch, 46; Pine Siskin, 3; White-throated Sparrow, 7; Tree Sparrow, 9; Field Sparrow, 4; Slate-colored Junco, 108; Song Sparrow, 5; Swamp Sparrow, 1; Cardinal, 7; Myrtle Warbler, 2; Carolina Wren, 1; Brown Creeper, 10; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 3; Tufted Titmouse, 13; Chickadee, 21; Golden-crowned Kinglet, 8. Total, 30 species, 960 individuals. Ten Red Crossbills seen Dec. 3, feeding on pine cones in our graveyard.—MR. and MRS. NELSON, and D. W. PUMYEA.

Plainfield, N. J. (to Washington Valley beyond Scotch Plains).—Dec. 25; 7 A.M. to 6 P.M. Partly cloudy; 4 in. of snow; temp. 35.5°. Ruffed Grouse, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 16; Blue Jay, 20; American Crow, 18; Starling, 75; Evening Grosbeak, 1 female; Purple Finch, 12 (flock); Redpoll, 120; Goldfinch, 60; White-throated Sparrow, 2; Tree Sparrow, 36; Junco, 32; Song Sparrow, 9; Swamp Sparrow, 1; Cardinal, 2 (a pair); Myrtle Warbler, 32; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 7; Tufted Titmouse, 4; Black-capped Chickadee, 22; Hudsonian Chickadee, 1; Golden-crowned Kinglet, 9; Robin, 4; Bluebird, 10. Total, 28 species, 502 individuals. Tracks of Ring-necked Pheasants were seen in two or three places and a Great Horned Owl which had evidently but recently succumbed to an injury was found clinging to a branch of an oak in the woods. The Evening Grosbeak and Hudsonian Chickadee were first seen, in the same spot, on Dec. 17, when a pair of the former and two individuals of the latter were observed. This is the first New Jersey record of the Hudsonian Chickadee, but it is uncertain whether the birds belong to the typical form or to some other subspecies.—W. DE W. MILLER.

Princeton, N. J. (to Harlingen, Sourland Mountains, Blawenburg and return). Distance, 27 miles.—Dec. 21; 8:45 A.M. to 4:30 P.M. Cloudy, foggy through A.M. and late P.M.; 5 to 15 in. of soft, slushy snow; wind north, light; temp. 38°. Ring-necked Pheasant, 2; Marsh Hawk, 1; Sparrow Hawk, 2; Downy Woodpecker, 9; Horned Lark subsp., 25; Blue Jay, 3; Crow, 300; Starling, 450; Meadowlark, 9; Purple Finch, 9; Goldfinch, 25; Redpoll, 7; Tree Sparrow, 120; Junco, 200; Song Sparrow, 6; Cardinal, 1; chickadee sp., 8; White-breasted Nuthatch, 1. Total, 18 species, 1,178 individuals. Dec. 13, from window: White-winged Crossbill, 2; Ruby-crowned Kinglet, 1. Dec. 26, Evening Grosbeak, 1 male.—HAROLD R. WANLESS.

Vineland, N. J. (six miles northeast of Vineland).—Dec. 25; 10 A.M. to 4:20 P.M. Cloudy in forenoon, clear in afternoon; ground bare in fields, snow patches in woods; wind brisk; temp. 40°. Red-tailed Hawk, 1; Downy Woodpecker, 1; Crow, 4; Starling(?) flock of 100+; Tree Sparrow, 7; Song Sparrow, 2; Junco, 130. Total, 7 species, about 245 individuals.—WM. W. FAIR.

Lititz, Pa. (northern Lancaster County, Valley of the Hammer Creek).—Dec. 23; 8 A.M. to 5 P.M. Clear; no wind; 5 in. of snow; temp. 25°. Bob-white, 8 coveys, 88 birds; Goshawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Pigeon Hawk, (identified at close range, unusual in this region); Screech Owl, 1; Turkey Vulture, 4; Downy Woodpecker, 6; Yellow-bellied Sapsucker, 1; Flicker, 2; Blue Jay, 3; Crow, 2,000; Meadowlark, 1; Redpoll, 22; Slate-colored Junco, 60; Song Sparrow, 14; Tree Sparrow, 25; Cardinal, 2; Shrike, 1; Winter Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 7; Black-capped Chickadee, 5; Golden-crowned Kinglet, 5; Robin, 1. Total, 26 species, 255 individuals (exclusive of Crows).—HERBERT H. BECK and ABRAHAM BECK MILLER.

McKeesport, Pa.—Dec. 23, 1916; 7:15 A.M. to 5:30 P.M. Extremely clear; light snow in places; wind southeast, light; temp. 20° to 32°. Distance, 16 miles. Observers together except for 3 hours; covered same ground. Hairy Woodpecker, 1; Downy Woodpecker, 4; Crow, 1,500 flying overhead (about 20,000 around roost, of which many could be seen in the distance); Purple Finch, 2; Goldfinch, 1; Tree Sparrow, 70; Junco, 43; Song Sparrow, 15; Cardinal, 22; Carolina Wren (heard singing), 1; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 4; Tufted Titmouse, 5; Chickadee, 12; Robin, 2. Total, 16 species, 185 individuals (exclusive of thousands of Crows).—THOS. L. MCCONNELL and L. F. SAVAGE.

Philadelphia, Pa. (Fairmount Park).—Dec. 24; 9 A.M. to 1 P.M. Clear, light clouds; inch of snow, but many bare spots; wind southeast; temp. 30° to 40°. Herring Gull, 25; American Merganser, 50; Broad-winged [?—Ed.] Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 4; Flicker, 1; Crow, 20; Starling, 7; White-throated Sparrow, 45; Tree Sparrow, 1; Junco, 55; Song Sparrow, 12; Cardinal, 38; Carolina Wren, 4; Chickadee, 2; Golden-crowned Kinglet, 2. Total, 16 species, 269 individuals.—RICHARD M. PEARCE and WILLIAM PEPPER.

Philadelphia, Pa. (Wynnefield to Woodside, in Fairmount Park).—Dec. 25; 8:30 A.M. to 12:30 P.M. Cloudy; considerable snow in sheltered spots; wind northwest, brisk; temp. 36°. Sparrow Hawk, 1; Downy Woodpecker, 3; Crow, 10; Starling, 30; White-throated Sparrow, 15; Junco, 6; Song Sparrow, 18; Cardinal, 9; Carolina Wren, 1; Chickadee, 9. Total, 10 species, 102 individuals.—J. WILSON CORRISTON.

Pittsburgh, Pa.—Dec. 28; 10:45 A.M. to 4:30 P.M. Clear; ground almost bare; wind east, light; temp. 35°. Distance covered, 15 miles. Cooper's Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Crow, 600; Tree Sparrow, 35; Junco, 40; Song Sparrow, 12; Cardinal, 9; Winter Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 8; Chickadee, 15. Total, 13 species, 732 individuals.—THOS. D. BURLEIGH and ALBERT D. MCGREW.

Reading, Pa.—Dec. 25; 7:15 A.M. to 4 P.M. Partly cloudy to clear; 3 in. of snow; high west wind; temp. 30° to 40°. Observers together. Screech Owl, 1; Kingfisher, 1; Downy Woodpecker, 6; Blue Jay, 1; Crow, 20; Meadowlark, 4; Goldfinch, 40; Pine Siskin, 1; White-throated Sparrow, 4; Tree Sparrow, 65; Field Sparrow, 3; Junco, 85; Song Sparrow, 15; Cardinal, 6; Winter Wren, 2; White-breasted Nuthatch, 5; Chickadee, 25; Bluebird, 2. Total, 18 species, 285 individuals. A flock of 6 Red Crossbills on Dec. 10.—MR. and MRS. G. HENRY MENGEL.

Reading, Pa.—Dec. 24; 9 A.M. to 2:30 P.M. Partly cloudy; 3 in. of snow; wind north to northeast; temp. 28°. Sparrow Hawk, 1; Downy Woodpecker, 5; Blue Jay, 3; Crow, 10; Goldfinch, 8; Tree Sparrow, 42; Junco, 35; Song Sparrow, 11; Cardinal, 1; nuthatch sp., 2; Chickadee, 7. Total, 11 species, 125 individuals. I wish to report seeing (in company with Mr. and Mrs. G. Henry Mengel) a flock of 6 Red Crossbills in the vicinity of Reading on December 10.—ANNA P. and MARY E. DEETER.

Springs, Pa.—Dec. 26; 10 A.M. to 1 P.M. Partly cloudy; wind south, light; 3 in. of snow; temp. 32° to 42°. Ruffed Grouse, 1; Great Horned Owl, 1 (5 A.M.); Hairy Woodpecker, 1; Downy Woodpecker, 6; Pine Siskin, 15; Goldfinch, 1; Tree Sparrow, 1; Junco, 12; Song Sparrow, 1; Cardinal, 1; White-breasted Nuthatch, 5; Black-capped Chickadee, 4; Winter Wren, 1. Total, 13 species, 50 individuals.—ANSEL B. MILLER.

West Chester, Pa.—9:30 A.M. to 5 P.M. Cloudy two hours, remainder clear; several inches of snow, but many bare spots; wind west, brisk; temp. 36°. Turkey Vulture, 6; Goshawk, 2; Red-tailed Hawk, 5; Red-shouldered Hawk, 5; Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 10; American Crow, 1,630 (afternoon flight to great roost); Starling, 76; Redpoll, 70; Goldfinch, 15; White-throated Sparrow, 2; Tree Sparrow, 3; Junco, 105; Song Sparrow, 45; Cardinal, 9; Pipit, 30; Brown Creeper, 1; Mockingbird, 1; White-breasted Nuthatch, 5. Total, 20 species, 2,022 individuals.—C. E. EHINGER.

Williamsport, Pa.—Dec. 27; 9 A.M. to 4 P.M. Cloudy and sleety; temp. 32° at 8 A.M.; no wind; 5 in. of snow. Distance covered, 9 miles. The two of us covered the same territory. American Merganser, 6; Black Duck, 7; Hawk (Sharp-shinned?), 1; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 13; Crow, 20; Tree Sparrow, 30; Slate-colored Junco, 20; Song Sparrow, 2; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 12; Tufted Titmouse, 5; Chickadee, 9; Golden-crowned Kinglet, 6; Bluebird, 4. Total, 17 species, 142 individuals.—JOHN P. and CHAS. V. P. YOUNG.

Wyncote and Glenside, Pa. (to and through the old Baeder Property and return—about 5 miles).—Dec. 24; 8 A.M. to 2 P.M. Fair; ground snow-covered; no wind; temp. 20° to 32°. Hawk sp., 2; Sparrow Hawk, 2; Downy Woodpecker, 6; Flicker, 2; Crow, 16; Starling, 30; Purple Finch, 4; Goldfinch, 4; White-throated Sparrow, 16; Slate-colored Junco, 60; Song Sparrow, 15; Cardinal, 8; Winter Wren, 2; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 3; Golden-crowned Kinglet, 5. Total, 16 species, 179 individuals.—(MRS. W. B.) JANE G. NOBLE and ESTHER HEACOCK, of the Wyncote (Pa.) Bird Club.

Chevy Chase, Md. (from Chevy Chase Village to Rock Creek, northeast and from the Village to Chevy Chase Lake).—Dec. 26; 8 to 10 A.M. and 2 to 4 P.M. Clear and still; temp. 24° to 28°. Turkey Vulture, 10; Red-shouldered Hawk, 2; Screech Owl, 2; Yellow-bellied Sapsucker, 3; Flicker, 2; Hairy Woodpecker, 1; Downy Woodpecker, 8; Red-headed Woodpecker, 11; Blue Jay, 21; American Crow, 30; Fish Crow, 2; Purple Finch, 8; Goldfinch, 6; White-throated Sparrow, 16; Tree Sparrow, 14; Junco, 80; Song Sparrow, 22; Cardinal, 27; Mockingbird, 4; Carolina Wren, 4; White-breasted Nuthatch, 10; Red-breasted Nuthatch, 2; Tufted Titmouse, 9; Carolina Chickadee, 2; Black-capped Chickadee, 6 (flock 1 mile north of District Line, on Rock Creek); Golden-crowned Kinglet, 2; Bluebird, 19. Total, 27 species, 324 individuals.—S. W. MELLOTT, M.D.

Berwyn, Md., to Anacostia, D.C.—Dec. 23; 8:30 A.M. to 5 P.M. Clear; ground partly snow-covered; wind light, southerly; temp. 27° to 44°. Herring Gull, 1; Canvasback, 1; Turkey Vulture, 29; Marsh Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 3; Red-shouldered Hawk, 4; Southern Downy Woodpecker, 9; Yellow-bellied Sapsucker, 2; Red-headed Woodpecker, 15; Red-bellied Woodpecker, 1; Flicker, 3; Blue Jay, 35; Crow, 3,000; Fish Crow, 8; Red-winged Blackbird, 3; Meadowlark, 10; Purple Grackle, 1; Purple Finch, 2; Goldfinch, 7; White-throated Sparrow, 60; Tree Sparrow, 127; Junco, 305; Song Sparrow, 93; Fox Sparrow, 5; Cardinal, 28; Migrant Shrike, 1; Carolina Wren, 8; Brown Creeper, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 16; Carolina Chickadee, 8; Golden-crowned Kinglet, 7. Total, 33 species, 3,796 individuals. Bluebirds were heard passing overhead on two occasions but were not seen.—IRA N. GABRIELSON and E. R. KALMBACH.

Washington, D. C. (Woodridge, D. C., to Contee, Md., thence to Bowie, Md.).—Dec. 25; 7:30 A.M. to 4 P.M. Partly cloudy; ground partly bare of snow; wind, northwest; temp. low, rising but little above freezing. Observers together. Bob-white, 37; Turkey Vulture, 19; Sharp-shinned Hawk, 1; Cooper's Hawk, 3; Broad-winged Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Yellow-bellied Sapsucker, 3; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 2; Flicker, 8; Blue Jay, 40; Crow, 1,000; Meadowlark, 2; White-winged Crossbill, 23; Goldfinch, 40; Pine Siskin, 1; English Sparrow, 50; White-throated Sparrow, 45; Tree Sparrow, 10; Slate-colored Junco, 65; Song Sparrow, 5; Cardinal, 11; Myrtle Warbler, 3; Mockingbird, 1; Carolina Wren, 3; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 5; Tufted Titmouse, 7; Carolina Chickadee, 6; Golden-crowned Kinglet, 12; Bluebird, 11. Total, 34 species, 1,423 individuals.—DOUGLAS C. MABBOTT and ERNEST G. HOLT.

Washington, D. C.—Dec. 23; 10 A.M. to 2:30 P.M. Clear; ground partly snow-covered; wind northwest, light; temp. 34°. Bob-white, 10; Turkey Vulture, 11; Hairy

Woodpecker, 1; Red-headed Woodpecker, 4; Flicker, 3; Blue Jay, 8; Crow, 1,000; Goldfinch, 3; White-throated Sparrow, 50; Song Sparrow, 5; Towhee, 1; Mockingbird, 1; Carolina Wren, 3; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 3; Carolina Chickadee, 4. Total, 18 species, about 1,140 individuals.—WALTER DOANE.

Washington, D. C. (Roslyn to Four-mile Run, and Oaks to Wellington, Va.).—8 A.M. to 5:30 P.M. Rain all day; calm; temp. 32° to 40°. Herring Gull, 13; Black Duck, 3; Marsh Hawk, 3; Red-tailed Hawk, 2; Barred Owl, 5; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Red-headed Woodpecker, 3; Red-bellied Woodpecker, 2; Flicker, 4; Blue Jay, 9; Crow, 208; Fish Crow, 3; Starling, 20; Meadowlark, 5; Rusty Blackbird, 1; Crow Blackbird, 9; Purple Finch, 3; White-winged Crossbill (collected). 21; Goldfinch, 1; White-throated Sparrow, 79; Field Sparrow, 2; Tree Sparrow, 23; Junco, 160; Song Sparrow, 37; Swamp Sparrow, 5; Cardinal, 10; Myrtle Warbler, 1; Mockingbird, 4; Carolina Wren, 8; Brown Creeper, 3; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 2; Tufted Titmouse, 7; Carolina Chickadee, 7; Golden-crowned Kinglet, 19; Ruby-crowned Kinglet, 2; Bluebird, 20. Total, 39 species, 717 individuals.—A. K. FISHER, W. L. MCATEE, E. A. PREBLE and ALEX. WETMORE.

Washington, D. C. (to Arlington, Va.; Dyke, Va.).—Dec. 24; 9 A.M. to 3:30 P.M. Partly overcast; raw, southerly winds; temp. 40°. Distance 8 miles. Herring Gull, 20; Ring-billed Gull, 2; Lesser Scaup, 1; Canada Goose, 25; Bob-white, 20; Turkey Vulture, 12; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Broad-winged Hawk, 1; Bald Eagle, 1; Sparrow Hawk, 2; Kingfisher, 6; Hairy Woodpecker, 1; Downy Woodpecker, 12; Yellow-bellied Sapsucker, 1; Red-headed Woodpecker, 18; Flicker, 10; Horned Lark, 34; Blue Jay, 3; American Crow, 500; Fish Crow, 3; Red-winged Blackbird, 7; Meadowlark, 2; Rusty Blackbird, 1; Purple Grackle, 6; Purple Finch, 20; Goldfinch, 3; Snow Bunting, 1 (third record in thirty years); White-throated Sparrow, 50; Tree Sparrow, 50; Junco, 100; Song Sparrow, 10; Cardinal, 18; Mockingbird, 3; Carolina Wren, 20; Winter Wren, 2; Brown Creeper, 5; White-breasted Nuthatch, 7; Tufted Titmouse, 10; Carolina Chickadee, 20; Golden-crowned Kinglet, 15; Hermit Thrush, 1; Bluebird, 12. Total, 44 species, 1,039 individuals.—MR. and MRS. LEO D. MINER and RAYMOND W. MOORE.

Dyke, Va. (near Washington, D. C.).—Dec. 31; 11 A.M. to 4 P.M. Clear and raw; ground bare; practically no wind; temp. 25°. Distance 5 miles, through pine woods and old pine fields almost exclusively. Species seen elsewhere, in italics. *Herring Gull*, 12; *Bob-white*, 1; *Turkey Vulture*, 8; Red-shouldered Hawk, 1; *Broad-winged Hawk*, 1; *Sparrow Hawk*, 1; *Kingfisher*, 1; Downy Woodpecker, 5; *Red-headed Woodpecker*, 2; Blue Jay, 8; Crow, 25; *Red-winged Blackbird*, 8; Purple Finch, 12; White-winged Crossbill, 2; Goldfinch, 3; *White-throated Sparrow*, 15; Tree Sparrow, 30; Junco, 30; Song Sparrow, 10; Cardinal, 2; Myrtle Warbler, 1; Carolina Wren, 4; Winter Wren, 2; Brown Creeper, 15; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 40; Tufted Titmouse, 18; Carolina Chickadee, 15; Golden-crowned Kinglet, 50; Ruby-crowned Kinglet, 3; Hermit Thrush, 1; Bluebird, 4. Total, 32 species (individuals of 23 species seen in pines), 326 individuals.—MRS. EDGAR W. MOORE, CLARENCE R. SHOEMAKER, MR. and MRS. LEO D. MINER, and RAYMOND W. MOORE.

Four-Mile Run and New Alexandria, Va. (across from Washington, D. C.).—Dec. 23; 7:30 A.M. to 4:30 P.M. Clear; temp. at 8 A.M., 27°. Distance covered, 6 miles. Herring Gull, 85; Mallard, 3 (males); Black Duck, 170 (doubtless including some female Mallards); Bufflehead, 1; Great Blue Heron, 2; Killdeer, 1; Turkey Vulture, 10; Marsh Hawk, 3; Sparrow Hawk, 1; Screech Owl, 2 (in Washington); Hairy Woodpecker, 2; Downy Woodpecker, 1; Northern Flicker, 3; Blue Jay, 7; American Crow, 500; Fish Crow, 1; Meadowlark, 7; Rusty Blackbird, 4; Purple Finch, 5; White-winged Crossbill, 2 (excellent view); Goldfinch, 12; White-throated Sparrow, 3; Tree Sparrow, 200; Slate-colored Junco, 150; Song Sparrow, 50; Swamp Sparrow, 2; Towhee, 1; Cardinal,

20; Migrant Shrike, 1; American Pipit, 1^a (a familiar bird to me; identification certain); Mockingbird, 5; Carolina Wren, 4; Brown Creeper, 1; Red-breasted Nuthatch, 12; Tufted Titmouse, 9; Carolina Chickadee, 8; Golden-crowned Kinglet, 8; Bluebird, 2. Total, 38 species, 1,299 individuals.—J. P. YOUNG.

Herndon, Va.—Dec. 25; 8 A.M. to 2 P.M. Clear; ground partly snow-covered; wind west, light; temp. 39°. Bob-white, 10; (Turkey?) Vulture, 9; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-headed Woodpecker, 3; Flicker, 5; Blue Jay, 14; Crow, 21; Meadowlark, 6; grackle sp., 4; Goldfinch, 4; White-throated Sparrow, 7; Tree Sparrow, 3; Junco, 43; Song Sparrow, 7; Cardinal, 6; Cedar Waxwing, 5; Mockingbird, 3; Winter Wren, 1; Brown Creeper, 3; nuthatch sp., 11; Tufted Titmouse, 3; chickadee sp., 12; Bluebird, 7. Total, 24 species, 193 individuals.—PEARL M. BEARD.

Charleston, Kanawha Co., W. Va.—Dec. 24; 8:30 A.M. to 12:30 P.M. Partly cloudy; ground almost clear on south side of hills, north side snow-covered; temp. 29° to 49°. Bob-white, 22; Hairy Woodpecker, 4; Downy Woodpecker, 2; Yellow-bellied Sapsucker, 1; Red-headed Woodpecker, 2; Northern Flicker, 8; American Crow, 1; Goldfinch, 4; White-throated Sparrow, 3; Tree Sparrow, 16; Field Sparrow, 97; Junco, 83; Song Sparrow, 23; Towhee, 14; Cardinal, 44; Catbird, 1 (very rare here in winter, but one stayed last year till January; the one here now came about Dec. 1); Carolina Wren, 19; White-breasted Nuthatch, 8; Tufted Titmouse, 33; Black-capped Chickadee, 12; Robin, 2; Bluebird, 4. Total, 22 species, 403 individuals.—PHILLIP CRAWFER and I. H. JOHNSTON.

Lewisburg, W. Va.—Dec. 26; 8 A.M. to 4:30 P.M. Cloudy; snow on north and west hillsides; wind east, light; temp. 25°. Bob-white, 16; Mourning Dove, 1; Turkey Vulture, 19; Cooper's Hawk, 1; Red-tailed Hawk, 2; Barred Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 17; Pileated Woodpecker, 3; Red-headed Woodpecker (immature), 1; Red-bellied Woodpecker, 11; Flicker, 7; Blue Jay, 29; American Crow, 35; Meadowlark, 12; Purple Finch, 16; Goldfinch, 25; Tree Sparrow, 126; Slate-colored Junco, 294; Song Sparrow, 2; Cardinal, 20; Mockingbird, 1; Carolina Wren, 6; Brown Creeper, 1; White-breasted Nuthatch, 24; Tufted Titmouse, 23; Golden-crowned Kinglet, 7; Bluebird, 9. Total, 28 species, 712 individuals.—CHARLES O. HANDLEY, HARRY E. HANDLEY and PROF. H. C. BAILEY.

White Sulphur Springs, W. Va.—Dec. 25; 11 A.M. to 5:15 P.M. Fine; wind west, light; ground partly snow covered; altitude 1,900 to 2,400 ft.; temp. 38° to 46°. Ruffed Grouse, 3; Turkey Vulture, 1; Cooper's Hawk, 1; Red-shouldered Hawk, 2; Barred Owl, 1; Downy Woodpecker, 6; Yellow-bellied Sapsucker, 1; Blue Jay, 3; Crow, 5; Tree Sparrow, 5; Junco, 150; Cardinal, 2; Brown Creeper, 3; Tufted Titmouse, 2; Black-capped Chickadee, 7; White-breasted Nuthatch, 9; Red-breasted Nuthatch, 3; Golden-crowned Kinglet, 17; Bluebird, 12. Total, 19 species, 233 individuals.—MR. and MRS. STANLEY V. LADOW.

Currituck Sound, N. C.—Dec. 31; dawn until dark. Clear; wind north, fresh; temp. 30° to 38°. Country visited: Monkey Island, Waterlily Island, the Sound, marshes, and beach, live oak and pine woods, cotton and corn fields. Observers together. Holboell's Grebe, 2; Horned Grebe, 6; Pied-billed Grebe, 1; Herring Gull, 10; Bonaparte's Gull, 18; Hooded Merganser, 24; Mallard, 15; Black Duck, 150; Baldpate, 75; Pintail, 2,000; Redhead, 6,000; Canvasback, 4,500; scaup sp., 4; American Goldeneye, 6; Oldsquaw, 3; Ruddy Duck, 1,500; Canada Goose, 4,000; Whistling Swan, 2,000; Great Blue Heron, 4; Coot, 2,500; Wilson's Snipe, 15; Killdeer, 5; Turkey Vulture, 2; Marsh Hawk, 4; Bald Eagle, 5; Sparrow Hawk, 1; Screech Owl, 2; Kingfisher, 4; Southern Hairy Woodpecker, 1; Red-cockaded Woodpecker, 6; Flicker, 4; American Crow, 55; Fish Crow, 12; Red-winged Blackbird, 125; Meadowlark, 100; Boat-tailed Grackle, 15; Purple Finch, 2; Redpoll, 2 (very tame; observed for as long and at as close range as we wished. The A.O.U. check-list gives this species south only to Virginia.); Ipswich

Sparrow, 2; Savannah Sparrow, 30; Sharp-tailed Sparrow, 1; Chipping Sparrow, 1; Field Sparrow, 12; White-throated Sparrow, 3; Song Sparrow, 41; Swamp Sparrow, 13; Fox Sparrow, 6; Cardinal, 8; Orange-crowned Warbler, 1; Myrtle Warbler, 66; Pine Warbler, 1; Pipit, 2; Mockingbird, 5; Catbird, 1; Carolina Wren, 5; Winter Wren, 1; Long-billed Marsh Wren, 2; Brown Creeper, 1; Brown-headed Nuthatch, 25; Carolina Chickadee, 6; Golden-crowned Kinglet, 7; Blue-gray Gnatcatcher, 1 (most northern winter record). Total, 62 species, 23,565 individuals. Seen also the day before or the day after the census: Loon, 1; Red-breasted Merganser, 75; Black Vulture, 5; Downy Woodpecker, 1; Red-bellied Woodpecker, 1; Goldfinch, 100; Pine Siskin, 18; Junco, 20; Towhee, 4; Cedar Waxwing, 1; House Wren, 1; Brown Thrasher, 2; Tufted Titmouse, 10; Ruby-crowned Kinglet, 3; Hermit Thrush, 2; Robin, 10, making a grand total of 78 species.—J. M. JOHNSON, J. T. NICHOLS and LUDLOW GRISCOM.

Lexington, N. C.—Dec. 26; 9:30 A.M. to 5 P.M. Cloudy with a little rain; ground bare, frost in some places; wind north to northeast, moderate; temp. 37° to 46°. Bob-white, 26; Turkey Vulture, 17; Red-shouldered(?) Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 2; Yellow-bellied Sapsucker, 1; Northern Flicker, 2; Phoebe, 2; Blue Jay, 2; Crow, 17; Meadowlark, 18; Purple Finch, 20; Goldfinch, 5; White-throated Sparrow, 34; Field Sparrow, 51; Slate-colored Junco, 139; Song Sparrow, 27; Fox Sparrow, 1; Towhee, 1; Cardinal, 26; Cedar Waxwing, 17; Myrtle Warbler, 1; Carolina Wren, 18; Winter Wren, 2; Tufted Titmouse, 2; Carolina Chickadee, 12; Golden-crowned Kinglet, 3; Hermit Thrush, 3; Bluebird, 61. Total, 29 species, 512 individuals: The identification of the Phoebe was solely by its note; but I have seen this species hereabout on Oct. 30 and Feb. 17, so it very probably winters.—THEODORE ANDREWS.

Louisburg, N. C.—Dec. 25. Clear; ground bare; wind light. Bob-white, 1; Turkey Vulture, 4; Black Vulture, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Red-headed Woodpecker, 2; Flicker, 2; Phoebe, 2; Blue Jay, 1; Crow, 4; Red Crossbill, 2; Goldfinch, 1; White-throated Sparrow, 25; Chipping Sparrow, 6; Field Sparrow, 6; Slate-colored Junco, 250; Song Sparrow, 15; Cardinal, 1; Mockingbird, 1; Carolina Wren, 4; Brown-headed Nuthatch, 6; Tufted Titmouse, 4; Chickadee, 10; Golden-crowned Kinglet, 10; Ruby-crowned Kinglet, 1. Total, 25 species, 358 individuals.—CLIFTON and ROBERT ASHBY and JOSEPH C. JONES.

Raleigh, N. C.—Dec. 23; 7 A.M. to 1 P.M. Clear; ground bare; wind southwest, very light; temp. 28°. Great Blue Heron, 1; Killdeer, 1; Turkey Vulture, 25; Marsh Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Southern Hairy Woodpecker, 1; Red-headed Woodpecker, 2; Flicker, 1; Phoebe, 1; Crow, 5; Red-winged Blackbird, 100; Meadowlark, 10; Purple Grackle, 1; Purple Finch, 5; Goldfinch, 6; White-throated Sparrow, 100; Field Sparrow, 6; Slate-colored Junco, 20; Song Sparrow, 150; Fox Sparrow, 50; Cardinal, 12; Carolina Wren, 6; Brown Creeper, 2; Red-breasted Nuthatch, 6; Tufted Titmouse, 2; Carolina Chickadee, 12; Golden-crowned Kinglet, 25; Ruby-crowned Kinglet, 1; Hermit Thrush, 3; Robin, 2. Total, 32 species, 561 individuals.—C. S. BRIMLEY and EDWARD BRIMLEY.

Columbia, S. C.—Dec. 25; 10 A.M. to 4 P.M. Cloudy and damp; ground bare; no wind; temp. 45°. Yellow-bellied Sapsucker, 1; Red-headed Woodpecker, 3; Flicker, 2; Meadowlark, 25; Goldfinch, 6; Vesper Sparrow, 4; White-throated Sparrow, 10; Chipping Sparrow, 1; Field Sparrow, 22; Junco, 100; Loggerhead Shrike, 3; Myrtle Warbler, 2; Palm Warbler, 6; Mockingbird, 8; Brown Thrasher, 6; Carolina Wren, 8; Golden-crowned Kinglet, 2; Ruby-crowned Kinglet, 1; Hermit Thrush, 1; Bluebird, 22. Total, 20 species, 233 individuals.—ALEX. R. TAYLOR and MARY E. CARR.

Monetta, S. C.—Dec. 25; 9 A.M. to 1 P.M. Cloudy; wind slight; temp. 50°. Dove, 100; Turkey Vulture, 2; Black Vulture, 12; Sparrow Hawk, 1; Southern Downy Woodpecker, 1; Yellow-bellied Sapsucker, 1; Southern Flicker, 4; Phoebe, 2; Blue Jay, 8; Red-winged Blackbird, 75; Meadowlark, 60; Goldfinch, 10; White-throated Sparrow,

24; Slate-colored Junco, 60; Song Sparrow, 12; Towhee, 1; Cardinal, 2; Cedar Waxwing, 15; Loggerhead Shrike, 3; Mockingbird, 6; Brown Thrasher, 2; Carolina Wren, 4; Ruby-crowned Kinglet, 2; Robin, 12; Bluebird, 30. Total, 24 species, 450 individuals.—BELLE WILLIAMS.

Spartanburg, S. C.—Dec. 26; 9 A.M. to 1 P.M. Cloudy; ground bare; wind northeast, light; temp. 37°. Bob-white, 8; Mourning Dove, 30 (1 flock); Turkey Vulture, 3; Red-tailed Hawk, 1; Sparrow Hawk, 1; Southern Downy Woodpecker, 2; Red-headed Woodpecker, 2; Flicker, 6; Phoebe, 3; Blue Jay, 30; American Crow, 4; Meadowlark, 23; Purple Grackle, 16; Purple Finch, 37; Goldfinch, 39; White-throated Sparrow, 17; Field Sparrow, 18; Slate-colored Junco, 127; Song Sparrow, 14; Towhee, 9; Cardinal, 21; Loggerhead Shrike, 1; Myrtle Warbler, 8; Pine Warbler, 2 (1 singing); Mockingbird, 3; Brown Thrasher, 1 (unusual); Carolina Wren, 9; Red-breasted Nuthatch, 5; Tufted Titmouse, 1; Carolina Chickadee, 13; Golden-crowned Kinglet, 19; Hermit Thrush, 9; Robin, 1; Bluebird, 9. Total, 34 species, 492 individuals.—GABRIEL CANNON.

Atlanta, Ga. (Piedmont Park, Collier's Woods, South River and Proctor Creek).—Dec. 24; 6 A.M. to 6 P.M. Cloudy; wind east; temp. 40° to 50°. Observers together from 10 A.M. till noon, following different routes the rest of the day. Pied-billed Grebe, 1; Mallard, 1; Ring-necked Duck, 1; Green Heron, 1; Wilson's Snipe, 25; Killdeer, 30; Mourning Dove, 9; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 7; Hairy Woodpecker, 4; Downy Woodpecker, 10; Yellow-bellied Sapsucker, 10; Pileated Woodpecker, 1; Red-headed Woodpecker, 8; Red-bellied Woodpecker, 2; Flicker, 30; Phoebe, 6; Blue Jay, 50; Crow, 15; Red-winged Blackbird, 500; Meadowlark, 100; Purple Grackle, 10; Purple Finch, 24; Goldfinch, 200; Vesper Sparrow, 4; Savannah Sparrow, 10; White-throated Sparrow, 150; Chipping Sparrow, 6; Field Sparrow (1 partial albino), 125; Junco, 200; Song Sparrow, 60; Swamp Sparrow, 30; Fox Sparrow, 8; Towhee, 50; Cardinal, 30; Cedar Waxwing, 20; Loggerhead Shrike, 2; Myrtle Warbler, 7; Pine Warbler, 6; Maryland Yellowthroat, 2; American Pipit, 50; Mockingbird, 10; Brown Thrasher, 1; Carolina Wren, 20; Bewick's Wren, 1; House Wren, 2; Winter Wren, 10; Brown Creeper, 6; White-breasted Nuthatch, 6; Brown-headed Nuthatch, 2; Tufted Titmouse, 10; Carolina Chickadee, 18; Golden-crowned Kinglet, 10; Ruby-crowned Kinglet, 10; Hermit Thrush, 8; Robin, 2; Bluebird, 20. Total, 64 species, about 1,985 individuals.—JAMES M. SANFORD and W. E. HANNUM.

Okefinokee Swamp, Ga.—Dec. 27; 5:40 A.M. to 11 P.M. Misty rain in early morning, rest of day clear; practically no wind; temp. about 55°. Territory covered: Billy's Island to Dinner Pond Lake, about 15 miles by boat through a cypress swamp. Water-Turkey, 2; Black Duck, 3; Wood Duck, 10; Ward's Heron, 4 (1 collected); American Egret, 1; Sandhill Crane, 2; Wilson's Snipe, 20; Killdeer, 3; Bob-white, 2; Mourning Dove, 12; Turkey Vulture, 12; Florida Red-shouldered Hawk, 4; Sparrow Hawk, 1; Florida Barred Owl, 8; Kingfisher, 1; Southern Hairy Woodpecker, 2; Pileated Woodpecker, 10; Red-bellied Woodpecker, 6; Flicker, 6; Phoebe, 12; Florida Blue Jay, 3; Cowbird, 1; (Florida?) Red-winged Blackbird, 100; Southern Meadowlark, 1; Florida Grackle, 1; Purple Finch, 1; Goldfinch, 8; Pine Siskin, 4; Vesper Sparrow, 2; White-throated Sparrow, 2; Field Sparrow, 1; Song Sparrow, 1; Swamp Sparrow, 10; Towhee, (*P. e. erythrophthalmus*), 2; Cardinal, 4; Cedar Waxwing, 12; Myrtle Warbler, 16; Mockingbird, 10; Catbird, 7; Brown Thrasher, 3; Carolina Wren, 6; House Wren, 1; Brown-headed Nuthatch, 1; Carolina Chickadee, 2; Golden-crowned Kinglet, 2; Ruby-crowned Kinglet, 4; Hermit Thrush, 2; Robin subsp., 100; Bluebird, 1. Total, 49 species, 432 individuals.—FRANCIS HARPER, DAVID LEE and FARLEY LEE.

Daytona Beach, Fla. (within two miles).—Dec. 27; 8:30 A.M. to 4:30 P.M. Clear; ground wet; wind southeast, light to brisk; temp. 70°. Herring Gull, 15; Laughing Gull, 276; Bonaparte's Gull, 316; Royal Tern, 38; Least Tern, 3; cormorant sp., 2; Brown Pelican, 3; Ward's Heron, 11; Louisiana Heron, 1; Little Blue Heron, 9; Least Sand-

piper, 1; Semipalmated Sandpiper, 5; Sanderling, 168; Killdeer, 9; Ruddy Turnstone, 3; Ground Dove, 6; Turkey Vulture, 3; Black Vulture, 9; Little Sparrow Hawk, 3; Kingfisher, 11; Red-headed Woodpecker, 2; Red-bellied Woodpecker, 2; Flicker, 3; Phoebe, 6; Florida Blue Jay, 35; Florida Jay, 3; Fish Crow, 2; Southern Meadowlark, 17; Red-eyed Towhee, 3; Florida Cardinal, 3; Tree Swallow, 10; Loggerhead Shrike, 23; White-eyed Vireo, 2; Myrtle Warbler, 27; Palm Warbler, 4; Florida Yellowthroat, 2; Mockingbird, 23; House Wren, 3; Ruby-crowned Kinglet, 3; Blue-gray Gnatcatcher, 5. Total, 40 species, 1,064 individuals.—MARTHA K. TICHENOR.

Daytona Beach, Fla.—Dec. 26; 10:45 A.M. to 5 P.M. Ground muddy; almost no wind; temp. 67°+. Horned Grebe, 6; Pied-billed Grebe, 2; Herring Gull, 4; Bonaparte's Gull, 13; Royal Tern, 26; Florida Cormorant, 3; Brown Pelican, 1; Red-breasted Merganser, 7; Lesser Scaup, 109; Wood Ibis, 11; Ward's Heron, 25; Louisiana Heron, 26; Little Blue Heron, 31; Coot, 1; Least Sandpiper, 5; Semipalmated Sandpiper, 25; Sanderling, 52; Spotted Sandpiper, 2; Black-bellied Plover, 10; Killdeer, 57; Turkey Vulture, 10; Marsh Hawk, 1; Little Sparrow Hawk, 1; Kingfisher, 12; Phoebe, 3; Florida Blue Jay, 2; Fish Crow, 2; Florida Grackle, 2; Goldfinch, 5; Towhee, 2; Loggerhead Shrike, 3; Myrtle Warbler, 26; Palm Warbler, 2; Mockingbird, 10; House Wren, 2; Blue-gray Gnatcatcher, 1. Total, 36 species, 505 individuals.—MRS. HENRY A. AINSWORTH.

Tallahassee, Fla.—Dec. 25; 9:30 to 11:30 A.M. Cloudy; no wind; temp. 68°. Killdeer, 3; Turkey Vulture, 9; Black Vulture, 30; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 9; Flicker, 1; Phoebe, 5; Florida Blue Jay, 45; Crow, 9; Fish Crow, 7; Meadowlark, 35; Goldfinch, 65; Towhee, 4; Florida Cardinal, 4; Loggerhead Shrike, 3; Mockingbird, 8; Carolina Wren, 3; Tufted Titmouse, 6; Black-capped Chickadee (sang 'phoebe' song repeatedly), 10; Ruby-crowned Kinglet, 3; Robin, 8. Total, 22 species, 268 individuals.—G. CLYDE FISHER.

Anniston, Ala.—Dec. 25; out seven hours. Cloudy; wind southeast, light; temp. 38° to 58°; radius of area, about 4 miles. Mallard, 6; Killdeer, 11; Turkey Vulture, 18; Marsh Hawk, 1; Red-tailed Hawk, 1; Sparrow Hawk, 1; Southern Hairy Woodpecker, 2; Southern Downy Woodpecker, 8; Yellow-bellied Sapsucker, 6; Red-headed Woodpecker, 2; Flicker, 17; Phoebe, 1; Blue Jay, 34; Crow, 5; Red-winged Blackbird, 250; Meadowlark, 47; Bronzed Grackle, 200; Purple Finch, 1; Goldfinch, 9; White-throated Sparrow, 180; Chipping Sparrow, 12; Field Sparrow, 85; Slate-colored Junco, 56; Song Sparrow, 70; Fox Sparrow, 2; Towhee, 35; Cardinal, 37; Cedar Waxwing, 18; Migrant(?) Shrike, 1; Myrtle Warbler, 12; Palm Warbler, 75; Pipit, 1; Mockingbird, 3; Brown Thrasher, 11; Carolina Wren, 14; Brown Creeper, 2; Tufted Titmouse, 1; Carolina Chickadee, 10; Golden-crowned Kinglet, 6; Ruby-crowned Kinglet, 1; Hermit Thrush, 4; Bluebird, 22. Total, 42 species, about 1,278 individuals.—R. H. DEAN.

Nashville, Tenn. (Bellemade to Glendale, including L. and N. (40-acre) reservoir).—8 A.M. to 3 P.M. Cloudy; ground wet and bare except snow still on hillsides; wind south, light; temp. 34°. Mallard, 1; Teal(?), 1; Killdeer, 6; Bob-white, 6; Mourning Dove, 2; Black Vulture, 1; Turkey Vulture, 2; Sharp-shinned Hawk, 1; Red-tailed Hawk, 3; Sparrow Hawk, 6; Kingfisher, 1; Downy Woodpecker, 3; Pileated Woodpecker, 1; Red-bellied Woodpecker, 4; Red-headed Woodpecker, 2; Yellow-bellied Sapsucker, 2; Northern Flicker, 40; Prairie Horned Lark, 370 (five flocks); Blue Jay, 2; Crow, 13; Meadowlark, 80; Bronzed Grackle, 21; Goldfinch, 6; Savannah Sparrow, 5; White-crowned Sparrow, 1; White-throated Sparrow, 45; Field Sparrow, 6; Song Sparrow, 27; Fox Sparrow, 1; Slate-colored Junco, 75; Towhee, 35 (one flock of 25); Cardinal, 20; Cedar Waxwing, 2; Myrtle Warbler, 4; Mockingbird, 25; Carolina Wren, 12; Bewick's Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 13; Carolina Chickadee, 15; Ruby-crowned Kinglet, 1; Robin, 105 (five flocks); Bluebird, 17. Total, 44 species, 988 individuals.—A. F. GANIER.

Hopkinsville, Ky.—Dec. 25; 9 to 11 A.M.; 2 to 4 P.M. Clear; patches of snow; wind east, calm; temp. A.M. 46°, P.M. 42°. Hairy Woodpecker, 1; Blue Jay, 8; American Crow, 9; White-throated Sparrow, 3; Junco, 30; Towhee, 50; Cardinal, 4; Mockingbird, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 15; Black-capped Chickadee, 1; Bluebird, 4. Total, 12 species, 129 individuals.—W. E. GRAY and W. E. GRAY, JR.

Hinsdale, Ill.—Dec. 27; 8 A.M. to 3 P.M. Clear; 3 in. of snow; wind west, light; temp. 20°. Observers together. Herring Gull, 5; Hairy Woodpecker, 3; Downy Woodpecker, 7; Red-headed Woodpecker, 5; Blue Jay, 12; Crow, 13; Meadowlark, 1; Bronzed Grackle, 1; Purple Finch, 20; Red Crossbill, 7; Goldfinch, 1; Tree Sparrow, 25; Junco, 20; Cardinal, 10; White-breasted Nuthatch, 7; Chickadee, 1. Total, 16 species, 138 individuals.—MISS ESTHER CRAIGMILE and MRS. C. E. RAYMOND.

Peoria, Ill.—10 A.M. to 3 P.M. Clear; ground bare; wind west, moderate; temp. 32°. Herring Gull, 4; Ring-billed Gull, 5; Hooded Merganser, 13; Redhead, 2; Coot, 16; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 5; Redpoll, 12; Goldfinch, 10; Tree Sparrow, 7; Junco, 50; Song Sparrow, 12; Cardinal, 30; Carolina Wren, 4; White-breasted Nuthatch, 6; Tufted Titmouse, 8; Black-capped Chickadee, 32. Total, 18 species, 221 individuals.—JAMES SEDWICK and REGINALD PACKARD.

Port Byron, Ill. (3 to 5 miles southeast).—Dec. 25; 8 A.M. to 2:30 P.M. Cloudy; 4 in. of snow; wind east, moderate; temp. 12° to 28°. Bob-white, 40; Rough-legged Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 7; Downy Woodpecker, 10; Red-bellied Woodpecker, 4; Prairie Horned Lark, 6; Blue Jay, 5; Crow, 15; Redpoll, 7; Tree Sparrow, 250; Junco, 75; Cardinal, 1; Brown Creeper, 3; White-breasted Nuthatch, 8; Tufted Titmouse, 4; Chickadee, 22. Total, 17 species, 459 individuals.—J. J. SCHAFER.

Rantoul, Ill.—9 A.M. to 3 P.M. Cloudy; 6 in. of snow, drifted; wind east, brisk; temp. 15°+. Bob-white, 8; Prairie Hen, 27; Red-tailed Hawk, 2; Broad-winged Hawk, 1; Rough-legged Hawk, 10; Sparrow Hawk, 2; Screech Owl, 4; Hairy Woodpecker, 15; Downy Woodpecker, 20; Red-bellied Woodpecker, 1; Flicker, 2; Prairie Horned Lark, 100; Blue Jay, 10; Crow, 500; Bronzed Grackle, 1; Goldfinch, 8; Lapland Longspur, 10; Tree Sparrow, 50; Slate-colored Junco, 30; Song Sparrow, 25; Swamp Sparrow, 3; Cardinal, 8; Brown Creeper, 2; White-breasted Nuthatch, 20; Red-breasted Nuthatch, 10; Tufted Titmouse, 63; Black-capped Chickadee, 14; Golden-crowned Kinglet, 1. Total, 28 species, 948 individuals. 1 Redpoll recorded Dec. 22.—GEORGE E. EKBLAW and EDDIE L. EKBLAW.

Fort Wayne, Ind.—Dec. 28; 7:45 A.M. to 1 P.M. Clear; ground partly bare; wind west, strong; temp. 17°. Downy Woodpecker, 12; Blue Jay, 3; Crow, 48; Purple Finch, 1; Tree Sparrow, 25; Slate-colored Junco, 7; Song Sparrow, 1; Fox Sparrow (?), 1; Cardinal, 4; White-breasted Nuthatch, 11; Tufted Titmouse, 7; Black-capped Chickadee, 22; Robin, 1. Total, 12 species, 143 individuals.—CHAS. A. STOCKBRIDGE and A. A. RINGWALT.

Gary to Dune Park, Ind. (about 15 miles).—Dec. 24; 9:30 A.M. to 3:30 P.M. Cloudy; snowing in A.M.; wind southwest to northwest; 8 in. of snow; temp. 30°. Herring Gull, 12; Bob-white, 7; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 4; Crow, 1; Tree Sparrow, 53; Junco, 46; Chickadee, 3. Total, 10 species, 130 individuals.—J. W. FULTON and LEONARD LYONS.

Indianapolis, Ind.—8:30 A.M. to 1:30 P.M. Ground clear of snow in open; clear; west wind, brisk; temp. 40°. Screech Owl, 1; Kingfisher, 2; Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 53; Bronzed Grackle, 1; Tree Sparrow, 39; Junco, 36; Song Sparrow, 9; Cardinal, 22; White-breasted Nuthatch, 5; Tufted Titmouse, 17; Chickadee, 7. Total, 13 species, 194 individuals.—RAYMOND MEAD, BERG MOORE and EDWARD BLACK.

Indianapolis, Ind.—Dec. 25; 10 A.M. to 2 P.M. Partly cloudy; 3 in. of old snow; wind east, light; temp. 25° to 31°. Bob-white, 10; Mourning Dove, 1; Kingfisher, 2; Hairy

Woodpecker, 1; Downy Woodpecker, 7; Bronzed Grackle, 3; Tree Sparrow, 72; Slate-colored Junco, 55; Song Sparrow, 26; Cardinal, 40; Carolina Wren, 3; Brown Creeper, 8; White-breasted Nuthatch, 12; Tufted Titmouse, 38; Black-capped Chickadee, 10; Bluebird, 2. The first time that I ever saw Bluebirds on or near Christmas, but they have been seen almost every week since the close of migration showing conclusively that some individuals are wintering in this locality. Total, 17 species, 344 individuals.—ETTA S. WILSON.

Lafayette, Ind.—8:45 A.M. to 12:45 P.M. Partly cloudy; snow on ground; wind northeast, brisk; thawing in sun. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 10; Crow, 11; Tree Sparrow, 14; Slate-colored Junco, 15; Song Sparrow, 20; Cardinal, 14; Carolina Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 7; Tufted Titmouse, 25. Total, 13 species, 125 individuals.—M. L. FISHER.

Roachdale, Ind.—Dec. 25; 8:30 A.M. to 12:30 P.M. Partly cloudy; 2 in. of snow; wind southeast, light; temp. 20° to 30°. Kingfisher, 1; Downy Woodpecker, 11; Red-bellied Woodpecker, 4; Flicker, 2; Blue Jay, 6; American Crow, 36; Meadowlark, 6; Tree Sparrow, 104; Slate-colored Junco, 5; Song Sparrow, 6; Cardinal, 1; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 9; Black-capped Chickadee, 20; Robin, 1. Total, 16 species, 216 individuals. (Also 3 species unidentified hawks—8 individuals).—WARD J. RICE.

Cadiz, Ohio.—Dec. 24; 9 A.M. to 12:45 P.M.; 2:40 to 4 P.M. Cloudy; 2½ in. of snow; wind southeast, light; temp. 24° to 34°. Distance walked, 9½ miles. Bob-white, (tracks of 21); Mourning Dove, 1; King-necked Pheasant, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 8; Prairie Horned Lark, (heard) 1; Blue Jay, 2; Crow, 4; Tree Sparrow, 10; Junco, 20; Song Sparrow, 6; Cardinal, 7; Carolina Wren, 3; White-breasted Nuthatch, 9; Tufted Titmouse, 9 (sings); Chickadee, 7. Total, 16 species, 126 individuals.—HARRY B. MCCONNELL, JOHN WORLEY and RAYMOND TIMMONS.

Laceyville, Ohio.—Dec. 24; 9 A.M. to 12 M. Cloudy; 4 in. of snow; wind moderate, shifting from east to southwest; temp. 20° to 34°. Bob-white, 18; Red-tailed Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 10; Red-bellied Woodpecker, 5; Yellow-bellied Sapsucker, 1; Redpoll, 35; Goldfinch, 3; Tree Sparrow, 75; Junco, 40; Song Sparrow, 8; Cardinal, 8; Carolina Wren, 3; White-breasted Nuthatch, 6; Tufted Titmouse, 10; Chickadee, 5. Total, 17 species, 235 individuals.—E. E. SMITH.

Canton, Ohio.—Dec. 24; 8 A.M. to 2:30 P.M. Cloudy; 12 in. of snow with numerous much deeper drifts; wind southeast, moderate in morning, stronger in afternoon; temp. 18° to 30°. Bob-white, 20; Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Tree Sparrow, 116; Slate-colored Junco, 33; Song Sparrow, 6; Cardinal, 10; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 9; Black-capped Chickadee, 7. Total, 12 species, 212 individuals.—EDWARD D. KIMES.

Canton, Ohio.—Dec. 28; 11 A.M. to 2:30 P.M. Clear; ground covered with snow, much drifted; wind west; temp. 30°. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 3; Tree Sparrow, 3; Song Sparrow, 7; Cardinal, 5; Brown Creeper, 1; White-breasted Nuthatch, 10; Tufted Titmouse, 3; Chickadee, 10; Golden-crowned Kinglet, 1. Total, 12 species, 51 individuals.—MAY S. DANNER and MARY KING.

Cumberland, Ohio.—Dec. 28; 10:30 A.M. to 5 P.M. Fair; ground bare; wind west, brisk; temp. 32° to 35°. Red-shouldered Hawk, 2; Hairy Woodpecker, 3; Downy Woodpecker, 3; Crow, 34; Tree Sparrow, 55; Junco, 3; Song Sparrow, 9; Cardinal, 4; Carolina Wren, 4; White-breasted Nuthatch, 1; Tufted Titmouse, 5; Chickadee, 6. Total, 12 species, 128 individuals.—HAZEL SCOTT and FOSTER H. SCOTT.

Hillsboro, Ohio.—Dec. 25; 8 A.M. to 12 M., and 1 to 2 P.M. Clear followed by cloudy; 1 ft. of snow crusted over; light southwest wind; temp. 10° to 30°. Walked 1 mile south, then rode north in machine and walked 2 miles. Bob-white, 40; Mourning Dove, 30;

Red-shouldered Hawk, 2; (Red-tailed?) Hawk, 1; Sharp-shinned Hawk, 1; Sparrow Hawk, 3; Barred Owl, 1; Hairy Woodpecker, 8; Downy Woodpecker, 10; Yellow-bellied Sapsucker, 2; Red-bellied Woodpecker, 4; Flicker, 5; Horned Lark, 50; Blue Jay, 11; Bronzed Grackle, 4; Crow, 250; Meadowlark, 62; Tree Sparrow, 50; White-throated Sparrow, 12; Slate-colored Junco, 200; Song Sparrow, 60; Cardinal, 35; Northern Shrike, 1; Migrant Shrike, 1; Carolina Wren, 2; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, 40; kinglet sp., 1; Robin, 1. Total, 29 species, 889 individuals.—LETHA E. ROADS.

Meadow Brook and East Harbor, Lakeside, Ohio.—Dec. 25; 9:30 A.M. to 3 P.M. Clear; 8 in. of snow; wind northwest, light; temp. 20°. Nine miles. Canvasback, 4; Bob-white, 15; Ring-necked Pheasant, 5; Bald Eagle, 2; Sparrow Hawk, 2; Downy Woodpecker, 6; American Crow, 9; Purple Finch, 2; Redpoll, 34; Goldfinch, 1; Tree Sparrow, 45; Song Sparrow, 8; Cardinal, 13; Bohemian Waxwing, 2. Total, 14 species, 148 individuals.—ROBERT KELLY and G. I. HAUXHURST.

Mt. Vernon, Ohio.—9:30 A.M. to 12:30 P.M. Foot of snow; wind west, light; temp. 12°. Sparrow Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 8; Red-bellied Woodpecker, 1; Horned Lark, 9; Blue Jay, 9; Crow, 2; Redpoll, 20; Goldfinch, 5; Tree Sparrow, 22; Junco, 7; Song Sparrow, 17; Cardinal, 14; Carolina Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 16; Tufted Titmouse, 6; Chickadee, 15. Total, 18 species, 154 individuals.—MISS CORA and V. F. DEBER.

Salem, Ohio.—Dec. 25; 8:30 A.M. to 12:30 P.M. Cloud sheet; wind northwest, light; 4 to 18 in. of snow; temp. 26°. Distance walked, 4 miles, home by auto 2 miles. Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 4; Cardinal, 5; White-breasted Nuthatch, 2; Tufted Titmouse, 5. Total, 7 species, 24 individuals.—H. W. WEISGERBER.

Sewickley, Pa.—Dec. 25; 9 A.M. to 12 M. Cloudy; ground bare, snow in the woods; wind northwest, very brisk and fresh; temp. 30°. Distance covered, about 7 miles. Red-shouldered Hawk, 1; Downy Woodpecker, 17; American Crow, 3; American Goldfinch, 1; Tree Sparrow, 40; Junco, 6; Song Sparrow, 1; Cardinal, 6; Brown Creeper, 2; White-breasted Nuthatch, 6; Tufted Titmouse, 12; Chickadee, 10. Total, 12 species, 105 individuals.—BAYARD H. CHRISTY and FRANCIS A. HEGNER.

Toledo, Ohio (Woodlawn Cemetery, Ottawa Park and land west of city).—8 A.M. to 2 P.M. Clear; several in. of snow; wind very light; temp. 25° to 30°. Bob-white, 9; Long-eared Owl, 1; Downy Woodpecker, 4; Blue Jay, 7; Crow, 2; Purple Finch, 10; Goldfinch, 4; Tree Sparrow, 17; Junco, 23; Song Sparrow, 3; Cardinal, 9; Brown Creeper, 3; White-breasted Nuthatch, 4; Chickadee, 7; Robin, 1. Total, 15 species, 104 individuals.—EDWARD METZGER.

West Lafayette, Ohio.—Dec. 27; 8 A.M. to 2 P.M. Heavy clouds, fog, drizzling rain; snow in woods and on north hillsides; wind southwest; temp. 48°. Walked 11 miles. Mourning Dove, 1; Red-shouldered Hawk, 2; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 3; Blue Jay, 3; Crow, 4; Tree Sparrow, 50; Slate-colored Junco, 62; Song Sparrow, 8; Cardinal, 23; Pipit(?), 500; Carolina Wren, 6; White-breasted Nuthatch, 8; Black-capped Chickadee, 2. Total, 16 species, 678 individuals.—SHERIDAN F. WOOD.

Youngstown, Ohio.—Dec. 25; 8 A.M. to 5 P.M. Partly cloudy; about 12 in. of snow; wind northwest, moderate; temp. 27° to 33°. Walked about 12 miles. Bob-white, 4; Ruffed Grouse, 3; Sparrow Hawk, 1; Barred Owl, 1; Kingfisher, 2; Hairy Woodpecker, 8; Downy Woodpecker, 20; Northern Pileated Woodpecker, 1 (our first hereabouts for nearly three years); Red-bellied Woodpecker, 4; Northern Flicker, 1; Blue Jay, 29; Crow, 3; Meadowlark, 1; Rusty Blackbird, 1 (has been present about two weeks); Goldfinch, 5; Tree Sparrow, 48; Slate-colored Junco, 5; Song Sparrow, 7; Cardinal, 39; Winter Wren, 1; White-breasted Nuthatch, 36; Tufted Titmouse, 11; Chickadee, 41; Golden-crowned;

Kinglet, 15. Total, 24 species, 287 individuals.—GEORGE L. FORDYCE, VOLNEY ROGERS, C. A. LFEDY and MR. and MRS. WILLIS H. WARNER.

Detroit, Mich.—Dec. 23; Palmer Park (140 acres), 8 to 10 A.M.; Belle Isle Park (700 acres), 1:30 to 4 P.M. Clear; 6 in. of snow; wind southwest, moderate; temp. 8° at start, 26° at finish. Herring Gull, 4; White-winged Scoter, 5; Ring-necked Pheasant, 3; Hairy Woodpecker, 7; Downy Woodpecker, 5; Yellow-bellied Sapsucker, 1; Crow, 3; Northern Shrike, 1; Brown Creeper, 2; White-breasted Nuthatch, 5; Chickadee, 21. Total, 11 species, 57 individuals.—RALPH BEEBE.

South Haven, Mich.—Dec. 24; 9 A.M. to 3 P.M. Four in. of snow; wind west, light; temp. 40°. Herring Gull, 8; Old-squaw, 2; Downy Woodpecker, 10; Blue Jay, 4; Crow, 4; Redpoll, 30; Junco, 33; Song Sparrow, 4; Cardinal, 10; Mockingbird, 1 (identified by one who had seen Mockingbirds in the South); White-breasted Nuthatch, 3; Tufted Titmouse, 1; Black-capped Chickadee, 40. Total, 14 species, 151 individuals.—MRS. A. N. WILLIAMS, MISS RUTH MYHAN, MISS JESSIE NICOL, MRS. M. R. FRESHWATERS, MISS BERTHA SHAW, MR. ARTHUR MOORE and MISS FLORENCE L. GREGORY.

Elkhorn, Lauderdale Lakes and vicinity, Wis.—Dec. 26; 8 A.M. to 12 M.; 1:30 to 3 P.M. Cloudy, raining; ground covered with snow and ice; wind northeast shifting to southeast, strong; temp. 28° to 31°. Mallard, 3; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 5; Blue Jay, 2; Crow, 1; Tree Sparrow, 8; Slate-colored Junco, 7; White-breasted Nuthatch, 1; Black-capped Chickadee, 5. Total, 10 species, 35 individuals. Redpolls have been abundant up to day of taking census. A Robin was seen the past week and a Northern Shrike several times.—LULA DUNBAR.

Hartland, Wis.—Dec. 23; 8:30 A.M. to 4 P.M. Clear; 4 in. of snow; wind southwest, light; temp. 8°. Hairy Woodpecker, 1; Blue Jay, 13; Crow, 3; Redpoll, 30; Pine Siskin, 27; Tree Sparrow, 8; Junco, 2; White-breasted Nuthatch, 3; Chickadee, 7. Total, 9 species, 94 individuals.—SUSIE L. SIMONDS.

Manitowoc, Wis.—Dec. 25; 1:30 to 4:30 P.M. Cloudy; 6 in. of snow; wind northeast, light; temp. 20°. Distance covered, 5 miles. Observers together. Herring Gull, 16; Hairy Woodpecker, 1; Downy Woodpecker, 3; Redpoll, 3; Pine Siskin, 2; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Chickadee, 6. Total, 8 species, 33 individuals.—SCOUTMASTER JOHN EGAN, SCOUTS HAROLD GROTH, ED. SCHMIDT and THEODORE KRUEGER.

Waukesha, Wis.—Dec. 25; 9:30 A.M. to 4 P.M. Cloudy; 4 to 6 in. of snow; wind none; temp. 15° to 25°. Observers on same trip. Blue Jay, 10; Crow, 50; Redpoll, 2; Pine Siskin, 25; Tree Sparrow, 25; Slate-colored Junco, 7; Brown Creeper, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Black-capped Chickadee, 4; Golden-crowned Kinglet, 1. Total, 11 species, 127 individuals.—MISS MAY MORGAN and S. PAUL JONES.

St. Peter, Minn.—Dec. 24; 10 A.M. to 12 M.; 1:30 to 5:30 P.M. Partly cloudy; 5 in. of snow; wind northeast, light; temp. 16°; 6-mile tramp—fields, woods and lake. Mallard, 2; Bob-white, 25; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 7; Red-winged Blackbird, 20; Tree Sparrow, 16; Brown Creeper, 2; White-breasted Nuthatch, 12; Red-breasted Nuthatch, 3; Black-capped Chickadee, 22. Total, 12 species, 117 individuals.—HARRY J. LADUE.

Lanesboro, Iowa.—Dec. 25; 8 A.M. to 2 P.M. Very cloudy; 2 in. of snow; wind southeast, brisk; temp. 8°; 13 miles. Red-shouldered Hawk, 1; Long-eared Owl, 1; Screech Owl, 1; Flicker, 1; Prairie Horned Lark, 32; Blue Jay, 7; Crow, 7; Goldfinch, 13; Tree Sparrow, 100; Slate-colored Junco, 1; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 55. Total, 14 species, 223 individuals.—ALBERT WETTER.

Sioux City, Ia.—Dec. 25; 9 A.M. to 12 M. Cloudy; 5 in. of snow; wind northeast, brisk; temp. 9° (Govt.). Birds suffering from cold, raw wind and lack of food. American

Goshawk, 1; Red-tailed Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 1; Prairie Horned Lark, 1; Redpoll, 12; Pine Siskin, 27; Tree Sparrow, 150; Junco, 60; Cardinal, 6; Brown Creeper, 2; White-breasted Nuthatch, 9; Chickadee, 25; Golden-crowned Kinglet, 1; Bluebird, 4 (2 adults and 2 young). The Bluebirds were in deep woods, but even there their usual food-supply of insects, etc., must have been largely lacking. Total, 15 species, 303 individuals. Bluebird, Golden-crowned Kinglet and Goshawk are unusual here. Seems to be a wave of Goshawks all over Iowa and South Dakota this year.—ARTHUR LINDSEY and WALTER W. BENNETT.

South English, Iowa.—Dec. 27; 8:30 A.M. to 1 P.M. Ground snow-covered; wind south, very light; temp. 10°. Bob-white, 26; Mourning Dove, 2 (quite a few are staying in barnyards here this winter); Hairy Woodpecker, 6; Downy Woodpecker, 12; (Red-bellied?) Woodpecker, 1 (close-barred black and white with red extending from top of head to quite low on neck); Blue Jay, 7; Crow, 14; Slate-colored Junco, 90; Cardinal, 2; White-breasted Nuthatch, 18; Tufted Titmouse, 1 (I have been feeding this individual for some time; it surely answers Reed's description); Black-capped Chickadee, 120; Robin, 1. Total, 13 species, 300 individuals.—JOHN B. SLATE.

Lennox, S. D. (town and adjacent country).—Dec. 23; 9 to 11 A.M.; 2 to 5:30 P.M. Partly cloudy; ground bare except a little snow in shaded spots; wind southwest, light; temp. -2°. Long-eared Owl, 1; Screech Owl, 2; Downy Woodpecker, 1; Horned Lark, 500; American Crow, 150; Redpoll, 156; Greater Redpoll, 1; Lapland Longspur, 10,000 (an uncaptured multitude; probably 100,000 are wintering in this vicinity); Tree Sparrow, 165; White-breasted Nuthatch, 4; Chickadee, 1; Brown Creeper, 1. Total, 12 species, 10,982 individuals.—W. B. MALLORY.

Vermillion, S. D. (down Vermillion River 3 miles, back over prairie).—Dec. 22; 1:30 to 4:15 P.M. Clear; ground bare; wind northwest, light; temp. 17°. Hairy Woodpecker, 2; Downy Woodpecker, 5; Crow, 1; Redpoll, 45; Goldfinch, 1; Tree Sparrow, 29; Slate-colored Junco, 6; Cardinal, 1; Brown Creeper, 2; White-breasted Nuthatch, 6; Red-breasted Nuthatch, 1; Chickadee, 36. Total, 12 species, 135 individuals.—W. H. OVER and W. M. WILLY.

Yankton, S. D.—Dec. 28; 9:30 A.M. to 12:30 P.M. Clear; 1½ in. of snow; wind southwest, light; temp. 8°. Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1; Crow, 3; Red Crossbill, 6; Goldfinch, 8; Lapland Longspur, 15; Tree Sparrow, 100; Slate-colored Junco, 10; Montana Junco, 1; Song Sparrow, 1; Brown Creeper, 2; White-breasted Nuthatch, 1; Chickadee, 15. Total, 14 species, 167 individuals.—AUSTIN P. LARRABEE.

Fremont, Neb.—Dec. 26; 7:30 A.M. to 12 M. Clear; 1 in. of snow, with ice (thunder storm and rain the preceding night); wind northwest, cold; temp. 30°. Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Northern Flicker, 1; Prairie Horned Lark, 30; Blue Jay, 1; Crow, 1; Red Crossbill, 8; Goldfinch, 4; Pine Siskin, 13; Tree Sparrow, 45; Brown Creeper, 6; White-breasted Nuthatch, 5; Red-breasted Nuthatch, 7; Chickadee, 35. Total, 15 species, 164 individuals.—MRS. LILY RUEGG-BUTTON.

Omaha, Neb.—Dec. 27. Parks, boulevards and cemeteries, 2 to 4 miles in sparsely wooded ravines, etc., four distinct areas all not over 5 miles from post office. Clear; ground white; light west wind; temp. 30° to 12°. Marsh Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 9; Flicker, 4; Blue Jay, 9; Crow, 21; Purple Finch, 5; Red Crossbill, 2; Redpoll, 86; Song Sparrow, 1; Goldfinch, 46; Pine Siskin, 11; Tree Sparrow, 18; Slate-colored Junco, 165; Towhee, 1; Cardinal, 8; Loggerhead Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 9; Red-breasted Nuthatch, 10; Chickadee, 87. Total, 21 species, 499 individuals.—MILES GREENLEAF, L. O. HORSKY, WM. MARSH and DR. S. R. TOWNE.

Kansas City, Mo. (district between the Country Club and Dodson, in the Swope Park region and in the country between Independence and Atherton).—Dec. 23, 24, 25. Bob-white, 7; Marsh Hawk, 2; Red-tailed Hawk, 6; Rough-legged Hawk, 1; Sparrow

Hawk, 2; Short-eared Owl, 5; Kingfisher, 1; Hairy Woodpecker, 32; Downy Woodpecker, 31; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 8; Flicker, 34; Prairie Horned Lark, 6; Blue Jay, 46; Crow, 70; Red-winged Blackbird, 1,500; Thick-billed Red-wing, 7 (1 taken); Purple Finch, 13; Red Crossbill, 4; Goldfinch, 200; Pine Siskin, 3; Lapland Longspur, 2; Harris's Sparrow, 10; White-crowned Sparrow, 12; Tree Sparrow, 650; Slate-colored Junco, 750; Song Sparrow, 37; Lincoln's Sparrow, 1; Swamp Sparrow, 2; Fox Sparrow, 5; Cardinal, 59; Bohemian Waxwing, 2 (one taken); Cedar Waxwing, 8; Carolina Wren, 34; Winter Wren, 2; Brown Creeper, 21; White-breasted Nuthatch, 4; Tufted Titmouse, 45; Chickadee, 90; Golden-crowned Kinglet, 12; Robin, 8; Bluebird, 7. Total, 42 species, 3,740 individuals.—RALPH HOFFMANN, CHARLES TINDALL, WM. MICHAELS and HARRY HARRIS.

Marionville, Mo.—Dec. 25; entire day. Snow on north slopes; wind southeast, strong. Area covered, 15 miles. Wilson's Snipe, 4; Bob-white, 40; Red-tailed Hawk, 5; Swainson's Hawk, 2; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Prairie Horned Lark, 8; Blue Jay, 7; Crow, 12; Meadowlark, 1; Goldfinch, 5; Harris's, Sparrow, 2; Tree Sparrow, 1; Slate-colored Junco, 200; Song Sparrow, 4; Swamp Sparrow, 12; Fox Sparrow, 2; Cardinal, 15; Winter Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 25; Chickadee, 18; Bluebird, 1. Total, 26 species, 397 individuals.—JOHNSON NEFF.

Marshall, Mo.—Dec. 23; 9 A.M. to 2 P.M. Overcast with thick haze; wind variable, light; temp. 30°. Distance covered, 8 miles. Marsh Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 3; Kingfisher, 1; Hairy Woodpecker, 7; Downy Woodpecker, 17; Red-bellied Woodpecker, 7; Flicker, 2; Blue Jay, 15; American Crow, 36; Red-winged Blackbird, 1; Meadowlark, 1; Purple Finch, 11; Goldfinch, 48; Pine Siskin, 15 (the second time in 16 years); Tree Sparrow, 215; Slate-colored Junco, 45; Song Sparrow, 3; Cardinal, 14; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 14; Carolina Chickadee, 17. Total, 24 species, 479 individuals.—J. A. LAUGHLIN.

Pleasant Hill, Mo.—Dec. 25; 8 A.M. to 12 M. Partly cloudy; brisk, chilly east wind; small patches of snow on ground. Brushy fields and small groves. Bob-white, 5; American Rough-legged Hawk, 2; Red-tailed Hawk(?), 1; Hairy Woodpecker, 2; Downy Woodpecker, 12; Red-bellied Woodpecker, 3; Flicker, 11; Blue Jay, 25; American Crow, 40; Purple Finch, 20; Goldfinch, 18; Tree Sparrow, 40; Chipping Sparrow, 2; Field Sparrow, 1; Slate-colored Junco, 60; Song Sparrow, 9; Cardinal, 27; Brown Creeper, 3; White-breasted Nuthatch, 2; Tufted Titmouse, 25; Black-capped Chickadee, 40; Bluebird, 3. Total, 22 species, 351 individuals.—A. E. SHIRLING.

Austin, Texas. (west from town on Mesquite prairie, south of town on Colorado River and in cedar brakes along Barton Creek).—Dec. 25; 7:30 A.M. to 5:30 P.M. Heavy fog up to 10:30 A.M., partly clear rest of day; light south wind in afternoon; temp. about 60°. Distance traveled, about 12 miles. Killdeer, 12; Bob-white, 3; Mourning Dove, 16; Inca Dove, 11; Turkey Vulture, 20; Black Vulture, 75; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 5; Barn Owl, 2; Hasbrouck's Screech Owl, 1; Burrowing Owl, 1; Belted Kingfisher, 5; Southern Downy Woodpecker, 2; Texan Woodpecker, 3; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 5; Golden-fronted Woodpecker, 2; Northern Flicker, 21; Phoebe, 3; Blue Jay, 31; American Crow, 11; Meadowlark, 200; Arkansas Goldfinch, 600; Pine Siskin, 7; Vesper Sparrow, 7; Savannah Sparrow, 3; Lark Sparrow, 90; Harris's Sparrow, 200; White-crowned Sparrow, 1; Field Sparrow, 36; Slate-colored Junco, 200; Black-throated Sparrow, 2; Rock Sparrow, 6; Song Sparrow, 7; Lincoln's Sparrow, 18; Fox Sparrow, 9; Towhee, 10; Cardinal, 90; Cedar Waxwing, 5,000; Loggerhead Shrike, 2; Myrtle Warbler, 160; Sprague's Pipit, 36; Mockingbird, 90; Brown Thrasher, 1; Cañon Wren, 12; Carolina Wren, 48; Texas Bewick's Wren, 6; House Wren, 7; Winter Wren, 4; Brown Creeper, 1; Sennett's Titmouse, 28; chickadee sp., 42; Golden-crowned Kinglet, 4; Ruby-crowned Kinglet, 30;

Wood Thrush,* 1; Gray-cheeked Thrush*, 1; Olive-backed Thrush*, 2; Robin, 5,000; Bluebird, 60. Total, 60 species, 12,253 individuals. All numbers above 50 are estimates. Cedar Waxwings, Robins and Arkansas Goldfinches were too numerous to attempt to count.—W. S. TAYLOR and W. H. WARREN.

Taylor, Tex.—Dec. 25; 10:30 A.M. to 1:30 P.M. Cloudy to partly cloudy; ground bare; wind southwest, light to moderate; av. temp. 71°. Woodcock, 4; Killdeer, 4; Texas Bob-white, 1; Mourning Dove, 14; Turkey Vulture, 11; Black Vulture, 9; Marsh Hawk, 2; Red-shouldered (?) Hawk, 1; Sparrow Hawk, 3; Burrowing Owl, 1; Road-runner, 1; Hairy Woodpecker, 1; Red-bellied Woodpecker, 1; Flicker, 4; Phoebe, 1; Crow, 1; Meadowlark and Western Meadowlark, together, 40; Goldfinch, 25; Vesper Sparrow, 1; Grasshopper Sparrow, 22; Harris's Sparrow, 30; Slate-colored Junco, 20; Song Sparrow, 65; Lincoln's Sparrow, 8; Cardinal, 5; Cedar Waxwing, 3; White-rumped Shrike, 2; Myrtle Warbler, 26; Sprague's Pipit, 1; Mockingbird, 12; Texas Wren, 1; Western House Wren, 1; Plumbeous Chickadee, 5; Robin, 88; Bluebird, 14. Total, 36 species, 428 individuals. Observers worked conjointly.—MR. and MRS. H. TULLSEN.

Bozeman, Mont.—10 A.M. to 2:30 P.M. Cloudy, with occasional light siftings of dry snow; snow 18 in. deep; light breeze from northwest; temp.—2°. Grouse, 1; Batchelder's Woodpecker, 1; Magpie, 13; Black-headed Jay, 1; Western Crow, 1; Redpoll, 18; Western Tree Sparrow, 12; Mountain Song Sparrow, 4; Bohemian Waxwing, 50; Long-tailed Chickadee, 8; Mountain Chickadee, 1. Total, 11 species, 110 individuals.—NELSON LUNDWALL.

Meridian, Idaho (irrigated farm lands).—Dec. 22; 8:27 A.M. to 4:10 P.M. Clear until 3 P.M.; 1 in. of snow; wind southeast, light, increasing to strong; temp. 28° to 32°; 14 miles. Bob-white, 17; Chinese Pheasant, 53; Marsh Hawk, 7; hawk sp. (large), 9; hawk sp. (small), 2; Long-eared Owl, 30; Short-eared Owl, 1; Western Horned Owl, 2; Red-shafted Flicker, 7; Pallid Horned Lark, 98; Magpie, 219; Blackbird (some had red wings, and probably some Brewer's Blackbirds were with them), 396; Western Meadowlark, 23; House Finch, 141; Pale Goldfinch, 31; Gambel's Sparrow, 13; Shufeldt's Junco, 221; Merrill's Song Sparrow, 71; White-rumped Shrike, 2; Western Tule Wren, 1; Long-tailed Chickadee, 3. Total, 21 species, 1,347 individuals. Dec. 19, Snowy Owl, 1. First seen Nov. 23, and often between times. Dec. 21, Batchelder's Woodpecker, 1.—ALEX. STALKER.

Denver, Colo.—11 A.M. to 1 P.M. Cloudy, snowing; ground with 4 in. of snow; wind north, light; temp. 14° to 18°. Ring-necked Pheasant, 42; Long-eared Owl, 3; Orange-shafted Flicker, 3; Desert Horned Lark, 15; Magpie, 50; Red-winged Blackbird, 8; Meadowlark, 3; House Finch, 25; Redpoll, 1; Tree Sparrow, 30; Shufeldt's Junco, 1; Pink-sided Junco, 2; Gray-headed Junco, 2; Mountain Chickadee, 4. Total, 14 species, 189 individuals.—W. H. BERGTOLD.

Red Butte and Marron, Colo.—10 A.M. to 3 P.M. Cloudy; a foot of snow; temp. 32°. Golden Eagle, 1; Hairy Woodpecker subsp., 2; Downy Woodpecker subsp., 1; two species of jays, 8; Dipper, 1; American Pipit, 30; Rocky Mountain Creeper, 1; Mountain Chickadee, 3. Total, 9 species, 67 individuals.—MRS. IDA L. LOGUE.

Camp Verde, Ariz. (elevation 3,100 feet).—Dec. 22; 10 A.M. to 3 P.M. Clear; ground bare; wind southwest, light; temp. 50°. Great Blue Heron, 3; Killdeer, 2; Gambel's Quail, 50; Mourning Dove, 1; Sharp-shinned Hawk, 1; American Goshawk, 1; Western Red-tail, 1; Desert Sparrow Hawk, 1; Rocky Mountain Hairy Woodpecker, 1; Red-naped Sapsucker, 1; Gila Woodpecker, 2; Red-shafted Flicker, 1; Pallid Horned Lark, 20; Western Meadowlark, 20; Brewer's Blackbird, 30; Arkansas Goldfinch, 10; Western Vesper Sparrow, 5; White-crowned Sparrow, 20; Intermediate Junco, 50; Sage Sparrow, 20; White-rumped Shrike, 1; Curve-billed Thrasher, 1; Rock Wren, 1; Cañon Wren, 1;

*We doubt these three thrushes, especially the Gray-cheeked, as they winter so far south of the United States.—Ed.

Western House Wren, 1; Bridled Titmouse, 4; Mountain Chickadee, 2; Lead-colored Bush-Tit, 1; Ruby-crowned Kinglet, 6; Western Robin, 2; Western Bluebird, 30; Mountain Bluebird, 1. Total, 32 species, 291 individuals.—OSCAR F. SCHAEFER.

Seattle, Wash.—9:30 to 11 A.M.; 1:50 to 4:30 P.M. Clear; ground bare; light north wind; temp. 40°, afternoon, 34°. Residence section near Lake Washington and along boulevards. Observers together. Herring Gull, 13; Mallard, 2; Coot, 35; Killdeer, 5; California Quail, 7; Gairdner's Woodpecker, 1; Northwestern Flicker, 12; Stellar's Jay, 35; Western Crow, 12; Brewer's Blackbird, 12; Pine Siskin, 1; Oregon Junco, 262; Rusty Song Sparrow, 41; Oregon Towhee, 18; Cedar Waxwing, 55; Seattle Wren, 2; Western Winter Wren, 1; Oregon Chickadee, 55; Western Robin, 126; Varied Thrush, 1. Total, 21 species, 708 individuals.—MRS. J. I. COLWELL and MR. J. W. CLISE, JR.

Portland, Ore.—Dec. 26; 9:30 A.M. to 5 P.M. Ground bare; easterly wind, light; av. temp. 34°. Herring Gull, 111; Glaucus-winged Gull, 1; Mallard, 14; Baldpate, 40; Green-winged Teal, 42; Pintail, 8; Canvasback, 2; Great Blue Heron, 1; Wilson's Snipe, 8; Killdeer, 8; Oregon Ruffed Grouse, 1; Ring-necked Pheasant, 4; Western Goshawk, 1; Cooper's Hawk, 1; Kingfisher, 3; Gairdner's Woodpecker, 1; Red-shafted Flicker, 13; Western Crow, 27; Western Evening Grosbeak, 63; Willow Goldfinch, 1; Oregon Junco, 133; Rusty Song Sparrow, 17; Yakutat Fox Sparrow, 4; Oregon Towhee, 11; Vigors's Wren, 2; Oregon Chickadee, 44; Chestnut-backed Chickadee, 15; Ruby-crowned Kinglet, 4; Western Robin, 2; Varied Thrush, 8. Total, 30 species, 568 individuals.—W. D. STRONG, TOM MCCAMANT and W. L. BREWSTER, JR.

Portland, Ore. (Mt. Tabor, Reed College, Crystal Springs, Riverview Cemetery, Multnomah, and Washington Park)—all in the city of Portland. Trip made in auto with frequent stops to note birds. Dec. 26; 9:30 A.M. to 1:30 P.M.; 2:30 to 4:30 P.M. Clear and cold; brisk east wind; ground bare; temp. 32° to 36°. Glaucous-winged Gull, 17; California Gull, 7; Hooded Merganser, 2; Mallard, 50; Green-winged Teal, 3; Canvasback, 6; Scaup, 6; Scoter, 6; Snow Goose, 2; Canada Goose, 3; Wilson's Snipe, 2; Ring-necked Pheasant, 3; Desert Sparrow Hawk, 1; Belted Kingfisher, 1; Red-shafted Flicker, 1; Crow, 1; Rusty Song Sparrow, 16; White-crowned Sparrow, 1; Golden-crowned Sparrow, 2; Oregon Junco, 33; Oregon Towhee, 5; Western Robin, 23; Varied Thrush, 5. Total, 24 species, 232 individuals.—MARY E. RAKER, HELEN D. TONSETH and MARGARETHE E. WOLLE.

Salem, Ore.—Dec. 26; 9 A.M. to 2:30 P.M. Ground bare; wind, northeast to northwest. Ring-necked Pheasant, 1; Western Redtail, 1; Kennicott's Screech Owl, 2; Kingfisher, 1; Gairdner's Woodpecker, 2; Northwestern Flicker, 11; California Jay, 10; Western Crow, 9; Meadowlark, 1; Brewer's Blackbird, 1; Redpoll, 10; Willow Goldfinch, 3; Pine Siskin, 23; Golden-crowned Sparrow, 19; Oregon Junco, 205; Rusty Song Sparrow, 21; Oregon Towhee, 8; Seattle Wren, 2; Oregon Chickadee, 28; Chestnut-backed Chickadee, 8; Slender-billed Nuthatch, 2; California Creeper, 1; Western Robin, 20; Western Bluebird, 6. Total, 24 species, 399 individuals.—RUTH and LOUIS STEWART, and FAY and FERN WELLS.

Escondido, Cal.—Dec. 25; 7:30 A.M. to 2:30 P.M. Clear; cold northwest wind; temp. 37°. 10 miles by buggy; 5 miles 'cross country. Including birds seen Dec. 22 and 23. Killdeer, 16; Valley Quail, 60; Mourning Dove, 32; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Western Red-tailed Hawk, 1; Desert Sparrow Hawk, 4; Barn Owl, 2; California Screech Owl, 1; Burrowing Owl, 3; Roadrunner, 1; Red-shafted Flicker, 5; Black-chinned Hummingbird, 5; Arkansas Kingbird, 6; Say's Phoebe, 9; Black Phoebe, 6; California Horned Lark, 73; jay sp., 2; Red-winged Blackbird subsp., 5; Western Meadowlark, 100; Brewer's Blackbird, 75; House Finch, 173; Willow Goldfinch, 15; (Oregon?) Vesper Sparrow, 20; Western Lark Sparrow, 130; White-crowned Sparrow, 120; Western Chipping Sparrow, 134; Junco subsp., 18; Bell's Sparrow, 5; San Diego Song Sparrow, 3; Anthony's Towhee, 12; Cedar Waxwing, 24; California Shrike, 7; Audubon's Warbler,

78; Western Mockingbird, 10; Pasadena Thrasher, 3; Western House Wren, 2; Western Robin, 375; Western Bluebird, 150. Total, 40 species, 1,700 individuals.—FRED GALLUP.

San Francisco, Cal. (Golden Gate Park and Lake Merced).—Dec. 25; 8 A.M. to 5:30 P.M. Clear; light west wind; temp. 40° to 50°. Observers together. Western Grebe, 8; Eared Grebe, 50; Pied-billed Grebe, 20; Common Loon, 1; California Murre, 1; Glaucous-winged Gull, 3; Western Gull, 150; Herring Gull, 105; Mallard, 310; Baldpate, 73; Green-winged Teal, 130; Shoveler, 220; Canvasback, 1,580; Lesser Scaup, 128; Bufflehead, 12; White-winged Scoter, 35; Surf Scoter, 1; Ruddy Duck, 485; Great Blue Heron, 3; Coot, 1,735; Killdeer, 130; Snowy Plover, 24; California Quail, 60; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Western Goshawk, 1; Western Red-tailed Hawk, 3; Northern Pigeon Hawk, 1; Sparrow Hawk, 2; Western Kingfisher, 1; Red-shafted Flicker, 10; Anna's Hummingbird, 15; Black Phoebe, 8; California Horned Lark, 12; California Jay, 2; Bicolored Blackbird, 320; Western Meadowlark, 160; Brewer's Blackbird, 20; California Purple Finch, 1; Green-backed Goldfinch, 1; House Finch, 170; Bryant's Marsh Sparrow, 18; Gambel's and Nuttall's Sparrows, 1,500; Golden-crowned Sparrow, 7; Sierra Junco, 25; Santa Cruz Song Sparrow, 125; Yakutat Fox Sparrow, 3; San Francisco Towhee, 2; California Shrike, 5; Hutton's Vireo, 1; Audubon's Warbler, 850; Townsend's Warbler, 5; Salt Marsh Yellowthroat, 5; American Pipit, 176; Vigors's Wren, 4; Red-breasted Nuthatch, 2; Santa Cruz Chickadee, 25; Coast Bush-Tit, 50; Ruby-crowned Kinglet, 12; Sitkan Kinglet, 4; Dwarf Hermit Thrush, 30; Western Robin, 126; Varied Thrush, 8; Pale Varied Thrush, 1. Total, 65 species, 8,979 individuals. On Dec. 23 and 24, the following also: Bonaparte's Gull, 3; Red-breasted Merganser, 1; Pintail, 2; Virginia Rail, 1; Red-backed Sandpiper, 40; Western Sandpiper, 1; Say's Phoebe, 2; Golden-crowned Kinglet, 2. Grand total for 3 days, 73 species.—HAROLD E. HANSEN, WALTER A. SQUIRES, C. R. THOMAS and JESSE KLAPP.

Los Angeles, Cal. (Los Angeles Harbor, San Fernando Valley, Benedict Canyon, Eagle Rock Valley, Silver Lake, Nigger Slough, Sunset Beach, Eaton Canyon, Hollenbeck Park).—Dec. 27; 6:30 A.M. to 5:30 P.M. Cloudy after 10 A.M., misty in P.M.; wind northeast, light; temp. 28° to 68°. Observers in six parties as indicated, each covering different territory. Western Grebe, 4; Eared Grebe, 8; Pied-billed Grebe, 10; Red-throated Loon, 1; Glaucous-winged Gull, 6; Western Gull, 280; California Gull, 34; Ring-billed Gull, 40; Short-billed Gull, 3; Forster's Tern, 5; Farallon Cormorant, 4; Baird's Cormorant, 9; California Pelican, 21; Mallard, 1; Baldpate, 7; Cinnamon Teal, 4; Shoveler, 1; Pintail, 5; Redhead, 2; Canvasback, 212; Scaup, 1; White-winged Scoter, 1; Ruddy Duck, 21; Great Blue Heron, 13; American Egret, 11; Black-crowned Night Heron, 4; Sora, 1; Coot, 122; Northern Phalarope, 4; Wilson's Snipe, 17; Least Sandpiper, 12; Red-backed Sandpiper, 19; Western Sandpiper, 41; Sanderling, 34; Greater Yellowlegs, 1; Hudsonian Curlew, 13; Black-bellied Plover, 3; Killdeer, 53; Snowy Plover, 13; Valley Quail, 100; Mourning Dove, 21; Turkey Vulture, 14; Marsh Hawk, 2; Western Red-tailed Hawk, 2; Bald Eagle, 1; Desert Sparrow Hawk, 18; Barn Owl, 1; Burrowing Owl, 8; Roadrunner, 3; Kingfisher, 1; Willow Woodpecker, 1; Nuttall's Woodpecker, 2; Red-naped Sapsucker, 1; California Woodpecker, 7; Red-shafted Flicker, 40; Anna's Hummingbird, 28; Cassin's Kingbird, 11; Say's Phoebe, 12; Black Phoebe, 39; California Horned Lark, 400; California Jay, 28; Western Crow, 8; San Diego Redwing, 1,125; Western Meadowlark, 194; Arizona Hooded Oriole, 1 (stray, living in a private yard); Brewer's Blackbird, 1,161; House Finch, 871; Willow Goldfinch, 200; Green-backed Goldfinch, 2,700; Western Savannah Sparrow, 9; Large-billed Sparrow, 70; Belding's Sparrow, 119; Gambel's Sparrow, 391; Golden-crowned Sparrow, 29; Thurber's Junco, 677; Rufous-crowned Sparrow, 1; San Diego Song Sparrow, 78; Thick-billed Fox Sparrow, 5; Towhee (*P. maculatus* subsp.), 15; Anthony's Towhee, 87; Tree Swallow, 3; California Shrike, 33; Hutton's Vireo, 5; Audubon's Warbler, 1,306; Townsend's Warbler, 1; Pacific Yellowthroat, 9; Pipit, 136; Dipper, 2; Western Mock-

ingbird, 84; Pasadena Thrasher, 4; Rock Wren, 1; San Diego Wren, 6; Western House Wren, 2; Tule Wren, 27; Plain Titmouse, 3; Bailey's Mountain Chickadee, 5; California Bush-Tit, 80; Wren-Tit, 11; Ruby-crowned Kinglet, 16; Western Gnatcatcher, 2; Black-tailed Gnatcatcher, 4; Dwarf Hermit Thrush, 15; Western Robin, 177; Western Bluebird, 95; Mountain Bluebird, 28. Total, 105 species, 8,746 individuals.—MRS. F. T. BICKNELL and MRS. ROBERT FARGO; MISS HELEN S. PRATT and MRS. W. L. BROWNLEE; MR. L. E. WYMAN; DR. E. A. DIAL and MRS. WARREN MARTZ; MR. ALFRED COOKMAN; and MR. JOHN B. FREDERICK.

Notes on the Plumage of North American Birds

FORTY-SECOND PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Crissal Thrasher (*Toxostoma crissale*, Fig. 1).—As with other Thrashers, the sexes of this species are alike in color and the seasonal changes in color are due only to fading and wear. The summer plumage, aside from being more frayed, is more sandy in tone than that of winter.

The juvenal (nestling) plumage closely resembles that of the adult, but is slightly paler below. The succeeding, or first winter plumage, is not distinguishable from that of the adult.

The Crissal Thrasher ranges from western Texas to the Pacific coast northward as far as southern Utah, and southward into northern Sonora and Lower California. No races of it have been described.

California Thrasher (*Toxostoma redivivum*, Fig. 2).—The above remarks concerning the plumage of the Crissal Thrasher apply also to this species. This bird, however, has a more restricted range, being found only in California and northern Lower California. Our figure (Fig. 2) is unfortunately too brown above and the ventral region and crissum are too deeply colored, faults of reproduction, which apparently cannot at times be avoided.

Leconte's Thrasher (*Toxostoma lecontei*, Fig. 3).—In general tone of color Leconte's Thrasher resembles Bendire's Thrasher. It is, however, even paler than that species (and hence is the palest of all the Thrashers) and the underparts are unspotted.

So far as the adults are concerned, the slight color changes in the plumage of this species are the same as those of other Thrashers. The juvenal plumage, however, is somewhat more fulvous both above and below than that of the mature bird.

Two races of this species are recognized, *Toxostoma lecontei lecontei* to which the name Leconte's Thrasher is restricted, and *Toxostoma lecontei arenicola*, the Desert Thrasher, a slightly darker form. The first inhabits the deserts of southern California, southern Nevada and southward into northern Sonora, and to San Felipe Bay in Lower California. The second is said to be confined to the deserts of Lower California lying between latitudes 28° and 30°.

Bird-Lore's Advisory Council

WITH some slight alterations, we reprint below the names and addresses of the ornithologists forming BIRD-LORE'S 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with the objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the sixteen years that it has been in operation fully equals our expectations. From both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, 1919 16th St. N. W., Washington, D. C.
ARIZONA.—Harriet I. Thornber, Tucson, Ariz.
CALIFORNIA.—Joseph Grinnell, University of California, Berkeley, Cal.
CALIFORNIA.—Walter K. Fisher, Palo Alto, Cal.
COLORADO.—DR. W. H. Bergtold, 1460 Clayton Ave., Denver, Colo.
CONNECTICUT.—J. H. Sage, Portland, Conn.
DELAWARE.—S. N. Rhoads, Haddonfield, N. J.
DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l. Mus., Washington, D. C.
FLORIDA.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
FLORIDA, Western.—R. W. Williams, Jr., Tallahassee, Fla.
GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.
ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
IOWA.—C. R. Keyes, Mt. Vernon, Iowa.
KANSAS.—University of Kansas, Lawrence, Kan.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
MAINE.—A. H. Norton, Society of Natural History, Portland, Maine.
MASSACHUSETTS.—William Brewster, Cambridge, Mass.
MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
MINNESOTA.—Dr. T. S. Roberts, Millard Hall University of Minn., Minneapolis, Minn.
MISSOURI.—O. Widmann, 5105 Morgan St., St. Louis, Mo.
MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
NEBRASKA.—Dr. R. H. Walcott, University of Nebraska, Lincoln, Neb.
NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.

- NEW HAMPSHIRE.—Dr. G. M. Allen, Boston Soc. Nat. Hist., Boston.
- NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
- NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
- NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
- NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Washington, D. C.
- NEW YORK, Western.—E. H. Eaton, Hobart College, Geneva, N. Y.
- NORTH DAKOTA.—Prof. O. G. Libby, University, N. D.
- NORTH CAROLINA.—Prof. T. G. Pearson, 1974 Broadway, New York City.
- OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
- OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
- OREGON.—W. L. Finley, Milwaukee, Ore.
- PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
- PENNSYLVANIA, Western.—W. E. Clyde Todd, Carnegie Museum, Pittsburgh, Pa.
- RHODE ISLAND.—H. S. Hathaway, Box 1466, Providence, R. I.
- SOUTH CAROLINA.—Dr. P. M. Rea, Charleston Museum, Charleston, S. C.
- TEXAS.—H. P. Attwater, Houston, Tex.
- UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
- VERMONT.—Prof. G. H. Perkins, Burlington, Vt.
- VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
- WASHINGTON.—Samuel F. Rathburn, Seattle, Wash.
- WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
- WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.

CANADA

- ALBERTA.—G. F. Dippie, Calgary, Alta.
- BRITISH COLUMBIA.—Francis Kermode, Provincial Museum, Victoria, B. C.
- MANITOBA.—Ernest Thompson Seton, Greenwich, Conn.
- NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.
- ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
- ONTARIO, Western.—W. E. Saunders, London, Ont.
- QUEBEC.—E. D. Wintle, 189 St. James Street, Montreal, Canada.

MEXICO

- E. W. Nelson, Biological Survey, Dept. of Agr., Washington, D. C.

WEST INDIES

- C. B. Cory, Field Museum, Chicago, Ill.

GREAT BRITAIN

- Clinton G. Abbott, Rhinebeck, New York.



Winter Notes

Evening Grosbeak in Pittsfield, Mass.

It may be of interest to you, and as a sequel to "My Experience with Evening Grosbeaks," a story that I sent you last Spring, I send you the following facts: The Evening Grosbeaks visited my window until the 20th of May this year, feeding from the trays and from my hand. Imagine my surprise to see six Evening Grosbeaks, four female and two male, this morning (Nov. 19, 1916), about 9.30 o'clock in the same trees that they were in the habit of alighting in last Spring, one bird flew down on to the piazza roof. I immediately put out the trays with seed but all flew away and did not return during the day. I was in hopes that they would return in the winter time, but did not expect them so early. Last Sunday we had a snow storm, about six inches fell on the mountains about this city, I wonder if the birds followed the storm, possibly it is a new record of early appearance.—CHARLOTTE M. BARROWS, 113 Appleton Ave., Pittsfield, Mass.

[The Berkshire Evening Eagle, published at Pittsfield December 26, 1916, has this additional note on Mrs. Barrows' Evening Grosbeaks:

"About three weeks ago, six or seven Evening Grosbeaks showed up at the Barrows home, but Mrs. Barrows had not expected them and there was no food tray out in the accustomed place. After prospecting a while, the birds disappeared and did not reappear until very recently. Last year there were 42 in the flock and this year about 26 have put in an appearance. They are very tame and will eat out of Mrs. Barrows' hand. They apparently know her and do not manifest any trepidation when she appears at the window. On the contrary they crowd up close to the window to get their food. Let a stranger enter the room, however, and draw near to the

window and the birds will flutter away quickly to a safe distance and reconnoiter for a while."—ED.]

Evening Grosbeaks in Fall River, Mass.

The Evening Grosbeaks have again arrived in Fall River, Mass., for their fourth visit, the other years being 1911, 1914, 1916.

The first one was seen on December 11; but their very distinctive call was heard on the tenth. This is the earliest date on which they have ever been seen in Fall River, as in the other years they have not been seen until February. Last year, when they were not reported to BIRD-LORE, they were seen for the first time on March 13, but were seen many times from that date until early in May, as many as fifteen at a time. This year the flock is even larger, eighteen or nineteen having been counted, with more males in full plumage than usual, so it is a beautiful sight.

They feed occasionally in the box elder trees, but also seem to find something on the ground they like, not as yet coming for the sun-flower seeds which have been put out.—ELLEN M. SHOVE, 446 Highland Ave., Fall River, Mass.

The Evening Grosbeak in New York City

Walking along the path by the upper lake near the Botanical Garden Museum, on the morning of Nov. 23, of this year, I passed almost under three male Evening Grosbeaks. They were feeding in an ironwood tree on which a few old seeds still remained, and allowed me to pass not more than four or five paces away. While looking at and admiring the birds, which I had been acquainted with for many

years in the West, the Assistant Director, Dr. Murrill, came by and I called his attention to them. He at once pronounced the birds to be similar to eight he had seen a week earlier in the Garden at no great distance from this point, and feeding on the same species of tree. This is the earliest date, I believe, recorded for their far eastern range, and I can find only four other birds mentioned in the past as having been seen within the city limits. Up to the time of writing this note, Dec. 25, I have seen or heard nothing more of these strikingly showy visitors.—R. S. WILLIAMS, *Administrator Assistant, New York Botanical Garden.*

Evening Grosbeak in Pennsylvania

On the morning of November 30, 1916, I went for a walk along Stony Creek, carrying with me a quantity of suet to put in the wire cages at several feeding-stations; and, while busy filling one, I heard an entirely new bird-note, and discovered in a nearby tree a bird which was a stranger in this locality. Soon two others joined this one, and the three came into a honeysuckle vine within a few feet, and I immediately identified them as female Evening Grosbeaks. They remained near me for a half-hour or more, so my identification was positive. They were eating honeysuckle berries, and berries from the poison ivy. The cracking of the seeds could be heard at a distance.—HARRIET E. WALLACE, *Norristown, Pa.*

Pine Grosbeak in Illinois

If I am rightly informed, I understand that the Pine Grosbeak has not been recorded in this vicinity. I am therefore delighted to place the female Pine Grosbeak on record. I first saw same this morning of Nov. 20. It fluttered from a tree to my feet, and again very unhurriedly back to the branches.

It has since been staying almost continuously in a thicket of vines, amongst which grow an abundance of matrimony-vine berries. The bird feeds with great

relish upon these berries, seems very friendly and contented.

This bird was verified by Mr. Paul B. Riis, of this city and others.—(Mrs.) ROBERT LATHROP, 1231 *National Ave., Rockford, Illinois.*

A Practical Solution of the Sparrow Problem

I have been fighting the English Sparrow for several years, for the reason that he has been fighting the other birds which visit our feeding station, driving them off and consuming all of the food. I noticed that the English Sparrow liked the seeds and grains best of all the foods which I put out. I also noticed that when there was no grain in the station and there was grain thrown out for the poultry the English Sparrow left the station and went to the chicken-yard, and the other birds had a few minutes to snatch a lunch. So, although I heartily disapprove of him, I am feeding him grain on a bare space of ground about fifty feet away from the feeding station and to my delight the Chickadee, Nuthatch, Juncos, Woodpeckers and Tree Sparrows are left in peace. I put in the station sunflower seeds, suet, bits of apple crumbs, and doughnut scraps, which I make by tossing crumbs of all kinds into boiling fat and skimming them off as soon as they brown. For the English Sparrow I throw oats and cracked corn and, although I do it grudgingly, I see no better way out.—(Mrs.) EDITH H. SMITH, *Cornwall, N. Y.*

Acadian Chickadee at Branchport, N. Y.

During the last days of November, 1916, an Acadian Chickadee presented his appearance here in our woodsy village, and I observed him daily until December 22, when he vanished.

This is the first time that I have noted the Acadian Chickadee in this section during a period of over twenty-six years' active bird observation, therefore it is of noteworthy occurrence.

It proved to be of a rather independent

disposition, being observed daily all alone in various parts of the town, besides being a regular patron of my suet feeding stool and bird winter-garden on the porch roof.

While Chickadees will venture to feed from my hand if offered seeds of sunflowers, the Acadian could not thus be tempted; in fact, seeds did not appeal to his taste, but he was partial to nut-meats; while suet always lured him close to camera, and I was enabled to secure several photographs.

However, one had to be alert in order to get a snap, for the Acadian was very active and seldom lingered at the suet, preferring to break off a crumb and hastily flit to a nearby tree to devour it.

The rather plaintive notes of this bird were so different from those of the ordinary Chickadee that its presence could be readily distinguished, even if not seen, as it flitted around in the tree tops.—CLARENCE F. STONE, *Branchport, N. Y.*



ACADIAN CHICKADEE
Photographed by C. F. Stone

Book News and Reviews

BIRD FRIENDS. A Complete Bird Book for Americans. By GILBERT H. TRAF-TON. Houghton Mifflin & Co., Boston and New York. 12mo. xviii+330 pages; plates and cuts.

To write "a complete bird-book for Americans" in three hundred and odd pages is obviously an ambitious undertaking, and if Mr. Trafton fails to accomplish a task which we believe most authors would consider impossible, he at least comes as near success as his space permits.

His book, in brief, is a practical dissertation on the bird's place in nature and its relations with man. He writes of the migrations, songs, nesting habits, colors, and plumage of birds, gives useful suggestions on methods of study in the field, including bird-study with a camera, where we regret to see he does not mention the importance of a blind if one would secure not only pictures but intimate observations as well.

This more purely ornithological matter occupies the first sixty-two pages of the book. Pages 63 to 173 are devoted to economic ornithology with chapters on the food of birds, their value to man, changes in the numbers of birds, natural enemies of birds, bird enemies introduced by man (in which the cat is arraigned at length), and man as an enemy of birds.

Having stated the value of birds and the various destructive agents which are arrayed against them, Mr. Trafton devotes the balance of his book to an account of the various agencies which directly or indirectly are working for bird-protection.

He writes in detail of the activities of the National Association of Audubon Societies, the national Government and several representative bird clubs, and gives instructions in regard to erecting bird-houses, feeding-stations, planting, etc.

His final chapter on methods of teaching bird-study in the schools is one of the most valuable in the book. Mr. Trafton has had wide experience in this field and

his outlines of study for the first to eighth grades contain much original and suggestive material.—F. M. C.

A YEAR WITH THE BIRDS. By ALICE E. BALL. With 56 colored plates by Robert Bruce Horsfall. Gibbs & Van Vleck, New York City. 1916. 8vo. 191 pages.

This book is an unusual and most attractive combination of ornithology, poetry and art. It treats in verse of the more prominent characteristics of color, form, or song of over fifty common birds arranged according to their season.

We have first, therefore, winter birds which in turn are followed by those of spring, summer and autumn.

It is believed by the author, and no doubt with truth, that through the medium of rhyme and rhythm she can reach the child mind more effectively than if the same information were presented in prose. She exhibits excellent judgment in the selection of her material and no small degree of skill in giving it an attractive literary setting. Her efforts to picture the bird in nature are well seconded by Mr. Horsfall whose drawings depict the subjects chosen in their haunts and, at times, notably with the Chickadee and Tree Sparrow, reveal genuine sentiment.—F. M. C.

AUDUBON POCKET BIRD COLLECTION. Case No. 1. Permanent Resident and Winter Visitant Land Birds of the northeastern United States (63 figures). Case No. 2. Winter Visitant and Permanent Resident Land Birds of southeastern United States (82 figures). Arranged by Frank M. Chapman. Drawn by E. J. Sawyer, for the National Association of Audubon Societies. Price, 10 cents each.

The National Association of Audubon Societies has recently issued two handsome pocket folders of colored pictures of birds which embody a new idea in bird-study. Each folder represents a museum exhibition case in which the birds are

arranged in shelves. Without, therefore, appearing to be overcrowded, it has been possible to get the greatest number of birds in the smallest amount of space, and the student can consequently place in his pocket a two-sheet folder on which are figured all the land birds he may usually expect to find between November and March.

The figures are small but accurately colored and the fact that all those in the same section of the case are *drawn to the same scale* makes them of more value in field identification (where size is of the first importance) than illustrations in books where the scale constantly changes.

The plan for these novel bird collections, which originated with Dr. Chapman and is based on his seasonal exhibits of local birds in the American Museum, has been admirably carried out by Mr. Sawyer.

These folders will be of great assistance to teachers, and form a part of the equipment given this year to every member of a Junior Audubon Class. Others may obtain them for 10 cents each by addressing the office of the National Association at 1974 Broadway, New York City. A reduction on quantities for the use of Audubon Societies, bird clubs and other organizations is made.—T. G. P.

The Ornithological Magazines

THE CONDOR.—The November number of 'The Condor,' containing five general articles, completes Volume XVIII. The first paper entitled 'Some Results of a Winter's Observations in Arizona,' by A. B. Howell, is based on field-work in 1915-16, on Rillito Creek, near Tucson. This locality is classic ground ornithologically but most of the previous work in the region has been done in summer. The more important notes include the finding of two Audubon's Caracaras—the first reported from the state for ten years, the determination of the form of Junco occurring in winter, the absence of the Sage Sparrow and the Rufous-winged Sparrow, and the first record of the occurrence of the Swamp Sparrow in Arizona.

In the third and concluding part of 'Meeting Spring Half Way,' Mrs. Bailey gives an account of the birds found about Brownsville, Texas, and on the trip back to Corpus Christi, Texas, and the changes noted in the bird-life and vegetation due to migration and the advance of spring during an absence of two weeks.

Pemberton contributes a brief article, with two illustrations, on the 'Nesting of the Le Conte Thrasher,' between Cabegon and Whitewater, in Riverside County, Calif., in 1916; and Quillin and Holleman a note on the finding of five nests of the San Domingo Grebe in Bexar County about ten miles south of San Antonio, Texas.

'More Summer Birds for San Francisco County,' by Ray, is a supplement to a paper on the same subject which appeared in 'The Condor' in 1906. The number of species has now been increased from 44 to 100, mainly as a result of observations in the southeastern part of the county in the Merced Lakes region.

Among the brief notes Pemberton calls attention to 'Grammatical Errors in Vernacular Names' in the cases of the Screech Owl and Song Sparrow. Through long usage these names are generally accepted but if formed on the usual models found in Warbling Vireo and Mourning Warbler "the more prevalent practice should have dictated that these names be Screeching Owl and Singing Sparrow."—T. S. P.

A Winter Feeding Poster

THE Biological Survey has issued an attractive and valuable poster well designed not only to attain the immediate end in view of feeding birds in winter, but also to arouse widespread interest in bird-life.

It is illustrated with drawings and photographs showing methods and results of feeding birds in winter, and these are accompanied by instructions which will enable anyone to establish feeding stations. Copies of this poster and additional information in regard to winter feeding may be obtained from the Biological Survey, Washington, D. C.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

MAJOR ALLAN BROOKS' observations on birds in the war zone, which we are privileged to publish in this issue of BIRD-LORE, have as much human as ornithological interest. While he arouses our fears for the safety of the Sandpiper whose search for food is constantly interrupted by the explosion of shells, we are far more concerned for the safety of the observer who, inadequately protected by sandbags, is evidently giving his attention to the bird rather than to their common source of danger.

When we realize what an irreparable loss to ornithology might be inflicted by a mere fragment from one of these shells, we are sure that every admirer of Major Brooks' paintings of birds (and that, we know, includes all who have seen them) will be relieved to hear that after serving a long period on the firing-line he is now engaged in teaching others the use of the rifle. It is a suggestive comment on war valuations that he owes his present comparative immunity from danger to his skill as a marksman rather than to his rare gifts as an artist.

EVENING GROSBEAKS have again returned to us, and bid fair to become regular winter visitants to the northeastern states, while the 'Acadian' Chickadee has been reported from localities south of those it has heretofore been known to visit. Up to this time (January 15) the winter has been far from severe and we cannot

account for the presence of these and other boreal birds through prevailing climatic conditions.

What then has induced them to extend their winter wanderings to such comparatively low latitudes? The answer to this question is surely not to be based only on observations made in the region to which the birds travel, but rather upon studies made in the country which they have left.

Failure of the normal food-supply in the area where the bird commonly winters is probably the prime cause which induces birds to extend the limits of their winter range, and the presence of food in the territory invaded is a secondary factor in their occurrence there.

The number of 'records' of the Evening Grosbeak and Acadian Chickadee, for example, which have been made during recent years, sometimes prompts the question whether this is not a matter of increase in the numbers of ornithologists rather than in the numbers of birds. It goes without saying that the number of observations made increases automatically with the number of observers, and beyond question more purely accidental visitants are reported nowadays than were seen when field students were less numerous. But it does not seem probable that during the last forty years, at least, such widespread incursions as those made by the two birds mentioned could have taken place unnoticed. In this issue of BIRD-LORE, for example, Mr. C. F. Stone records the first Acadian Chickadee observed by him at Branchport, New York, during a period of twenty-six years' continuous observation, and we could cite a number of similar cases.

WE strongly condemn the proposal to organize Boy Scouts, or any other groups of boys, into bands for the destruction of English Sparrows. Such a plan has absolutely nothing to commend it. If it becomes necessary to reduce the numbers of Sparrows the work should be entrusted to trained and authorized agents of the state who could do it humanely and with a due regard to the safety of other birds.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

ONE WAY TO BEGIN THE NEW YEAR

THERE is a simple but very effective and much needed method of work which every State Audubon Society would do well to adopt. It consists in making the aims, resources and headquarters of each State Society known to every school, public library and all organized institutions to which such information might be of use, throughout the state.

A correspondent writes to the point, in describing the work of a high-school boy who is deeply interested in bird- and nature-study. "I happened to be at the Y. M. C. A. one day, when this boy came in and asked for some nature-study literature. I think it was a most unusual request, for the gentleman at the desk looked very much surprised. He passed over *The Country Gentleman*, which constituted the Y. M. C. A.'s nature library."

From another correspondent, who lives in the state of New York comes an inquiry as to whether there is an Audubon Society in the state, and if so, what it could do to help a teacher in a rural school. Communications of this kind suggest that our Audubon Societies need to establish a working connection with every village, town and city in their respective states, if they are to fulfil the object for which they were founded. It is not enough to offer a few public lectures each year, to have a succession of field-trips, or to send out traveling-libraries and demonstration material for use in schools. There ought to be and must be a *live relation* between the Society and each possible coöperator, if nature-study and the conservation of natural resources are to be successfully undertaken and carried to the desired end. When a teacher writes: "I have never found any material so interesting and educational as that you offer. The children love it, and have made a remarkable growth in their love for wild things. Their water-color bird outlines are by far their best efforts in manual work"——it is a noteworthy indication of the possibilities of the influence which Audubon work rightly directed may have in the education of the public. Again and again, comes a message of appreciation of the educational leaflets, of BIRD-LORE and BIRD-LORE'S School Department, and of the value of nature-study.

The opportunity, so long and earnestly striven for, of creating an "open door" in our schools is here. We need now more effort in the direction of making that door known and used, by keeping it *wide open*, and by extending a greeting to those who might enter if they knew the way. Each State Society

might well have a Publicity Committee, or, if you will, an "Orientation Committee," whose duty it should be to more thoroughly present the work of the Audubon Society to all whom it may concern. The postage used in such a campaign would be well spent, we may be assured.—A. H. W.

NOTE

Teachers and organizers of Junior Audubon Societies will receive instructions and material *much more quickly*, if they apply directly to the headquarters of The National Association of Audubon Societies. All that is necessary in making application to form such societies is to collect a fee of ten cents from each person desiring to become a member, and to forward the total amount, with a request for material, to Mr. T. Gilbert Pearson, 1974 Broadway, New York, N. Y.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXI: Correlated with Geography, History and Story-Telling

We are not through with the subject of bird-music, but, during these coldest of months, it may not come amiss to take up a little studied matter which fits in well with the stories we love to hear around the fire of an evening, and the games we enjoy indoors while snow falls fast or wild winter winds blow. It is a matter which reminds one of pioneer days, tales one has read or has had the good fortune to hear from the lips of grandfather or grandmother, who repeated them as they had heard them from an older generation.

In 1905, there was issued from the Government Printing Office at Washington the second edition of a bulletin entitled *The Origin of Certain Place Names in the United States*. This bulletin, which is marked No. 258 in Series F, Geography, 45, was prepared by Mr. Henry Gannett for the United States Geological Survey, under the Department of the Interior. It represents an enormous amount of study and correspondence, and places at our disposal in brief form a delightful and suggestive amount of information not otherwise available in a single volume.

Did you ever stop to think, when you are studying the lesson for the day in geography, how many kinds of place names may be found on the map of our country? Take a random list, such as this, Chester, Fort Monroe, Halseyville, Isle au Chene, Kotzebue, North Hero, Oconomowoc, Ohio, Toronto, Wilkes Barre, Ypsilanti, Zaralla. Indian, Spanish and Aztec names run side by side down the pages of your geography with ones of English, Greek, Mexican, French and Dutch origin. Each one contains a precious bit of association with some man, nation, place, natural object, historical event or custom which at

one time seemed of great significance to the early settlers or their dusky predecessors.

The far away home of early emigrant ancestors is cherished and handed on to future generations, in the name Chester; a President is honored and a military school distinguished, in Fort Monroe, and a first settler's successful conquest of virgin soil, in Halseyville; Isle au Chene, one of the Apostle Islands in Lake Superior, pictures the impression of French pioneers when they first saw this 'island of the oak,' while Kotzebue is the name of a Rus-



FORTY FORT JUNIOR AUDUBON SOCIETY, KINGSTON, PA.
Fifty of the eighty-five members of the class are shown in this photograph

sian navigator who, early in the nineteenth century, commanded expeditions the object of which was to explore the Pacific Ocean.

North Hero is one of two islands known as "Two Heroes," which was granted to Ethan Allen, "the intention being that they should be owned only by brave men warmly disposed toward the Revolution." What a thrill comes to us as this sign of loyalty toward an ideal of liberty flashes out its significance anew to us from the printed page!

Oconomowoc is the Indian way of saying 'home of the beaver.' A modern city rises to-day upon the site of this old beaver stronghold. What the struggle between civilization and nature, between man and beast, may have been is well pictured in one of Enos Mill's graphic essays. Ohio, a more familiar word, taken from the Iroquois Indians' dialect, means 'beautiful river.'

In Toronto we have a picture-word, again from the Indian tongue, meaning 'oak tree rising from the lake.'

Wilkes Barre, Ypsilanti and Zaralla each refers to sympathizers with American independence at different times and in different ways, representing British, Greek and Mexican men of deep conviction and great courage.

Especially interesting to us are place names of Indian origin, for the reason that so many of them are connected with objects in nature. The Indian, being a hunter and a wanderer in a primeval wilderness, was of necessity a keen observer, so far as the necessities of his simple existence were concerned. Although not a student of nature, in the sense of learning for the sake of knowledge, he acquired by daily experience much information about the habits and appearance of many plants, animals, birds and other natural objects.

Being fond of bright colors, as well as attentive to all strange or unusual sounds, the Indian quite naturally was attracted by the brilliant plumage and musical notes of birds, and named these familiar creatures according to his mode of living, his superstitions, or his first impressions of their appearance and actions. In the Milicete Indian word, 'Zezos,' we find an unexpectedly beautiful interpretation of the Chickadee's 'pe-wee' song. To the childlike mind of the Milicete, whose home is in the valley of the St. John River, the leader of a flock of Chickadees sings 'Tezos,' that is, 'Jesus,' to its mates. In this single word is contained a picture of the simple faith of the Indian, converted to Christianity by some devoted French priest.

The peculiar motions of the Nuthatch attracted the red man, who named this familiar bird Tci'-di-wa'-ti-wemp'-tos, that is, 'bird that goes slowly down a tree-trunk.' To the male and female Robin, as well as to their nest and eggs, were given separate names, each signifying some noticeable characteristic.

If you can pronounce the Indian word for Whip-poor-will, 'Hwip'-o-lis,' you will have a close imitation of the notes of this nocturnal singer.

A-bak'-wi-ses', or 'Bird-that-butts-its-head' is no other than the Downy Woodpecker, while Gas'-kum-un-is, the Kingfisher, is especially interesting, since it refers to a sudden or unexpected dropping beyond one's depth when wading in water, and, as used to describe the Kingfisher, means its manner of plunging for prey.

But to return to place names, let us study a few more words of Indian derivation, which will be only an introduction to the pleasures in store for those who take the matter up further.

Chicago—Ojibwa Indian form *she-kag ong* = 'wild onion place.'

Chicacomico—Indian form = 'place where turkeys are plenty.'

Acabonack—Indian form = 'root place,' where the Indians found roots for medicinal uses.

Adirondacks—(Mohawk) Iroquois form = 'bark eaters.'

Ahiki—Indian form = 'sweet potato mother.'

Ambajeejus—Indian form referring 'to two large, round rocks, one on top of the other.'

Amicalola—Cherokee Indian form = 'tumbling' or 'rolling water.'

- Androscoggin—Amasagunticook form = 'fishing place for ale wives,' or 'fish spearing.'
 Antigo—Indian form = 'evergreen.'
 Apopka—Indian form = 'catfish eating creek.'
 Aptakisic—Indian form = 'half day' or 'sun at meridian.'
 Aquaschicola—Indian form = 'where we fish with the bush net.'
 Arcata—Indian form = 'sunny spot.'
 Aswagusawadic—Indian form = 'place where one is compelled to drag his canoe through a stream.'
 Attapulgis—Indian form = 'boring holes into wood to make a fire.'
 Attitash—Indian form = 'blueberries.'
 Aztec—name of a native Mexican tribe = 'place of the Heron,' 'shallow land where vapors arise,' 'land of the flamingoes.'

From these few examples, it is easy to see how the Indian marked the places to which it was useful for him to be able to find his way, or, which appealed to his sense of beauty, or served as a landmark through newly trodden ways. Many of these names will be unfamiliar to you, but they will all be found on the map of the United States. It would make an interesting evening's game to look up the locality of each place in a large atlas.

The list of words might be indefinitely prolonged, if there were space. It remains for you to find a deeper meaning in your study of geography than merely learning to locate places on maps. Would it not be easier to remember, for example, that Menominee is a city in Wisconsin, and also, in Michigan, if you knew that this queer Indian word refers to the wild rice which once grew abundantly about those places? Wild rice, in turn, suggests wild birds which prefer that food and, by this clew, one might discover something of the abundance of such species in earlier times.

Summing up this rather novel method of study, we may find it of value in three ways: first, to stimulate interest in routine study; second, to aid the memory through the association of different ideas; and third, to awaken the mind to the wealth of knowledge hidden in words, which is free to all who have the will and the wit to claim it as their own. This New Year, let us make the hours in school count for more, by getting the most we can out of what we have to learn.—A. H. W.

FOR AND FROM ADULT AND YOUNG OBSERVERS

"John Thoreau, Jr. (Henry Thoreau's eldest brother), one day put a Bluebird's box on my barn,—fifteen years ago, it must be,—and there it still is, with every summer a melodious family in it, adorning the place and singing his praises. There's a gift for you which cost the giver no money, but nothing which he bought could have been so good." Excerpt from Emerson's Diary.

NOTE: "The Bluebird box has lasted until destroyed by a spring gale of the present year" (1915).

FROM A STARCH-BOX TO A TWENTY-SIX ROOM MARTIN-HOUSE

Some years ago, I began to see bird-houses in different gardens near my home, and became interested in them. I was twelve years old at the time. Tools had been given me by relatives, but I never had any real use for them. The interest in bird-houses started my tools on their proper journey in life.

My first efforts began with starch-box foundations, and Wrens and Bluebirds are not skeptical about such architecture. From the way Jenny Wren perks about, some of the starch of original abodes of this kind seems to have entered into her makeup. Immediately Wrens and Bluebirds took advantage of the new dwellings. I was still on the step-ladder, having just placed a house, when a vivid Bluebird, the first one of the season, perched on the new roof. It was a magic incident. He came from the sky like a blue arrow and was as quickly gone. Later he came with his mate to delight our household.

After reading my first bird-books, specific needs impressed themselves upon me very quickly. As with all things we love, nothing is too good, so an investment in clean, smooth lumber was made. The size of the various doors began to mean something. Ventilation was a consideration, and placing the houses with regard to wind and rain. The neighbors were touched by the new interest, and a kind neighbor made helpful suggestions. The third year, ambition and ever-growing interest reached 'from pole to pole,' and alighted on Martin-houses. Some six-room houses of unique design were built, but placed too near the dwelling for occupancy. Martins came to the garden all through the season, fluttering on the houses and expressing most earnest regret that their needs could not be met. The joy ahead this year is that twenty-six rooms of solid comfort await boarders this spring, the distance of the Martin-pole away from the house being scientifically correct.



Next to the passing fire-department, nothing occasions quite the stir that the shrill cries and wheeling about of several Martins hunting for an abode do. The whole family rush for the windows, and send up all kinds of silent petitions to the flying birds to 'remain and try us.'

In the fall and winter, I have made some bird-feeders and shelters. Juncos and Chickadees have come and certainly brought their friends. An automatic feeder is kept extremely active in the front parkway of my home. From the way people handle and study it, kind hospitality is on the way for other birds. Now I have a formula of various seeds suitable for all winter birds, and these efficient garden friends are being properly attracted.

I have tried both cypress and white pine for making bird-houses, and find the latter the most practical and easy to work with. All my houses are built in such a way that they can be readily cleaned. Either the bottom, side or front is removable. Any boy who is looking for the most interesting pastime and study had better 'follow the leader' BIRD-LORE. Nothing can touch it for wide-awake surprises and benefit.—CONROY EVANS, *Evanston, Ill.*

[The accompanying illustration is the best commentary on this article. Dog and boy are equally alert, and the Martin-house pictured shows the thought and careful workmanship bestowed upon it.—A.H.W.]

WHAT I AM DOING FOR BIRDS

This winter when the birds could not get much to eat, I put some suet on the tree near our house, and I had fun watching the birds eating it.

When it got warmer, I made a bird-house for the Wrens and put it out. I am hoping they will like it.

And I have noticed that the birds have come to our apple trees, and at first we thought they were eating the frozen apples that are on the trees; but I found out that they just wanted the seeds to eat.—ALLEN DUKE (age 11), *Mt. Vernon, Iowa.*

WINTER PENSIONERS

Every winter during November I put out feeding-stations. Heretofore the Slate-colored Juncos have never stayed at my feeding-stations after the latter part of December, but this winter they are still here in January, there being at least three of them.

As far as I can ascertain no one else in Ithaca has any Slate-colored Juncos coming to their feeding-stations. Thinking this may interest the readers of BIRD-LORE, I am sending it in.—DONALD T. RIES, *Ithaca, N. Y.*, Jan. 6, 1916.

[Who will keep a record this season of feeding-stations and their visitors?—A. H. W.]

THE WHITE-BREASTED NUTHATCH AND THE FOOD-COUNTER

The White-breasted Nuthatch is the most appreciative little guest that visits the food-counter in winter. 'He eats what is set before him and asks no questions.' He makes no complaints whatever. Fat pork and suet are his favorite foods, but of course when he cannot get them, he is perfectly contented with bread-crumbs. He comes at the slightest ring of the dinner-bell.

The White-breasted Nuthatches are my most numerous guests at my 'free lunch-room.' When they come for food, they remind me of a brook eternally flowing. Frequently three to five may be seen bouncing down the tree-trunk to the counter.

One of my guests, however, is rather greedy. He scurries down the tree to the counter flippantly, as if he owned it all. He then pops in and takes his meal.

While eating, he has an expression on his tiny face that makes him look like a naughty boy. I expect he knows he should not take so long, but just simply wants to be bad. Others respect their friends and hurry away as soon as they find a piece that suits them. They go away so quickly you would think someone was nearby to shoot them. Maybe, and I shouldn't wonder, if that wasn't bird politeness.

Frequently I have seen five going to the counter at once. It is great fun to watch them feed. These bright little sprites are a joy to the whole household. We consider them as part of the family. I know we will miss them when they go on their journey northward, but hope to see them next winter.—SARAH W. WEAVER (age 12), *Monkton, Md.*, 1916.

[Birds' politeness is hardly a suitable phrase, since it conveys a human conception of meeting and greeting. Some birds go so far as to quarrel at the lunch-counter, striving to get the best or the most of the bill-of-fare. The pleasure to be had watching feathered guests at a lunch-counter cannot be over estimated.—A. H. W.]

BIRD-STUDY BRINGS ITS OWN REWARD

I wrote you concerning a club of women, two of whom have studied birds for years. We have had such a delightful Nature Club for two years! Birds are our particular study.

Several of us take BIRD-LORE and we have it in our public library.

Last year I had a very enthusiastic seventh grade of forty pupils. We have our Audubon Leaflets and use them for our Friday reading lesson. I *steal* time when the drawing teacher cannot manage and have several of the pictures painted, then we have an exhibition of our work and vote on the best work. As we were members of the Audubon Society, the Liberty Bell as a grade, and three of us belonged to the Burroughs Club, we decided to have a name of our own, and chose 'Ch'gee gee,' Indian for Chickadee. Our banner

is orange with black letters, and the two banners, Liberty Bell and Ch'gee gee, decorate our school-room. The seventh and eighth grades of our school have morning exercises together. The Principal gives me fifteen minutes each Monday morning, when we have observation for the week and I take up some new work. Of course it is a short period, but it is gratifying to see what has been accomplished. Many of the children own bird-books. We have 'Bird Neighbors' and 'Bird Life' on our shelves for reference, also 'Birds that Every Child Should Know.'

I have taught here two years and feel that two large grades have been well started in bird-study. We have no manual training class, but many of the boys have made nest- and feeding-boxes.

Our ladies' club has started a sanctuary at the cemetery. It is a beautiful spot for such work and we have the cordial support of the gentlemen most interested in the cemetery work.

I am hoping that this coming year in school will be as happy in bird-study as the past two years have been. We shall be particularly interested in the School Department of BIRD-LORE.—MRS. DELIA B. HEMSTREET, *Canton, New York.*

A METHOD OF BIRD-STUDY

In the spring of 1913 I, who knew perhaps ten birds by sight, became suddenly interested in nature-study. Since then every possible spare moment has been devoted to an exact study of our feathered friends. As a teacher, I realized how ignorant the children of large towns and even of the country were in regard to nature. I resolved that wherever I taught the children should learn to appreciate the great out-of-doors. The last two years have brought much enthusiasm, especially last spring.

As everyone knows, not many birds frequent northern Maine during the cold season. The few residents such as Chickadees, Woodpeckers, Snow Buntings, Redpolls and those rarer visitors, the Pine Grosbeaks, Horned Larks and the White-winged Crossbills were eagerly watched for daily. There were no feeding-stations, for interest had only begun. However, short five-minute talks were given every morning.

While the snow was yet deep upon the ground, I prepared for the spring campaign. I presented each pupil with a drawing of a bird with each part outlined and numbered. The corresponding names were listed at one side of the paper. In a very few days the correct spelling, pronunciation and meaning of these names were learned in the spelling recitations. Next I had the pupils locate and name these parts on several specimens in view of the whole school. Several stuffed birds were obtained from the Aroostook State Normal School collection at Presque Isle, Maine. Thus, the children knew how to designate each marking on birds observed.

Then a small club, the Madawaska Model School Junior Audubon Class, was formed. There should be a very large class this year, while I am far away studying birds of the sunny South. In March, 1915, the pins, bird pictures, literature, etc., were received at Fort Kent. A bird corner was next instituted. Several colored bird pictures were hung above the two slates, on which was written a Bird-Study Outline. This outline was copied by each pupil, and was used in the study of every bird reported. To this corner were added two nests, one a Robin's, the other a Crow's, also three mounted specimens, a Pileated Woodpecker, a Hairy Woodpecker, and a Paroquet. The three

[illegible]

Enthusiasm reached its highest during the latter part of May and the first of June. For nearly a month the weather had been very mild but it suddenly became very cold on May 23. During the night heavy winds blew up a freezing rain-storm, which continued until the afternoon of May 28. By reason of the rain or the intense cold, or both, the school grounds were invaded by a multitude of chilled and perhaps starving birds. Field-glasses were unnecessary, because the birds would come to the steps and pick up crumbs. Some of the species seen were Robins, American Redstarts, and other Warblers galore, Wilson's, Blackburnian, Parula, Chestnut-sided, Black-throated Blue, Yellow, and Cape May. In fact the plowed land to the east was dotted with Myrtle, Magnolia, and Cape May Warblers. The latter are supposed to be very rare in Maine. The Magnolia Warblers seemed to be bluish gray in color. One noon, as the children were scattering crumbs by the back steps, they received an informal call of some ten minutes in

length from a Lazuli Bunting. How he happened there was a mystery! Perhaps half an hour later, there nearly alighted on the heads of the much excited observers a Parula Warbler.

Many dead bodies were found and brought to school. Some had been frozen, some had been killed by beating against houses or trains, while others had been captured by the ever watchful cat. Among the number were three Blackburnian Warblers, one Tree Swallow, one Oven-bird, one Mourning Warbler, one Black-throated Blue, and one Chestnut-sided Warbler. There were several other specimens also which were sent with those named, to be mounted.

As the birds were so chilled, many of them were captured by the children. One little Assyrian boy on his way to lunch returned before he had gone home in order to bring a Black-throated Blue Warbler. Another teacher tried to take a snapshot of the little prisoner but he escaped. A Wilson's Thrush, early one morning, was placed in an open window from which he chose to watch the school for over half an hour. What pleased the boys was a baby Grackle which had been blown from its nest to the sidewalk by the heavy gales. It was placed in a wooden quart measure. Every lad had his turn at digging worms to satisfy the enormous appetite of the little creature. The unceasing cries were tiresome, but they helped to increase interest. What matter, then, if the regular routine for the day was disturbed?

Not only birds on the wing but nests, eggs and young were studied. As soon as the weather became fair the ranks began to thin. No more did the Parula and Mourning Warblers or the Lazuli Bunting appear to view. However several pairs of birds sought suitable homes for themselves in our vicinity. The children discovered and reported two nests, which contained eggs, in an adjacent field. Of course the names of the owners were learned only after careful stalking. The time required for incubation was never known. However the eager students easily ascertained that the little birds spent approximately eight days in the nests. But a short distance away a large colony of Bank Swallows hollowed out nearly two hundred cavities in the soft, sandy river bank. Five minutes' walk from the school building brought to view the old dead tree where the patient mother Flicker abode. At first both parents used to fly away when any one approached but, becoming accustomed to visitors, they in turn surveyed the well meaning intruders. A day or two before the close of school a Chipping Sparrow laid five beautiful eggs in a soft nest, hidden in a little evergreen tree. However, the friendly Robins preferred the quiet of the old cemetery for establishing a residence district.

As for the actual results gained, I can only hope that my daily talks with my children and with the student-teachers who visited our room will extend the interest in birds to all the schools in that section of the Pine Tree State. Just recently one of my former pupils stated in a letter that the business men of Fort Kent were having such signs as 'Feed the Birds' posted in their shop windows. The teachers are already planning campaigns there for this spring.—(Miss) CARRIE COOPER, *Arcadia, Georgia*.

AROOSTOOK STATE NORMAL SCHOOL BIRD-STUDY OUTLINE

Date:	19—.	Name of Observer:	
Weather:	Temperature:	Wind:	Locality:
Time of Starting:		Time of Return:	

Observe accurately and record on the spot as much as you can of the following:
Size. Use some well-known bird as a standard for comparison and reduce to inches later.
Color, general;

Number and color of wing-bars;
 Stripes on head and how placed;
 White outer tail-feathers;
 Under tail-coverts, if different from belly;
 Color of rump, if different from rest of bird;
 Color of sides, if brightly colored;
 Any odd ornaments or patches of color.

Shape of Body, slender or bulky.

Tail, long, short, square, rounded, forked.

Wings, round, pointed, long or short—judged by distance measured off on tail while sitting.

Shape of Bill, draw outline.

Habits, ways of moving, walking, hopping, flying;

Perch preferred, trunk, limb, dead twig, tree top, etc.;

Manner of sitting;

Manner of flying, direct, undulating, heavy, flapping, etc.;

Disposition, restless, quiet, stupid, sly, tame, suspicious.

Food, how procured?

Song, describe as nearly as possible, as chirps, trill, twitter, melody, scream, hoot, etc.

Nest, where placed; how placed;

Material used;

Did both birds work on nest?

Eggs, number.

Sexes, are both colored alike, if not, state marks of each. Color and markings.

Number, abundant, common or scarce.

Migration.

Economic Value.

Extra Notes.

Name of Bird.

[Fort Kent is about as far north as one can go in Maine without crossing the line into New Brunswick. The wealth of bird-life there is apparent from the extensive list of migrants and winter visitors mentioned. It would be well, however, to feel much doubt about seeing a Lazuli Bunting in Maine. An escaped Painted Bunting was once reported in the state, but it was identified as a cage-bird. Possibly a chance Blue-gray Gnatcatcher was seen, or in the excitement of the spring migration, the Indigo Bunting was wrongly called the Lazuli. Aside from this, the account is unusually full of interest and helpful suggestions.—A. H. W.]



THE ENGLISH SPARROW

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 90

Many kinds of foreign birds have been introduced into the United States with the hope of having them become acclimated to their new surroundings. In many cases this action was taken by persons who doubtless were actuated by the desire to have around them certain forms of bird-life that they had been accustomed to see and enjoy about their European homes before migrating to these shores.

Linnets, Bullfinches, Skylarks, and many other birds, interesting on account either of their singing, or of the striking character of their plumage, have been liberated in the United States and Canada. Game-birds, especially Hungarian Partridges, the little European Quail, and various species of Pheasants go to swell the list of foreign birds that have been brought here to mingle with our native bird-population. As a rule these imported species did not thrive in their new surroundings, and after a short time were seen no more.

The most striking exception to this rule has been the House Sparrow of Europe, which in this country has acquired the incorrect title of "English" Sparrow. The first importation of these birds appears to have been made in the year of 1850, by the directors of the Brooklyn Institute. Eight pairs were that year liberated in Brooklyn, New York. In a bulletin on the English Sparrow, issued by the Department of Agriculture in 1889, a statement by the Hon. Nicholas Pike is quoted, in which he gives an account of this early attempt to naturalize English Sparrows in this country. He writes:

"It was not till 1850 that the first eight pairs were brought from England to the Brooklyn Institute, of which I was then a director. We built a large cage for them, and cared for them during the winter months. Early in the spring of 1851 they were liberated, but they did not thrive.

"In 1852 a committee of members of the Institute was chosen for the re-introduction of these birds, of which I was chairman. Over \$200 was subscribed for expenses. I went to England in 1852, on my way to the consul-generalship of Portugal. On my arrival in Liverpool I gave the order for a large lot of Sparrows and song-birds to be purchased at once. They were shipped on board the steamship 'Europa,' if I am not mistaken, in charge of an officer of the ship. Fifty Sparrows were let loose at the Narrows, according to instructions, and the rest on arrival were placed in the tower of Greenwood Cemetery chapel. They did not do well, so were removed to the house of Mr. John Hooper, one of the committee, who offered to take care of them during the winter.



ENGLISH SPARROW

Order—PASSERES
Genus—PASSER

Family—FRINGILLIDÆ
Species—DOMESTICUS

National Association of Audubon Societies

"In the spring of 1853 they were all let loose in the grounds of Greenwood Cemetery, and a man hired to watch them. They did well and multiplied, and I have original notes taken from time to time of their increase and colonization over our great country."

This appears to have been only the first of many importations that followed. For example, Colonel William Rhodes, of Quebec, Canada, introduced Sparrows at Portland, Maine, in 1854. Other men brought some to Peace Dale, Rhode Island, in 1858. In 1860 twelve birds were liberated in Madison Square, New York City; and four years later they were introduced into Central Park. In 1866 200 were set free in Union Park, New York City. Forty pairs were brought to New Haven, Connecticut in 1867. Twenty Sparrows were turned loose in Boston Common in 1868. In 1869 the City Government of Philadelphia bought over one thousand Sparrows. In the same year twenty pairs were brought to Cleveland, Ohio, and sixty-six pairs were taken from New York to Cincinnati. Shortly after this they were introduced in San Francisco.

It will be seen therefore from the above records, which are not at all complete, that the present population of English Sparrows did not develop in this country from a single importation, as has sometimes been stated.

Their appearance seems to have been hailed with delight by the people of the country generally, for many records tend to show that after they once became fairly well established in the East, there sprang up a regular Sparrow craze, for the birds were captured and taken to scores, if not hundreds, of places in different parts of the country.

Not only were they distributed artificially, but the birds also spread rapidly by their own initiative. Their progress was made chiefly along the highways, where the droppings of horses furnished an abundant supply of half-digested grain, and along the railroads where the grain-cars, particularly in autumn, were continually scattering food along the right-of-way.

At the present time there are comparatively few communities in the United States or in southern Canada where the English Sparrow is not well known, and probably it is the most numerous species of bird in North America. It is chiefly a bird of the cities and towns, and is usually not found in abundance in the thinly populated parts of the country. In the autumn, however, when the Sparrows are most numerous, owing to the recently reared broods, and in cities where the Sparrow population is already at its maximum, many of these birds are naturally forced out of the cities and towns in quest of food.

In no way does the English Sparrow show its fondness for living near human habitations more than in its nesting-habits. Unlike other Sparrows, it rarely, if ever, constructs its nest in woods, thickets, or fields at any considerable distance from a house. During the breeding-season the birds swarm in the towns and cities and there, in crevices about buildings, in water-spouts, or in boxes put up for the convenience of other birds, it makes its home. The hollows of trees are frequently used for this purpose. When such nesting-sites are no

longer available, owing to overcrowding, they will build bulky, covered, and ill-looking nests among the branches of shade trees. The nesting material used consists of straw, grass, twigs, rags, fragments of paper, or feathers; in fact, almost any substance that may easily be carried seems to be regarded by these birds as suitable material for nest-making.

The eggs are spotted, and usually range in number from four to six. Two or more broods are often reared in a season. The Sparrow is extremely prolific, and one evidence of its wonderful ability to avoid dangers and thrive is shown in the fact that in large cities, where destructive natural enemies are reduced to a minimum, albinism has become more and more noticeable. I have observed here in New York City in recent years that the number of Sparrows showing white feathers in the wings or on the body has apparently increased. If these unusually marked birds lived in the country they would, of course, be shining marks for predatory enemies.

While primarily a seed-eater by nature, the English Sparrow is nevertheless quite omnivorous in its food-habits, and it annually destroys many insects. I recall some years ago talking with two farmers in Onslow County, North Carolina, who were lamenting the fact that the law did not protect the English Sparrow, for they stated that these birds were among the most valuable species on their farms because of their great fondness for the caterpillars that infested their tobacco plants.

An observer in the United States Department of Agriculture recently found that in Utah these Sparrows were feeding their young largely on the cut-worms and other insects that were then a scourge to the alfalfa fields of northern Utah. Other observers in various parts of the country have pointed to instances where the English Sparrow was of decided economic value. These cases, however, appear to be comparatively isolated ones, and are regarded by our agricultural experts in Washington as being greatly overbalanced by the injury these birds do to the general interests of mankind.

Most persons who have tried to cultivate gardens or small fruits in the neighborhood of towns or cities are ready to testify to the annoyance they have experienced by English Sparrows eating tender plants, such as new peas and young lettuce, as well as by the destruction of such fruits as cherries, pears, grapes, and peaches. They also frequently destroy buds and flowers.

The United States Department of Agriculture scientifically investigated the contents of the stomachs of a large number of English Sparrows, and reported that aside from the destruction of weed-seeds, very little is to be said in the English Sparrow's favor. In reference to the insects destroyed this statement is made: "Out of five hundred and fifty-two stomachs inspected by the Biological Survey, forty-seven contained noxious insects, fifty held beneficial insects, and thirty-one contained insects of little or no importance."

There is a widespread feeling that the country would be better off if the English Sparrow had never been brought here. This sentiment against this

bird, whether justified or not, has arisen because of the annoyance it gives to gardeners and fruit-growers; its tendency to destroy the nests of small native birds and thus drive them out of our towns; the loss caused by fires due to the nests placed about buildings catching sparks; its uncleanly habits spoiling sculptures on the façades of buildings; its noisy chatter about the house and yard where once the songs of other birds were heard, to say nothing of the petulant calling and fighting in the early morning heard about bedroom windows where late risers are taking their "beauty sleeps."

Resentment against the bird is reflected in the laws of our country, for in no state in the Union is the English Sparrow protected by statute. Every little while there are discussions in the public press about starting "Sparrow-wars" with a view to exterminating these birds. Now and then we hear of some community's efforts looking to this end. Such attempts, however, have virtually been futile, as the English Sparrow can take care of itself so successfully that only by continuous warfare against them, year after year, can their numbers be kept down in any particular community.

Sometimes the experiment is made of offering a bounty on the heads of Sparrows. One objection to this procedure is that inexperienced persons, who are not able to distinguish between the English Sparrow and one or another of our native Sparrows, immediately become active in such a campaign, and our native birds suffer as a result. Within the past month an agent of this Association visited a western town where a bounty was being paid on dead English Sparrows. This agent examined the dead birds brought in during three days, and found that only one out of every eleven birds brought in, on all of which the bounty appears to have been paid, were English Sparrows; the others were all useful native birds.

"What shall we do with the English Sparrow?" is a question which this Association is probably asked once a day on an average throughout the year. I confess my inability to answer this question. The Department of Agriculture at Washington has attempted to answer it by issuing bulletins advising people to poison and trap the birds. Whether this course is wise, it may at least be said that all such attempts in a public way instantly produce strong opposition by many hundreds of men and women who, perhaps in lieu of more interesting bird-neighbors, regard with pleasure the presence of the English Sparrows, and often feed them upon their window-sills, or provide boxes for their accommodation.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

MOTION-PICTURES OF WILD BIRD-LIFE NOW AVAILABLE

As part of the Association's work in applied ornithology, Herbert K. Job has been photographing and producing a library of motion-pictures of varied phases of wild bird-life. Seven reels have been completed, and others are expected to follow. These films are of excellent quality and have been well received, some having been used on the professional stage widely over the country.

A duplicate set of these seven reels has now been prepared, and will be rented out from the New York office of the National Association. Besides the descriptive legends on the films, there will also be supplied typewritten notes, prepared by Mr. Job, to supply further information. Following are the titles and contents of the films:

Reel I. BIRD-LIFE OF THE WEST COAST OF FLORIDA. Scenes in breeding colonies of water-birds, concluding with the Bird Key Reservation, Dry Tortugas, showing thousands of sea-birds.

Reel II. SEA-ISLAND RESERVATIONS OF LOUISIANA. Touring through Breton Island Reservation with Col. Theodore Roosevelt; visiting an immense Pelican city and other places of interest.

Reel III. WHERE WILDFOWL WINTER. A winter trip to the vast wild-life reservations on the Louisiana coast, amid thousands of wild ducks and geese, and of other birds. A fine film for sportsmen.

Reel IV. ATTRACTING WILD BIRDS. Shows Junior Audubon Society work and methods of feeding and attracting birds on estates; also the wonderful breeding-colony of Egrets and other water-birds created by Edward A. McIlhenny, at Avery Island, Louisiana.

Reel V. PROPAGATION OF GAME-BIRDS AND WILD WATERFOWL. Scenes depicting methods of breeding and rearing these interesting species on estates, showing what may be done, either as a pastime or as an industry.

Reel VI. BIRD-STUDY FOR LIVE BOYS. How a high-school boy worked for the Audubon Society, and helped to take motion-pictures of numerous common birds at their nests feeding their young. Chestnut-sided Warblers are shown feeding their brood in his hand and on his head.

Reel VII. HOME-BIRDS FOR EVERYONE. Out on a 'bird-walk.' The intimate home-life of the most familiar dooryard

birds—Robins nesting on the window-sill, Catbirds in the shrubbery, a Blue Jay family by the kitchen roof, and various others.

For the present, charges as follows will

be made for the use of these films: \$5 for one reel, and \$3 for each additional reel. Transport charges are borne by the receiver. Four or five reels make a good evening's entertainment.

THE EDUCATION OF A ROBIN

By MARIE KUGLER

During a severe storm, early in May, a Robin's nest in our yard was blown down, and, when found, only one of the young birds was alive. His bare little body was stiff with cold, but after being wrapped in cotton and kept near the fire a while, he revived enough to swallow food. For several weeks he was a very dependent little fellow, but later on developed decided opinions. As soon as he was old and strong enough to fly well he was turned out of doors, and we supposed that after a day or two he would mingle with the other feathered folk; but not so. He would fly about until tired out, then come to the door and beg to get in, and even as late as the last of August he would come to the back porch for food and water.

As he had been brought up by hand, he did not know how to find food for himself. He would sit and scream at sight of a worm or berry, expecting it to drop into his wide-open mouth, but would make no effort to pick it up; so we had to teach him to hunt for food out-of-doors. We taught him to pick currants from the bushes by holding him under the clusters so that they just touched his bill, and it wasn't long before he realized that it takes 'pull' to get things in this world. He soon became expert at it, and in a few days we had the pleasure of watching him make profitable round-trips from fence to bush with never an instant's pause.

After a few trips to the garden, where we dug worms for him, he learned to look for them on the ground, and later on we were almost sure to get an answer from him in the corn-rows whenever we called his name, and, until quite late in the summer, he would answer and come to us from the trees when we were in the yard.

He would ride round on our shoulders but his favorite perch was on someone's head.

He loved to bathe and made his wants known plainly by going to his drinking-cup and fluttering his wings violently. After his bath he would fly to the round of a certain chair to preen himself. Since he had no family to associate with, it took several hard-fought battles to establish himself in bird society; but by the end of the summer he seemed to be on good terms with the other Robins in the neigh-



THE PET ROBIN GETS A WORM FROM ITS FRIEND, MISS MARIE KUGLER

borhood. I had read of the 'whisper songs' of birds, but had never heard one until this bird began to sing. Evening after evening he would croon the dearest little twittering songs to himself, as if putting himself to sleep with a lullaby. We took several good pictures of him, but the accompanying one is his best; it shows him at meal-time, very much interested in the menu.

We are wondering whether he will come back to us next summer. We have marked his foot so that we may recognize him.

NEW MEMBERS AND CONTRIBUTORS

Enrolled from October 20, 1916, to
January 1, 1917.

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Adams, Thomas M.
Brewster, Frederick F.
Hancock, Mrs. James Denton.
Jackman, Edwin S.
Joslyn, Mrs. George A.
Miles, Mrs. Flora E.
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Riker, John J.
Seton, Ernest T.
Turnbull, Anna B. (In Memoriam)
Wason, Charles W.
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Bijur, Abraham
Blumenthal, F.
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Bradley, William Post
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Brown, Miss Frances
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Bruner, Mrs. H. C.
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Burckhardt, Miss Elizabeth
Butcher, Howard
Button, Mrs. W. H.
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 Murray, Miss Catherine
 Sanford, George A.
 Wellington, Sarah W.
 White, Martha R.

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Sturgis, F. K.	5 00	Wilkins, Miss Laura	1 00
Toland, Leigh	1 00	Woman's Club	10 00
Tower, Ellen M.	5 00		
Townley, Mrs. John L.	1 00	Total.	\$562 41

NOTES OF AUDUBON WORK

Busy Bird Clubs

Dimock, Pennsylvania, is a scattered crossroads village of 123 souls, yet it has a Junior Class of 23 members that hold meetings fortnightly, all the year round, and even more often in summer.

Bird clubs in southern California are being entertained by a little play entitled 'The Woodpeckers' Convention,' written by Mrs. Louise Carola Davis, and illustrated with stereopticon slides taken from her own photographs of California birds.

Fritz Hagans, the new president of the Forest Hills Audubon Society, has had the Boy Scouts distribute from door to door directions for the proper feeding of the wild birds that remain in the gardens over winter. He especially recommends the giving of water, even before food; and suggests the melting of suet and mixing it with hemp, millet, rape and canary seed, and crushed corn, putting this in a feeding-box a few feet above the earth. Suet may

also be fastened to the trees, far enough up to be out of the way of dogs.

Mrs. Granville Ross Pike, who has been doing good Audubon work in southern California under the auspices of the National Association, has prepared 'The Birds' Declaration of Independence,' which is an excellent document for conservationists, and has a gentle irony that appeals to every mind.

It is pleasing to know that such a veteran as Dr. Thomas S. Roberts, of Minneapolis, is still active in bird-protection work, keeping local clubs wide-awake, and availing himself of varied opportunities for preaching the gospel according to Audubon.

The flourishing Watertown (N. Y.) Bird Club lately had an evening meeting devoted to the life and studies of Audubon. This club lately published a capital pamphlet on the birds of its territory by E. J. Sawyer, well-known as an artist of bird-life, who is one of its members.



TWO ROBINS AT THEIR BATH
Photographed by Esther Heacock



BIRD-BOXES BUILT AND SOLD FOR THE BENEFIT OF THE WAR-SUFFERERS
Photographed by W. W. Grant

At the recent annual meeting of the Ohio State Audubon Society, Miss Gertrude Harvey reported that twenty-five kinds of birds nested every year in her garden.

The State Audubon Society of California has designed a handsome seal, depicting a *Phainopepla* in a pepper tree. It is to be printed on a 'sticker' and used as has become a custom with the Red Cross seals at Christmas.

An autumn meeting of the energetic bird club of Saratoga Springs, New York, was entertained by a novel 'stunt' in the program. The hall was darkened, and the Secretary, Miss Kate McCloskey, told the progress of a June day in the bird-world. As she proceeded from hour to hour, calls of the various birds singing during the day were given by a group of boys stationed in different parts of the auditorium—songs of the Robin, Whip-poor-will, Thrush, Bob-white, White-throated Sparrow and other familiar acquaintances. In addition to this, pictures of birds were thrown on the screen, and phonograph records of their songs

given simultaneously. Such programs are both instructive to the audience and helpful to a society.

More Alien Depredation

The accompanying photograph represents the contents of an Italian's pocket after his capture at South Norwalk, Connecticut, one Sunday morning last spring. It illustrates what would happen here in the North if it were not for the work of the wardens. To show the persistency of the Italians in killing song-birds, I have but to mention one swamp adjoining the farm of an Italian on the edge of a city, where for the fourth year running we have captured an Italian shooting small birds; and three years out of the four the culprit was stopping at the farmer's house, and each year was severely fined. This summer I caught a man with two Juncos and one Goldfinch, showing that nothing is too small for them. Education is to solve the problem through the children, but enough old ones are among us, and new ones all the time coming, to



AN ITALIAN'S GAME-BAG IN CONNECTICUT

Two Flickers, two Chewinks, one Robin, one Hermit Thrush, one White-throated Sparrow, one Field Sparrow, one Goldfinch, red squirrel and a domestic Pigeon. He had ammunition enough to last all day.

be a serious menace to all forms of wild life. The arm of the law, in the form of the game-warden, must still be busy. We captured one Italian with two Rhode Island Red Chickens he had shot.—
WILBUR F. SMITH, *South Norwalk, Conn.*

Loss of Bird-Life in Forest Fires

William B. Mershon, of Saginaw, Michigan, sends us a note from J. H. McGillivray, a forest expert, that adds another and very important reason for extreme care in preventing forest fires. The note follows:

"It may interest you to know that I made a game-survey last summer of approximately ten acres of green covert on the Au Sable River, along about the same extent of burnt-over ground, and by conservative estimates based on the wild life found, allowing 5 cents each for song-birds, 25 cents each for Partridges, etc., as food-value, and an equivalent value for recreation purposes, multiplied by the number of acres in Michigan burned over last year, increased decimally (for wild life averages ten years of life), I found that even holding the timber loss to the exceptionally low figure of \$86,000, we destroyed by forest fires approximately \$3,000,000 worth of game."

The Birds and the Belgians

The young son and daughter of W. W. Grant, of Geneva, New York, devised a plan last summer which served a kindly purpose in two ways. They constructed ninety-eight bird-boxes, and sold them for the benefit of blind and wounded soldiers in Europe. Deducting the cost of the lumber and its sawing into uniform pieces, the profit obtained added \$9 to the soldier's fund. As all these boxes were disposed of locally, and were excellently designed, and many were given away in addition to those sold, the birds of Geneva ought to be both happy and numerous next spring. The children got so much pleasure out of their doubly beneficial enterprise that they propose to try it again this winter.

A Community of Albino Robins

Several white Robins have been seen in this vicinity from 1914 to the present, seven or eight having been counted by the Junior Audubon Class of this town. One well-known example has snow-white plumage—not one colored feather. Dr. R. W. Dove of this town relates that in June, 1916, he found a nest containing one brown and two white Robins and observed that they were being fed alike by both the male and female parents. One of those white birds at the present writing is feasting on the mulberries and raspberries in the lot and adjoining lots of the writer.
—ALONZO THOMPSON, *Harman, W. Va.*

New Finley Films

Since many churches, schools and other educational institutions are now equipped with moving-picture lanterns, it is important that good films of wild-bird and animal life be available for this educational work. It will not be many years before educational institutions will have libraries of various things illustrated with moving pictures, as now we have libraries for books, manuscripts, and magazines. The National Association of Audubon Societies has been collecting moving pictures to show its various fields of activity, especially in organizing Junior Audubon Societies, showing the children putting up bird-houses, feeding song-birds in winter, and the results accomplished on the big wild-bird reservations in various parts of the country.

William L. Finley, field-agent for the Pacific Coast States, has collected during the past five years remarkable moving pictures of wild birds and other animals. He has been in the field a large part of the time, visiting the big federal wild-bird reservations of the West, and has achieved some wonderful results. Some of these films were shown last year while Mr. Finley was on his lecture-tour through eastern cities. He will be in the East during March to show a new series of moving-picture reels.

Mr. Finley's work during the past summer has taken him to the great sea-bird colonies off the Oregon coast, then through eastern and southern Oregon for birds and animals in the lake region, and out in the sage-brush country. Some of his best results were achieved on a trip to the top of Mt. Hood with his moving-picture equipment, and also on an extended tour through Yellowstone Park. His assistants have been R. B. Horsfall and Mrs. Finley. He was also accompanied on two trips by T. Gilbert Pearson.

Inasmuch as Yellowstone Park is the greatest refuge in America for wild animals, these enthusiasts had abundant opportunity for picturing bears, deer, antelopes, elks, buffalos, beavers, and various smaller mammals and birds, such as squirrels, marmots, conies, Jays and Clark's Crows. One of the best features of the summer's work has been to show the splendid scenery amid which these animals live. The films that Mr. Finley has prepared for lecture purposes are therefore not only intimate studies showing the wild bird or mammal at home, but they are doubly interesting as travelogues.

One phase of Mr. Finley's work that he considers of great importance is that by which he seeks to interest children in the love and protection of our song birds. His reels showing children of the Junior Audubon Societies building bird-houses are exceptional from an educational standpoint, as also are those of children mothering orphaned Bluebirds and Thrushes whose parents had been killed by a cat. Later these same birds, after they are fully grown and able to fly, are seen bathing and feeding from the hands of the children.

Of the animal series, Mr. Finley has many that are most remarkable, especially that of the home life of the wild antelope in the deserts of southern Oregon. Having discovered a water-hole where these animals were accustomed to drink, Mr. Finley and his companions, Mr. Horsfall

and S. G. Jewett, built a blind of sage-brush in which to hide the camera. Entering the blind before daybreak, they spent four days in these cramped quarters, photographing the wary animals as they came within range. By this means good pictures of herds of them were secured, as were also those of hundreds of Sage Grouse that came daily to the water-hole to drink. It is a lamentable fact that through long and cruel hunting the antelope has come to be on the verge of extinction. This picture will undoubtedly tend to secure the preservation of one of the most beautiful of American animals.

The Enabling Act

A treaty between Canada and the United States for united action in protecting migratory birds was concluded on December 7, 1916, but this admirable agreement will have little practical value unless means are provided for making sure that the treaty-regulations are observed. These 'means' are conscientious and capable officers, who must be paid. This payment must come from the Federal Treasury in each country, and therefore requires, on this side of the boundary, an appropriation of money by Congress. A bill for this purpose (H.R. 20080) was introduced by Representative Henry D. Flood of Virginia. It reiterates in detail the provisions of the treaty prohibiting the killing, capturing, sale or purchase, exportation or importation, of any birds to or from Canada, except under regulations to be made by our Secretary of Agriculture; provides for the process of law by which violators may be punished; and appropriates \$170,000 for warden-service and other necessary expenses. It is expected that similar action will be taken by the Parliament of the Dominion of Canada. This bill was immediately referred to the Committee on Foreign Affairs, whence it is to be hoped it will be reported speedily.

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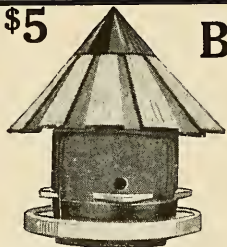
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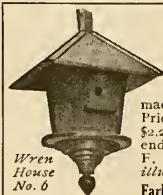
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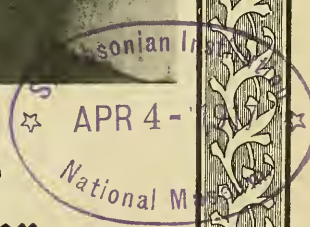
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Bird-Lore

March-April, 1917

CONTENTS

GENERAL ARTICLES

	PAGE
FRONTISPIECE IN COLOR—BEWICK'S, HOUSE, WINTER, ALASKA, LONG-BILLED MARSH, SHORT-BILLED MARSH WRENS	<i>Louis Agassiz Fierles</i> ..
THE GREAT BLUE HERONS OF HONEOYE. Illustrated.	<i>Verdi Burtch</i> .. 73
TWO BABY HUMMERS. Illustrated.	<i>Margaret S. Hitchcock</i> .. 79
REDWING	<i>Elsie Elouise Wheeler</i> .. 81
THE PURPLE MARTIN AT WICHITA, KANSAS	<i>Richard H. Sullivan</i> .. 83
EVENING GROSBEEKS. Photograph	<i>Mrs. W. F. Barrows</i> .. 85
NOTES ON THE PLUMAGE OF NORTH AMERICAN BIRDS. Forty-third Paper.	<i>Frank M. Chapman</i> .. 86

NOTES FROM FIELD AND STUDY 88

AN UNEXPECTED VISITOR (Ills.), *H. S. Shaw, Jr.*; A LONG-EARED OWL ROOST, *C. W. Vibert* and *G. T. Griswold*; NOTES FROM SOUTHERN CONNECTICUT, *Wilbur F. Smith*; THE WELLESLEY BIRD-BOX (Ills.), *John C. Lee*; THE STARLING IN BALTIMORE, *J. Hollowell Parker*; LARK SPARROWS NEAR GRAFTON, W. VA., *A. J. Dadisman*; BOHEMIAN WAXWINGS IN SEATTLE, WASH., *J. Dean* and *F. D. Terry*; PRAIRIE HORNED LARK IN MARYLAND, *Edward Harris, Sr.*; SMOKE TREES AND PURPLE FINCHES, *Mrs. Cuthbert Hall*; IS THE CAPE MAY WARBLER INCREASING IN NUMBERS, *R. E. Robbins*; EVENING GROSBEEK IN ONTARIO, *R. B. Chellon*; EVENING GROSBEEKS AT MORRISTOWN, N. J., *R. C. Caskey*; CARDINAL IN RHODE ISLAND, *H. L. Madison*; PICKEREL CATCHING SWALLOW, *Constance Humphrey*; A WREN'S NESTING-PLACE, *Blanche A. Turner*; HELPFUL YOUNG BLUEBIRDS, *Mrs. George A. Harter*.

BOOK NEWS AND REVIEWS 95

THORBURN'S 'BRITISH BIRDS'; SCUDDER'S 'CONSERVATION OF WILD BIRDS'; FORBUSH'S 'THE NATURAL ENEMIES OF BIRDS'; INGERSOLL'S 'INDEX TO BIRD-LORE'; THE ORNITHOLOGICAL MAGAZINES; BOOK NEWS.

EDITORIAL 98

THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT 99

A SUGGESTION FOR BIRD AND ARBOR DAY; FOR TEACHERS AND PUPILS; FOR AND FROM ADULT AND YOUNG OBSERVERS.

EDUCATIONAL LEAFLET No. 91. THE SAGE GROUSE. With Colored Plate by Bruce Horsfall 112

THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT 116

THE MIGRATORY BIRD TREATY BILL; HOSTS OF WATER-FOWL IN LOUISIANA; THE AMSTON EXPERIMENT STATION; NEW MEMBERS AND CONTRIBUTORS; NOTES FROM THE FIELD.

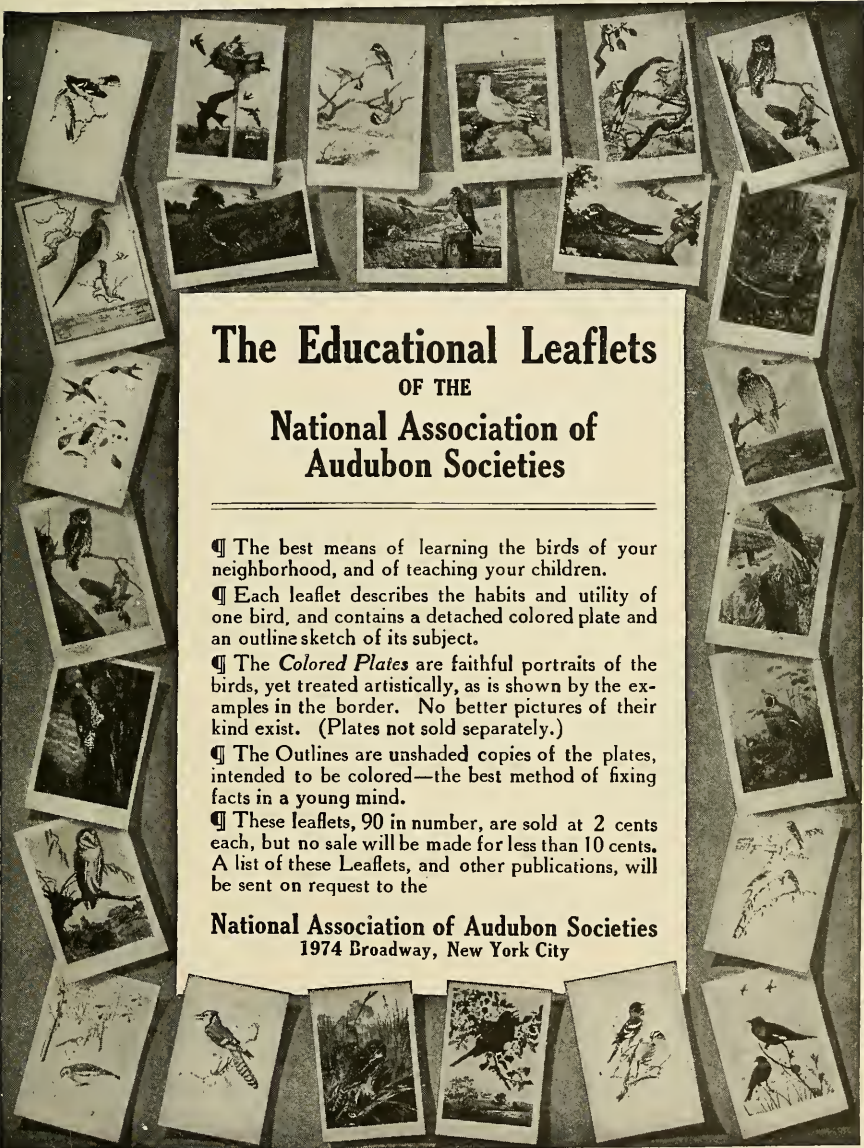
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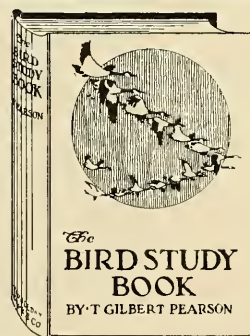
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Vol. XIX

MARCH—APRIL, 1917

No. 2

The Great Blue Herons of Honeoye

By VERDI BURTCH

With photographs by the author

DOWN through a deep narrow valley in the finger-lake region of western New York, winds the inlet of Honeoye Lake. About two and one half miles from the lake the valley begins to broaden out and the inlet overflows in springtime on the alluvium and clay beds that it has been bringing in and depositing during the centuries to form an oozy, treacherous swamp. This swamp is covered with a forest of ash, elm, and maple trees, and is full of fallen logs in various stages of decay.

Here the valley is 800 feet above the sea-level and the wooded hills are very steep and rise 1300 feet to 1400 feet above the valley on either side.

In January, 1914, our game-protector told me of the large nests that he had seen in this swamp, and from his description I at once knew that they were the nests of the Great Blue Heron.

May 24, 1914, a charming automobile ride of twenty-four miles over and through the glaciated hills brought us to the upper end of the swamp. Long before we were there we could see the nests of the Herons high up in the dead tops of the ash trees which were above the other trees in the forest. It did not take us long to get into the midst of them, where the great birds were flying to and fro or were perched on or above the nests. They were not nearly so wild as the Lake Lamoka Herons which we visited the year before, for these left the vicinity of the nests as soon as we came among them and after a long time came scouting around only to leave again as soon as they glimpsed us.

These Honeoye birds acted more like our old Potter Swamp birds of twenty years ago, and who knows but that they may be direct descendants of the Potter Swamp birds, their ancestors having moved to Honeoye after Potter Swamp was despoiled of its forest.

We counted seventy-six nests that we could see from the road, and there must have been a few that we could not see. Many of these nests held young and nearly every nest had an old Heron or two either on or above it.

Some of the trees held as many as four nests, and it was near one of these and another tree with three nests that I climbed a tree and pulled my camera up after me. I had hardly got settled into a fairly comfortable position when the Herons began to return to their nests. A bird came to each nest, and



" . . . PERCHED ON OR ABOVE THEIR NESTS "

five birds came to the four-nest tree. From my vantage-point I could see far out over the forest. A few birds were sitting on their eggs, their long necks folded over their backs, but most of them were standing in their nests or on a branch at one side or above them. They would stand thus motionless for a long time, or sometimes after alighting would stand still for ten or fifteen minutes, then walk slowly down the limb to the nest, using the wings to help

them balance. When an old bird alighted at a nest where there were young, the young would stretch up their heads and make a great variety of grunts and squawks, but as the old one appeared to take no notice of them they would soon subside.

I saw sixteen birds at nests at one time and many others flying about. At one nest a pair stood on each side facing each other with the young sticking their heads up between them—unfortunately it was out of range of my camera.



"THEIR GREAT WINGS FLAPPING SLOWLY"

At another nest a male bird brought a stick to his sitting mate and she took it from him and placed it on the nest.

We went to this herony again June 5, 1915, arriving there at 8 A.M. Before going into the swamp I counted 101 nests that I could see from the road. We found the ferns and other tender plants all wilted down, having been cut by frost a few nights before. The fallen logs were a great help in getting around as the water was quite deep and there were many treacherous places where the mud and water would let one in over his boot-tops.

As on our other visit, the Herons were busy flying to and from the lake or circling around the nests. A dead Heron was hanging by its head high up in a

tree; probably had been shot and lodged there. Some of the trees with nests were rather close together, and many held two, three, and a few as many as four nests.

Selecting a tree near two trees, each of which contained two nests, I was soon up where I could command a view of nearly the entire herony, and it was certainly a fine sight, nests nearby and far away in each direction. I could see



"THE GREAT BIRDS WERE FLYING TOO AND FRO"

sixty-three nests from my position, and thirty-seven had birds on them or standing on a limb above them. Many birds were perched on the tip-top of the nest-trees, standing motionless like statues outlined against the wooded hill. Birds were coming up the valley from the lake, their great wings flapping slowly, then, as they neared the nest-tree, the legs were brought forward and with a few quick flaps they alighted on the end of a limb, flapping their wings a few times to regain their balance. If there were young in the nest, as there



"WITH MY LAST PLATE I GOT MY BEST PICTURE"

were in nearly all at this time, they would raise their heads and set up a great squawking, crowding and fighting each other and making noises like the barking of a puppy and a whole litter of little hungry pigs. The old birds never seemed to notice them, however, and they soon subsided and settled back in the nest.

The old bird would stand motionless for a long, long time, then, with great deliberation, walk down the branch to the nest. When the parent reached the nest the young would take her bill in theirs and try to pull her down. She usually stood a long time with her head up before feeding the young, then would drop her head when a young one would take her bill into its own as she gave up the food. At other times she would regurgitate the food into the nest and the young would pick it up.

The two nests nearest to me remained empty, their owners coming around many times but each time wheeling and going away again until I began to fear that they would not alight while I was there. Below me the Water Thrushes and Redstarts were singing, and a Great-crested Flycatcher cried out from his perch on the dead top of a tree. Occasionally I would glimpse a Scarlet Tanager as he flashed by through the trees beneath me; Downy and Hairy Woodpeckers and Flickers were working on nearby stubs. Two Mallard Ducks flew over, and a Red-eyed Vireo sang his querulous song. All this was very interesting, but standing with one's full weight on one's climber-spurs and holding twelve pounds of camera is not very comfortable, to say the least, and after I had endured it for over two hours and was thinking of going down, a bird came flapping along to the lower nest and—*click*—she was mine as she sailed up to her perch on a limb beside the nest. Almost at once the other bird came and alighted on a limb above the upper nest. After the usual wait she walked slowly down the limb to the nest, and with my last plate I got my best picture, two nests and a bird standing at each.



Two Baby Hummers

By MARGARET S. HITCHCOCK

With photographs by the author

IT was on the 13th of June, 1914, that I discovered it. Could it be, I wondered—so tiny a bit of something on the bough, fastened together with cobwebs—could it be that a Hummingbird had condescended to build her nest in our garden? I did not dare look longer then, for fear, if it was really true, that I might disturb the wee, emotional thing. I watched and waited; yes, what joy! When I saw her really busy, coming and going, so fast that on the second day the nest was very nearly finished. On the 19th, I boldly looked inside, and saw one egg, and on the 21st I saw two eggs, when she seemed to be on the nest really sitting. Frequently she left to visit the honeysuckle nearby, but returning in a moment or two. From the first she did not seem to look upon me as an intruder. She was always near, however, generally watching from a favorite perch in an adjoining tree, but never making any protest, and I have seen her many times drive Sparrows well out of the neighborhood of her nest. So I photographed her, when she came three times and looked sharply at the camera pointing at her, then rested on a twig just over the nest, preening her feathers. After about three minutes she came with a dart, hovered over the nest a second, eying me sharply, about four feet from her, and then settled on her eggs as if she did not mind in the least, as long as I was still. But, when I moved away, she flew off, only to return in an instant.

She seemed to become more and more accustomed to my coming and going, but she never stayed on the nest when I came very close.

On the 4th of July, when I peeped in as usual, lo! I saw that one tiny white egg had hatched, and, but for the pulsation, I would have said that the tiny bunch, bare and almost black, and apparently headless, was not alive. It was not until several days later that I saw the wee head and bill, which had been tucked under. I supposed because, perhaps, of the weight of the long bill; but no, nature does not provide the long bill until needed. The bill was no longer in proportion, when first hatched, than other birds' bills.

I suppose the first one was the brother, as he was so much larger than the other; however, this was the only difference between them. On the morning of the 5th the smaller one hatched. The egg-shells disappeared as if by magic. I suppose the little mother carried them quite away. No father made his appearance, not even visiting the honeysuckle nearby. I have not even seen a male Ruby-throat this summer.

On July 12 I took a picture, and again when the baby hummers were two weeks old, but neither shows the little ones very distinctly; they nestle down until only the bill and eyes are visible. On the 22nd, however, they held their heads higher, and the picture shows two tiny heads.

On the 23rd, I resolved, while there was no danger of their flying, to get a

better picture. I had fed them for several days, a drop of syrup (sugar and water), which they took as freely as they did food from their mother, opening their bills each time. I gently put my finger under the stronger one, when he immediately snuggled



IN THE HAND JULY 23, 1914

in the warm hand, and I carried the tiny baby in front of the camera and snapped his picture. When I placed him back, he was just beginning to tremble—such a baby, I thought! Then imagine my surprise on the morning of the 26th to find this bold little fellow sitting on a bare twig half-way to the top of the larger spruce, more than twenty feet away from the nest, and his little sister all alone below. I immediately photographed her, forcing her to sit on the edge of the nest, which she did not want to do. She seemed rather afraid, but in a moment I put her back in the nest, and all was well until the next morning, when, I suppose, she tried to follow the brother. At an early hour she was in the nest, but at about nine o'clock she was gone.

The mother was very faithful; in fact, I discovered where the mites were by seeing her feeding them, when my mind was set at rest about their safety.

I was amazed at their quick intelligence, and at no time more so than when, on coming only the second time with syrup, I found their heads far above the nest, their necks stretched an inch or more. I could not believe it possible that it was for me until I saw



IN THE NEST JULY 25, 1914

it repeated each day when I brought them the food. I gave it to them only once a day, fearing to interfere too much, so that they remembered from the day before. This I thought most remarkable, considering that they were so young.

Their bills have grown longer, and I noticed, too, they did not protrude the tongue until the day before the first one flew; then they regularly licked the syrup from my finger with the tiny, hair-like tongue.

Today, the 27th, they are so high in the tree I cannot see them, only hear them often. This is reassuring, though I cannot be called even a foster-mother; nevertheless, I would not take anything for the confidence already shown, and I think of Longfellow's poem:

"He giveth you your wings to fly,
And breathe a purer air on high,
And careth for you everywhere,
Who for yourselves so little care!"

Redwing

By ELSIE ELOUISE WHEELER, Meriden, N. H.

NOT the shy little Indian maiden that kept the prairie camp-fires bright for an absent lover, but a brilliant little Warbler, is the Redwing of my story.

One beautiful summer morning, I received a telephone message from a friend that a bird of bright tints was fluttering at that moment, quite unable to fly, in a rose-bush beneath her window. Would I come down and ascertain the nature of its injury and see that it was cared for? "At any minute," she prompted, "the Grimalkin of the Green Eyes may prowl around the hotel corner." Needless to say, I went, though the sun-splashed distance stretched half a mile, and my waiting housework voiced remonstrance.

The bird proved to be a full-grown male Redstart, and I easily caught him and carried him home. One wing drooped uselessly, but no bones seemed to be broken, and I concluded that the bird had flown so violently against some obstruction as to bruise and lame the breast muscles, rendering flight impossible for the time. From the vivid orange flame of his wing markings, I named him 'Redwing.' I placed him in an empty bird-cage and offered him refreshments. I had watched Redstarts in the woods, so I knew what kind of food my guest would relish. I brought my fly-killer and sought the sunny side of the shed.

Thirty house-flies were my first offering, and these were greedily swallowed. For all his stiffened muscles, Redwing was the swiftest bird in motion I ever saw. He would sit on his cage-perch and swing his head downward to pick up the flies, or drop to the bottom of the cage, snatch a fly in his bill and swallow it

while hopping to his perch again, meanwhile turning and twisting his alert body with inconceivable agility, flirting and opening and shutting his tail. Even in his semi-crippled condition, he was the spirit of animation.

Disliking to be thought inhospitable in my own home, I set before the invalid other thirty flies, and was rather aghast to see them all disappear down the 'red lane with no turning' in exactly ten minutes by the clock.

Was it reproach for niggardliness that looked out at me from Redwing's black, expressive eye? I bethought me of a neighbor's wire fly-trap.

The borrowed trap was baited and set and I went about my housework with lightened responsibility. Pending the filling of the trap, I put into Redwing's cage sections of earthworms, some scraped veal, and bits of suet, but none of these would he even deign to sample. Later in the day the trap was opened, and 400 flies, by actual count, were set as 'a feast before the king.' These lasted Redwing about two hours.

During the first day, though constantly active, Redwing seemed weak and showed little fear of me, eating and drinking when I was close beside him. Dainty and graceful as a butterfly, much more brilliant in hue, and scarcely larger than my thumb, he was the most attractive and interesting visitor that ever gladdened our home.

Being an adult, his habits were formed, and he was untamable. His longing for the wildwood life began to awaken as his wing healed, and the restraint of the cage, necessary to insure his safety, grew constantly more irksome. When I drew near with food, or when hungry, his chirping call rang loud and metallic, otherwise he was silent.

On the second day the patient seemed stronger and became so restless that I transferred him to a larger cage, and on the third day I hung this in an unused chamber where he would be free from molestation. Shortly afterward he began to resent my approach, showing signs of fear when I ministered to his needs; so I placed a dish containing about eight hundred flies in his cage, filled his drinking-cup, and left him as much as possible to the solitude he seemed to desire.

The chamber door has a small aperture through which I could watch him without being seen, his actions becoming more natural when he considered himself free from observation. High up in one end of his cage was a perch, and at the other end was one near the bottom, in close proximity to his food. One day I watched him unobserved, for fifteen minutes, and he hopped and flirted from the high to the low perch and back 236 times, usually taking a fly or a sip of water every fourth trip.

After leaving him for an hour, I came back to my concealed post of observation and took 'tabs' on his doings for fifteen minutes more. This time he made the round trip, by actual count, 311 times, taking a fly or a drop of water, as before, about every fourth trip. At this rate, Redwing would consume

about two thousand flies a day, and while he was in my care he kept to about that average.

With such an established record for insect-eating, of what incalculable value are Redwing's innumerable kinsfolk to the orchardist, to the agriculturist and to the lumberman, in their consumption of untold numbers of destructive caterpillars and other insects!

Late one afternoon, when my dainty feathered guest flew about so actively that I believed he would now be able to care for himself, Redwing and I took the path to the woodland together. In the gnarled hillside orchard, a favorite Warbler haunt, I photographed Redwing in his cage and then set him free. With a few exultant notes he flew by short stages through the orchard, up the hillside, and met the descending night in the dim mosaics of the woodland.

The Purple Martin at Wichita, Kansas

By RICHARD H. SULLIVAN, Wichita, Kansas

THIS beautiful summer resident, *Progne subis*, is probably the most sociable of the community birds that visit the temperate regions of eastern North America during the nesting season. I say 'beautiful' because of its symmetry and elegant poise in flight, and particularly because of its inviting insistence that the bleak, somber, wintry days should go, and that the greening, with its varied chorus from other feathered throats, is come. Indeed, his friendliness is in direct contrast to the remarkable indifference of civilization, whose habitations he frequents while performing a positive service, for which he receives little or no return, except in death by the shotgun, as voluminous evidence will show.

I have been building houses and shelters for Martins, Wrens, Bluebirds, Chickadees, and other birds, for forty years, or ever since I was big enough to build anything, and the first of these birds has always appealed to me as approaching the ideal, with the sprightly little Wren as a close second; for both species consume many times their weight in the noxious insect enemies of mankind. At the same time, their general attitude is so cheerful and friendly that one might be excused in wanting them around all the time.

When I came to Wichita from Colorado, in June, 1905, a careful watch was kept to observe Martins as the train moved eastward. The first note was heard at Dodge City, 150 miles to the westward of this city. Upon arrival, sixteen large and small colonies were found in the down-town district, and several in the residence sections, with a total of about seventy-five pairs, as a rough estimate. I have kept a record of their arrival and departure in season since that time, and find that there was apparently an increase up to the summer of 1911, when they seemed to be somewhat less numerous.

Dates of arrival and departure:

Year	Spring	Summer and Autumn
1905		August 15
1906	April 14*	August 25
1907	March 11	August 31
1908	March 27	August 19
1909	March 25	August 12
1910	March 22	August 22
1911	March 30	August 28†

For various reasons, a Martin-house was not erected until the early spring of 1908. It was a common box with six compartments, placed upon the roof of a five-story office building. That summer, five pairs of Martins brought their young to wing from this home.

With preparations for removal of offices to a higher building in the late winter of 1908, another and much more elaborate house was planned. It is a sort of bungalow or resort-hotel pattern, and contains forty-six rooms, most of which are 4 by 4 by 6 inches in size, with 2.5 by 3-inch openings. The old box was removed and set underneath this new hotel, which was placed upon a framework about four feet above the roof, 107 feet above the ground. It was painted white and green, and the total expense for house, platform and erection was nominal.

During the summer of 1908, four pairs nested in the old box underneath and six pairs in the new hotel. All of these brought their young to wing, and thirty-six birds left the new house for the South in August. This was considered a very good beginning.

It was with a good deal of satisfaction that I found that eighteen pairs of birds has nests in my little hotel in May, 1909. Then followed trouble for the birds and disturbance of my peace of mind. For some reason, unknown at the time, the birds began visibly to decrease before full complements of eggs had been laid. Careful examination disclosed no vermin. It was later found that the desertions were due to nightly visits of marauders who gained access to the roof by the fire-escape, and also to molestation by visitors from adjoining roofs. As a consequence, but six pairs brought young to wing. During the following autumn, a total of twenty-seven eggs were taken from the several rooms, some nests having one egg, some three, and some six.

In the spring of 1910, the same trouble was experienced, fourteen pairs nesting and but three bringing young to wing. I then determined to remove the house to my home in Fairmount, a college suburb, three and five-tenths miles from the original site, in the hope that a few stragglers in the neighborhood might be induced to colonize there. The house was placed on a heavy pole, 18 feet above the ground, and gourd vines were started to present a home-like, inviting appearance. The House Sparrows appropriated the accommodations within two days after the work was finished, in March, 1911.

*Sick in bed for a month after March 7.

†Austin H. Larrabee, Professor of Biology in Fairmount College, has a date for a female Martin of October 4, 1911.

Then began a relentless warfare against this persistent and pugnacious creature. So fiercely were they persecuted, to make way for better birds, that if a Sparrow saw a member of my family stoop to the ground, he would 'dig out.'

But the nesting season passed without Martins.

During May I discovered that a pair of Sparrows had built a nest in one of the rooms, the female having peculiar markings. Five eggs were destroyed from this nest, and in a few days another nest was begun on the other side. The process of destruction alternated from time to time until the close of August, when it was found that fifty fresh eggs had been destroyed. And I verily believe that they were all laid by the same female.

The warfare will be reopened next month, when the obstructions are taken from the openings. One scheme employed last year was to put tappers in two small milk-cans and adjust the cans as cow-bells out of sight under the house, with strong string or wire running thence to the pantry window. A jerk of this string always emptied the house of Sparrows.

During last autumn large numbers of migrating Bluebirds stopped and investigated the accommodations of this hotel, supposedly with a view to future engagements; but I shall take care of them with another bird-house.

Another Martin-house of moderate size will be put up this spring on the present office building, which has an inaccessible roof 134 feet above the ground; and I am almost certain of a colony there, even though the trial at Fairmount may still be unsuccessful.



EVENING GROSBEEKS AT PITTSFIELD, MASS.

Photographed by Mrs. W. F. Barrows

Notes on the Plumage of North American Birds

FORTY-THIRD PAPER

By FRANK M. CHAPMAN

(See frontispiece)

As Mr. W. DeW. Miller has remarked in discussing the plumage changes of the Wrens figured in BIRD-LORE for December, 1916, the sexes in this family are alike in color or essentially so. After the postjuvenal molt, the young bird is distinguishable from the adult only by slight differences in the wings and tail which are not renewed at that molt, and subsequent changes in the color of the plumage are due only to wear and fading. But if the Wrens vary but little with age, sex, or season, many of the species vary geographically, and those which have a wide range are usually represented in it by a large number of local races or subspecies which, in their color and size, exhibit the effect of the existing environment.

Bewick's Wren (*Thryomanes bewicki*, Fig. 1).—The nesting (juvenal) plumage has the breast mottled or indefinitely spotted with blackish, but these markings are lost at the postjuvenal molt, after which the young bird resembles the adult.

Bewick's Wren is found throughout the greater part of the United States (though it is only locally common east of the Alleghanies), and is consequently subjected to a wide variety of conditions to which it responds by more or less evident racial variations in color and size.

Mr. H. C. Oberholser in a review of this group published in 1899 (Proc. U. S. N. M., XXI, pp. 421-450) includes eleven forms of Bewick's Wren from the United States, Lower California, and the islands of the Pacific coast, but of these the 'Check-List' of the American Ornithologists' Union (1910 Ed.) recognizes only eight. In the latest paper on these Wrens, however, Mr. H. S. Swarth describes no less than eight races from California alone (Proc. Calif. Acad. Sciences, VI, 1916, pp. 53-85).

Fortunately, these Wrens are as a rule non-migratory, and one therefore rarely finds two races in the same locality. Field identification, therefore, so far as subspecies is concerned, is more a matter of geography than of ornithology. So far as *species* is concerned, Bewick's Wren may be readily distinguished from the House Wren by its white or buffy superciliary line, by its longer tail, larger size and other characters. Our figure, based on the eastern race, is somewhat too rufous and the superciliary line is more buffy than is usual. The western races are grayer, less reddish brown above.

House Wren (*Troglodytes aëdon*, Fig. 2).—The juvenal plumage differs from that of the adult in the blackish mottling of the breast, but, as with Bewick's Wren, these markings disappear with the postjuvenal molt. It also agrees with that species in having no spring molt, and the breeding plumage is essentially like that worn in winter.

The House Wren ranges from Cape Horn to Canada. Several specific and many subspecific names are applied to it in this wide area, but one has only to see the birds and hear them sing, whether in South America or North America, to be convinced of their close relationship.

In the United States we have only two races, *Troglodytes aëdon aëdon* of the East and *Troglodytes aëdon parkmani* of the West.

Winter Wren (*Nannus hiemalis*, Fig. 3).—The nestling Winter Wren has the breast mottled or margined with dusky, and the presence of these markings in connection with the barrings on the flanks make the juvenal plumage quite unlike that of the adult. Only the flank markings are retained at the post-juvenal molt, after which young and old are alike in color. There is no spring molt, and the summer plumage is essentially like that of winter.

Three races and two closely allied 'species' of the Winter Wren are known in North America. *Nannus hiemalis hiemalis*, the Eastern Winter Wren, ranges westward to Alberta; *N. h. pacificus*, the Western Winter Wren, is found from western Alberta to the Pacific coast; and *N. h. helleri*, the Kadiak Winter Wren inhabits Kadiak Island.

Alaska Wren (*Nannus alascensis*, Fig. 4).—The Alaska Winter Wren is a representative form of the Winter Wren found in the western part of the Alaska Peninsula, the eastern Aleutian Islands, and St. George Island of the Pribilof group. It differs from the Winter Wren chiefly in having a slightly longer bill; below, it more nearly resembles the Western Winter Wren in color, while the upperparts are more like those of the Eastern Winter Wren.

The Aleutian Wren (*Nannus meliger*) represents the Aleutian Wren in the Western Aleutian Islands.

Long-billed Marsh Wren (*Telmatodytes palustris*, Fig. 5).—The nestling Long-billed Marsh Wren has the crown and foreback black without white streaks and is thus quite unlike the adult in appearance; but after the post-juvenal plumage, old and young wear the same kind of plumage. In Dwight's opinion, there is a complete prenuptial or spring molt in this species.

Five races of this species are known, as follows: (1) *Telmatodytes palustris palustris* of the northeastern states; (2) *T. p. marianæ* and *T. p. griseus* with a not fully understood range in the southeastern states; (3) *T. p. iliacus* of the "plains and prairies of central North America;" (4) *T. p. plesius* of the "arid interior of North America;" and (5) *T. p. paludicola* of the Pacific coast.

Short-billed Marsh Wren (*Cistothorus stellaris*, Fig. 6).—I have seen no specimens of this species in nestling plumage. In the nestlings of *Cistothorus apolinari*, a species from the Andes of Colombia, the streaks of the upperparts are nearly obsolete. According to Dwight, the young of our species after the postjuvenal molt cannot be distinguished from the adult, and there is a complete spring molt. There is only one species of Short-billed Marsh Wren in North America, but closely allied species are found as far south as Argentina.

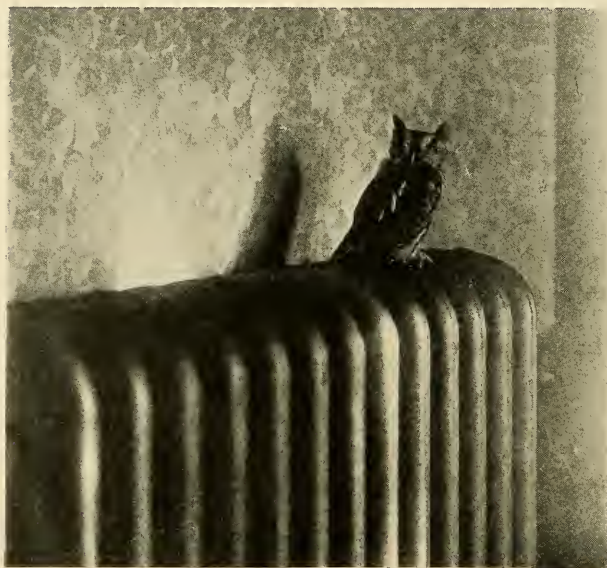
Notes from Field and Study

An Unexpected Visitor

When I came downstairs at about six o'clock in the morning on September 16, I was astonished to see a Screech Owl sitting on a radiator in the front hall. My first thought was that someone had put a stuffed bird there as a joke, but I realized at once that he was alive, because he turned his head when I moved to one side. I called to my wife, and she came down to see our visitor, who did not seem to be at all disturbed at our presence. I then got

and flew into an adjoining room. He struck against a mirror and dropped onto a table, where he sat on a pile of books, looking very wise indeed. He did not remain long, however, but flew to my camera, which was standing near-by. After my friend had taken his picture in this position we decided not to keep him in the house any longer, so we opened the door, and he flew silently out, being lost to view in some near-by woods.

We think the Owl must have come down a chimney into a fireplace, as there was



SCREECH OWL

Photographed by H. L. Shaw, Jr.

out my camera and took some pictures, one of which is reproduced herewith. Nearly an hour later I went to the house of a neighbor, and got him to come over with his camera. The Owl had remained in the same place all this time, and I found that I could get close to the radiator without disturbing him. But finally, when I stood with my hand on the radiator, within a few inches of the Owl, he became alarmed

apparently no other way in which he could have gotten in.—H. S. SHAW, JR., *Dover, Mass.*

A Long-eared Owl Roost

What is believed to be an unusual observation was recorded by the undersigned on February 4, 1917, in Goodwin Park, in the outskirts of this city. A telephone message in the morning communicated the

news that what was supposed to be a Long-eared Owl had been seen the previous day. This Owl is not at all common here, and so we decided to see for ourselves and verify if possible the earlier observation. Soon after arriving near where the bird had been seen, we found under a clump of small hemlock trees an estimated quantity of not less than four quarts of pellets, many of which will be gathered and sent to Washington for inspection. This in itself was something never before seen by either of us, notwithstanding one of us has been hunting birds for a great many years and has seen so-called 'flights' of Owls and many pellet collections.

A few minutes later one of us discovered in an open-topped pine tree, not more than twenty-five feet from the ground, a single specimen of the Long-eared Owl. Not daring to move for fear the Owl would not be seen by us both, the discoverer of the bird did not stir until joined by his companion, who, upon being shown where the single Owl was roosting, quickly exclaimed "There are two, yes three, four, five, six, seven, good heavens, how many?" Just then the flock rose and we counted eight, and another flew out of a tree ten feet away. We were so astonished by our find that we almost lost sight of still another Owl who had remained behind. To see ten Long-eared Owls, and nine of them in a space not more than six feet square in a single tree, is something of an experience, even to us who have been field-students for upwards of forty and thirty years respectively. We do not find evidence in any book record that shows even half this number being seen in a single flock in the state of Connecticut.—C. W. VIBERT, G. T. GRISWOLD (Hartford Bird Study Club), *Hartford, Conn.*

Notes from Southern Connecticut

The past year was remarkable for the flight of Warblers, and the large numbers of Bay-breasted and Blackburnian Warblers, and the occurrence of certain rare species, the following records of which should be of interest:

HOLBÆLL'S GREBE.—March 19, one at Norwalk; March 24, five at Rowayton; April 15 and 20, one at Norwalk.

RING-BILLED GULL.—Though called a rare migrant in the 'Birds of Connecticut,' the writer believes this to be a fairly common, though not generally found species. Several birds were seen in the spring of 1916. September 13, 1916, one was shot over the Housatonic River at Stratford, and is in the Museum at Birdcraft Sanctuary. December 11, 1916, one was shot by duck-hunters at Stratford, and is in the writer's collection. Jan 13, 1917, one was seen feeding in Bridgeport Harbor.

LAUGHING GULL.—These Gulls have increased during the past few years until last fall they appeared in flocks of over one hundred among the islands off this place.

BONAPARTE'S GULL.—A flock of about fifteen of these Gulls stayed on the Housatonic River at Stratford from September 7 to 13. One that was shot is in Birdcraft Museum at Fairfield.

WILSON'S PETREL.—The 'Birds of Connecticut' says of the Wilson's Petrel (page 26): "We have no specific records of this species," yet these Petrels have been fairly common in the Sound off this place for some years to the writer's knowledge, coming in among the islands at times, and once in the harbor. The lobster fishermen tell me that these Petrels help them to locate their buoys by sitting on them. I have counted twenty in two hours. One shot August 7, 1914, is in the collection of the Fish and Game Commissioners, and one was taken by a member of the Biological Survey the past summer.

KING EIDER.—One shot at Fairfield Beach on December 14, 1916, by Mr. Leon Beardsley, is mounted in Birdcraft Museum.

KILLDEER.—Apparently these birds are coming back to breed in these parts for I saw a pair with nest completed at Wilton on June 10, 1916, and Mr. Herbert Sniffens tells me that a pair raised a brood on his farm at Stratford. In August they were plentiful on one of the ponds that had been drained.

EVENING GROSBEAK.—Eight birds were in Norwalk from March 8 to 13, 1916. They were seen by many and were feeding on haccatack berries.

LAWRENCE'S WARBLER.—On May 12, 1916, a male was observed at Waterbury, and on May 20, another male was found at Wilton. It was feeding near the ground in willows and was very tame. A party of fifteen people watched it as long as they cared to do so at a very close range. Believing it to be a migrant, no effort was made to watch it further, but Mr. Edward Godfrey, one of the original party, passing the place in June found a Lawrence Warbler feeding young in the same field where we found this one on May 20, and it may have been the same bird.

MOCKINGBIRD.—One lived about the residential section of Bridgeport all last winter, and I photographed it on March 21 in its haunts.

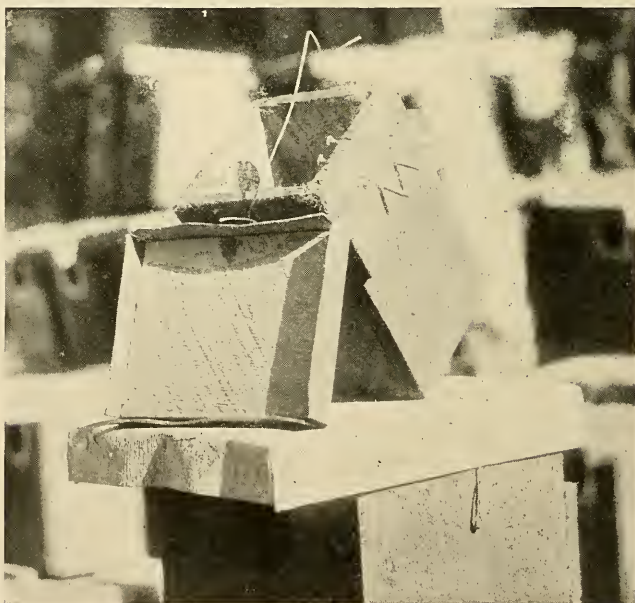
'ACADIAN' CHICKADEE.—One found by one Abbot, identified by Mark Candee, and showed to me on January 11, 1917, has been in the same locality since and was seen by many people on January 18, 1916.—WILBUR F. SMITH, *South Norwalk, Conn.*

The Wellesley Bird-Box

Many people would take greater interest in encouraging the native birds if most of the equipment now to be had on the market were not quite so expensive. Simple forms of feeders and bird-boxes seem to be quite as efficient as the more elaborate.

If in any community it is desired to introduce a large number of bird-boxes at low cost it is only necessary to settle on some simple design and have them made at the nearest box (packing-box) factory.

The plan can be carried out by an indi-

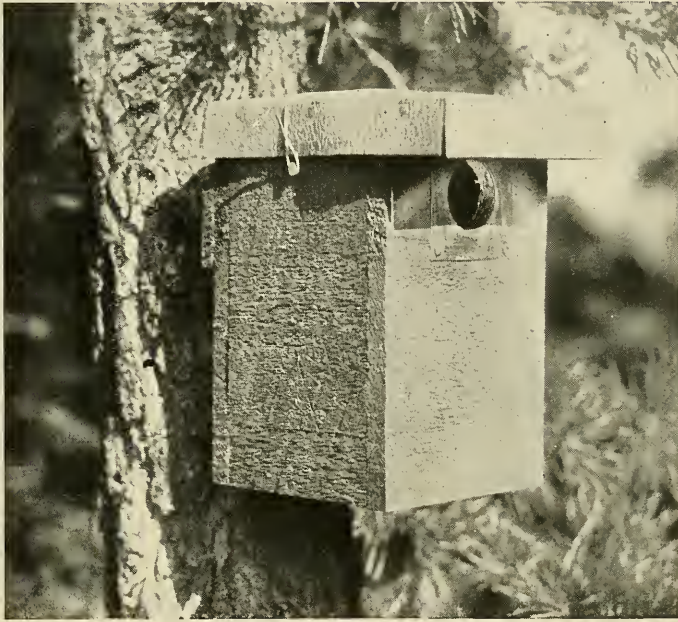


THE WELLESLEY BIRD-BOX

Dimensions of stock, top, $5 \times 6\frac{1}{2}$ inches; front and back, each $5 \times 7\frac{1}{2}$ inches; sides, $4 \times 7\frac{1}{2}$ inches; bottom, 4×4 inches. The box is put together with $1\frac{1}{4}$ -inch galvanized box nails. The roofing-paper and entrance guard fastened with $\frac{1}{2}$ -inch galvanized tacks. The top of the box is removable, but is held in position by a piece of galvanized No. 16 soft iron wire looped over a tack on each side. Two holes about one inch apart are bored in the upper part of the box in a downward direction from the inside so that when the cover is off, the box can be nailed to a post or tree with $2\frac{3}{4}$ -inch galvanized wire nails. To be stained any dull neutral shade.

vidual or by a local Audubon Society, and the boxes distributed at cost to those who want them. The box factories will make the cost extremely low provided they can

point of introduction in New York, nor how far it has already made its way. I suppose that Starlings have been reported from points further south than Baltimore,



WELLESLEY BIRD-BOX IN POSITION

A guard of thin galvanized iron surrounds the entrance. For Bluebirds and Swallows the opening should be one and one half inches in diameter; for smaller birds one and a quarter inches

deliver them by truck, unpacked, at one point.

I tried the experiment with a lot of one thousand and it worked so well that I have ordered more. They cost fifteen cents each. The style adopted, which I tested with success during the past year, is outlined in the accompanying photographs. The top of the box is removable for cleaning and all nails, tacks, and other metal parts are of galvanized iron.

To distinguish the box as a type I have called it the 'Wellesley Bird-Box.'—JOHN C. LEE, *Wellesley, Mass.*

The Starling in Baltimore

I do not know how close a watch is being kept on the spread of the European Starling throughout our country from the

but I send you the following item for what it may be worth:

A flock of European Starlings, containing several hundred individuals, has been roosting at night for an unknown length of time in a row of sycamore trees on Mt. Royal Avenue bordering the sunken gardens and overlooking the Union Station and the surrounding railroad yards. That row of trees has for several years been a roosting-place for thousands of English Sparrows during the winter months, and it is possible that the Starlings were there for several nights before being noted, although I pass that place practically every evening during the week. My attention was first attracted by unfamiliar notes on the evening of January 16, 1917, and subsequent investigation proved the presence of a large number of

Starlings. The Starlings have been noted there every evening since that date except on January 21, when I did not pass the place. Since last fall I have occasionally seen a few Starlings, from one to five at a time, in the parks and suburbs of Baltimore; but this is the first time I have known of such large numbers coming right into the heart of the city.—J. HOLLOWELL PARKER, *Baltimore, Md.*

Lark Sparrows near Grafton, W. Va.

On June 18, 1916, two adult and two young Lark Sparrows were seen in an orchard about eight miles north of Grafton. The birds were flying about in the orchard and seemed perfectly contented. Two young birds were in the trees. The young birds were being fed by the adult birds. The young birds had evidently been hatched in the orchard or near-by. There might have been more young birds but only two were seen. These were the first Lark Sparrows known to have visited this section of the country. I feel sure that I have never seen them before. We were able to identify the birds as we could get within thirty feet of them. I was in this part of the country but one day, and there was no one else to observe the birds later. A month afterward I was in the same orchard and no trace of the birds could be found.—A. J. DADISMAN, *Morgantown, W. Va.*

Bohemian Waxwings in Seattle, Wash.

Bird-lovers of this section, especially those along the lake-shore of this city, have been treated to a rare sight which we feel will be of interest to the friends of birds everywhere. It was the presence of Bohemian Waxwings by the thousand! The birds, accompanied by Cedar Waxwings, and by hundreds and hundreds of Robins (the latter flying in flocks by themselves but following, apparently, wherever the Waxwings led), were first seen on the morning of December 30, 1916, when they were noticed flying south. At intervals thereafter, usually in the forenoon, these

birds returned, and always, when in our immediate vicinity, settled on tree and house-top or even on telephone wires, from which resting-places they made frequent excursions into the numerous madrona trees around. The berries, of course, were the objective. While thus engaged they afforded us excellent opportunities for observation. Indeed, so close could we get that it would have been possible more than once to simply reach out and stroke the Bohemian's smooth plumage, but the Robin was less trusting. Though some of his number were always equally within reach, they were constantly giving warnings which would cause big numbers of all the birds to suddenly fly away, apparently in fear. But always they returned. And always the Bohemians seemed to be more numerous than the Cedar Waxwings, or the Robins. Since the Bohemian is supposed "not to come into this vicinity," officers and members of our local Audubon Society were disposed to be suspicious of our identifications on the first reports, but fortunately several of them had occasion to see for themselves and verify our statements now.

Why the birds came is a mystery. No one versed in bird-lore here will take it upon himself to hazard an interpretation of the phenomenon. If it was food they came for, they left before the supply was much decreased, for there are madronas and alder trees whose berries are still untouched. And if the South was their intended destination, why did they go north again? The last flocks, numbering several hundreds, were seen for the last time on January 9, in the morning, and after much calling, in the familiar lispings way, and no end of circling about (but no feeding at all) they went back into the North.—J. DEAN and F. D. TERRY, *Seattle, Wash.*

Prairie Horned Lark in Maryland

The notes of Mrs. Arthur F. Gardner, of Troy, N. Y., in your July-August, 1916 number on the Horned Lark, remind me of some observations made here in western

Maryland on the Prairie Horned Lark which seem to show that they breed in this region, although I believe their nests have not been found.

In the Maryland Geological Survey of Allegany County, published in 1900, there is a list of summer birds of western Maryland by Edward A. Preble. He says of the Prairie Horned Lark: "While driving through Garret County [the western County of Maryland], on May 18, I saw a male bird of this species. He was on a fence-rail, singing lustily, and was not at all shy. It was near the town of Accident, about ten miles from the northwestern corner of the county. There can be little doubt but that the bird was breeding." On this page of the report I have noted: "August 26, 1911. Saw a flock on barren hill east of city. Did they not breed somewhere in this region? August 24, 1912. Same locality. Again this year I note, June 23, 1916. The same locality." Rev. Mr. Eifrig, formerly of this city, a well-known ornithologist and naturalist, in a list of local birds, writes as follows of the Prairie Horned Lark: "Often seen in flocks on hills and roads in this vicinity, along with Juncos, Tree Sparrows, and so forth. Breeds in the higher parts."

My idea has been that they breed in the open 'glades' near Oakland and Mountain Lake, Garrett County. These observations seem to show that they are extending their breeding-range, which has, until recently, been recorded as the prairies of the Middle West eastward to northern New England. It may have ranged eastward and southward as the country became open and more deforested.

I shall look out for them another season and see if we can positively find their breeding habitat.—EDWARD HARRIS, SR., *Cumberland, Md.*

Smoke Trees and Purple Finches

The seeds of a group of six 'smoke trees,' near my house at Westport Point, southern Massachusetts, are sought before they are fully formed by a flock of Purple Finches and feasted upon as long as they last. It

is a curious fact that we never see these Purple Finches at any other time. We do not know where they live, but they have come to these same smoke trees every August for more than twenty years.—MRS. CUTHBERT HALL.

Is the Cape May Warbler Increasing in Numbers?

Have any of your readers, I wonder, observed a marked increase, within the last two or three years, in the number of Cape May Warblers migrating through this country? My own observations of that species are striking evidence of such an increase. In more than fifteen years of bird-study, covering a very large area in northeastern United States, I had not succeeded, previous to 1914, in recording a single Cape May; whereas, in the two and a half years since April, 1914, I have recorded about twenty individuals of that species, at widely separated times and places, in the states of Maine, Massachusetts, and New Hampshire. Such an experience seems rather significant.—R. E. ROBBINS, *Brookline, Mass.*

Evening Grosbeak in Ontario

Having read many articles in BIRD-LORE concerning Evening Grosbeaks which have been seen in many parts of the country, I thought that it might be of interest to you to know about a flock that has annually visited this town for the last four years. The flock consists of about fifteen males and females, and they feed on hawthorn berries and the seeds of the hard maple, seeming to prefer the latter. They are now more common than the Pine Grosbeak, of which species I have not seen a specimen for two years, although they used to be regular visitors.—R. B. CHELTON, *Cobourg, Ont.*

Evening Grosbeaks at Morristown, N. J.

On December 16, 1916, I saw my first Evening Grosbeak. It was a single individual, a male and was near the top

of a tall maple. A few days later two of my neighbors reported that they had seen a single one in the same vicinity. About the middle of January a report came to me that a flock of seven or eight had been seen in the Sherman Hill section of the town, and on January 25 and 26 I saw a flock of about the same number feeding on sumach berries in a vacant lot just in the rear of my yard. I did not see them again until February 16, when a flock of about ten birds was seen in a black locust at the end of my garden. A short article was published in one of our local papers and since then several reports have come to me of others having seen these birds.

Pine Siskins were seen here during November, but seem to have passed on. Redpolls are common. In the course of a two-hours walk this afternoon, I saw probably 100. Two Canadian Nuthatches have been daily visitors to our suet since the latter part of January.—R. C. CASKEN, *Morristown, N. J.*

Cardinal in Rhode Island

During the past week the Cardinal has been reported as seen at Warren, R. I. So far as I am able to ascertain this is the first record of the state.

The bird is a female and is in and around the grounds of the home of Mrs. Albert E. Leach, who first saw it on Tuesday, January 23, at about 3 P.M. At that time she had it under observation with glasses for about five minutes. On January 29, Mrs. Leach, with three others, Miss Mary Crowell, Miss Elizabeth Freeborn, and Miss Virginia Reynolds, had the bird under observation for about thirty minutes, and the same parties saw the bird again on January 30.

This is the first time Mrs. Leach had ever seen the bird, but the other three persons know the bird intimately in the South where they have had them feeding at their windows in other years.

I have not found time to go to Warren and verify these observations, but the above-named persons are good amateur observers, and in consideration of the

fact that three of them are familiar with the bird, I feel safe in reporting it as a new record in Rhode Island.—H. L. MADISON, *Curator Park Museum, Providence, R. I.*

Pickereel Catching Swallow

Some of my friends were fishing on a little lake near here. A Swallow was skimming over the lake very near the water, and a pickereel jumped up and caught the bird in its mouth. No one here has seen such a thing happen before.—CONSTANCE HUMPHREY, *Kalamazoo, Mich.*

A Wren's Nesting-Place

At our country-place, the outside bathroom is not put into use until sometime in May. This spring the pipes were connected the last week in April, and our caretaker unintentionally left the door ajar. When I arrived about the 8th of May, to open the house and put all in readiness for the summer, I found someone ahead of me who had already put her house in order and had established herself comfortably. It was a House Wren, who had taken advantage of the open door, and was satisfied not only on the lower shelf of the little cabinet that hangs over the tub, but built her nest right upon my empty soap-dish.—BLANCHE A. TURNER, *Arcadia, Mo.*

Helpful Young Bluebirds

A pair of Bluebirds successfully raised a brood in our bird-house in May, the young birds leaving the nest the third of June. After several days, the parent birds built a nest in a similar bird-house in a neighbor's yard and raised a second family.

We were interested to observe that the young birds worked with the parents in carrying food to the latest fledglings, also in cleaning the nest. When the second brood left the nest, the 'big brothers' seemed as excited as the parents.—MRS. GEORGE A. HARTER, *Chicago, Ill.*

Book News and Reviews

BRITISH BIRDS. Written and illustrated by A. THORBURN, F. Z. S., with eighty plates in color, showing over four hundred species. In four volumes. 4to. Vol. III, pls. 41—60; Vol. IV, pls. 61—80. Longmans, Green & Co., London and New York.

The appearance of Volume IV marks the completion of this superb work. A noteworthy undertaking under any conditions, its manufacture and publication in England at this time is a tribute to everyone who has been engaged in its production.

In these final volumes, the work of artist, engraver, and typographer shows no falling off from the high standard of excellence established by Volumes I and II. We have had no illustrations of birds published in America which would compare favorably with the plates in this work. There have been state publications where the question of expense was not of primary importance and the best available methods of color engraving were employed, but the results were far below those attained in the volumes under consideration.

Rumor has it that a fully illustrated book is to be published by a state in which there is a greater *per capita* interest in birds than in any other in the Union. We trust that in selecting an engraver of the drawings for this proposed work, the reproductions in Mr. Thorburn's volumes be exhibited as models to be followed as closely as circumstances will permit.

Volume III treats of the Herons, Ducks, Geese and Swans, Pigeons, Gallinaceous Birds, Rails and Coots.

We suppose it is hopeless to expect English writers to employ names for American birds by which they are commonly known in this country, and consequently need not be surprised to see our Sora entered as 'Carolina Crake' (the bill, by the way, in the figure of this species is basally red instead of yellowish green).

Volume IV contains the Bustards and

Cranes, Shore-birds, Terns, Gulls, Auks, Divers, Shearwaters, and Petrels.

The total number of species figured in the four volumes is somewhat over four hundred. To give a plate to each species would have involved a prohibitive expense. Only by placing a number of species on the same plate was it possible to produce a work of this character at a reasonable price. It must be taken for granted, therefore, that the requirements of commercial publication have imposed certain restrictions on the artist for which he is not responsible. The artist, therefore, should not be criticized for an arrangement beyond his control. Rather should we accord him our praise for the skilful and artistic manner in which he has met and usually conquered difficult problems of arrangement and grouping with a result which rarely fails to produce a pleasing whole, while the individual figures, with but few exceptions, portray form, color and character in a wholly accurate and charming manner.—F. M. C.

CONSERVATION OF OUR WILD BIRDS.

Methods of Attracting and Increasing the numbers of Useful Birds and the Establishment of Sanctuaries. By BRADFORD A. SCUDDER, Secretary, Massachusetts Fish and Game Proc. Assoc., 748 Tremont Bldg., Boston, Mass., 1916. 71 pages; line cuts.

This is a useful manual on those phases of bird protection which so fortunately are interesting a constantly increasing number of bird-lovers throughout the country. After giving a list of the birds which may nest about our homes, Mr. Scudder tells us what steps are necessary to induce them to take up their abode near ours and describes in detail various types of nesting-boxes, bird-baths, and feeding devices. There is also a chapter on planting food-bearing trees, shrubs, vines and plants for land birds and also one on planting for aquatic birds. Practical suggestions are given for the establishment of bird sanctuaries on which the author emphasizes

For reviews of Vols. I and II, see BIRD-LORE.

the "importance of not relaxing for a moment the campaign of extermination that must be waged against the enemies of wild life found within the borders of a sanctuary."

Under the head of 'Enemies of Wild Birds' he returns to this same subject and says: "We may never hope to increase the numbers of our useful birds and quadrupeds until their natural enemies and other distinctive agents are either largely removed or reduced to a minimum."

This statement is modified somewhat in succeeding pages, but Mr. Scudder apparently favors more interference with nature's balance than Mr. Forbush advocates (see succeeding review), if we would increase the numbers of song-birds about our homes. Books of this kind cannot have too large a circulation.—F. M. C.

THE NATURAL ENEMIES OF BIRDS. By EDWARD HOWE FORBUSH, State Ornithologist. Economic Biology, Bull. No. 3, Mass. State Board of Agriculture, Boston, 1916. 58 pages; 17 plates.

Our attention has been so focused on the unnatural enemies of birds that we have given comparatively little thought to their natural enemies. Mr. Forbush's paper is therefore a welcome addition to the valuable series on economic ornithology for which we are already indebted to him.

Under the head of 'Introduced Domesticated Enemies' are included the cat, dog, hog, grazing animals, and rat. To these are added the following 'Feral Enemies': Fox, mink, weasel, skunk, raccoon, red, gray and flying squirrel, chipmunk, muskrat, meadow mouse, deer mouse, deer, Shrikes, Grackles, Blue Jay, Crow, Hawks, Owls, and Eagles, while some Gulls, Herons, Wrens and other species are classed as 'Minor Bird Enemies.'

'Introduced Bird Enemies' are the English Sparrow, Starling, and Ring-necked Pheasant and the list is completed by the addition of the snapping turtle, several species of snakes, frogs and fish and, finally, various species of insects which are said to be potentially the greatest enemies of birds.

Against this array of foes it might be imagined that few birds would live to reach maturity, but Mr. Forbush shows how strictly natural enemies, and this excludes introduced species, are necessary to maintain that balance of life which prevents any one species from having an undue advantage over others and thus, in time, overrunning the country in which it lives.

He does not approve, except under certain special conditions, of attempting to control the natural enemies of birds, and he shows the futility of bounties. His studies are summed up in the following conclusions: "(1) Natural enemies of birds are necessary and desirable, as they tend to maintain within proper bounds the numbers of the species on which they prey. (2) Organized attempts to increase the numbers of birds over large areas by destroying indiscriminately all natural enemies are undesirable. (3) Under certain circumstances enemies which have been able to adapt themselves to man and his works and have become unduly numerous may require reduction in numbers. (4) Individuals of useful species which may become particularly destructive should be eliminated. (5) Self-interest on the part of the people most concerned eventually will bring about such reduction of predatory animals as is needed without the stimulus of bounty laws, which in most cases are pernicious and which, if enacted at all, should be directed only against the larger predatory animals or those which are dangerous to human life or exceedingly destructive to domestic animals or crops."

—F. M. C.

AN INDEX TO BIRD-LORE-Vols. I—XV, inclusive. Compiled by ERNEST INGERSOLL. For sale by the National Association of Audubon Societies. Price, 50 cents.

A glance through this useful work of reference impresses one who has been fairly familiar with the contents of BIRD-LORE, with the richness of the store of information which is to be found in a set of this magazine. Aside from the hundreds

of colored figures, over 2,000 photographs of birds have been reproduced, with a corresponding wealth of descriptive matter. We should be grateful to Mr. Ingersoll for making all this material so readily available.—F. M. C.

Ornithological Magazines

THE AUK.—On the opening page of the January issue is a speaking portrait of Daniel Giraud Elliot, which is followed by a memorial address by Dr. Frank M. Chapman who, all too briefly, outlines the life and work of this great ornithologist. Few are privileged to attain such honors as came to him, and his loss will be keenly felt by his friends the world over. Men of such caliber always advance, and uplift the science to which they devote their lives.

As a fine example of a local list, Major Allan Brooks' 'Birds of the Chilliwack District, B. C.,' is to be commended. Collections were made for eleven years, and the results and conclusions regarding 257 species and races are compressed to occupy only a few pages, including a map. Another good local list is one on 'The Birds of Culebra Island, Porto Rico,' by Mr. A. Wetmore. Mr. H. L. Stoddard records 'Notes on a few of the Rarer Birds of Sauk and Dane Counties, Wisconsin.' Mr. H. G. Wright deals at length with 'The Orange-crowned Warbler as a Fall and Winter Visitant in the region of Boston, Massachusetts.'

A new race of the Meadowlark—*Sturnella neglecta confluenta*—from Washington, Oregon and British Columbia, is described by Mr. S. F. Rathbun, a new Finch (*Telespiza ultima*) from Nihoa Island, Hawaiian Islands, is described by Mr. W. A. Bryan, and a new race of the Broad-winged Hawk—*Buteo platypterus iowensis*—from Iowa, is described by Mr. B. H. Bailey. In view of the well known 'melanistic' plumages of many species of Hawks, we wonder if the describer has sufficiently weighed this possibility.

The Thirty-fourth Meeting of the

A.O.U., in Philadelphia, is reported by the Secretary Mr. J. H. Sage. The A.O.U. has increased in spite of the long list of members deceased during the year.

Before closing this review we would take exception to the too frequent practice of publishing 'sight' records of races that, according to geographical distribution, ought to be the ones seen. For instance at page 91 we find two records of the 'Acadian' Chickadee, a slightly differing form of the Hudsonian Chickadee, and first described from Nova Scotia. How do we know that these birds are not of the race from Labrador, or the race from Hudson Bay? This is not improbable, for at page 86 is recorded the capture of a Mountain Plover on Cape Cod, a bird that should not be found east of the Rockies. And what of the Evening Grosbeaks recorded as *Coccothraustes vespertina vespertina*? Might not the Rocky Mountain race slip down this way? And the same thing is true of other 'records' we have seen of other birds. So very many old records of species have proved to be something else, when the moth-eaten specimens on which they rested have been examined, that we may well wonder how future students are going to treat sight records, which have nothing more tangible than unsupported opinions to back them.—J. D.

Book News

'Some Bird Friends,' by Henry F. Pullen, is an "intimate introduction" to some of the commoner birds of British Columbia. It is attractively illustrated with twenty half-tones and the text shows a genuine love of birds and enthusiasm for their study. This booklet of 30 pages is published by the Free Lance Publishing Company at Victoria, British Columbia.

'Food Plants to Attract Birds and Protect Fruit,' Circular No. 49 of the Massachusetts State Board of Agriculture, by Edward Howe Forbush, is a publication which may be consulted to advantage at this seasonable time for spring planting.

Bird=Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WITH the next issue of BIRD-LORE we plan to inaugurate an undertaking which it is hoped will be of much interest and value to field students. Authorities on the bird-life of certain regions have consented to supply us with a brief summary of seasonable news in that part of the bird world with which they are familiar. They will tell us, for example, of the character of the winter bird-life of their respective districts, whether it is distinguished by the presence of rare winter visitants or absence of those which should be expected to occur. They will report, in a general way, on the advance of the migration, and, in short, give a résumé of their own observations and those of other local observers who may report to them. The information they contribute will thus serve as a standard of comparison for those students who would know whether conditions in bird-life, as they observe them, are usual or exceptional. These reports will be published as a sub-department of 'Notes from Field and Study,' under the editorship of Mr. Charles H. Rogers.

The year 1916 was rendered memorable in the annals of ornithology by two remarkable discoveries. During the summer, William Stein, a member of one of the American Museum's paleontological expeditions, found the skeleton of a gigantic fossil bird in the lower Eocene deposits of Wyoming. This bird, we learn from a short preliminary announcement in 'The Ameri-

can Museum Journal,' "was much larger than an Ostrich, although not so tall, and had a huge head with a high compressed beak, unlike any living bird." A study of this skeleton has revealed some unexpected facts which, in due time, will be published.

The fossil bird record is so fragmentary that we are apt to take for granted almost any addition to it; but our knowledge of living birds is so comparatively complete that we were not prepared for Dr. W. L. Abbott's most surprising discovery that a local race of the White-winged Crossbill* inhabits the mountains of Santo Domingo.

If the bird were a Red Crossbill its presence, even in a West Indian island, might not be so astounding. Red Crossbills are found as far south as the pine forests of Central America and, in the Alleghanies, to Georgia; but the White-winged species is more boreal and is not known to nest south of New England. How then can we account for its presence as a permanent resident so far south of the range of the species it represents?

We may ask the same question about the Horned Larks that live on the Savanna of Bogotá in the Eastern Andes of Colombia. No other Horned Lark is found in South America or, indeed, in Central America; the nearest point at which the species occurs being southern Mexico.

Possibly we may regard these birds as indicators in nature's self-registering thermometer. Reaching the regions they now occupy during climatic conditions which no longer prevail, one has found a favorable home in the pine forests of a Caribbean island, the other, suitable haunts on a temperate zone Andean plateau. The climate, which we may believe forced them southward, has retreated, so to speak, to its present level, leaving behind it these records on the scale of time.

There is small resemblance between the giant bird which existed some millions of years ago in Wyoming, the Crossbill of Santo Domingo and Horned Lark of Colombia, but what profound depths of ignorance the light they shed reveals!

*See Riley, Smiths Misc. Coll., Vol. 66, No. 15, 1916, p. 1

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

"Hitherto my rambles have been confined to the neighborhood of a single spot, with a view of showing how perfectly accessible to all, are numerous and varied natural objects."

"When an inhabitant of the country, it was sufficient to go a few steps from the door, to be in the midst of numerous interesting objects; when a resident of the crowded city, a healthful walk of half an hour placed me where my favorite enjoyment was offered in abundance; and now, when no longer able to *seek* in fields and woods and running streams for that knowledge which cannot readily be elsewhere obtained, the recollection of my former rambles is productive of a satisfaction which past pleasures but seldom bestow."—Rambles of a Naturalist by Dr. John D. Godman, 1859.

A SUGGESTION FOR BIRD AND ARBOR DAY

MANY beautiful and instructive pageants have been given to celebrate historical events or special and significant phases of progress. These entertainments have done much to stimulate interest and civic pride in the development of the towns, cities or neighborhoods which furnished the occasion for their undertaking. The main object of such pageants, indeed, is to draw the people of a community more closely together and to attract those outside to share in the creation of new enterprises and enthusiasms.

The thought comes to one who has witnessed such a pageant: Why not try this idea in a simple way for the improvement of Bird and Arbor Day exercises, and indirectly for the betterment of the conservation of natural resources in all of its manifold forms?

State Audubon Societies could do a great deal in this direction by getting together the materials for a Bird and Arbor Day pageant on an inexpensive scale, within the means as well as within the ability of rural or urban schools. The effort put into an entertainment of this kind is never wasted, provided that effort is well directed. There is an opportunity here for the exercise of a variety of talents and the person who is able to conceive and work out a Bird and Arbor Day pageant of merit, suitable for presentation by the scholars in our primary grade and high schools will deserve our attention and praise.

The Bird masque, 'Sanctuary', written by Percy MacKaye, is beyond the ability of the average school, but wherever it has been properly presented, it has not only given much pleasure, but also, awakened keen interest in birds and nature.—A. H. W.

[NOTE: See BIRD-LORE, Vol. XVIII, No. 6, pp. 451 and 465.]

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXII: Correlated with Reading, English, and Music

THE POET'S TREASURE

"And now Spring beckons me with verdant hand, . . ."—Li Po. A.D. 702-762.

There is much wealth which is free to everyone in this great, whirling, beautiful world. Nature's treasures are so numerous that one could scarcely learn to name them all in a lifetime, although they are free to any one who will seek them. It is the gift of poets to discover treasures hidden from ordinary sight, and to them you must go to find the way to many a treasure-trove. You cannot begin too soon to become familiar with the ways and words of poets. The *great* poets give generously of the wealth they have found, just as great musicians or great artists do. Why not take *the best* for your own, then, when it can be had for the accepting, instead of wasting your finest sense of appreciation upon the less worthy or the unworthy? If any one should offer you a choice between several coats, or hats, or automobiles, you would surely take the best. Why choose low-grade music or inferior books or ordinary pictures when you can as easily have the best?

To help you prepare for Bird and Arbor Day, the following bits of treasure have been found and are here offered to you.

In the fourth century B. C. there lived a Chinese poet who was also a minister of state to a feudal prince. This poet was exiled for political reasons, and went to the distant hill-country where he lived with Nature until his tragic death. Thereafter, in his honor, there was held on the fifth day of the fifth moon a festival called the Dragon-boat Festival.

There follows part of a song written by this poet, whose name was Ch'ü Yüan:

"Methinks there's a genius
Roams in the mountains,
Girdled with ivy
And robed in wisteria,
Lips ever smiling,
Of noble demeanour,
Driving the yellow pard,
Tiger-attended,

Couched in a chariot
With banners of cassia,
Cloaked with the orchid,
And crowned with azaleas;
Culling the perfume
Of sweet flowers, he leaves
In the heart a dream-blossom
Memory haunting. . . ."

This is a wonderful Oriental picture, a gem in words, which though translated from the original, still conveys to us the poet's deep delight in Nature's beauty. One can almost see the imaginary Spirit of the Mountains, clothed in flowers, driving a yellow leopard, attended by tigers, who leaves in each responsive heart a dream-blossom.

Between 689 and 740 A.D. a very learned poet named Meng Hao-jan lived and wrote. He went to the hills after spending forty years in study and from his pen we may take these delicate pearls of thought:

"The red gleam o'er the mountains
Goes wavering from sight,
And the quiet moon enhances
The loveliness of night.

"Over the chain of giant peaks
The great red sun goes down,
And in the stealthy floods of night
The distant valleys drown.

"The night wind tells me secrets
Of lotus lilies blue;
And hour by hour the willows
Shake down the chiming dew.

"Yon moon that cleaves the gloomy pine
Has freshness in her train;
Low wind, faint stream and waterfall
Haunt me with their refrain.

"The tired woodman seeks his cot
That twinkles up the hill;
And sleep has touched the wanderers
That sang the twilight still."

What rare sympathy with Nature this poet had, to present to us in so few simple lines such a wealth of beauty! Lute in hand, he wandered "through the fragrant dew-lit ways" to meet a friend, filled with the beauty of the night. Can you hear the willows hour by hour "shake down the chiming dew," as he watched the "stealthy floods of night" drown the distant valleys? Can you see the gleam of light twinkling up the hill from the woodman's cottage and can you feel that moment of silence when sleep touched the wandering birds "that sang the twilight still?"

These poets of long ago knew the birds better than we suspect, and the flowers, trees, skies and mountains, too. Take a few random lines from other Chinese poets who lived before the year 1000 A.D.:

"Night is at hand; the night winds fret afar,
The North winds moan. The waterfowl are gone
To cover o'er the sand-dunes; dawn alone
Shall call them from the sedges. Some bright star
Mirrors her charms upon the silver shoal."

"Oh! she is good, the little rain! and well she knows our need
Who cometh in the time of spring to aid the sundrawn seed;
She wanders with a friendly mind through silent nights unseen,
The furrows feel her happy tears, and lo! the land is green."

"The yellow dusk winds round the city wall:
The crows are drawn to nest,
Silently down the west
They hasten home, and from the branches call."

"I too have felt the wild-bird thrill of song . . . "

The following lines taken from a poem describing a stone image known for "a thousand autumns" as the Celestial Weaver hints at the careful observation of the poet who wrote them:

"And since she breathes not, being stone, the birds
Light on her shoulders, flutter without fear at her still breast. . . ."

"How beautiful and fresh the grass returns!
When golden days decline, the meadow burns;
Yet autumn suns no hidden root have slain,
The spring winds blow, and there is grass again."

"In green pavilions of warm trees
The golden builders toil and sing;
While swallows dip along the leas,
And dabble in the ooze of Spring."

"The peach blooms open on the eastern wall—
I breathe their fragrance, laughing in the glow
Of golden noontide. Suddenly there comes
The revelation of the ancient wind,
Flooding my soul with glory; till I feel
One with the brightness of the first far dawn,
One with the many-coloured spring; and all
The secrets of the scented hearts of flowers
Are whispered through me; . . ."

Could any words express more exquisitely than these the spirit of 'tranquil repose' discerned by the poet-seer in the familiar aspects of nature about him?

"It dwells in the quiet silence,
Unseen upon hill and plain,
'Tis lapped by the tideless harmonics,
It soars with the lonely crane."

It is such a worshipper of nature who bares his head "while some far thrush the silence stirs," and as he scans the sky, welcoming now some early flock of wild geese, or reveling in flowers, and making the world his 'dreaming-place,' voices the feeling of every one who loves nature and finds in it rest and never-ending refreshment.

Who has not, at times at least, felt himself in 'a world apart,' like the ancient Taoist philosopher, exiled and a wanderer, going by the title of the "Old Fisherman of the Mists and Waters," (though as he explained, "he spent his time in angling, but used no bait, his object not being to catch fish")?

These are the lines of his poem entitled:

A WORLD APART

"The Lady Moon is my lover,	I would liefer follow the condor
My friends are the oceans four,	Or the seagull, soaring from ken,
The heavens have roofed me over,	Than bury my godhead yonder
And the dawn is my golden door.	In the dust of the whirl of men."

There have been poets without number gathering hidden treasure since the days of these long dead singers of the East, but I may call your attention to only one at this time, Emily Dickinson, a rare New England genius, whose verses convey delicately traced pictures and a subtle charm reminding one of the Oriental poets.

We may wonder if she herself felt this when she wrote

THE SEA OF SUNSET

"This is the land the sunset washes, These are the banks of the Yellow Sea; Where it rose, or whither it rushes, These are the western mystery!	"Night after night her purple traffic Strews the landing with opal bales; Merchantmen poise upon horizons, Dip, and vanish with fairy sails."
--	--

Find her thin volumes of poems, so overflowing with treasure, and look there for 'May-flower,' 'Purple Clover,' 'Summer Shower,' 'The Snake,' 'Out of the Morning,' 'Mother Nature,' 'The Grass,' 'The Oriole's Secret,' 'In the Garden,' 'The Bluebird,' 'April.' All of her poems are short. Two you may enjoy memorizing.

THE ROBIN

"The robin is the one That interrupts the morn With hurried, few, express reports When March is scarcely on.	"The robin is the one That overflows the noon With her cherubic quantity, An April but begun.
---	--

"The robin is the one
That speechless from her nest
Submits that home and certainty
And sanctity are best."

THE SLEEPING FLOWERS

" 'Whose are the little beds,' I asked, 'Which in the valleys lie?' Some shook their heads, and others smiled, And no one made reply.	" 'Tis iris, sir, and aster, Anemone and bell, Batschia in the blanket red, And chubby daffodil.'
---	--

" 'Perhaps they did not hear,' I said; 'I will inquire again. Whose are the beds, the tiny beds So thick upon the plain?'	"Meanwhile at many cradles Her busy foot she plied, Humming the quaintest lullaby That ever rocked a child.
--	--

" 'Tis daisy in the shortest; A little farther on, Nearest the door to wake the first, Little leontodon.	" 'Hush! Epigea wakens! The crocus stirs her lids, Rhodora's cheek is crimson,— She's dreaming of the woods.'
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"Then, turning from them, reverent,
'Their bed-time 'tis,' she said;
'The bumble-bees will wake them
When April woods are red.'"

SUGGESTIONS

Where does wistaria grow? cassia?
 Where do azaleas grow? orchids?
 Why does the poet say "*stealthy* floods of night?"
 What kinds of waterfowl go to cover "among the sedges?"
 Why does the poet say "*sundrawn*" seed?
 What is the picture of the yellow dusk *winding* around the city wall?
 Who are "the *golden builders* in the trees?"
 Why did the poet write "*warm*" trees?
 Do Swallows "dabble in the ooze," that is, gather mud?
 What are the "*hideless harmonies*?"
 To what does the "cherubic quantity" of the Robin refer?
 To what habit of nesting does the word "*speechless*" refer?
 Do any birds ever sing on the nest?
 What flower is leontodon? batschia? epigaea? rhodora?
 What do these words mean?
 Do you find the poets' treasure in these quotations?
 Look up *treasure-trove*. Note spelling of all nouns given above.
 Read 'The Rhodora,' by Emerson.—A. H. W.

FOR AND FROM ADULT AND YOUNG OBSERVERS

THE VALUE OF CHARTS AND PICTURES OF BIRDS

I am inclosing a picture of the Junior Audubon Society at Traverse, Minnesota, taken in April. Last October, we formed the club and have had a meeting each month until school closed. At each one we studied a different bird, using the leaflets. Many interesting things were learned about birds and we have all enjoyed the work very much.—CAROLINE D. LUTHER, *Waterville, Minn.*



JUNIOR AUDUBON SOCIETY AT TRAVERSE, MINNESOTA

[It is an encouraging feature of the School Department to receive so many welcome reports of bird-study in schools successfully and profitably carried on to the enjoyment of both teachers and pupils. From time to time, in these columns, suggestions are made or criticisms offered as to the value of bird-charts and pictures. Do not forget that in bird- and nature-study the most important thing is to *learn to observe* at first-hand. The living bird, tree, or flower in its native habitat is the *real* bird, tree, or flower, the one we want to become more and more familiar with and learn to love and understand and cherish.

Pictures and charts are valuable aids but they do not take one far in an *actual acquaintance with nature*, which is the basis of the nature-student's knowledge. Use them then with discrimination, remembering their limitations.—A. H. W.]

A PLAYLET FOR BIRD AND ARBOR DAY EXERCISES

TENNYSON'S BROOK (Sung)

BETH.—[writing] The music of that brook makes a lovely setting for my paper on Audubon, for birds always haunt a brook. [Aloud] John James Audubon was born near New Orleans in 1780. (My! almost a century and a half ago!) When he was a very tiny child, he tried to draw the birds he saw in the woods around him. His father was a French naval officer, so of course he wanted his son to enter the navy and he had teachers to prepare him for this career. His drawing-master set him to sketching horses' heads, but John seized every opportunity to draw his beloved birds. Finally his father realized that he could not be anything but an artist. Audubon painted his birds in their natural colors and, what was just as important, in their natural positions, something that no previous artist had ever done. Some of the greatest scholars in Europe and America were his personal friends, and surely it is fitting that he should be the founder of the society for the protection of birds.

JOHN.—[rushing in with egg in his hand] Sis, see this cunning little egg! I think it is a Robin's.

BETH.—Did you rob a bird's-nest?

JOHN.—No, I'm not that kind. I found it on the ground and thought you'd like it for your Audubon Club meeting this afternoon.

BETH.—John, you ought to do something to stop the destruction of birds. I saw a number of boys with bean-shooters the other day, right here in this neighborhood.

JOHN.—Well, I do try to stop them, but, Sis, I think if they knew more about birds they wouldn't be so cruel.

BETH.—Well you can relieve them of a little of their ignorance. Tell them that man would perish from the earth in seven years if it wasn't for the birds.

JOHN.—[rubbing head] That's pretty strong. How do you make that out?

BETH.—Why, they eat the insects which destroy the food that the farmers plant for us to eat. Birds have an enormous appetite; they eat much more than their own weight. One bird alone eats hundreds of different kinds of insects, caterpillars, and mosquitos. Here is a pamphlet [taking it up and reading from it] published by the Department of Agriculture of the United States. Among other things it says that the Cuckoo eats so many caterpillars that its stomach is lined with hairs; this bird also eats beetles, spiders, and grasshoppers.

WILL.—That's all right, Beth. Everything you say is true, but boys are not the only creatures cruel to birds. What about the 10,000,000 birds used in this country in one season to decorate women's hats? And you know those most costly feathers which ladies like to wear, called aigrettes, are taken from a beautiful bird called the White

Heron. This egret is cruelly torn from the body of the mother bird while she is caring for her young, and when the mother is killed, of course, the little ones die.

BETH.—The Audubon Society has been steadily fighting this evil. New York state and many other states have passed laws to protect the birds, and I assure you we don't wear feathers of any kind on our hats; flowers and ribbons are good enough for us. Of course we could wear Ostrich feathers, because those are plucked harmlessly.

WILL.—O, yes, they are all right.

BETH.—The girls will soon be here to give their reports on birds for the past two weeks. Please stay. I think you will be interested, and we want your help.

[Five or six girls come running in, put hats down and seat themselves.]

GRACE.—Well, I've been to the woods to get some information from the birds themselves. I saw the dearest Song Sparrow, a little brown bird you know, much like the English Sparrow, only he has spots on his breast. I watched him sitting on top of a bush and singing "Sweet, sweet, sweet, very merry cheer" [turning leaves of her book], and then, away in the deep woods, I heard a voice calling, "Teacher, teacher, teacher."

REBECCA.—O, yes, the Oven-bird! That's a little brown bird too!

GRACE [continues]—and when I drew near the entrance again, I saw a whole colony of Wrens. There was a tiny bird-house on a porch and the mother Wren was going in to feed her babies. The Wrens also are brown and very small; but oh! their notes are so sweet and rapid that they just tumble over one another, and I couldn't attempt to imitate them.

FLORENCE.—And I have been up to Bronx Park; one has a splendid opportunity to study birds there, because they have a large inclosure filled with the various song-birds, and they are all named.

OTHERS.—Isn't that fine!

FLORENCE [continues]—But I wandered out into the adjoining woods, and saw the first bird of spring, the one that carries the sky on his back.

MIRIAM.—The Bluebird!

FLORENCE [continues]—and as I was standing very quietly under a tree, a Wood Thrush came down on a near-by branch and said, "Who are you, who are you?" and I was so thrilled with delight that I didn't answer his question.

MIRIAM.—What a charming experience, but what wouldn't I give to hear a Hermit Thrush! His song is like a beautiful hymn, and I suppose it would be almost irreverent to try to imitate that.

HELEN.—How was the Wood Thrush dressed?

FLORENCE.—He wore a coat of cinnamon-brown and a vest of gray splashed with brown spots.

MARION.—Well, my report is from a place nearer home, our own Prospect Park. I suppose you know over seventy varieties of birds can be seen there. The Purple Grackles are very common; the grass is simply black with these big birds. If I had an old wheelbarrow here, I could show you what the Grackle says, because it is a squeak. Farther out, as I was going through the deep grass, I heard distinctly these words, "You can't see me, you can't see me," and sure enough I couldn't, for the deep grass hid him completely.

HELEN K.—That's the Meadowlark. Down at Nantucket I used to hear him all day. He is a beautiful, large bird with a coat of dark brown and throat and breast of bright yellow.

HELEN D.—I wish I could have seen him, but I did see a Woodpecker, dear little downy fellow, drilling away on the trunk of a tree as if his work in the world was the work that must be done.

GERTRUDE.—Yes, he saves the trees by eating the insects.

REBECCA.—Who says, "Cheer up, cheer up, cheer up?"

ALL.—The Robin!

REBECCA.—Well, as you know, we have some trees in our back yard, and I have been trying to attract the birds this year.

GERTRUDE.—Oh, tell us what you did! I always put crumbs out for them.

REBECCA.—I nailed a tin cup filled with sugar and water in one tree, and another with crumbs in a second tree. I also fastened bones in the branches, and a piece of suet as large as your two hands, and you should have seen the result. The Blue Jay arrived with his outlandish voice, but handsome blue coat and topknot, and the little Chick-a-dee-dee-dee, and the Junco who stays with us all winter, and now the dear Robins. They have built their nest of mud and straw, not so pretty as the Oriole's hanging nest to be sure, but it is very interesting to watch the family life in it. The mother Robin is an excellent disciplinarian; she visits each child in turn with a delicious worm, and if any youngster is inclined to be piggish, she raps him with her bill.

NELLIE.—[rushing in and fanning herself; all say "Hello!"] I just got off the train! Where do you think I've been? to Riverby on the Hudson, to visit Mr. John Burroughs, the greatest living naturalist! See, I have his picture here.

MIRIAM.—What an honor! but tell us what you did.

WILL.—Beg pardon, but isn't Henry Ford, the auto manufacturer, a friend of Mr. Burroughs?

NELLIE.—Yes, and Mr. Ford is a great lover of birds. His whole estate is one vast bird sanctuary. He has bird-houses and feeding-stations and every known comfort to attract and protect the birds. Well, Mr. Burroughs himself met us at the station. You know he is seventy-nine years old, but you should have seen him crank up his Ford car; he says he has to work or people might think he was getting old. On the way up to his house, he pointed out to us a rare bird's nest, or a delicate flower, or an odd tree that we might not have noticed at all. Then he took us to his famous study in the woods called "Slabsides." You can't imagine what a delightful companion Mr. Burroughs is,—why he knows the name of everything in nature, even the different kinds of rocks!

JOHN.—I'm thinking, didn't Mr. Burroughs in his youth live in Washington and know Mr. Lincoln?

NELLIE.—Yes, he had a Government position.

JOHN.—Well, I wonder if you know that story about Mr. Lincoln and the birds. He and a party of gentlemen were riding off to attend to a business matter of importance, when Mr. Lincoln saw two birds that had fallen out of their nest. After several minutes Mr. Lincoln said, "Gentlemen, I must return and put those two birds back into their nest."

WILL.—All great men seem to have loved birds. Nearly every poet has written about them. Shelley sang of the Skylark, Keats of the Nightingale, and of our own poets, Celia Thaxter's 'Sandpiper,' and Longfellow's 'Birds of Killingworth,' are dear to every one.

BETH.—Yes, and isn't it Emerson who says,

"Hast thou named all the birds without a gun?
Loved the wood-rose and left it on its stalk?
O, be my friend, and teach me to be thine."

[This simple but suggestive playlet has sufficient action, if well presented, to make an effective part of a Bird and Arbor Day program. Added interest would be gained if the following articles were shown at the proper moment to illustrate the spoken lines: a picture of Audubon and one of his bird pictures if a copy can be secured; a bean-shooter; a picture of the aigrette being torn from the Egret Herons and also, a picture of the Heron in perfect nuptial plumage; a picture of John Burroughs and one of Mr. Ford's bird sanctuary. Hung up on the wall might also be pictures of the various birds mentioned in the playlet with portraits of the poets named and of Abraham Lincoln.

The quotation from Emerson's lines emphasizes again the value which poets attach to Nature's treasures. In her quaint, delicate way, Emily Dickinson, too, warns the ruthless trespasser who plucks every flower, especially the rarest, and who asserts his supposed right to trample upon or destroy anything which comes to his notice:

"Who robbed the woods,
The trusting woods?
The unsuspecting trees
Brought out their burrs and mosses
His fantasy to please.
He scanned their trinkets, curious,
He grasped, he bore away.
What will the solemn hemlock,
What will the fir-tree say?"

If Bird and Arbor Day teaches anything, it is this lesson of the right use and enjoyment of Nature. The playlet given above was written by Eva Marian Provost in the interest of the Audubon Society and presented at School, No. 167, Brooklyn, N. Y. "As a result of the enthusiasm it awakened," twelve Junior Audubon Societies were formed during the year.—A. H. W.]

THE SKYLARK AT HOME

Dorking, Surrey, England, July 9, 1905.

Took a walk after breakfast. There was a continuous singing of Larks, soft and low, all over the fields of standing grain, and once in a while a bird would rise, ascend higher than the trees, and hover in the air, pouring out liquid trills, and after a minute would drop to the ground. I was enchanted at this, for I had feared it was getting too late in the summer to hear a Skylark. The best was to come, however. One started up, singing, and continued soaring around and gradually rising higher and higher, up and up, until it was a tiny speck which it was hard to keep in sight in the bright sky. Leaning against a fence-post, I tipped my umbrella toward the sun to protect my eyes from the glare, so that I could watch the singer, which was almost in the zenith. Once I lost it, but knew it was there, for the sweet, unceasing trilling music still floated down. The bird kept in the sky fully five minutes, perhaps longer. Then it descended slowly, growing larger to the sight, and, just at the last, stopping its circling, it came down in a straight line, still keeping up its singing until it alighted. It was worth crossing the ocean to hear that Skylark sing.—MISS LUCY UPTON, *Providence, R. I.*

[The writer of the above, an invalid who now is able to observe birds only occasionally from her room, which overlooks a few trees in a somewhat open corner of a city street, has so fine an appreciation of nature that her words, not originally intended for publication, will appeal to us all, expressing as they do the result of keen observation and sympathetic understanding.

She says: "I have been trying to analyze the fascination of bird-study, as compared with other lines of nature-study. It does appeal more to me. My recreation hobby for years was botany, and it gave me much pleasure. I was nearly fifty before I began to pay any attention to birds and I have often regretted that I had no interest in them

when I was young. The only desire I could have for beginning life over again would be that I might have more intimacy with birds. I have had a few lovely experiences that I would like to share with you."

Read Shelley's *Skylark* and memorize it, a simple task that will bring you much joy.—A. H. W.]

AN ALBINO CROW

One day in late spring I noticed a flock of Crows with a white bird among them.

The Crows lit on a corn-piece and began to dig up the little corn.

I looked on for awhile and then shouted at them. They all rose from the ground, the white bird taking the lead. That was the last I saw of them that day. The next day I saw the white Crow again. It sat on a fence-post and cawed like a Crow. It was just the size of a black Crow. One morning last summer I saw another white Crow. It cawed to the rest and they flew and it took the lead.—ROGER D. PINKHAM (age 12 years), *Lancaster, N. H.*

[Albino birds, like albino creatures of any kind, are rare, so mark it as a red-letter day when you see one. In certain lights, white is a more striking color than red or blue or green, and it plays a decidedly important part in animal and plant coloration. See Chapman's 'Handbook,' pp. 92-96, and also, when visiting museums look for exhibits demonstrating this fact.—A. H. W.]

MY REAL ESTATE BUSINESS

I entered the real estate business in 1913, and my first advertisement was put in the 'Bird News' of our country place. I had five houses for rent, three for Wrens and two for Bluebirds. They were nailed on shady trees which grew quite near together. My first caller was a Wren who looked a little white house over carefully but was much displeased with the doorway. She peeped into the house and then called for her mate. This she repeated three times before her husband arrived. Both went in but came right out and immediately left. I found out later that the doorway was made entirely wrong, and to make it comfortable and cozy I would have to bore the door hole at least an inch above the floor. I did so and the next summer the house was occupied by a family of Wrens, who paid well for the rent. I then repaired all of my houses the same way only making the Bluebirds' doorway larger.

I was so encouraged that summer that I bought more houses, and the increase of feathered neighbors was greatly noticed.

In the winter I decided to keep lunch-counters and they were supplied daily with suet, sunflower seeds, millet, and wheat. My chief visitors were the White-breasted Nuthatches, and a stream of them was as continuous as a stream of water flowing into the ocean, only their ocean was the food-counter.

Downy Woodpeckers were seen quite often at the counters, and Flickers and Juncos. Song and Tree Sparrows came occasionally, and toward the end of winter they were almost as regular visitors as the Nuthatches.

This summer, 1916, more birds have rented my houses than the two last summers could total. English Sparrows are seen little around the house, and I am glad to say that I have more than twenty houses, besides food-counters and -shelves, and I am planning to buy more houses and I hope to have many bathing-places before next summer, so I can call our five-acre lawn a real bird sanctuary.—SARAH W. WEAVER (age 13), "*Clynmalira*," *Monkton, Md.*

[We have few more active bird-students than the writer of this article which spells enjoyment of nature in every word. "I now have a branch of the Audubon Society," she writes, "and I belong to the Maryland Wild Bird Protective Association. I am studying and hope to be a bird lecturer when I am older." We need more people who are *really acquainted* with birds and nature to give talks in schools and elsewhere.—A. H. W.]

THE TRUTH ABOUT CATS AND BIRDS

There is a very curious thing going on at our house. And what is it? You shall hear about it now.

There are two Mockingbirds around our home that started it all by chirping so much one morning that my grandmother looked out of her window to see what all the fuss was about, and there was a cat, and one of the Mockingbirds, and the Mockingbird would fly down and pick the cat and then fly up before the cat could get it.

And one day Mother came running and said, "Come out and see the Mockingbird's nest." So I went out and there was the Mockingbird's nest. And there were three huge mouths that belonged to the little Mockingbirds, and we could see their heads sticking up out of the nest.

One day there was a terrible downpour of rain. And next day there was only one little Mockingbird left. And you see the Mockingbirds picked all the cats that came near the nest because they were afraid the cats would catch them.

We are sure that the rain drowned the other two little Mockingbirds. That afternoon Mother looked all around on the ground, but she didn't see them. But one morning, before seven o'clock, I heard the Mockingbirds calling, so I got up and looked out of my window, and there was one of our cats, and there was the poor little Mockingbird and twice the cat attacked the little Mockingbird, but we scared the cat away.

Then when our cook, Ellen, came in she put the bird on the fence, but it flew right down into the next yard. And this is the end.—LOUISE ROBINSON KING (7 years), *Charleston, S. C.*

[If you have not read Sidney Lanier's delightful story about a pet Mockingbird, be sure to get it soon. It would be a charming selection to read aloud at a Junior Audubon Society meeting. As to cats and birds, don't try to apologize for cats or to excuse them for wanting to destroy birds. It is their natural habit, and the sensible thing is to remember this and to discover some way whereby cats and birds can be kept apart. Mr. Howard Cleaves in an admirable illustrated lecture upon matters connected with bird-

banding and bird-protection, shows a device whereby cats can be given ample outdoor space under piazzas, well latticed.

Those who like cats and wish to keep them ought, in justice to their neighbors who may not like cats, as well as in justice to birds and the cats themselves, adopt some simple, effective way of giving their pets outdoor exercise without endangering bird-life or encroaching upon the rights of others. Let us use tact in this matter, but at the same time let us do something sensible and to the point. The little girl who sent in this interesting contribution wrote down her observations with "absolutely no help of any kind."—A. H. W.]

A FAMILY OF FOREST BABIES

'Twas a glorious morn in springtime
When all Nature was astir;
All around the birds were singing
And the insects were awhir.

Along the country roadside
Violets raised their faces bright,
And where'er one looked or listened
There was beauty and delight.

We were on our way to school
And our pleasure ever grew
When we found a bird or blossom
Or a creature that was new.

Driving up a wooded mountain
We were suddenly surprised
By a whirring rush and flutter
Right before our very eyes.

'Twas a frightened mother Partridge
With her brood just off the nest,
And, to save her young, she flew
Swiftly 'gainst the horse's breast.

Instantly we made a halt.
What was this we had espied?
Baby Partridges so young
That they had not learned to hide!

Scattered all about the roadway—
'Twas the rarest sight to see—
Were the sweetest, dearest babies
Found in Nature's nursery.

Then we caught one—yes, 'twas true,
A baby Partridge—what a prize!
We must hold it and see closer
Those most wondrous sparkling eyes.

It was only one brief moment
That we were so greatly blessed;
Then reluctantly, but gently,
It was placed among the rest,

For the frantic mother Partridge
Flew at us in great concern.
'Twas a most important lesson
That such wee babes had to learn.

Soon with sudden understanding
They all did as they were bidden,
And with their devoted mother
Quickly under leaves were hidden.

So this kindergarten lesson
For the forest children bright,
Most impressively was taught
And observed with great delight.

Thus does every baby Partridge
Learn the lesson, too, I ween,
But seldom are we humans blessed
By beholding such a scene.

—MISS ADELAIDE L. MOORE, *Winsted, Conn.*

[The incident described is vouched for by the writer, to "the truth of every word." Another correspondent sends notes about a brood of nine little Partridges, which at the time of writing were "only a day or two old . . . too young to know any fear." He adds, "a week longer and you could not get near one."—A. H. W.]

THE SAGE GROUSE

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 91

On a beautiful July evening our little party left the open waters of Lower Klamath Lake and slowly made its way up a combined creek and canal to Laird's Landing. At the little wharf the Audubon patrol-boat 'Grebe' came to rest, and we stepped out to find before us the ranch-buildings of a small stock-raiser lying in a semi-circle of ragged desert hills that rose in uneven terraces to the distant horizon. A Western Meadowlark was singing in the yard and numerous Mourning Doves, the most ubiquitous bird in North America, were flying about. In the one small cluster of trees within sight Bullock's Orioles were nesting. Snipe and Phalaropes were brooding their eggs in the neighboring marsh, and a Western Horned Owl had only the night before moved her young from the big barn to the trees where the Orioles' hammock nests swung.

These evidences of bird-life were noted within a few minutes after landing, but we had come in quest of something else—we sought a certain bird which the writer had never seen. There were plenty in the neighborhood we were told, and to find them we need only walk out on the sage-clad hills. The country had once been an interminable jumble of lava beds disgorged from a heated and groaning earth. On every hand lay blocks of black volcanic rock, but the rain and frost of centuries had worn away the igneous mass and made the soil that now furnished a scanty foothold for the sage. Over these silent wastes we walked. Twice we were saluted by the song of the Sage Thrasher, and thrice the trilling, canary-like notes of the Brewer's Sparrow were borne to our ears.

Suddenly, only a few feet distant, a large bird burst from cover and went rushing away through the air at a good rate. To my startled gaze it seemed almost as large as a Turkey, although probably it weighed not more than four pounds. Its flight was distinctive. Turning its body to the left it gave four hasty wing-beats, then sailed on an even keel, only to turn to the right in another moment and repeat the performance. Thus alternately sailing and flying, while turning its body first to one side and then to the other, it pursued its course for perhaps a third of a mile and dropped again among the sage-brush. We had found the object we sought, the great Sage Grouse of the desert plains, the largest Grouse in the world save the Capercaillie of Europe. From bill-tip to tail-tip a grown male measures two and a half feet, and the expanse of its wings is a yard or more.

This was near the northern boundary of California and at almost the westernmost limit of the bird's range.



SAGE GROUSE

Order—GALLINÆ

Genus—CENTROCERCUS

Family—TETRAONIDÆ

Species—UROPHASIANUS

National Association of Audubon Societies

The haunt of the Sage Hen corresponds very nearly to that portion of North America where the sage-brush grows; thus it is found in southern British Columbia and southern Alberta, and thence southward through eastern Oregon, Montana, Wyoming, Idaho, Colorado, Nevada, Utah and eastern California. The southern limit of their range is reached when the desert growth turns from sage-brush to creosote in northern Arizona and New Mexico.

Throughout all this vast region this feathered monarch of the plains was at one time abundant. Formerly it was not extensively shot for the reason that antelope, deer, and other larger game were usually to be met with. With the passing of the big game and the introduction of breech-loading guns, a sad change has come over the fortunes of the Sage Hen. In some remote corners of the West where hunters rarely penetrate, these naturally trusting birds are so tame at times that one may knock them over with a stick. As a general thing, however, they have learned a proper dread of their human enemies, and in many sections where the remnants of the former flocks are still to be found it is frequently difficult to approach within shooting distance before the birds take wing.

This Grouse feeds very largely on the leaves of the sage-brush, and its flesh is at times strongly permeated with the odor of this plant. Hence, experienced Westerners seldom shoot the old birds, for their flesh is tough and strong, and unless prepared by a master cook is usually regarded as totally unfit for food. Irwin Cobb, after such an experience, named the bird 'The Battle Hen of the Republic.' Young birds of the year that have fed largely on grasshoppers and other insects are regarded as being a choice food, and are esteemed as highly as the Ruffed Grouse or Bob-White. In the deserts around Burns, Oregon, I found the rangers quite able to distinguish between the old and young when the birds rose from the ground. That the young are quite as good as any game bird in the land was proven to me by the delicious repast set before me by some of the good people of this arid country. The Sage Grouse are entirely terrestrial; living in regions where trees are rare they have never acquired the habit of alighting on a limb. Experienced gunners speak with admiration of the bird's ability to hide on the ground where there is extremely little cover, the only possible protection being the low growth of scattered sage-brush.

Observers have long noted that the feathers on the breast of the male Sage Grouse are often found in a worn and frayed condition, which would seem to indicate that this portion of the plumage, for some reason, receives much rougher treatment than elsewhere on the body. An explanation of this and also some interesting notes on the bird's behavior during the breeding-season was published some years ago in *The Auk* by Mr. Frank Bond who, while living in the West, had abundant opportunities to observe the activities of this interesting bird.

"The peculiar feathers of the breast of the Sage Cock," he writes, "are more or less faithfully described by every ornithologist who has published a

sketch of the bird; but as yet I have seen no explanation of the cause of the wearing away of the barbs and even shafts of the feathers of the lower neck. These feathers are worn away during that period of sexual excitement which causes many birds to develop odd and eccentric habits until the nuptial season is passed. The Sage Cock is unable to produce the musical booming sound of the Prairie Chicken, the forcible expulsion of the air from the sacs producing an inconsequential chuckling noise only; nevertheless the bird offers reasonable entertainment to any individual who will rise early and stroll out into the sagebrush a hundred yards from the campfire.

"During the months of April and May the Sage Cocks are usually found in small flocks of a half dozen or more, stalking about with tails erect and spread after the manner of the strutting Turkey cock, but I have never seen the Grouse dragging their wings upon the ground, turkey fashion, and in the manner described by Dr. Newberry in the quotation from this author found on page 406 of Dr. Coues' 'Birds of the Northwest,' nor have I ever found a wing of a Sage Cock, in this or any other season, which exhibits the slightest wearing away of the primaries. Instead of dragging its wings upon the ground, the Sage Cock will enormously inflate the air-sacs of the neck until the whole neck and breast is balloon-like in appearance, then stooping forward, almost the entire weight of the body is thrown upon the distended portion, and the birds slides along on the bare ground or short grass for some distance, the performance being concluded by the expulsion of the air from the sacs with a variety of chuckling, cackling, or rumbling sounds. This performance is continued probably daily, during the pairing and nesting season, and of course the feathers are worn away by the constant friction."

Mr. E. S. Cameron, who has studied the habits of the Sage Grouse in Montana, makes further comments on the peculiar antics of these birds when in spring the mating instinct becomes strongly developed. In part he says:

"During the first half of April the males repair to a regular 'playground,' but it is a difficult matter to observe their love-antics on account of the encompassing sage. However, on April 7, 1896, my wife and I happened to ride close upon a number of old cocks, near our ranch, which were engaged with their play in a small open space. They never fought nor threatened each other, but strutted or paraded before some hens concealed in the sage-bushes, and were entirely occupied with a most grotesque rivalry. By ruffling up all their feathers, spreading their tails, and dragging their wings along the ground, they looked much larger than they really were, while they produced a rattling sound with their quills after the manner of Turkey cocks and Peafowl. At the same time they continuously uttered a kind of whistling challenge, and, distending their necks by means of their air-sacs, erected an enormous white ruff. As the playground was small, the eight or nine cocks upon it were in imminent danger of a collision, but for the ten minutes that we watched them this did not take place, nor were there any moments of ecstatic oblivion for which some game-

birds are famous. As will be seen from the above their courtship is rather a display than a 'play,' thus differing from the performance of the Sharp-tailed Grouse.

Like all Grouse, this species has its nest on the ground. This consists of a slight hollow, usually under the shelter of a sage-bush, but sometimes it may be found under a bunch of high grass in the neighborhood of some stream or small body of water. Occasionally one may come across a nest containing a slight lining of grass-blades, or of sage-brush, twigs, or leaves, but more often there is no lining of any character.

In number the eggs range from six to nine. They are olive-buff or greenish brown in color, and are prettily marked with round spots of dark brown.

As already intimated, the food of the Sage Hen, to a considerable extent, is composed of the leaves of the sage-brush, but the birds also eat other leaves, tender plants, and even blossoms. Grasshoppers, ants, and such other insects as are available are also consumed. I have never heard a farmer complain of a Sage Grouse injuring his growing crops except in rare instances, although this may occur to a very limited extent. Perhaps one reason for the lack of complaints is that when a district becomes thickly settled, and contains many farms where crops might be injured, the birds have become so depleted by shooting that any destruction they may do is hardly noticeable.

The time has arrived in the history of the Sage Grouse when it is necessary that more restrictive measures should be enacted and enforced for its protection if the bird is to be spared from the fate of the antelope, which at one time existed in great numbers over a large part of the range in which the Sage Grouse still persists.

It is true that laws have been enacted for their protection, but these are not adequate; for instance, in Idaho, the birds may be shot for three and a half months, and in Nevada, four and a half months each year. This is entirely too long a season, especially when we take into consideration that the bag-limit, or in other words the number of birds that may legally be killed in a day, is ten in Nevada and in Idaho, twelve. Thus it will be seen that in Idaho the law permits a man to kill legally not less than 1,176 Sage Grouse in a single season.

The state of Washington has already taken steps in the right direction by permitting an open season of only fifteen days, that is from October 15 to November 1, and allowing a bag-limit of only five birds daily.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

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\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

THE MIGRATORY BIRD TREATY BILL

In the last issue of BIRD-LORE reference was made to a bill introduced in Congress on January 13, 1917, by Representative Flood of Virginia, the purpose of which was to give force and power to the treaty for the protection of migratory birds ratified between this country and Great Britain on December 7, 1916. That Treaty, it will be recalled, covers the main provisions of the McLean Law for the protection of migratory birds enacted in 1913, concerning the constitutionality of which some question has been raised.

The same day that Mr. Flood took this action a similar bill was introduced in the Senate by Senator Hitchcock of Kansas, and was referred to the Committee on Agriculture.

As the session of Congress this year terminated on March 4, it was apparent from the beginning that energetic action must be taken if we hoped to get a consideration of the measure in the jam of legislative work that Congress must consider. This Association at once began an active campaign in its interest. Many circulars were sent to members, affiliated societies and clubs, and to persons throughout the country who, it was thought, would be interested in learning of the situation. As

a result thousands of letters and telegrams were despatched to the Senators and Congressmen requesting their support.

The Secretary of the Association spent most of the time in Washington during the last six weeks of Congress. At the expense of the Association, John H. Wallace, of Alabama, and Alva Clapp, of Kansas, went to Washington to consult with their Representatives and acquaint them with the sentiment at home on the subject. As a result of the educational work thus done, an abundance of votes was secured in both Houses to pass the bill if it could be brought up for consideration. With some amendments the bill was reported favorably by the Foreign Relations Committee in the House and the Agricultural Committee in the Senate, but further than this no action was taken.

As our readers are well aware there was an unprecedented amount of delay and confusion in reference to many administrative bills during the closing days of Congress. An immense amount of good work however, was accomplished, and at the special session of our national lawmakers called for April 16, 1917, the bill will again be introduced and its consideration will be pressed.

HOSTS OF WATER-FOWL IN LOUISIANA

Mr. E. A. McIlhenny, who keeps well-informed as to conditions about the bird-refuges in southern Louisiana, and to whose skill and generosity we owe the admirable photograph accompanying this article, reports, in a letter quoted below, that water-fowl are extraordinarily plentiful there.

"The past summer was most favorable for the growth of duck-feed, and the mar-

Scaups and Redheads occupied the lakes of this tract and the State Game Preserve. On Marsh Island vast numbers of Gadwalls, Baldpates, and Mallards were to be found, and great numbers of Blue Geese, with a few Snow Geese, occupied Marsh Island throughout the entire autumn. These Geese later moved to the Grand Chenier tract in the vicinity of Constances Bayou, where they congre-



DUCKS IN WINTER ON A LOUISIANA REFUGE

shes, ponds, and lakes were filled with all kinds of the most attractive feed for Ducks and Geese; and in the early fall the Ducks and Geese came in enormous quantities. The fall and early winter . . . were very dry, and the birds congregated in amazing numbers wherever there was water. The principal centers for bird-population were: for Pintails, Mallards, and Teal, on both sides of the Grand Chenier Ridge; for Mallards and Teals on the Ward-McIlhenny tract, between the camp and the Gulf; and great quantities of Canvasbacks,

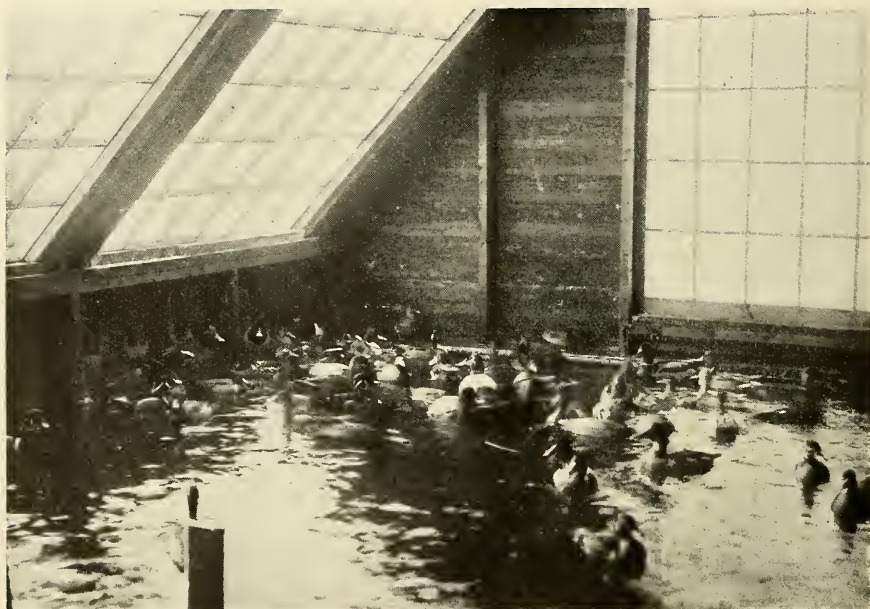
gated in enormous numbers, and where there are still a great number. At present there are more Ducks on the Louisiana State Preserve than I have ever known there. On the lake near my camp I estimate there are 40,000 Canvasbacks; and on the Louisiana State Game Preserve and Lake Fearman, and on the North and South lakes, vast numbers of Canvasbacks, Scaups, Baldpates and Gadwalls. Teal are everywhere, and the present winter has shown a greater wild-fowl population on the Louisiana refuges than ever before."

THE AMSTON EXPERIMENT STATION

Readers of BIRD-LORE, and of the Annual Report of the National Association, are aware that Mr. Charles M. Ams has acquired an immense tract of virtually wild land in eastern Connecticut, and has fitted up in one of the lakes within it a model breeding-place for wild ducks to be cultivated in captivity. Mr. Ams has now

portance. The planting of food-bearing vegetation will be carried out in a way to teach the public what and how to plant.

For beginning the propagation of wild water-fowl an ideal small pond and adjoining swamp- and grass-land have been enclosed with a seven-foot, vermin-proof fence. A water-fowl breeding-house out in



SCENE IN THE GLASS BREEDING-HOUSE AT AMSTON

When this photograph was taken, ten species of Ducks were swimming about in comfort, although the temperature outside was 15° below zero

declared the entire tract a wild-life sanctuary, and has posted it accordingly. Further, he has signed an agreement giving the National Association of Audubon Societies full use of the property as a sanctuary and experiment station under the oversight of Herbert K. Job. Mr. Ams pays all expenses for work mutually agreed upon, and provides the necessary labor, including the services of an expert game-keeper.

At the Experiment Station nesting and feeding devices will be placed with a view of collecting various data of practical im-

the pond, with glass front, comprising a swimming-pool and float, has been constructed, and the breeding stock already obtained has wintered finely. It consists of most of the more important and valuable species of North American wild Ducks, and some other water-birds. Unusual facilities will be afforded for scientific and practical studies, including the growing of aquatic food-plants.

Stocks of the Bob-white and of the Scaled Partridge or 'Blue Quail' have been secured, and coöperative experimental

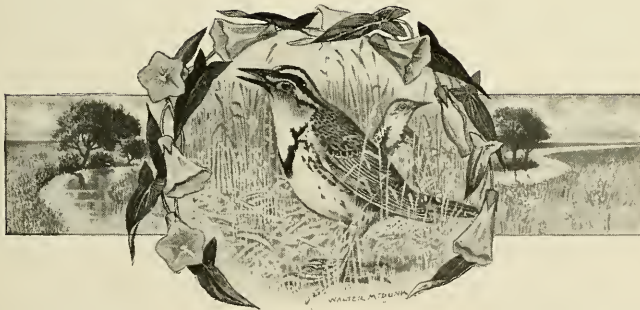
work elsewhere with other species is under way, which later will be centered here. A large commercial game-farm is to be established near by, and may be visited for purposes of further instruction.

Need has long been felt of some place reasonably accessible where all these practical methods with wild birds and game could be observed and studied. To accommodate visitors and students, Mr. Ams is opening a small hotel and a public garage. Also, he has placed at the disposal of the Association an attractive house, in which will be placed an exhibit of bird-specimens for study, pictures of birds, Audubon literature, and apparatus for feeding and attracting birds. Mr. Pearson, Mr. Job, and others will be in attendance during the coming summer season, and will be glad to meet and interest those who come. There is good fishing, boating, and

bathing on the large lake, which is less than a mile from the railroad station, while the hotel and exhibit are close by. Good camp-sites on the lake may be available by special permission for parties who really come to learn and who present satisfactory references.

During the season of 1917 the work will be tentative and experimental, but there would seem to be an excellent opportunity here for the building up of a summer school of ornithology and game-keeping, and of a bird-lovers' camp and cottage colony. The development of this unique project will be watched with interest. Those who desire to engage accommodation in advance may write to H. Rohde, Superintendent, Ams-ton, Connecticut.

Casual visitors by train or other conveyance may come at any time.



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NOTES FROM THE FIELD

Progressive Florida!

Two years ago the Florida Legislature abolished the state game-warden system, the advocates of this action claiming loudly that the birds could be better protected by the use of officers appointed locally, providing the various county officials should deem it necessary to have wardens. This was done despite the energetic protests from this office and the active opposition of the State Audubon Society. The results are just as were to be expected.

The following quotation from a letter recently received portrays a typical example of the conditions existing in that benighted state:

"In the show-window of one of the leading hardware merchants of Bradentown, among other lawless displays, stands a white Egret in full plumage. One citizen, who is an enthusiastic bird-protectionist, tells me there has been much comment on this mute bird standing there in defiance of all state laws, but the transgressors go about their affairs smiling, regardless of comment. Also a party of five or six men slaughtered thirty deer—among them several doves.

"What can be done? The whole thing is a crying shame, and here where so much has been said and done. I do so want to see these 'leading citizens' made an example of in the courts."

Bradentown, to which our correspondent refers, is the county-seat of Monroe County, Florida. It is an attractive, progressive town on the south bank of the

Manatee River near the mouth of Tampa Bay. It is a nice place to visit if one is willing to shut his eyes and ears to what may readily be seen and heard in reference to an utter disregard for bird- and game-protective laws.

Death of Miss Leona Robbins

The Colorado Audubon Society and the cause of bird-protection in the Pike's-Peak region, suffered an irremediable loss when Miss Leona Robbins, Secretary of the Society, and a devout bird-lover, died on January 7, 1917. Miss Robbins was not only enthusiastic and effective in her labors for the benefit of the birds, but was an artist-teacher of high repute, and greatly esteemed by those who knew her in either capacity. For several years she coöperated with Dr. W. W. Arnold and Edward S. Warren in their work for better bird laws, and she also maintained a bird-hospital at her Ivywild home.

Walt F. McMahon

The office staff of the National Association was increased on February 1, 1917, by the accession of Mr. Walt F. McMahon as an active assistant. Mr. McMahon came to us from Boston, where for a year previous he had devoted his entire time to the duties of Secretary of the Massachusetts Fish and Game Commission, an experience which gave him valuable training in legislative and conservative matters generally. Before that he had spent two

years with Mr. E. H. Forbush in the research work and drawing of illustrations required by the annual reports and frequent bulletins issued from Mr. Forbush's office; and this gave him a wide view of the field of bird-protection. Mr. McMahon has become an expert in the planning and management of bird-protective exhibitions, bird-box contests, and the like. Audubon Societies and schools are holding these useful exhibitions more and more; and this Association, which has always encouraged them, is now glad to be able to render increased assistance.



A STAND BUILT OF FRUIT-BOXES

The Bob-White in Ohio

For the past five years there has been an absolute close season on Quail shooting in Ohio. The time set by law was about to expire, and the question arose: Shall Quails be shot or shall they be protected for another term of years? This Association favored continuing the close season for at least two and perhaps five years, and our Ohio agent, Dr. Eugene Swope, began a campaign looking to this end, when lo! the farmers of the state took up the fight, and demanded that the

bird be protected for all time, and the Ohio Legislature has passed such a law!

An Inexpensive Food-Stand

The accompanying photograph shows an interesting feeding-station erected by Mrs. William H. Dunshee, of Cedar Rapids, Iowa. It is made of three fruit-cases held together by corner posts that raise the entire structure about 18 inches above the ground. Each shelf is provided with a tray of galvanized screening, bent up at the edges to prevent the food blowing off. In case the snow blows in, warm water may be poured through the trays. The broad, projecting roof is a good feature, and the system of perches provided for the little boarders is very attractive. Unless backed against a tree, as shown in this picture, it would be well to have the station partly enclosed at the back to protect the birds and yet have an exit. Cords or wires from the corners would prevent its blowing over. The picture shows a Cardinal on the ground, two Chickadees on the perches and Juncos.

Sustained Effort

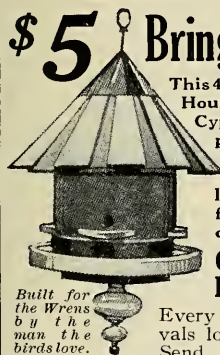
The importance of "Keeping at it" in the education of the public on the subject of bird-protection is as great as in any other effort at public improvement. It is a pleasure to learn, therefore, that the Civic Club of Chambersburg, Pennsylvania, is to organize during the coming season another fine exhibition of bird-study, feeding-devices, etc., like that which was so successful last year.

Value of the Index

A lady in Minneapolis writes us this pleasant note after examining the new 'Index' to the first fifteen volumes of BIRD-LORE:

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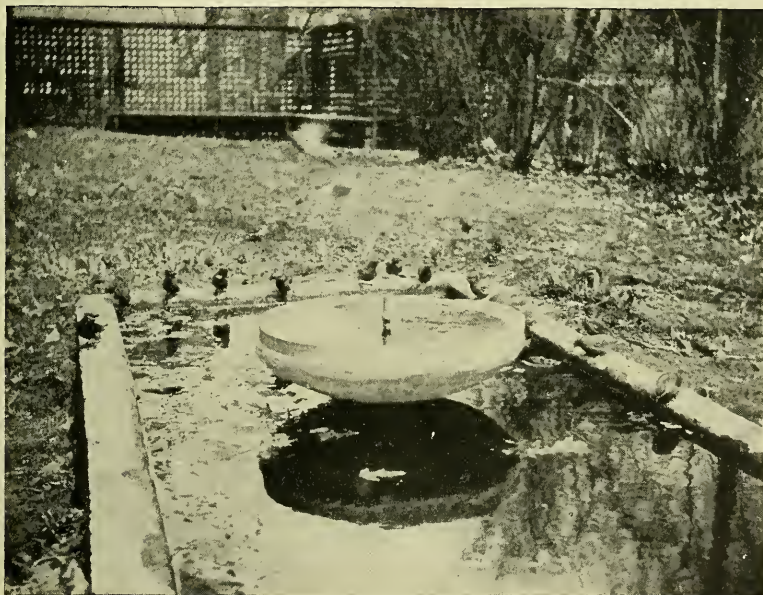
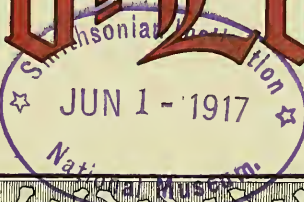
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May-June, 1917

CONTENTS

GENERAL ARTICLES

LEAST BITTERN. Photograph.....	<i>Verdi Burtch</i> ..	126
OUR NEIGHBORS OF THE GRAPE-VINE. Illustrated by the author.....	<i>Theodore Macklin</i> ..	127
BIRD GARDENING ON CAPE ANN.....	<i>Frank G. Speck</i> ..	132
A SCHOOL-SUSTAINED BIRD RESERVATION.....	<i>Ralph E. Wager</i> ..	135
TWO BLUEBIRD TENANTS. Photographs.....	<i>Avis Criss and W. R. Boulton, Jr.</i> ..	138

NOTES FROM FIELD AND STUDY

A REMARKABLE NESTING-SITE, <i>William I. Morgan</i> ; A SUBSTITUTE FOR A HOLLOW LIMB, <i>Fred Gallup</i> ; MOCKINGBIRD IN CLEVELAND, <i>S. Louise Pateson</i> ; A SUCCESSFUL BIRDBATH, <i>Mrs. Arthur F. Gardner</i> ; A BOSTON WOOD-DUCK, <i>R. P. Bigelow</i> ; CEDAR WAXWINGS AT THE POOL, <i>John B. May, M.D.</i> ; A WREN'S NEST INSIDE A HORNET'S NEST, <i>F. Schwerdtfeger</i> ; BIRD NOTES FOR 1916, FROM ORIENT, <i>L. I. Roy Latham</i> ; BIRD-LIFE ON THE BORDER, AS SEEN BY A NATIONAL GUARDSMAN, <i>Private Lawrence I. Grinnell</i> ; A STONE BIRDBATH, <i>Margaret S. Hitchcock</i> ; THE TENANT OF A BACK YARD BRUSH-HEAP, <i>W. B. Mallory</i> ; THE HISTORY OF A MARTIN-HOUSE, <i>R. W. McDowell</i> ; BIRD-BOXES AND SIGN-BOARDS, <i>A. J. Anderson</i> ; STARLINGS AT PROVIDENCE, <i>R. I. Mrs. A. C. A. Brown</i> ; STARLINGS AT CARLISLE, PA., <i>Emelin Knowlton Parker</i> ; EVENING GROSBEAK RECORDS, <i>Editor</i> ; INTERESTING WINTER BIRD RECORDS IN NORTHERN NEW JERSEY, <i>B. S. Bowdish</i> ; YELLOW-THROATED WARBLER IN BROOKLYN, N. Y., <i>Edward Fleischer</i> ; BIRD-PROTECTION IN THE WAR-COUNTRIES, <i>Alice W. Wilcox</i> .	139
---	-----

THE SEASON

BOSTON REGION, <i>Winsor M. Tyler</i> ; NEW YORK CITY REGION, <i>Charles H. Rogers</i> ; PHILADELPHIA REGION, <i>Julian K. Potter</i> ; WASHINGTON REGION, <i>Harry C. Oberholser</i> ; OBERLIN REGION, <i>Lynds Jones</i> ; KANSAS CITY REGION, <i>Albert E. Shirling</i> .	151
--	-----

BOOK NEWS AND REVIEWS

PEARSON'S 'THE BIRD STUDY BOOK'; DAVIS'S 'BIRD POEMS'; FORBUSH'S 'NINTH ANNUAL REPORT OF THE STATE ORNITHOLOGIST'; HARD ENERGH'S 'BIRD PLAYMATES'; THE ORNITHOLOGICAL MAGAZINES; BOOK NEWS.	155
---	-----

EDITORIAL

	157
--	-----

THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT

THE NEED OF THE NATIONS, <i>A. H. W.</i> ; JUNIOR AUDUBON WORK; FOR AND FROM ADULT AND YOUNG OBSERVERS.	158
---	-----

EDUCATIONAL LEAFLET No. 92. THE WHITE-THROATED SPARROW. With Colored

Plate by Bruce Horsfall.....	<i>T. Gilbert Pearson</i> ..	172
------------------------------	------------------------------	-----

THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT

RECRUITS FOR CONSERVATION; AN APPEAL FROM RUSSIA; COMMENT ON CURRENT EVENTS; NEW MEMBERS AND CONTRIBUTORS; NOTES ON AUDUBON WORK.	176
---	-----

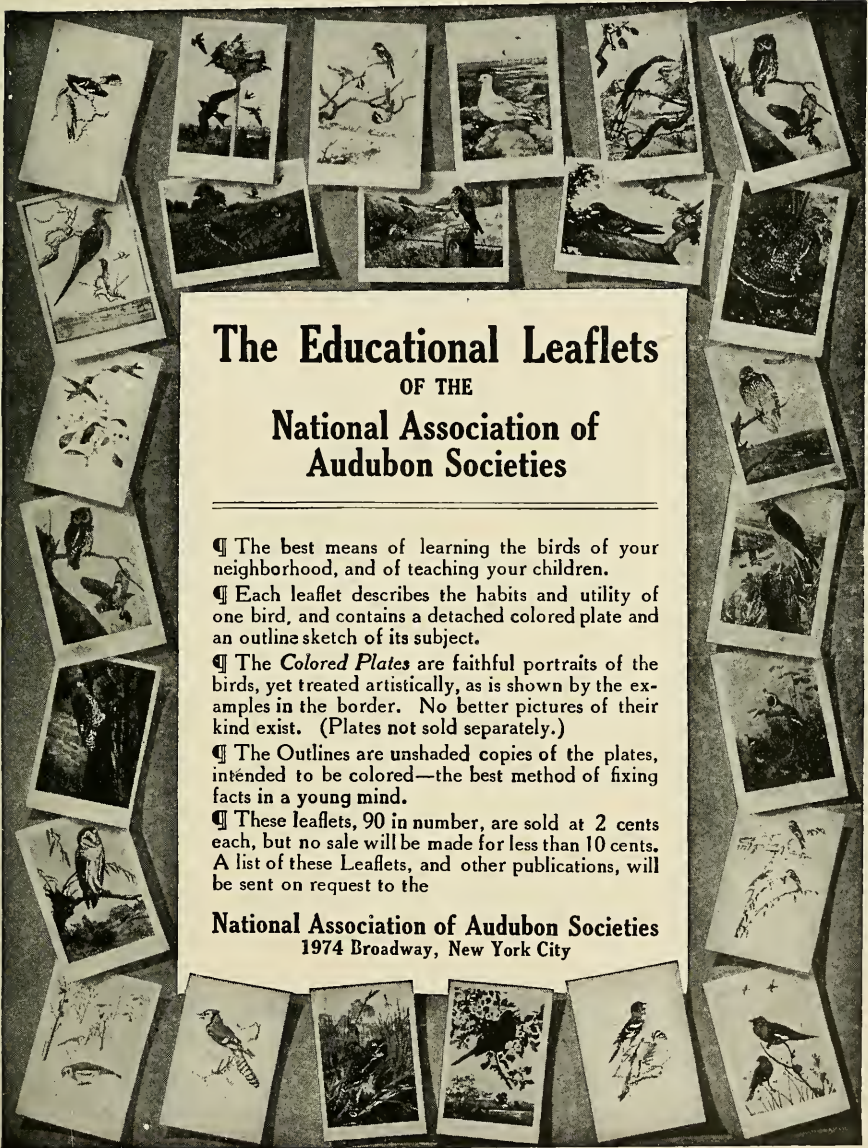
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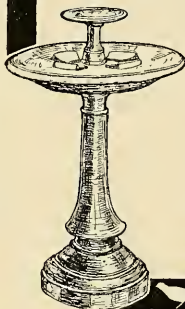
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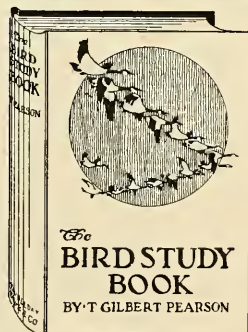
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Vol. XIX

MAY—JUNE, 1917

No. 3

Our Neighbors of the Grape-Vine

By THEODORE MACKLIN, Manhattan, Kans.

With photographs by the Author



SIGNS of spring had indeed come. One of the neighbors' little folks had surely seen a Robin perched far up on the cottonwood tree across the way and in the joyful mirth of childhood had hastened to its mother with the first news of the season. A few days later when a weather relapse brought a severe sample of the wintry days almost agone, five badly chilled Robins were seen grouped on the bare twigs of a scarred plum tree. The next morning a carpet of white greeted any of the redbreasts which had not hastily flown south.

One afternoon a few weeks later a visitor was seen hopping about on the grape-vine that in summer shaded the back porch. During the days that followed it was casually noted that Robins frequented the yard, the old garden spot, and frequently the grape-vine. Curiosity got the upper hand, and observation showed that the Robins were bent on making a home of their own in plain sight of our kitchen window.

What a strange place it seemed for a nest to be made! Had the Robins thought of the chance for a cat to climb the two by four scantling and make an unwelcome visit? Had they chosen well to build within six feet of the back steps and within easy reach of any passerby?

When the Robins came the weather was too cold to permit the use of the back porch, and the Robins saw no one who might in the future become a cause for worry. The work of nest-making was started and finished long before

time to spade the garden, and, so far as the Robins were concerned, their choice had been ideal.

Then came days of warm sunshine, when the grass had grown up deep and bright green, when the tree-buds were bursting into leaf, and everywhere gardens were scenes of spading, raking, and seed-planting. The back porch was once again called into usefulness, to the inconvenience of Mother Robin. Every time the kitchen door opened, the frightened bird rapidly slipped off her nest and sailed out onto the ground. She never made a sound but, with the instinct to deceive, left the nest as if her departure had been without the least concern. And then when silence was assured, and the cause of alarm had



BROODING AND PANTING

gone, the faithful little bird was seen flying from some nearby spot toward her trust. She would alight upon the vine, look and listen for a moment, and then hop up onto the edge of the nest. For a short time she would stand there, turning her head about as if fondly looking down and admiring something in the nest, and then carefully, softly she would snuggle into place.

One day after the Robin had been kept from her nest unusually long because of the spading being done in the garden, a few feet away, she became restless, and from the branch of a little apple tree chattered out a whole lesson in scolding. She knew that it was high time for her to be back there on the nest, and, besides, evening was fast settling her twilight shades upon the grape-vine. Wonderful instinct it is that makes each little mother bird know how long her nest may safely be left. In the middle of the day, when the sun was shining,

she was willing to spend more time away than later when the atmosphere was cold.

A few days later, during a period of observation, the male bird was seen cheerfully hopping about the garden and lawn in characteristic Robin style. First he would take a half dozen rapid hops, come to a stand, cock his little head to one side and listen. Then, with a sudden thrust of his bill, some bug, taken unawares, was caught. For some reason the skilful little hunter was saving up his catch, for before long a goodly feast of various morsels was dangling from his bill. He flew to the nest, perched there beside the sitting mother, and proceeded to feed her when she opened her begging mouth. It was a



WHICH ONE FIRST?

curious sight to see this procedure! Before long, however, the mother bird half arose from the nest, and her head was lowered while she appeared to be busy with something beneath her. Curiosity again gained the upper hand. From a stool I peered into the nest to find there three tiny birds, soft, weak and downy, but quite able to open their voiceless little mouths. Only two days before three small, delicate, faint blue eggs had been where now the babies lay. There was not a sign of broken shells about the nest, nor did search reveal them on the ground below. The old birds had disposed of them in their instinctive way. And now it was clear that the father Robin was devotedly performing his part in caring for the wee birds by providing the food which in turn the mother fed to them.

The delicate little babies did not require the personal care of the mother in feeding very long. The next day both parents were continually flying to and

from the nest, with meals served at all hours. The old bird's head would almost disappear in the nest while the feeding was progressing for the babies were so small and weak.

There are many tragedies that befall the careless or unobserving Robin parents. But our neighbors of the grape-vine were never caught off guard. While the youngsters were small, one of the old birds was constantly near the nest, if not actually standing on its edge or brooding over it. When the little birds were feathering and their heads were visible over the edge of their home, both birds would leave the nest indefinitely, although one or the other seemed to be constantly observing from some inconspicuous vantage-ground.

During a half hour, one afternoon, several battles in the surrounding trees resulted in victory to our Robins. They had apparently fed their growing triplets enough for the time being. Mother Robin was the only parent in sight, and she stood preening her feathers on the branch of a plum tree. The harsh, shrill cry of a Jay sounded, and a light blue bird stopped nearby. The Robin hesitated a moment, as if locating the intruding outcast, and then deliberately flew straight at the Blue Jay. A moment later the Jay dashed out from the dense foliage and was off for more peaceful quarters.

Soon after, another Jay grew bold enough to alight in the garden. It was apparently too close to the nest for safety, for a cry of alarm from the Robin on guard brought her mate from an unseen position and together they drove the enemy forth.

From time to time it was interesting to feed the little birds. Their parents seemed to feed them anything available, from bread crumbs to grasshoppers and from insect larvæ to earthworms. One day I spent an hour digging part of a tin pail full of worms which the greedy little rascals eagerly ate when dropped into their yawning big mouths. But the old Robins became furious and started up a warning chatter which seemed to chill the little ones with fright. They ceased to hold up their cavernous mouths and cowered into the nest as close as they could. It seems wonderful that such young birds can understand the various signals. So far as fear on their own account is concerned, they do not seem to have it until their wings are grown sufficiently for them to leave the nest. On the contrary, they snuggle into a hand just as they do the nest unless warned by the enraged old folks.

The wee little birds changed rapidly. At the end of the first week their eyes were open and their feathers had sprouted all over. Their bills, at first mere soft and wide openings as it were, elongated and took on a bird-like form. The necks grew strong so that, when the parents came up with food, their heads were lifted far up and their gaping mouths entreated for the first share. The act of placing a morsel in the mouth of the young is accomplished so rapidly that it is all but invisible.

At an early stage the young Robins commenced to preen their pin-feathers. They would move their overgrown heads about in a most awkward manner

long before there were feathers to clean or before their bills were even hard. But with the help of preening and the bounteous meals, wings and tail-feathers grew out rapidly. The weak, tottering legs strengthened, and the youngsters began to stagger to their feet. They were almost ready to leave the nest. Day after day, when the sun beat down on the nest, Mother Robin sat on the edge to shade her little ones. When she was frightened away, three heads hung out over the nest's edge. Their bills were open wide, and they panted for breath. When the Robin had shaded the nest, the youngsters huddled into the shade under her and, she in turn stood the heat by panting.

But at last came the day for leaving the nest. I had not realized that each little one was now a Robin full confident that to jump from the nest would not be to fall. So when close to the nest I started to reach up I was greeted by three noisy little throats as the youngsters fluttered out and away. They did not go far. But it was the last day that they might have been induced to pose and no time was lost in rounding them up. One was on a neighbor's porch, one hundred feet away; another was out in the garden, and the third on a neighboring lawn. Picture-taking over, the triplets were once more restored to the nest amid the loud scoldings of numerous Robins—parents, uncles and aunts—which had gathered around. That evening the nest was empty. In fact, the three had left it within an hour after the incident. They knew too much now to remain quietly at home. The Robins of the grape-vine had kept house for two months and now that the family was grown up, had moved. But occasionally still there may be seen hopping about the lawn or the garden the old folks with now and then one or more of the capable youngsters that a month before was but a tiny, pale bluish egg.



"THEY WERE INDUCED TO POSE"

Bird Gardening on Cape Ann

By FRANK G. SPECK, Gloucester, Mass.

KNOWING the helpfulness of the experiences of others in undertaking anything that is new, I began last year to go through the correspondence columns of BIRD-LORE for suggestive ideas. Having tried 'bird gardening' on a small scale now for my first year, I feel advanced enough to press myself into the company of those who think that they have perhaps something worth while to say.

Owning a small tract of land with a frontage on the Annisquam River and covered with a small beech grove and a tangle of briars and berry bushes for the most part, I undertook my experiments here. The river is entirely of salt water, miles of marshes lie to the north and west over which rises a twelve-foot tide, while at the rear is a dry, brushy region with almost no timber but no end of impassable thicket plentifully strewn with boulders. Small freshwater pools lie in places where water remains in them for nearly the entire summer. Our nearest timber of importance lies several miles to the west, forming the green woods of Essex County, in whose rolling hills and timbered wastes still are found deer, foxes and raccoons in some numbers. Thus I am fortunate in being in the midst of a diverse environment suited to the requirements of the different bird families. The peninsula here is known as Cape Ann, and being nearly surrounded by the sea and exposed to its severities, the region seems to exhibit some peculiarities in its fauna. Although having no better authority than my own observation to base my statement upon, I am, nevertheless, inclined to think that the abundance of marine and coast birds is compensated for in the scarcity of some other kinds which favor more timbered inland localities. Only a small portion of the Cape is covered with forest, much of which is beech, oak, and white pine.

My bird experiments began with an effort to increase the attractiveness of the wild thicket of my place by affording nesting-sites, providing food and shelter for the birds and, most important of all, by destroying the feral cats which are such a constant menace to the wild bird life of every district that lies near a large town or in the neighborhood of farms. Up to the present time this year I have had to destroy eleven marauding cats, and there recently appeared upon my small claim another which will have to be trapped this fall. I have been astonished at the fact, which I never realized before, of the tremendous mortality among birds caused by this animal. Persistent shooting and trapping cats with fish-baited traps has not succeeded in protecting from decimation the season's young of birds nesting in my neighborhood.

For the past three years a family of Tree Swallows has occupied a box close to the cottage, but no amount of effort could induce another pair to settle in any of the other houses placed out for them. The original settlers have fought them away. I hope that these fine creatures will some day change their

habits and grow more tolerant of their kind during the breeding season. A heavy gale, which swept the country in June, caused me some anxiety as to the welfare of the Swallows on account of the scarcity of insects during the three days of rain. The birds, however, benefited from a scheme that I hit upon—putting a piece of fish carrion on the lattice near their pole, which attracted some flies. These they continually took, hovering over the carrion in a way that showed how much they needed help at the time when their young were about half-grown. Five young ones at last were reared by this pair by July 4.

Unfortunately, there seems little prospect of the Purple Martin ever coming to this part of the state. Three years ago, Chimney Swifts favored us by homing in the chimney, but since these two families left, no others have come.

In a sweetbriar tangle, not thirty feet from the cottage, a family of Catbirds have nested and Brown Thrashers were not far from them. These confiding neighbors were constantly in sight, feeding upon the bread, oatmeal and cereals which we threw upon the small lawn for them. I am quite convinced, though, that their offspring all fell victims to the ubiquitous cats. Two hundred feet away, in a barberry bush, another pair of Catbirds raised two young in a more favored retreat.

Undoubtedly the most abundant, and certainly as satisfactory as any of the small birds, are the Song Sparrows. These, with a few other species of the Sparrows, throng our food-trays, as many as twenty having been seen in one flock within a space of twenty feet square, where I threw out my seed refuse from the cages of some foreign Finches which I keep. The latter are unquestionably the cause of attracting many native birds, not only by their song, but by their presence. In the bird-house where they are kept with other reptiles and animals under observation, I have found Song Sparrows, a Maryland Yellowthroat, female Redstart and a Vireo.

The wild birds are beginning to know how to find their way in and out of the constantly open door and windows. In the immediate vicinity of the cottage, if not within sight of the porch, are the nests of the Baltimore Oriole, Purple Finch, two pairs of Cedar Waxwings, Yellow Warbler, Maryland Yellowthroat, two pairs of Robins and the Chipping Sparrow. The latter lost her three nestlings during the severe storm in June. A Robin nesting beneath a neighbor's porch also lost a nest of seven eggs at the same time.

Black-billed Cuckoos spend much time in our trees. Frequent visits from several young Cowbirds with their Song Sparrow foster parents, characterize the day's events at the food-tables. Again, during August, the tables containing kitchen refuse will be visited early in the morning by as many as twenty Bronzed Grackles. While looking from my window at the same time, several Brown Thrashers, a Catbird, several Robins, occasionally Crows at the more distant trays, have been seen feeding; while, no doubt attracted by the company, a Flicker, some pugnacious Kingbirds, and a darting Warbler may be

glimpsed. As yet no Chickadees have come to nest, but at times one or two will spend an hour or so with us, and this winter suet and suitable boxes will be placed for them as well as for Nuthatches which we often see. Redstarts and Chestnut-sided Warblers come to the beeches and oaks, but I have found no nests, though they may be there.

A hundred yards from my hillside is a meadow where Bobolinks have come to nest within the last three years. There were about four pairs there this spring. Red-winged Blackbirds, too, are on the decided increase. These increases are very gratifying, and we are hoping that other species may come. The Purple Finches are new to this immediate vicinity, and I think may be held here by keeping an abundance of sunflower seeds on the ground for them. They come down with the smaller Sparrows for the seeds. The bird concourse is swelled at times during the summer by obscurely marked visitors which I am not wise enough to identify. I am sorry to say, however, that the most careful watching has not disclosed the presence of the House Wren in this vicinity.

In order to learn the density of bird population in some of the districts on the Cape, I combed over several orchards in different districts for nests, and then watched results. In such a count allowance should be made for nests that escaped scrutiny. None of the orchards were large. In one containing about thirty trees, near a house where English Sparrows were very numerous, was a Yellow Warbler, Baltimore Oriole, two Chipping Sparrows and two Robins. Bluebirds, too, had nested here earlier in the spring before I came. In another orchard of fourteen trees only, where cats were guarded against and where for the first time English Sparrows were routed out persistently, the results were proportionately better. A Bluebird family raised two young out of five eggs, a Cedar Waxwing succeeded with her brood, a Robin nested and succeeded, and a Song Sparrow brought out three young from a nest in a brush-heap. No accommodations had been previously made for the birds in this spot, but this year, by winter feeding and placing boxes and eradicating vermin, the place will be prepared. In another orchard, more remote from the farm, about two acres in extent, with a marshy meadow in its midst, were two Red-winged Blackbirds' nests, each with three eggs, a Flicker's with nine, two Bluebirds, and some Robins. A farmer who had only a few apple trees put up two Bluebird boxes and had both successfully occupied.

By passing about copies of *BIRD-LORE*, with its stimulating news from other parts of the country and its information, I may add that the infection of the bird-gardening idea has taken root quite generally in several parts of the Cape, and boys, as well as landholders, are already placing bird-houses, watching the birds, and, some of them, destroying their cats as a first measure.

A School-Sustained Bird Reservation

By RALPH E. WAGER, De Kalb, Ill.

THE following account of the establishment of a school-sustained bird reservation may be of service to some who are interested in the general problem of the conservation of our wild-bird life. Could high schools, normal schools, even colleges and universities, be stimulated to undertake the protection and care of bird reservations, it would do more to develop a keen personal interest on the part of students and, therefore, in those who later are to hold the reins of government and mold public sentiment than volumes of writings and numberless lectures. Such an undertaking presents a definite problem which must be solved in some definite manner.

Not only so, but it is also true that it is entirely practicable. There is in every locality a woodland or uncultivated tract of some sort, which may easily serve the purpose of a bird reservation. It becomes such the moment definite steps are taken to prevent wilful or preventable destruction of bird life upon it. From such a center of effort and accomplishment there radiates an influence over wide territory.

Some years ago the writer visited a grove, situated in Ogle County, Ill., and annually occupied as a nesting-site by a colony of Black-crowned Night Herons. Although but a comparatively small tract of planted Norway spruce, there were, nevertheless, between seventy and eighty pairs of the birds occupying it. Inquiry revealed the fact that the colony had in the past been rather frequently raided by hunters. At one time, if my memory serves correctly, sixty-five of the birds were killed and hung up on the nearby wire fence in evidence of the skill and valor of their destroyers.

More or less periodic visits were made for the purpose of studying the birds. The complete destruction of two rookeries in the northern part of the state of Illinois suggested the desirability of making secure the one known to the writer.

The farm on which the grove is located is owned by families under the name of Sedgwick and Bebb, but the local management is given by Mr. W. W. Jones, a gentleman in thorough sympathy with all good movements, and hence with that of conserving wild life. It was therefore suggested to Mr. Jones that an effort be made to establish the two or three acres of wooded land as a reservation. The suggestion met with a hearty acceptance. Mr. Jones took the matter up with the owners and secured their coöperation. The proposition was then placed before the students and faculty of the Northern Illinois State Normal School. The students contributed five or ten cents apiece to defray the necessary expenses, and by similar annual payments the necessary moneys are to be raised. By vote of the faculty the school placed itself on record as being behind the movement, and the president signed the papers, which are here reproduced.

Signs were then prepared and transported to the grove and placed in con-

spicuous positions, giving notice of the fact that the grove is a bird reservation and warning against shooting.

Arrangements were made with the tenant on the farm to act as warden, and here again hearty coöperation was secured. Many a hard-headed man will take hold of such a problem if he sees that it is really a serious undertaking. The farmers in the locality are intelligent people and are interested in the reservation.

In so far as is known no efforts have been made to molest the birds since the protection was undertaken. On the other hand, the owners of the farm, as



AN OBJECT LESSON IN BIRD PROTECTION

also Mr. Jones and his family, are planning certain improvements which shall add to the conveniences of those who may desire to visit the grove, as well as to the safety of the birds themselves. Altogether a most happy condition exists, and the writer is certain that there are hundreds of opportunities for the establishment of reservations in a similar manner if only schools shall undertake their part.

The contracts are herewith reproduced in the hopes that they may suggest like ones for many educational institutions.

CONTRACT WITH WARDEN

The students and faculty of the Northern Illinois State Normal School, desiring to maintain on the farm of Sedgwick and Bebb, in Ogle County, Ill., a bird reservation, do hereby contract with Ernst Moth to serve them in the capacity of warden over said reservation.

Said Ernst Moth agrees to perform, to the best of his abilities, the following duties in his capacity as warden:

I. To erect not later than Apr. 15, and to remove and store in a suitable place not later than Sept. 1, the signs provided for the purpose of warning against shooting and otherwise molesting the birds during or after their nesting-season.

II. To prevent, in so far as is possible, the use of firearms or other instruments of destruction, on or near the grove in which nest the birds for the protection of which this contract is drawn.

III. To report to the proper authorities and to assist in the prosecution of such as may violate the law of the land in the molestation or destruction of birds nesting in said grove, and to cooperate in such measures as may in general result in the welfare of the birds therein nesting.

In consideration of the performance of these duties the faculty and students of the Northern Illinois State Normal School agree to pay to Ernst Moth the sum of ten dollars (\$10.00) on or before July 1 of each year during which he continues to perform the duties of warden.

[Signed] JOHN W. COOK, President Northern Illinois State Normal School.

[Signed] ERNST MOTH.

CONTRACT WITH THE OWNERS OF THE FARM

A colony of Night Herons is accustomed to nest in a grove of Norway spruce and European larch on the farm of Sedgwick and Bebb, said grove being some twenty rods from the N. line and about thirty rods from the west line of the S. $\frac{1}{2}$ of the N. E. $\frac{1}{4}$ of Sec. 4, T 25, R 10 E. of the 4th P. M.

The purpose of this contract is to secure the protection of the birds which nest in said grove.

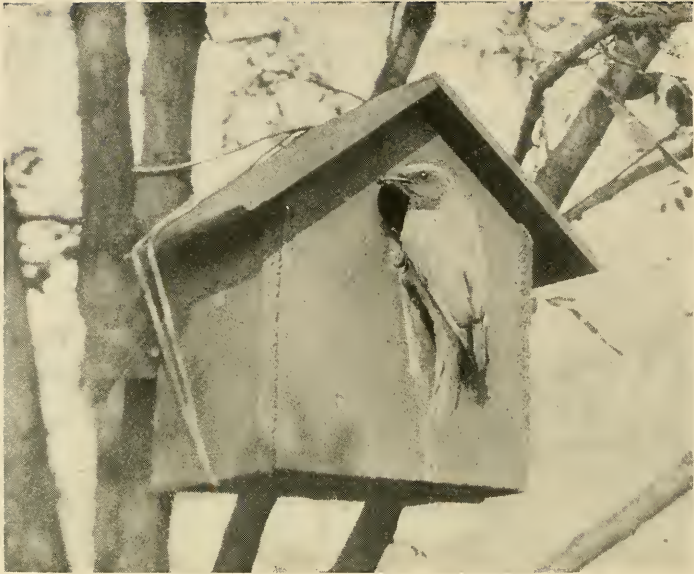
In consideration of this protection the owners of the grove, Clara M. Sedgwick, Samuel H. Sedgwick, Mary A. Bebb, and Edwin Bebb give to the faculty and students of the Northern Illinois State Normal School full authority to adopt and put into execution such measures as may by them be deemed advisable in order to secure such protection.

It is further agreed on the part of both parties to this contract that the right of owners or tenant to cut and remove trees from said grove shall not be disputed, and that if it becomes necessary for the purposes of protecting the birds to erect fences other than now exist, the expense of so doing shall be borne by the members of the Northern Illinois State Normal School who shall at the time be responsible for the maintenance of this contract.

This contract is to extend over a period of five years, with no compensation for the owners other than the right of cooperating in such measures as lead toward the protection of the birds and the properties concerned.

[Signed] W. W. JONES, Agent for Sedgwick and Bebb.

[Signed] JOHN W. COOK, President Northern Illinois State Normal School.



Photographed by W. R. Boulton, Jr., Beaver, Pa.



Photographed by Avis Criss, Amsterdam, N. Y.

TWO BLUEBIRD TENANTS

(138)

Notes from Field and Study

A Remarkable Nesting-Site

One day during the month of June, 1915, a pair of Yellow-breasted Flycatchers* were seen, to all appearances inspecting the boom of a drag-line excavator which is being operated on the Shoshone Project near Powell, Wyo., by the U. S. Reclamation Service, and the following day the birds began to build their nest. At first they were rather timid, sitting on the spoil-bank with a bit of grass or feathers until the machine stopped swinging for a minute or so, when they would put the grass in place, flying away at the first move of the boom. Thus it required two weeks to complete the nest. Gradually they became bolder and flew in and out while the boom swung rapidly. Three eggs were laid and hatched, and we had the pleasure of seeing the young fly away well matured.

On one occasion, shortly after the birds were hatched, the old birds were kept from the nest all night by the crew making repairs on the boom. Next morning, at 3 A.M., the oiler found the young apparently dead from exposure. He

*Probably the Arkansas Kingbird.—Ed.

brought them down, wrapped them in waste, heated on the boiler, and soon had them as lively as ever. At daybreak they were placed in the nest, and soon the old birds, much excited, came to them.

This machine operated from 3 A.M. until 9 P.M., and during the nesting-time traveled about two miles along the creek on which it was working. It is by no means a quiet machine, and often we expected to see the birds, nest and all, thrown from the boom by the violent jumping and jerking as the dipper is cast out and hoisted.

I am inclosing a photograph which will give you a better idea of machine and nesting-place.—WILLIAM I. MORGAN, *Operating Engineer, Powell, Wyo.*

A Substitute for a Hollow Limb

On June 14, 1914, I hung an old pair of overalls on the line to dry. The next morning, about 8 o'clock, Mother called to me and said, "Look what has taken possession of your overalls." At first I could see nothing, but a moment later a bird flew out of the right leg and off to the field. So I went and sat on the doorstep,



A PAIR OF FLYCATCHERS BUILT THEIR NEST AND REARED THEIR YOUNG AT THE PLACE MARKED X IN THE ARM OF THIS DREDGE WHILE IT WAS IN OPERATION

about thirty feet away from the overalls, to await the return of the bird. I did not have to wait long before two of them came with grass in their beaks. They flew

leg. So when they both had gone to the field after more material, I went up and tied the bottom of the leg.

They then worked faster than ever



AN ASH-THROATED FLYCATCHER AND ITS NESTING-PLACE
IN A PAIR OF OVERALLS

directly to the overalls; one clung to one leg while the other went in. I watched them for about an hour carrying material into their new home, but as fast as they took it in it fell out of the bottom of the

until about 11 o'clock, then started in again in the afternoon at 2 and stopped about 5 P.M. June 17, the nest was finished and partly lined with feathers. On the 18th they finished lining with feathers.

On the 19th they were not seen around the nest.

The following day I was not at home, but on the 21st the nest contained two eggs, and on the 25th four eggs.

July 12, I heard young and saw the old birds bringing food. Only two of the eggs hatched.

A week later or so, the old birds were still bringing moths, butterflies, and larvæ to the young. They were seen but once after leaving the nest, when the old birds were feeding them up in a tree.

—FRED GALLUP, *Escondido, Cal.*

Mockingbird in Cleveland

A Mockingbird visited East Cleveland today and sang during the day and into the night. His melody consisted of selections from the songs of the Bluebird, Oriole, Phœbe, Killdeer, Cardinal, Tufted Titmouse, Whip-poor-will, Night Hawk and Cooper Hawk, the little Owl, and others. Dr. F. H. Herrick, author of 'Home Life of Wild Birds,' regards it a most rare visitor to this district.—S. LOUISE PATTESON, *Waldheim, East Cleveland, Ohio*, April 22, 1917.

A Successful Bird-Bath

During the past season my bird-bath was such a success that I want to tell BIRD-LORE readers about it. This is the way it was made: First, a shallow box of wood was made, 4 feet long by 2 feet wide and 3 inches deep. This was plastered inside with a good cement, left rather rough. The cement was brought up at the edge even with the board edge and then sloped down to the bottom of the box. One end was more shallow than the other. When full, the water was not more than 2 inches deep in one end and about $\frac{1}{2}$ inch in the other. Every two or three days I swept the water out with a broom and refilled it. It was placed under a low-spreading plum tree, so the birds did not have to fly up more than 3 or 4 feet to reach the tree. The grape-arbor sheltered both tree and bath on the street side. It

was not made and put out until the middle of July, and we were away all of August, so my observations were made in September and October. This is a list of the birds I saw bathe in it: Robin, Bluebird, Junco, English Sparrows, Chipping Sparrow, Song Sparrow, White-throated Sparrow, Cedar Waxwing, Goldfinch, Yellow Warbler, and Phœbe.

A flock of fourteen Bluebirds used it almost every day, coming usually between the hours of 4 and 5. P.M. Several times I saw five Bluebirds in the bath at one time. They had a very pretty way, when they alighted on the edge of the bath, of standing for an instant with their wings outspread, as if looking at themselves in the water. October 4 and 8, eighteen Bluebirds bathed in the late afternoon. I think it was the same flock of fourteen but some went in more than once. Once I saw seven Robins in the bath at one time, and twice I saw four little Yellow Warblers bathe together. The largest number I counted in one afternoon was nineteen Robins, fourteen Bluebirds, two Cedar Waxwings, one Phœbe and dozens of English Sparrows and Chipping Sparrows. The Bluebirds came for their last bath October 13, although they were about the neighborhood until the last day of October. October 21 four Robins, five Juncos, and a large number of English Sparrows bathed. The last song-bird to bathe was one lonesome little Chippy on October 29. The English Sparrows used the bath as long as I kept water in it. I should add that we have no cat, nor do we allow a cat to come into the yard or garden during our waking hours.—MRS. ARTHUR F. GARDENER, 155 Maple Avenue, Troy, N. Y.

A Boston Wood Duck

It may be of interest to know that this morning I saw a male Wood Duck in the Charles River Basin. The river was frozen over, except for a small area of clear water where the overflow from the Stony Brook conduit flows into the Basin. Here was the Wood Duck, accompanied

by two females that I took to be Mallards. They were larger than the male. All three were quite fearless and swam toward me until they were not more than ten feet away. I could see the markings perfectly. At 6 o'clock in the evening the Wood Duck and his two companions were still there, and they had been joined by two pairs of Mallards.—R. P. BIGELOW, *Boston, Mass.*, March 15, 1917.

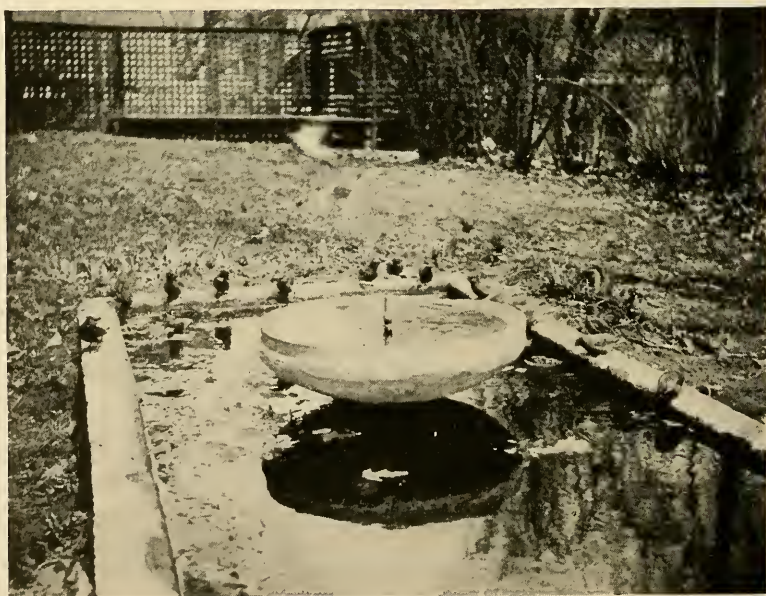
Cedar Waxwings at the Pool

The accompanying photograph is what might be called a successful disappointment. I imagine most amateur bird photographers will understand what I mean by that.

One day last winter I went out to a hillside near Tufts College, in Somerville, Mass., in the hope of obtaining a picture of the Evening Grosbeaks that had been reported to me as daily visitors in that locality. It was quite springlike, the

ground bare and soft. I traveled back and forth over the range where the Grosbeaks were reported, but there were none to be seen. I snapped two Crows on a dead pine, watched a great flock of Cedar Waxwings feeding where the Grosbeaks should have been, and at last set up the camera, with a twenty-foot extension cord, near a bird-bath or fountain in one of the yards on the hill.

The Waxwings had been coming to the bath at intervals, and at last, after quite a period of waiting, I succeeded in getting a group, as the photograph shows. Fourteen Waxwings and one English Sparrow are around the edges of the pool, another Sparrow is in the background, and at least five Waxwings are in the air, but the camera was not quick enough to show them clearly. No Grosbeaks were seen that day, but the trip was worth the time it occupied, and the picture is a spur to further efforts.—JOHN B. MAY, M.D., *Cohasset, Mass.*



CEDAR WAXWINGS AT THE POOL
Photographed by John B. May

A Wren's Nest Inside a Hornets' Nest

The accompanying photograph shows a nest of the white-faced hornet which contains the nest of a House Wren.

The hornets' nest was fastened to the outside of a house in Rosendale, N. Y., in 1914. On July 4, 1915, I took it down to examine it, naturally without suspecting the presence of a bird's domicile, when two House Wren's eggs rolled out through the opening in the wall. Further investigation showed that the Wren's nest filled the greater part of the interior. The nest is now preserved in the Brooklyn Museum.—F. SCHWERDT-FEGER, *Brooklyn, N. Y.*

**Bird Notes for 1916,
from Orient, L. I.**

GREAT BLACK-BACKED GULL.—One April 6, latest record by one day; former latest record, April 5, 1915.

HOODED Merganser.
—Flock of 10, January 3, were in our waters eight days. A very rare water-fowl near Orient, especially in winter.

WOOD DUCK.—Two records for the year: A male on December 8. Female picked up dead in a neighbor's yard December 3. The bird was still warm. This specimen had an American Museum tag on its leg, which became mislaid before I could get possession of it or the numbers thereon. One wing was clipped.

CANADA GOOSE.—A flock of 32. May 5 is a new late date for last one seen. Another flock was observed on May 3. These two dates comprise the only May records in sixteen years of observations.

WHITE-WINGED SCOTER.—A flock of 14 spent the summer near Orient. Eight

heretofore has [been the largest number summering. All appeared to be in normal condition, sporting and flying at will. Eight were males and seven females. They kept to one body of water from May to September. This species is a regular sum-



A HORNET'S NEST IN WHICH WRENS MADE
THEIR HOME

mer visitant in the bays, but is rarely seen in the sound.

PIGEON HAWK.—One May 11, a new late record.

BLACK VULTURE.—An individual of this rare visitor was observed on June 20. I was on my knees among garden truck, adjoining was an open field containing fish fertilizer. It was here that the bird alighted, thirty-eight feet from me, my presence being unknown to the bird for some time.

TURKEY VULTURE.—One September 24.

RED-HEADED WOODPECKER.—First breeding record for the eastern end of the north shore. Its status for twenty years has been: Exceedingly rare and irregular visitant August 1 to May 4.

PURPLE GRACKLE.—One bird wintered

over from 1915. Large flocks are occasionally recorded in mild spells in winter. One or two individuals frequently winter.

RUSTY GRACKLE.—Two on April 15 form my latest record.

RED-WINGED BLACKBIRD.—Arrived March 25. Latest date for first one seen by eleven days.

COWBIRD.—Although recorded in December, the first spring migrant did not appear till March 25, forming a new late arrival by thirteen days.

PIPIT.—Two were seen on September 10, eighteen days earlier than any previous record. Three were seen on the following day, and they were regular thereafter, ten being seen on the 15th.

SNOW BUNTING.—One April 6, latest record by three days.

BROWN THRASHER.—One wintered through from 1915. Uncommon in winter; third occurrence in sixteen years.

CATBIRD.—One wintered through from 1915. Although a very severe winter, this bird went through in excellent shape, residing continually in a cedar woods. For weeks its only companion was a White-throated Sparrow. They fed together by day and lodged underneath the shelter of the same cedar bough at night. They subsisted mostly on various seeds and berries, occasionally scratching for insects among the leaves when snow permitted.

HERMIT THRUSH.—One May 7, latest date for last one seen by seven days.

BLUEBIRD.—First migrant seen March 25. In common with other early spring migrants, was very late in arriving. This species was less rare than in the three preceding years. There were two records of it breeding in the locality, first nesting records in four years at Orient.—ROY LATHAM, *Orient, N. Y.*

Bird Life on the Border, as Seen by a National Guardsman

Most soldiers at the Border appreciate ornithology more from the culinary than the naturalist's point of view. Keen appetites, produced by long hikes, hard out-

door work and often a deficient food-supply have caused the Dove (of which there are three common varieties: the Mourning Dove, the White-winged Dove and the Mexican Ground Dove) and the Bob-White to become the best-known birds in this vicinity. A small guard of men stationed at some outpost in charge



YOUNG MOCKINGBIRD AS A CAMP PET
Photographed by Private L. I. Grinnell, Troop D,
Squadron A, N. G. N. Y., McAllen, Texas.

of water or food supplies, a shotgun borrowed from a nearby ranchman, and a few hours off between periods of guard duty have strengthened an acquaintanceship with these two types of birds.

As a matter of fact, however, next to the Dove the most common bird in this vicinity observed by the writer during the summer of 1916 was the Western Mockingbird. The accompanying illustration shows a young Western Mockingbird, which was discovered hopping around in front of my tent. On being offered some cracker crumbs it became exceedingly tame and perched on our hands and hats.

—PRIVATE LAWRENCE I. GRINNELL,
Troop D, Squadron A, N. G. N. Y., McAllen, Tex.

A Stone Bird-Bath

The accompanying photograph shows a bird-bath made by chiseling in a large

stone a cavity which will hold twenty quarts of water. We put a square sheet of slate, with rounded corners or supports, which brought it to within two inches of the surface of the water, and it has been

The Tenant of a Back-Yard Brush-Heap

I inclose a photograph of Brown Thrashers taken in a pile of brush in my back yard here in Lennox, where they



A STONE BIRD-BATH

Photographed by Margaret S. Hitchcock

much used by both old and young birds of many different species. A young Robin was splashing the water in all directions when the accompanying photograph was made.—MARGARET S. HITCHCOCK, *Morristown, N. J.*

have bred for four years, and are back now preparing another nest. I presume that they are the same pair, but of course cannot say positively. They are quite tame, and I have on several occasions placed my hand on the back of the fe-

male while she was sitting on the nest of eggs. When the young are born they are just like sitting hens, scratching and picking my hand till the blood comes when

creasing in numbers until last year about sixty-five Martins left my houses during the latter part of August. I would have done far better last year but for the ex-



BROWN THRASHERS AND THEIR BRUSH-HEAP HOME

Photographed by W. B. Mallory

[A pile of brush affords an acceptable nesting site to many thicket-haunting birds and induces them to live near us. It may be arranged in a short time and made sightly by training vines over it.—Ed.]

I come too close.—W. B. MALLORY,
Lennox, S. D.

The History of a Martin-House

The Martin-house hereshown is arranged to utilize every available inch of space and is 35 by 35 inches square over all, 5 feet in height, and contains forty-five rooms. I have two houses, the other one being a small house of twenty-three rooms. This house has been up for the past three years, while the one shown in the picture inclosed was erected last year. I have had success from the first with my Martin colony, starting with six pairs and in-

creased in numbers until last year about sixty-five Martins left my houses during the latter part of August. I would have done far better last year but for the ex-

temely unfavorable weather conditions which drove away at least a dozen pairs. My main trouble from the start has been with the English Sparrows, and I believe that to this evil alone can be attributed the fact that so few people continue to erect bird-houses. In this vicinity there used to be at least forty to fifty Martin-houses, and I doubt very much if there are now a dozen Martin colonies within a radius of five miles. I have made inquiry of a number of the older residents who formerly maintained Martin-houses, and the invariable reply has been "Yes, we used to have the Martins around, but the Sparrows ran them off, so we took the

box down." Now I would like to say that the prevalent idea that it is no longer possible to keep up a Martin colony with any degree of success is a mistake. It is quite true that since the advent of the English Sparrow it is far more difficult than formerly, but if a person will take the trouble either to take down his box in winter or else plug up the openings, and then use a 22 shotgun to assist in keeping down the pests, the Martins will get along all right. Naturally, if one allows his Martin-house to become filled with Sparrows' nests, the Martins will be unable to use it when they arrive in the spring; but there is no excuse for allowing the Sparrows to build a single nest after the Martins leave. My plan is to plug the doors with pieces of wood and then

use a 22 Stevens smooth-bore with shot cartridges which are safe to use, even in crowded localities. Also, I go up to the boxes once a week and tear out with an iron hook any nests the Sparrows have built, and to the shame of the Martins be it said that I generally have to take out two or three Sparrow nests every week. In justice to the Martins, however, I will say that with the increase in my colony I have had far less trouble in this respect, as the Martins are not now outnumbered in so large a ratio.

In this way I have managed without a great deal of trouble to keep my Martin colony comfortably housed and to see them steadily increase in numbers. I ought to mention here that for suggestions in regard to the Sparrow nuisance I am



A SUCCESSFUL MARTIN COLONY

Photographed by R. W. McDowell

take them out when it is time for the Martins to arrive. I also begin my warfare upon the Sparrows early in the spring and keep it up all summer, going around before breakfast and at suppertime and picking off a few each day. For this I

greatly indebted to J. Warren Jacobs, of Waynesburg, Pa., who has given me valuable ideas and help.

I consider it a great pity that more people do not provide accommodations for our native birds. If the average

farmer realized how many destructive insects are annually consumed by the Martins, it is likely he would be more willing to take a little trouble to keep these birds around his farm.—R. W. McDOWELL, *Uniontown, Pa.*

Bird-Boxes and Signboards

I herewith inclose a photo taken a short time ago by myself, which may be of possible interest for your magazine. The picture shows bird-houses placed on bulletin boards throughout the city by an advertising firm.

—established themselves within a tall church steeple, opposite me. Here they have lived all this bitter winter, leaving at dawn, flying toward the beaches. Regularly, they return at dusk.

Lately a few are on my lawn digging for something and making holes. These are the first Starlings I have even seen about here.—(MRS.) A. C. A. BROWN, *Providence, R. I.*

Starlings at Carlisle, Pa.

The English Starling has appeared in our midst as well as at Newville, Pa. I



BIRD-HOUSES AND SIGNBOARDS

Photographed by A. J. Anderson

As I am interested in the protection of birds, this idea attracted my attention as being both useful and ornamental.

You will notice that these bird-houses are adapted more for small birds, such as Martins, Wrens, and the like.—A. J. ANDERSON, 3544-16 Ave. So., *Minneapolis, Minn.*

Starlings at Providence, R. I.

About the last of October a large colony of Starlings—numbering in the hundreds

saw several of them on March 13.—EMELIN KNOW PARKER, *Carlisle, Pa.*

Evening Grosbeak Records

The Evening Grosbeak was formerly one of our rarest winter visitants, but if one may judge by the history of the past few years, we shall soon have to class it as of "regular occurrence; common locally." In addition to the large number of records which BIRD-LORE has published, includ-

ing those contained in 'The Season' of the present issue, we have received the following:

S. Paul Jones reports two males and three females at Waukesha, Wis., on March 25 and 26, and April 1, 1917. Lida Rogers sends the first authentic record of their occurrence at Holland, Mich., where a flock of about twenty-five appeared late in January, 1917, some of which were present when she wrote on March 5. Ida A. McAfee writes that she saw four males and eight females at New Bedford, Mass., on February 27, 1917. E. B. Moore reports a flock of five at Bantam, Litchfield Co., Conn., on March 15, 1917; the only previous record for that locality was February 14, 1905. B. F. Case writes that fifteen or twenty Evening Grosbeaks appeared in Tolland, Conn., just before Christmas. Later the flock increased to above fifty, of which thirteen were adult males. They remained about a month.

Several flocks were observed at Englewood, N. J., where they were last seen April 11. At Hammonton, N. J., Mary P. Conkey reports seeing from thirty to fifty Grosbeaks on March 11, and on April 22 they were still present. This appears to be the most southern record for the species.—Ed.

Interesting Winter Bird Records in Northern New Jersey

Several interesting bird records have been made in northern New Jersey during the past winter. Near Skillman, N. J., Mr. Henry G. Plump picked up a male Cardinal in the road on January 3, which was unable to fly. The occurrence of a Cardinal in that portion of the state is unusual. The bird was carried to Mr. Plump's home and seemed to recover somewhat, but died the following night.

On February 1, a boy found a male Baltimore Oriole at the corner of First and Clay Streets, Hackensack. This bird also was unable to fly. It was taken to Mr. Arthur Bratt, Deputy Warden of Hackensack, who endeavored to keep it alive

until weather conditions would permit its liberation. Mr. Bratt kept the bird until February 11, when an unfortunate escape of gas from a coal-fire during the night caused its death. In the meantime it had seemed well and lively, feeding freely on bread, canary seed, oatmeal, boiled potatoes, lettuce, suet, and such scraps as were convenient.

This winter has marked an exceptionally conspicuous eastern flight of Evening Grosbeaks. These birds have been reported from Blairstown by Mrs. D. C. Carter; for several weeks prior to March 9, they having fed about her doorstep; from Morristown, by Mr. Eugene Vanderpool, having been observed about the same time as the prior record. On January 3 an Italian in Old Tappan shot five of these birds, and they were brought to the writer for identification by the State Fish and Game Warden for Bergen County, Mr. William H. Small, who effected an arrest after being murderously assaulted by the Italian, who was sentenced to 110 days for the offence. These birds were all in the female or immature plumage. Miss Mary Pierson Allen has had a flock of nine bright males and some thirteen females or immature-plumaged birds about her home in Hackettstown for some weeks. Using a dish of water as a lure, she succeeded in attracting them to the spot of ground where she was feeding Purple Finches, Juncos, Fox and Song Sparrows, and Chickadees with bread crumbs, scratch-food and sunflower seed. Here the Grosbeaks have been feeding daily on the sunflower seed, which they quickly learned to enjoy, and at this place the writer secured nine photographs. Some of the females or immature birds even became sufficiently tame to alight on Miss Allen's hand to feed.

Mrs. Wilson Senseman, of Atlantic City, has been entertaining a Mockingbird which appeared at her home there during the second week in November. This bird fed on the poke-berries and grapes which had been planted for the birds and accepted suet tied to the trees and currants and grapes which were

thrown out for him. He took particular pleasure in concealing himself in thick foliage and, when English Sparrows gathered in a flock, emerging suddenly and chasing them all off the place. On February 26, Mrs. Senseman wrote that the bird was still with them and doing well.—B. S. BOWDISH, *Demarest, N. J.*

Yellow-Throated Warbler in Brooklyn, N. Y.

On April 28, 1917, while in Prospect Park, Brooklyn, N. Y., in charge of a group of fifteen members of the bird-study class of the Brooklyn Institute of Arts and Sciences, I heard, near the Rose-Garden, an unfamiliar song and found to my surprise that the songster was a fine male Yellow-throated Warbler. Never did an accidental visitor receive a more positive identification and live to tell the tale. Of the sixteen observers, fourteen had opera-glasses and the other two eight-power binoculars. All observed the bird for half an hour in fine light at a varying distance of from ten to twenty-five feet, and it was still in full view when they left. Many had manuals and, mark by mark, compared the printed description or the colored picture with the bird before them. The sharply defined yellow area on the throat and breast, the black streaks on the white flanks and sides, the white belly, the head-marks, the gray back and rump, and the white wing-bars were carefully noted. The song, which was repeatedly heard, was, as described, "like the Indigo Bunting's, but shorter." While there were several pine trees in the neighborhood, the bird spent all of the time it was under observation in the terminal branches of deciduous trees, alternately searching for food and singing.—EDWARD FLEISCHER, *Brooklyn, N. Y.*

Bird-Protection in the War-Countries

In this distressing time of war, when a large number of men from the farms is being drawn into the battlefields, there is coming a new realization of the economic

value of wild birds and a larger effort to protect them.

The Royal Society of England has prepared a special leaflet, 'Birds, Insects, and Crops,' asking the help of all readers in the protection of the birds and of the crops in cultivation. Every bird is being regarded in the light of its value to man. Even the famed Skylark has been put under suspicion as a destroyer of crops of corn and wheat, but it has been proven by the examination of thousands of stomachs that it does not feed on wheat, corn or corn-shoots, but rather on weed seeds and insects, thus doing beneficial work.

In France the bird-protection party includes men from every station and class—statesmen, writers, sportsmen, teachers, and agriculturists—men who have the vision to see in bird-protection a means of saving agriculture from the threatening dangers. They are working to check the illegal shooting in the close season, the merciless destruction by gunners, the netting of migrants and killing of seabirds as a summer pastime off the coast of Brittany and Normandy.

The friends of birds are constantly increasing in Australia also. They are trying vigorously to stop collectors from killing off the very rare birds of the country. The Gould League of Bird-lovers, numbering 60,000 members, is just beginning to put up nesting-boxes, food-tables, and baths for the wild birds in the state schoolgrounds, parks, and public gardens. A military camp is located in a beautiful park in Victoria, and some of the men of the medical corps, in their leisure hours, enjoy watching the birds and feeding them from the hand.

Russia, too, is taking more active interest in the cause of bird-protection and is inquiring of England about bird-legislation. Some preserves have been set apart for the birds. The Department of Agriculture has founded one of great importance in Siberia, where, in 1895, the slaughter of birds was responsible for the plague of locusts and cutworms which threatened famine for the country. Moscow still has a famous bird-market. A

commission has recently been formed which plans to circulate leaflets and pamphlets about bird-life and its value to the trees and crops, and to protect the natural life of the city parks.

America may well be proud of its progress in the work of conservation and its leadership of the world in methods of bird-protection.—ALICE W. WILCOX, *St. Johnsbury, Vt.*

THE SEASON

It is expected that a subdepartment with this title, under the editorship of Charles H. Rogers, will be hereafter a regular feature of BIRD-LORE. Its aim will be to give a general idea of the more unusual features of each season in different parts of the country, and it is hoped to accumulate a valuable fund of data on the fluctuation in the abundance of species. The contents of each instalment will be much like those of the introductory note to the Christmas Census, giving briefly the state of affairs in the world of birds during the previous two months—such as the lateness or earliness of the migration, the presence of irregular winter birds from the North, the scarcity of certain breeding species, the noteworthy abundance of some transient, etc. Statements of unusual events should be particular; general statements will suffice for conditions that are normal and to be expected.

We plan to have in each of several sections of the country a contributor, active in the field, who will send us between two and three hundred words every two months. He will supplement his observations by comparing notes with other members of the local bird club. Other active field-workers in the regions covered are urged to write summaries of their observations to these men; such contributions should be marked, 'For "The Season," BIRD-LORE,' and will in no case be published, but will be used at the discretion of the contributors in making out their reports.

The list of contributors follows:

Eastern Massachusetts: Dr. Winsor M. Tyler, 522 Massachusetts Avenue, Lexington, Mass.

New York City, within fifty miles of: Charles H. Rogers, American Museum of Natural History.

Southern New Jersey, southeastern Pennsylvania and Delaware: Julian K. Potter, 563 Bailey St., Camden, N. J.

District of Columbia, central Maryland and northeastern Virginia: Harry C. Oberholser, Biological Survey, Washington, D. C.

Central northern Ohio: Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.

Northwestern Missouri and north-eastern Kansas: Albert E. Shirling, 3849 East 62nd St., Kansas City, Mo.

This first instalment of 'The Season' covers the first three months of 1917. The next will describe the period from April 1 to June 15. Thenceforth reports of observations covering the previous two months should reach our contributors as soon as possible after the 15th of February, April, June, August, October, and December, and they in turn are requested to post their manuscripts not later than the 20th of these months to Charles H. Rogers, American Museum of Natural History, West 77th St., New York City.

BOSTON REGION.—In this region the past winter was one of continuous cold with the ground snow-covered throughout January, February, and the first half of March. The winter was made remarkable by the presence of seven species of irregular winter visitors. Evening Grosbeaks were locally common throughout the season; Pine Grosbeaks were present in small companies until early in February; Redpolls were well scattered through the country districts during the winter and are still present (April 1); Pine Siskins appeared in the autumn in good numbers, but the majority passed on, apparently, before January; a flight of Brown-cap Chickadees (nine collected specimens proved to be the new race *Penthestes*

hudsonicus nigricans) surpassed in numbers even the remarkable flight of 1913. (See Wright, 'The Auk,' 1914, pp. 236-42, and 'The Auk,' 1917, pp. 164-70, and Townsend, 'The Auk,' 1917, pp. 160-3.) During the autumn and the early part of the winter, Red Crossbills were fairly common and White-winged Crossbills occurred in small numbers. In spite of the presence of many northern birds, a marked scarcity of Brown Creepers was noted.

The beginning of the spring migration was delayed about ten days by inclement weather. The first arrivals were Song Sparrows and Bluebirds on March 21. Both soon became common. Red-winged Blackbirds, Grackles, Robins, Fox Sparrows, and Cowbirds came a few days later, also ten days late. I noted one Phoebe on March 27, a normal arrival date.

Hence, on April 1, in spite of the delay at the start, all the species due at this date have arrived, but as some species, notably Phoebe and Fox Sparrow, are represented by few individuals, the season must be regarded as still somewhat backward.—WINSOR M. TYLER.

NEW YORK CITY REGION.—This region received its full quota of the irregular visitors from the North whose abundance made this the most interesting winter ornithologically in at least the last two decades. The abundance was in species rather than in individuals, as only the Pine Siskin and the Redpoll were abundant. The Siskin was hardly more than an autumn transient, as few, if any, were seen after December; the Redpolls appeared as the Siskins left and stayed till mid-March. But few Evening Grosbeaks were observed about the city, though large flocks were reported near or beyond our fifty-mile radius. Remarkable numbers of Goshawks were seen and taken in north-western New Jersey and, chiefly beyond our boundaries, in Connecticut and vicinity. Several Pine Grosbeaks and one Northern Shrike were recorded nearby. Unfortunately, our conifers raised a very poor crop of cones last year, and the half-dozen or so Red Crossbills noted hurried

through early in the season. The White-winged Crossbills fed on sweet gum seeds and tarried with us; three males spent several weeks on Staten Island, leaving in March, and there were other records. Five winter stations for the Brown-cap Chickadee (*Penthestes hudsonicus nigricans*) were found: one (one bird) at Englewood, N. J.; three (four birds) in the Watchung Mountains, N. J.; and one (four birds), the southernmost record for the species, on Staten Island; none was seen after the first week in February. Black-cap Chickadees were extraordinarily common, but most of them left during the latter half of March.

There is little to be said of the spring migration, which, on the whole, has progressed so far about normally. There have been rather unusual numbers of the commoner River Ducks and a notable abundance of Holboell's and Horned Grebes. One party, on March 25, counted nearly 150 Grebes along five or six miles of Long Beach, L. I.; of these over one-third were of the larger species. Rusty Blackbirds have been, perhaps, more than ordinarily common.—CHARLES H. ROGERS.

PHILADELPHIA REGION.—During January the common winter residents were present in their usual numbers. The Carolina Wren, however, was almost entirely absent at different stations in New Jersey; in Pennsylvania it was apparently as numerous as ever.

January proved to be a month of great interest to local bird students because of the abundance of boreal birds which had made their appearance early in the winter. These were Pine Siskins, Horned Larks, Redpolls, Red and White-winged Crossbills and, most notable of all, Evening Grosbeaks, a species never before recorded so far south. Most reports have come from the pine-barrens region of southern New Jersey. Mr. Samuel Scoville, Jr., discovered a flock of seventy-four at New Lisbon, N. J., on January 29. Smaller flocks have been noted at different points, some very near Philadelphia.

A Great Blue Heron was noted January 6 and an adult Black-crowned Night Heron on February 11.

About February 20 the first spring migrants begin to arrive. Favorable weather may bring a few earlier; on the other hand, stormy and cold weather may delay the flight till well into March. Personal observations on these birds this year are as follows: Bluebird and Robin, March 4; Purple Grackle and Fox Sparrow, March 8; Killdeer and Red-winged Blackbird, March 11; Rusty Blackbird, March 18; Mourning Dove, March 21; Kingfisher and Turkey Vulture, March 22; Flicker and Phoebe, March 31. These are all rather late dates and are no doubt due to some extent to the weather conditions of late February and early March, yet records of a large number of observers will probably show that small numbers of most of these birds were in this vicinity anywhere from two to three weeks earlier than the dates given.

March closed with Evening Grosbeaks still present.—JULIAN K. POTTER.

WASHINGTON REGION.—During the winter of 1916-17 birds as a whole were rather unusually abundant. Furthermore, the exceptionally cold weather brought a number of interesting winter birds to Washington. Perhaps the most remarkable of these was the White-winged Crossbill, of which there were only four previous records. It appeared on December 10, 1916, and remained irregularly rather common until the latter part of February, 1917. The Red Crossbill was also present during the same period. The Pine Siskin was unusually common during the winter, appearing October 22, which is earlier than any previous autumn record. Among the unexpected winter occurrences might be mentioned a Ruby-crowned Kinglet, seen on January 20 by Mr. L. D. Miner, and a Blue-gray Gnatcatcher, observed on January 2 by Miss M. T. Cooke. The Whistling Swan and Ducks of a variety of species wintered in considerable numbers on the Potomac River. Altogether, the winter, from an ornith-

ological standpoint, proved to be one of the most interesting for many years.

The continuously cold weather during March had a rather interesting effect on the bird-life of this locality. It apparently delayed the spring arrival of only a few migrants, for many of them appeared about on time. On the other hand, several came very early. Those late in appearing were the Killdeer, first noted March 11, for which the average date of spring arrival is March 6; the Woodcock, noted March 11, average date of spring appearance, March 2; Cowbird, observed March 31, usual date of spring arrival, about March 20. Of the species that arrived ahead of their schedule might be mentioned the Phoebe, which was seen March 5, but which usually comes about March 10; the Purple Martin, which came March 25, six days ahead of its average; and the Brown Thrasher, which was seen March 31, three days ahead of its average. Two species arrived earlier than the earliest previously recorded date: the Louisiana Water-Thrush, seen March 17, for which the previous earliest record was April 1; and Henslow's Sparrow, seen on March 25, for which the previous earliest date was April 10, 1889.—HARRY C. OBERHOLSER.

OBERLIN REGION.—The winter was unusually severe in that there were longer periods of continuous cold during January and February than are expected. As a result no birds began to sing until the first wave of migration. Only the usual winter birds were present in the immediate vicinity of Oberlin, but there were reports of the presence of Bohemian Waxwings, White-winged Crossbills, Pine Grosbeaks, and Goshawks from regions east of Cleveland. A single Cowbird was found with a flock of House Sparrows on January 29.

The migrations began on February 19, when there was a marked increase in the number of Crows, which is nine days early for the average of this species. The Bluebird arrived on February 23, Fox Sparrow on the 24th, Canada Goose and Bronzed Grackle on the 25th, Robin, Killdeer

Meadowlark, Song Sparrow, and Towhee on the 26th. This completed the first real wave of migration. The usual first wave is composed of the Crow, Robin, Killdeer, and Bluebird, and the second wave of Canada Goose, Meadowlark, Bronzed Grackle, Song Sparrow, Northern Flicker, and Red-winged Blackbird. This time the Northern Flicker did not arrive until March 21—two weeks late—while the Towhee was nineteen days early.

The second wave of migration comprised the Black Duck, Baldpate, Red-winged Blackbird, Pintail, and Merganser, all on March 1, and Redhead and Canvasback on the 3rd. Cowbird on the 10th, Greater Scaup on the 11th, and Mourning Dove and Hooded Merganser on the 16th, make up the usual scattering records for the middle of this month. Cold weather interfered with any real movement.

The third wave began on the 20th with the arrival of the Chipping Sparrow; Northern Flicker and Field Sparrow came on the 21st, Phoebe on the 22d, Vesper Sparrow and Coot on the 24th, Red-breasted Merganser, Belted Kingfisher, Turkey Vulture, Shoveler, Lesser Scaup, Hermit Thrush, and Pied-billed Grebe on the 25th, and Rusty Blackbird on the 26th, closing the migrations for the month, with Wilson's Snipe and Swamp Sparrow late, and Hermit Thrush and Pied-billed Grebe early.

A study of the records given above, in comparison with the averages for all of the records for the vicinity of Oberlin, reveals a great irregularity for this season's movement, with only Belted Kingfisher, Phoebe, and Vesper Sparrow even approximating their average dates of arrival for twenty-one years. This is exceptional.—LYNDS JONES.

KANSAS CITY REGION.—A dry winter with no ground-cover of snow or sleet furnished favorable conditions for seed-eating birds. This may account for the unusual thousands of Thick-billed Red-winged Blackbirds (*Agelaius phoeniceus fortis*) that spent the winter in the vicinity. Smaller droves of these northern

birds occurred last year, but the numbers were quadrupled this winter. These Red-wings began to leave about the first of March, and those taken after March 5 were our nesting subspecies, *predatorius*.

A census of birds taken at various times during the winter showed the usual number of winter residents with, perhaps, an increase in the number of Cardinals and somewhat fewer Blue Jays. Winter Wrens also seemed more common than usual. Kinglets, Robins, and Bluebirds were occasionally seen throughout the winter.

A colony of twenty Short-eared Owls frequented a rodent-infested weedy tract. Several Goshawks were seen in different sections. They are not often reported for this region. Several Gambel's Sparrows were taken in February and early March, thus establishing a new record for the eastern range of this western bird.

Messrs. Harry Harris and Ralph Hoffmann took a Bohemian Waxwing in January. They also report the Northern Shrike for January and three Mockingbirds in different sections of the city throughout the winter.

By the last week of February there was a general return of Fox Sparrows, Harris's Sparrows, and Song Sparrows. Two Leconte's Sparrows were found February 25. Robins, Bluebirds, and Meadowlarks were generally distributed at this time. Lapland Longspurs, Pine Siskins, and Horned Larks were also found February 25.

The effect of the migratory game law is quite noticeable. The lakes used as resorts for the Kansas City hunting clubs are teeming with water-fowl. Mr. Ralph Hoffmann, returning from a recent trip to these lakes, reports thousands of Coots, hundreds each of Shovelers, Blue-winged Teal, Baldpates, Gadwall, and White-fronted Geese; dozens of individuals of each of half a dozen other species of Ducks and Geese, and many shorebirds.

At the last of March, the Tree Sparrows, Fox Sparrows, White-throated and White-crowned Sparrows, Harris's Sparrows, Juncos, and Siskins are still common.—ALBERT E. SHIRLING.

Book News and Reviews

THE BIRD STUDY BOOK. By T. GILBERT PEARSON, Secretary, National Association of Audubon Societies. Doubleday, Page & Co., Garden City, N. Y. 1917. 12mo. xvi+258 pages; colored frontispiece; 16 photographs; numerous text cuts.

Few writers of popular bird-books have had Mr. Pearson's opportunities to learn definitely the kind of audience to which their work was addressed. As a teacher, as a representative of the National Audubon Society, and for the past seven years its chief executive, he has come into personal touch with many thousands of persons who from varying angles were interested in birds.

In his 'Bird Study Book' he has therefore supplied suggestions and information which he actually knew were desired. The result is a practical introduction to the study of birds, telling why and how we should learn to know them and, particularly, why we should protect them. On this latter phase of his subject Mr. Pearson speaks with exceptional authority. Nowhere else will one find so satisfactory an exposition of the work for bird-protection which has been done in this country and of the varied activities of bird-conservers.

We regret to observe that the publishers have denied the book the index its contents so well deserve.—F. M. C.

THE BIRD POEMS OF MILES A. DAVIS. Published by John White Johnson, Rochester, N. Y. 12mo. 37 pages.

As Mr. T. Gilbert Pearson truly says in his introduction to this little volume, "Nothing seems more natural and proper as a subject for poetic meditation than birds." One does not have to be an ornithologist to realize the poetry of bird-life, and for that reason poems with birds as themes may appeal as strongly to those to whom birds are merely symbols as to those who know them.

Mr. Davis sings chiefly of our commoner birds, the Robin, Bluebird, Balti-

more Oriole, Bobolink, and others, and his verses reveal an ardent sympathy with bird-life and a poet's appreciation of the charm and beauty of birds.—F. M. C.

NINTH ANNUAL REPORT OF THE STATE ORNITHOLOGIST [of Massachusetts]. By EDWARD HOWE FORBUSH. For the year 1916. From the Sixty-fourth Annual Report of the State Board of Agriculture. 1917. 26 pages, 6 plates.

Like all its predecessors, this report is filled with matter of interest and value to the bird student and the agriculturist. It deals with publications, lectures, legislation, bird-day and bird-night exercises, bird-study in the schools, bird-boxes, control of cats, and the status of certain birds. Evidently the ornithologist of the state of Massachusetts does not lack for occupation.—F. M. C.

HARDENBERGH'S BIRD PLAYMATES. Published by Charles Scribner's Sons, New York City.

The idea embodied in 'Hardenbergh's Bird Playmates' seems to us so excellent we cannot but regret that it has been so poorly executed. Four pieces of cardboard, averaging about 18 by 18 inches, contain approximately 140 figures of birds. These figures, which are nearly 'cut out,' are to be detached and placed at a number corresponding to the one they bear in one of two landscape cards which measure 20 by 30 inches. One depicts a shore, the other a wood scene. The place allotted to each species on these cards is designed to represent its haunts. The child, therefore, not only learns to know the bird but also gains some information of the kind of country it inhabits. The game makes an appeal similar to that which prompts to construct maps and pictures with blocks and the like. It seems well designed to instruct as well as amuse, but, unfortunately, many of the birds are badly drawn and crudely colored, with staring yellow, red or brown eyes (not one has the iris black). After making all

allowances for perspective, the scale employed varies so that, for example, the Cowbird is larger than the Osprey, the Herring Gull smaller than the Woodcock.

It would have cost no more to reproduce a correct original than a poor one, and we cannot, therefore, find an excuse for the unworthy form given to this admirable conception.—F. M. C.

The Ornithological Magazines

THE CONDOR.—The new volume for 1917 opens with a rather startling theory that the White-throated Swift may possibly hibernate to a certain extent. In 'Further Notes on the White-throated Swifts of Slover Mountain,' near Colton, Calif., Wilson C. Hanna states that "these birds are residents here throughout the year. Many days often pass by during the fall and winter when no Swifts are seen, and then at some unexpected time they appear in large numbers." In January, 1913, during a cold wave, eight perfectly healthy Swifts were removed from a crevice where, with many others, they seemed to be roosting in a dazed or numb state. After being kept in a room for six hours they were released, and all flew away in a dazed fashion. "I had hitherto thought that they were numb from the cold . . . but it has been suggested to me that possibly they were hibernating." The paper contains some important notes on the nesting of this species, with measurements of six sets of eggs, but, unfortunately, omits the dates when the eggs were collected.

In 'Birds of the Humid Coast,' Mrs. Bailey gives a graphic picture of the habits of some of the species, particularly the Gulls, Cormorants, and Sooty Grouse found in the vicinity of Tillamook Bay, Ore. F. S. Hanford contributes an article on 'The Townsend Solitaire' with notes on five nests found in the Sierras at altitudes varying from 3,700 to 7,500 feet. As a result of observations made in 1915 and 1916, George Willett, in 'Further Notes on the Birds of Forrester Island, Alaska,' adds twenty-two species to the

list of birds known from this Bird Reservation.

Dr. Joseph Grinnell has made a critical revision of 'The Subspecies of *Hesperiphona espertina*,' and now recognizes four forms of the Evening Grosbeak. The typical subspecies remains unchanged, but the name *montana* is transferred to the Mexican form and that from the Rocky Mountain region is renamed *H. v. warreni*, and two subspecies are described as new, *H. v. brooksi* from British Columbia, and *H. v. californica*, from Crane Flat, Mariposa County, Calif. The size of the bill constitutes the principal difference, but not a single measurement is given, and future students must depend on these outlines of bills and brief statements of the relative 'degrees of thickness' of the bill to distinguish the several subspecies.—T. S. P.

Book News

The May issue of the 'Nature Study Review' is a bird number with articles by Elsa Guerdrum Allen on Wild Ducks with a Color Key to the Ducks of the Eastern United States; Louis Agassiz Fuertes, on Hummingbirds; Gilbert H. Trafton on The Thrush Family; Laura A. L. Turner on Tree Swallows; C. W. Leister on The Chestnut-sided Warbler; Guy A. Bailey on Bird Protection; and half-a-dozen other authors supply minor contributions. The Editor gives an outline for bird-study which has stood the test of years and writes sympathetically of John Burroughs. There are a number of excellent illustrations, notably those of wild Ducks by Dr. Arthur A. Allen, and the prose content of the magazine is good, readable, popular ornithology.

We cannot speak so highly for the verses. Poetic license may sanction certain liberties with words but not with facts, and poetry which sends the Bluebird to "Orient isles," and makes the House Wren sing with "tail up" does not ring true. A verse, apparently addressed to the Red-winged Blackbird, is headed "Phoebe Bird," but perhaps this is a slip for which the author is not responsible.

Bird-Lore

A Bi-Monthly Magazine
Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABELSGOOD WRIGHT
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE making of gardens, large and small, now occupies the mind and spare time of so many country dwellers that we have thought it well to devote this number of BIRD-LORE largely to a type of gardening which our new-born enthusiasm for potatoes and other vegetables should not cause us to overlook.

We must not forget that if we make potatoes and squash grow where only grass grew before, we are not only adding to the food-supply of the nation but also to that of potato-beetles and squash-bugs.

We should, therefore, make an alliance with the enemies of beetle and bug for war on the common foe. If, with that misguided instinct for 'cleaning-up,' which leads a farmer to leave no vestige of hedgerow or undergrowth about his land, our fields offer neither cover nor nesting-site to our proposed allies, we cannot expect them to camp with us.

It is now too late to repair the damage due to lack of foresight, and to a greater or less extent we must pay the penalty of unpreparedness. But at the worst we can still make our farms and gardens more habitable and attractive to the natural protectors of our crops by supplying them with drinking- and bathing-pools near which may be placed piles of brush for shelter and, possibly, also nesting-places, and by controlling the activities of marauding cats. It would not, indeed, be more

than fair if the terms of our alliance should include an agreement whereby we would promise to reduce the vagrant cat population in return for a proportionate reduction by the birds, in the ranks of insects injurious to vegetation.

A more fundamental and even more important type of bird-gardening has been pursued during the past season by the National Association of Audubon Societies in forming Junior Societies. Through the widely ramifying system it has established and the coöperation of bird-lovers throughout the country, it has sowed the seeds of a knowledge of the beauty and value of birds in the minds of nearly 250,000 children.

Who can estimate the value of the crop which time will here develop? If in some cases the seed fails to germinate or produce a healthy plant, in others there will grow the hardy perennial to last as long as the life that bears it.

The function of education, says Herbert Spencer, is "to prepare us for complete living," and any form of instruction which adds to our fund of information and shows the way to exhaustless stores of knowledge and of ennobling sources of pleasure may surely be called education of the highest order.

The National Association has much to its credit but to our mind no work it has ever done equals in importance this yearly placing of the feet of nearly a quarter of a million children on the first steps to bird-study and showing them the open gate through which lies a lasting association with the most attractive of Nature's animate forms.

OUR thanks are due the gentlemen who have consented to coöperate with us in conducting our new subdepartment 'The Season.' We hope in time to add to their number, when, if the ever-soaring prices of everything connected with the making of a magazine do not prohibit the use of the necessary space, we trust that this department will present a bi-monthly view of the more characteristic phases of bird-life throughout the country.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

THE NEED OF THE NATIONS

WAYS IN WHICH AUDUBON SOCIETIES CAN HELP

Every available resource is needed to-day in the world-wide struggle for lasting peace. It is no time for prejudice or indifference to retard necessary action. It is no time for extravagance or waste, both of which are speedily coming to be recognized as criminal abuse of resources. *It is* a time for calm, clear thinking, few words, and definite, effective action.

In spite of the gloom overshadowing not only foreign countries but also our own, the light of the greatest and grandest opportunity for the betterment of society and the uplift of civilization is breaking. Hope in the future and faith in the highest ideals beckon us on with stout hearts toward a glorious goal.

The resources of the Audubon Society are greater than we may think in this critical emergency. First of all, we now have a far-reaching organization, representative of nearly every part of our country, an organization which, unlike many others, reaches young and old alike. An appeal made through the State, National and Junior Audubon Societies will reach thousands of people. Second, we have behind us a greater moral and financial support than at any other time. If we outline practical and definite lines of work, we shall undoubtedly find ways and means to carry them on. Third, we are in a position to take up needed work at many separate points, with almost no further preliminary steps of investigation. In other words, we are already organized, supported, and equipped to do necessary work for the nations of the world quickly and efficiently. These are important resources, for without good-will, intelligence and method very little can be done.

Without waste of words, the following suggestions are timely for each State Audubon Society and each Junior Audubon Society to consider:

1. INCREASE OF FOOD-SUPPLY.

(a) Raise Chickens, Turkeys, and domesticated Ducks and Geese where conditions are favorable. Junior members can assist greatly in such undertakings.

(b) Study carefully the problem of stocking reservations with Quail, Grouse, and Pheasants, and also, the matter of establishing Pigeon-cotes. The question of food for these species is perhaps the most necessary one in determining what can be successfully accomplished. In this connection strive to interest sportsmen's leagues, game commissions and legislators.

(c) Instruct and assist wherever possible in the propagation and care of pigs and Belgian hares, for these two animals are easily kept and are profitable.

2. CONSERVATION OF FOOD-SUPPLY.

(a) Increase all efforts to protect beneficial birds. Reach every school, every library, every farmer and every newspaper in your state with concise, truthful statements of the relation of birds to agriculture, forestry, and health.

(b) Select as pets birds and animals which will aid in increasing our food-supply. Remember that caged song-birds, cats, rabbits and other pets require a great deal of food. Ask yourself how many pets of this kind you are justified in keeping when thousands of children and grown people, as well as necessary animals, like cattle, pigs, sheep, horses and mules, are starving.

(c) Turn your attention and energies, in the household of which you are a member, to an *economical disposal of garbage*. You can render an inestimable benefit to the Audubon Society by setting an example of thrift, broad-mindedness and coöperation. It goes without saying that everything conserved to the best end serves many purposes. Birds are natural scavengers, certain species belonging almost exclusively to that rank. From them we humans should learn the lesson that *Nature never wastes anything*. Millions of dollars are annually thrown away in our garbage-pails. You are not a good nature-lover nor a thorough nature-student if you carelessly waste refuse matter which can be converted to further use.

Much so-called garbage properly sorted and prepared, furnishes good food for pigs and poultry. There are other uses of this despised resource which should be studied in detail, and each citizen should be enlightened as to his civic duty in coöperating with his neighbors and town or city officials in conserving all food and other values from this source.

(d) Learn not to waste at table. I have seen poor waifs in one of our own large cities visiting garbage-pails in the wealthier districts, for bits of cast-out food. Better by far would it be if we avoided over-large helpings at table, and saved remnants in a usable condition. The food-supply of the nation would go more nearly around to the poor as well as the rich if everyone was thoughtful about wasting at table. Incidentally, we should be more healthful.

Birds are the largest eaters, relatively, of all living creatures, man not excepted. At this season of nesting observe for yourself how birds use their food-supply. Things they do not like they leave alone after one or two trials. Things they like they usually eat entirely. Only a few birds secure prey- or food material as pastime. Although birds are enormous eaters, they have a restricted diet, varied only sufficiently to meet the requirements of their activities and the vicissitudes of their annual food-supply. You can learn something from the food habits of birds about increasing and conserving the food-supply of the world.

3. PRIZES AS A STIMULUS TO COMPETITION.

Prizes are being quite generally offered in connection with the emergency gardens which now occupy the attention of every community. In Rhode Island the School Garden Committee awards a banner for the best school garden in the state. In the city of Providence the Retail Merchants Association will distribute this year about fifteen hundred dollars in various prizes for results achieved in gardening.

The School Department of BIRD-LORE has as yet done little in the way of encouraging competition in bird-work by means of prizes. It may, however, as space permits, print the names of those Junior Audubon Society members who win prizes in bird-house contests or other contests connected with the study and protection of birds. State Audubon Societies would do well to offer, from time to time, some prize or special token of approbation or encouragement in their respective states to members, particularly Junior members, who accomplish results in any line of bird-work worthy of such commendation.

4. PLANTING FOOD-SUPPLIES FOR BIRDS.

In connection with gardens, plant shrubs, herbs, etc., suitable for the natural food-supply of beneficial birds.

See Hodge: 'Nature-Study and Life,' p. 323; 'Food Chart of Our Common Birds.'

Baynes: 'Wild Bird Guests,' pp. 173-91.

Forbush: 'Useful Birds and Their Protection,' pp. 372-422; 'Game Birds, Wild-fowl and Shore Birds,' pp. 563-88; 'Food Plants to Attract Birds and Protect Fruit,' Circular No. 49, Massachusetts State Board of Agriculture.

McAtee: 'Three Important Wild Duck Foods,' Circular No. 81, Bureau of Biological Survey, U. S. Dept. of Agr.

Job: 'Propagation of Wild Birds.'

Ladd: 'How to Attract Wild Birds About the Home,' Bird Protective Society, Greenwich, Conn.

First Report of the Brush Hill Bird Club, Milton, Mass. 1914. Pp. 19-32.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXIII: Correlated with Music, Gardening, and Reading

Bird-Music. Part II

It is an inspiring thought that since the beginning of Junior Audubon Societies, six years ago, 584,254 children have been organized as members in a total of 29,052 Junior Audubon Clubs. To-day we need every one of these boys and girls to be alert, ready, and earnest to do his or her part for the welfare of the world. The duty that comes may be a welcome task or a dreaded one. It may call for real work and little play. It may interfere with vacation plans upon which some have set their hearts.

Let me tell you a secret which will help you over every hard place. The duty done *with a song in the heart* is not a duty at all but a joy. When the

great Belgian violinist Ysaye was playing in recital this winter on this side of the water, he appeared before an audience one afternoon in an apparently dejected condition. At the opening of the concert he sat in a chair and, to all appearance, his mind was far away from his fingers. But as he played on, he was borne up and out of himself by the power of his great love of music. He seemed almost to surpass himself in beauty of tone and height of interpretation.

That day he is said to have received word of the loss of a son in battle. It was his duty to appear before a public unaware of his sorrow. The love of music was at once his comfort and source of triumph. He was reported at the time as saying that music heals otherwise incurable breaches and creates ties never to be broken. I tell you this because the example of a great musician like Ysaye is one we may all well follow.

If we are not naturally musical, let us cultivate music and at least learn to appreciate it. With the mating, nesting birds all around us, we continually hear the most spontaneous, unstudied bursts of melody, choruses of rare quality, notes expressive of pure joy, and all of this daily demonstration is the accompaniment of duty and toil. Just think a moment what a change would come to us all if the birds went silently about nesting, if there were no morning matins, no songs at sunset, no cheery call-notes, no sweet responses.

Will you try to notice some of the following things in connection with bird-music this summer?

1. Where and when different species of birds sing?

Where a bird sings means two things really: first, in what locality it is while singing, woodland, thicket, meadow, field, marsh, seashore or along the roadside; and second, whether it sings on the ground, on a perch, on the wing, in trees, about bushes where it feeds or where it nests or both.

When a bird sings is a suggestive question, also, for there are birds singing only at dusk, others only by day, others at dawn and sunset with occasional bursts of song through the day. Some birds sing while feeding, others feed silently, except for an occasional call, and still other birds seem to follow no particular rule.

2. How a bird sings is another question which takes much observation to answer. One way of answering it is to study the mechanism of the throat and learn the parts of that mysterious little song-box called the *syrinx*. You will recall, perhaps, that what enables a bird to sing is the action of muscles largely, in connection with membranes about and within the lower end of the trachea and the opening of the bronchial tubes.

We may remember that, in general, the finer and more complicated the song, the larger are the number of song-producing muscles and the more intricate the song-mechanism is as a whole. Another way to answer this question of how a bird sings, is to learn the number of songs it sings, and the quality of its voice, whether loud and raucous, monotonous, soft and sweet, full and flowing or disconnected, clear or lisping, full of energy or weak.

3. Why a bird sings? Perhaps you have not thought much about whether birds have emotions and sing when well and happy or keep silent when ailing and uncomfortable; whether they sing when frightened or when hungry. There is a great deal to be learned before this question can be completely answered. Let me call your attention again to the four birds we are to observe particularly this year. Take the Crow as an illustration of the expression of various kinds of emotions. Although the Crow is not much of a songster, it nevertheless has a surprising variation of emphasis, intonation and time-intervals in its familiar "caw." Should one follow a Crow from day to day and listen to its lusty note in spring, its vociferous councils with its mates, its occasional attempts at imitative speech, its notes of alarm and the lugubrious calls of its nestlings, one might well believe that even a single note can express many states of emotion. In the case of the Downy Woodpecker, which is not a singing bird at all, study reveals its brief staccato call as well as its longer, more resonant roll, to be susceptible of minor changes to which the trained ear is attuned. The quality of the notes of the Robin and English Sparrow are about as different as one could imagine with respect to two species that are found so frequently associated on our lawns. Mr. Burroughs says the Robin's notes are so expressive as to be suggestive of human emotions. (Again, let me call your attention to the Robin as a bird well worth studying every day that it spends in our latitude.)

The English Sparrow's notes, on the contrary, seem almost always harsh and unmusical, except at the mating season, when occasionally a brief ripple of something like a twittering song may be heard from one. Mr. Burroughs calls attention to the possibility that thousands of years of contact with man and familiarity with artificial sounds may have affected the voices of certain more or less domesticated birds. He points out "how different the voice of the common Duck or Goose" is "from that of the wild species, or of the tame Dove from that of the Turtle of the fields and groves," and queries where the English Sparrow could "have acquired that unmusical voice but amid the sounds of hoofs and wheels, and the discords of the street." Birds are rather easily imitative, we know—certain species more than others. This one fact opens up a surprising possibility of interesting discoveries in bird-music.

Read Mr. Burrough's essay on 'Birds and Birds' as a hint of what is in store for the lover of bird-music, and if this summer duty keeps you at work in field or garden, have eyes and ears open as well as hands busy. You may easily learn to identify many weeds and humble herbs frequented by birds and insects, and add much to your store of knowledge while you are working with hoe, rake or shovel. Wherever you are, be glad of the opportunity to work outdoors or to be outdoors where there is so much to see and hear, even to taste and smell and handle. "Whenever you have learned to discriminate the birds, or the plants, or the geological features of a country, it is as if new and keener eyes were added." ('Sharp Eyes,' John Burroughs.)—A. H. W.

FOR AND FROM ADULT AND YOUNG OBSERVERS

THE BLACK-CROWNED NIGHT HERON

(*Nycticorax nycticorax nævius*)

By WILLIAM GOULD VINAL, The Rhode Island Normal School

A METHOD OF STUDY

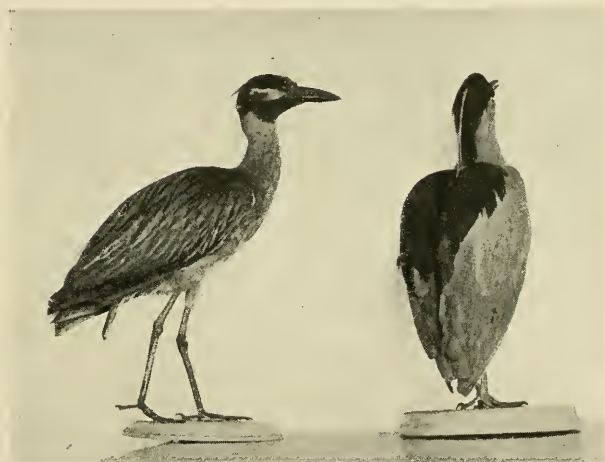
I. SUBJECT MATTER.

The Black-crowned Night Heron is known more commonly when called by one of its nicknames: Squawk, Quawk, or Qua Bird. In some of the southern states it is known as Gros-bec, Indian Hen, or Indian Pullet. The bird receives the first of these appellations from its call as it flies to and from its hunting-ground late in the afternoon or at night. Longfellow gives the proper setting, in 'Evangeline,' when he says,

"Deathlike the silence seemed, and unbroken, save by the herons

Home to their roosts in the cedar trees returning at sunset."

The Black-crowned is the most abundant and familiar of the Heron family. A large colony of these birds has a breeding-ground on Cape Cod, not far from Camp



YELLOW-CROWNED AND BLACK-CROWNED NIGHT HERONS
From Specimens in the Arnold Biological Laboratory, Brown University

Chequesset, a girls' camp, where the writer had frequent opportunity to visit the heronry and to experiment upon the birds with the camera. This particular colony is in a pitch-pine grove which is located near a marsh.

If one enters the rookery in daytime—which is usually bedtime for this species—he finds things rather quiet until discovered. The invader is then serenaded with a great din. The parents fly into the air, squawking and cackling promiscuously. Blanchan likens it to pandemonium, and Wilson compares the noise with that of two or three hundred Indians "choking or throttling" each other. Such is the heralding as one enters the *sanctum sanctorum* of herondom.

The housekeeping is no more inviting than the notes of greeting. The ground and trees are white with excrement, and a foul odor comes from decomposing pieces

of fish which have fallen to the ground. Here and there are the remains of a young bird who did not meet the laws of arboreal life successfully. Should a visitor climb toward the nests, the young birds still further show their unsociability by disgorging their last meal. The Herons also have good allies in the mosquitos, whose method of attack might reel any human foe who attempted to harm the landlords of the settlement.

The nests of these Herons were ragged platforms of dead sticks built in the forks of trees about 10 to 20 feet from the ground. The birds, it should be noted, usually



NEST AND YOUNG OF THE BLACK-CROWNED
NIGHT HERON IN A PITCH-PINE TREE

repair the old nests, which do not show the high degree of craftsmanship exhibited by other birds, while cleanliness is an unknown factor. In this latitude, the Black-crowned Night Heron returns about the second week of May, and as it is found breeding often into June, one may find the young in all stages of development during the midsummer months.

The baby Herons wear a coat of gray down and have a prominent head-crest. The one in the picture appeared to be dead, and I had to poke him several times before I learned that he was 'playing possum.' He would not hold up his chin, so appears as a fluffy ball in his photograph.

In less than a month these babies become nearly as large as their parents. This rapid growth is due to their enormous appetites. The old birds not only work nights but have to leave the homestead in the afternoon to keep the young well fed. They bring in fish, eels, and frogs and can ill afford to have 'fisherman's luck.' The food is softened and partially digested in the alimentary canal of the adult before it is served to the young. To have a family of three or four average 1.5 feet in height in their bare feet, in four weeks, is an undertaking that keeps both father and mother Heron working full time.

The young Heron has a dress more like the Bittern's than that of its parents. In this early period the color of the young blends well with the trees, making it more difficult to discover them. Sitting, day in and day out, like sentinels, except with a more expectant look, they await the return of the parents with food.

When I climbed a tree to take a picture of one of the young Herons, it began to climb away, and went rapidly to the end of a neighboring branch. If it lost its balance it regained it by using its bill. One unfortunate youngster fell to the ground and was allowed to pose on a limb. If disturbed on the perch the bird erected its crest, opened its cavernous beak, and spread its wings, presenting a terrifying appearance sufficient to drive away anyone having designs on its tender and plump makeup.

It was interesting to watch the adult birds feeding on the marshes and along the creek in front of the camp. They wade ankle-deep (usually thought of as knee-deep), often standing still. When food is spied, the arched neck allows the bird to strike with great force. To a small fish the Heron's leg must resemble a stick, and the light ventral

color must render its body imperceptible when looked at against the sky from below. The Heron's juvenile plumage enables the owner to escape becoming food for enemies, while the color of the adult is an aid in securing food.

The Black-crowned Night Heron is very widely distributed. It breeds from New Brunswick to Patagonia.* In this region it begins to migrate about the middle of October. Audubon says that the adults go farther south than the young.

II. METHOD OF TEACHING.

If there are Herons in the neighborhood, it is best to encourage pupils to observe these birds out-of-doors. Begin the work with an interesting description and ask a few questions to arouse the pupils' interest. If there is a rookery that can be visited it might be desirable to have a few pupils make a study of it. Observations of the adult feeding is an excellent training which is worth while for all the class. Pupils might have individual notebooks in which they could write answers to certain questions. These questions should be written on the blackboard when it is time to make the observations and the class be given at least a week for observation work.

A. OBSERVATIONS.

(a) *Questions for Observation at the Rookery.*

1. Try to enter the heronry without being discovered. If you are discovered: How did the bird discover you? How do you know that you were discovered?
2. What does the bird say? If you have heard the same call before, when did you hear it? Where did you hear it?

*Distribution and Migration of North American Herons and Their Allies', Wells W. Cooke. 1913. Biological Survey, Bulletin No. 45.



A BLACK-CROWNED NIGHT HERON IN ITS HAUNTS
Photograph of a mounted specimen.

3. Where does the Heron carry its long legs when flying? How do they help it at this time?

4. What is the color of the underside of the Heron?

5. When the birds come back to the trees note the color of the legs, the eyes, the top of the head, the back.

6. Where are the nests placed? Of what material are they made? Where is the material obtained? How do you suppose it is obtained? Compare the nest with some familiar nest.

7. Do the young birds make any noise? What do the parents feed the young? How can you tell this?

8. What is the difference in color between the old bird and the young one?

9. Describe a baby bird.

(b) *Questions for Observation at the Marsh.*

1. Does the bird ever stand motionless? (Audubon says that this one never does.) Advantage of the habit?

2. Does this Heron prefer to walk or wade? If it wades, how deep does it go in the water? How is it adapted for its method of locomotion?

3. In what position does it hold the head? What is the advantage of this?

4. What does the bird do when it sees prey? Why does it do this?

5. In what position does it hold its head when flying? Why?

6. Describe its colors. Why would it be difficult for a fish to discover it?

7. Where does it place the legs when flying? How does this position help it? How would it be hindered if it did not do this?

8. What does the bird do when it hears a noise. (Note that birds differ in their response to a noise. The Bittern, for example, rather squats than flies.)

9. Try to discover what the bird eats.

(c) *Questions for Observation in the Laboratory.* (Preferably use a stuffed specimen, otherwise a picture.)

1. Describe the beak. What is the character of the edges of the bill? Advantage?
2. Compare the length of the tail with that of other birds. Disadvantage? How is it overcome?

3. What is characteristic of the legs? Why should they be so? Compare the growth of feathers on the legs with the growth of feathers on the legs of the Owl. Explain the difference.

4. Describe the wings. What does that tell you?

5. What is unusual about the toes? How does this help the bird?

6. What duck-like characteristic is found on the foot? How can this be of service?

7. Compare the length of the neck with that of the legs. Why should there be this relation?

8. What is the position of the neck? When would this poise be helpful?

9. What part of the eye is red? Look at the pupil of several birds. What color is the pupil in every case? How does the iris of the immature Night Heron differ from that of the adult?

Each pupil has now had opportunity to make careful observations, and each one has had the benefits of the training.

B. ORGANIZATION.

Closely following the observation period should come the stage of organization. The teacher meets the class as a group. Questions about the observations made are asked and the results grouped somewhat as follows, the teacher writing down the facts on the blackboard as they are obtained from the pupils:

THE BLACK-CROWNED NIGHT HERON

Home: Marshes and Creeks. *Food:* Frogs, eels, worms, fish, mice.

Color . . .	Black head	hence name.
	Light below	not easily seen by animals it seeks.
	Dark above	not so easily seen from above.
	Red iris	peculiar to some birds.
Beak . . .	Three white crown feathers	ornamentation at breeding-time.
	Large, lance-like	killing prey.
	Sharp-edged	to hold slippery food.
Eyes . . .	Well forward	for quick sight.
	Large pupils	to see at night.
Neck . . .	S-shaped	to dart at food.
	Length of legs	to reach food.
	Drawn in when flying	better balanced.
Legs . . .	Long	to keep body above the water.
	Most part unfeathered	not to get feathers wet.
	Straight back when flying	to steer.
Toes . . .	Long and wide spread	to distribute weight.
	Slightly webbed	to bear them up in soft mud.
	Back toe well developed	useful in perching as well as for balancing
Tail . . .	Short, weak feathers	steers with legs.
Wings . . .	Long and broad	strong flight.

C. CONCLUSION. The pupil should be led to make the general conclusion, from facts gathered, that the Black-crowned Night Heron is a wading bird well adapted to its home and habits of getting food. Later the pupil will begin to see that to a great extent any bird is structurally adapted to its environment, that is to where it lives and what it eats. These two topics namely, home and habits, should come first, therefore, in considering an animal.

D. COMPARISON. The Black-crowned Night Heron has been used as a type of Heron and of a larger group commonly known as wading birds. The pupil is now ready to understand related forms and to search out differences and possibly, to give reasons for variations. A visit to a museum, if convenient, may well be made or pictures of the various forms studied used. Questions for observations should be given for this lesson in the same manner as before. The following notes are subjoined for the benefit of the teacher who may add to them as occasion demands.

1. *Plovers*. Slender bill, to probe ground; wings long and acute; swallow-like flight; hind toe small, scarcely touching ground; builds nest on ground; toes not webbed, gathers food from upper part of beach in firm sand; each toe has lobes (water propellers), yet is suited to running along the beach.

2. *Avocet*. Long curved bill, to search out worms and snails in crevices and under stones.

3. *Woodcock*. Long bill, to thrust into mud for worms; end extremely sensitive, for the purpose of feeling for food; eyes far back; tongue secretes a sticky substance to help hold worms; brown-colored plumage; builds nest on ground in leaves. Wilson's Snipe is a close relative of the Woodcock.

4. *Jacana* has feet adapted for walking on floating lily-pads; spurs on wings used for fighting; found in South America.

E. CORRELATIONS. Have the class investigate and make reports on the following:

1. *Literature.*

Story of the Egret.

Why our Shore Birds are Disappearing.

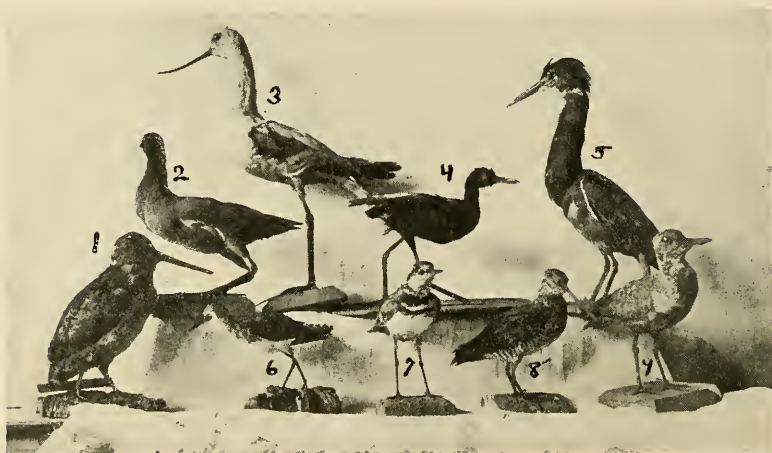
The Stork.

Child Stories: Hans Brinker, or The Silver Skates, by Mary Mapes Dodge, pp. 237-39.

Wonder Stories Told for Children by Hans Christian Anderson, pp. 431-36.

The Cranes' Express. An Old Tale. Adapted for Lower Grades.

2. *Drawing.* The Heron and its relatives have been used a great deal, especially in ornamentation, by the Japanese. The class might look over the chinaware and vases at home and bring in pieces that illustrate the use of birds in art. Birds are picturesque whether wading or flying. A cover design might be made at this time for the notebooks. Drawings to show the various forms of beaks and feet are interesting. Visit an art museum and study the use of the Heron in art.



4. SOME WADERS

(1) Woodcock, (2) Florida Gallinule, (3) Avocet, (4) Jacana, (5) Green Heron, (6) Spotted Sandpiper, (7) Killdeer, (8) Wilson's Snipe, (9) Black-bellied Plover.

MY FIRST TRIP TO A REAL 'BIRD HAVEN'

I had often thought of going down in the woods on our place for the purpose of watching birds, but every time I decided to go something would hinder me.

One day, however, I jumped on my pony, with her colt at our heels, and started to the woods. 'Ladie,' my pony, is really a wonder for crossing brooks, and she saves me many a step till I get to the woods, where I tie her to some old fence-post, and then I am free for a good frolic with the birds.

She apparently knew what I was going for when I started off in a gallop, and did her best to take me to the woods quickly.

When we reached the long longed-for place, I dismounted quickly, and in a short time was rambling over briars, making my way through thickets, and at the same time listening to the songs of the birds.

After walking a little way I came across several paths and, following one, finally came to a quiet place with the grass beaten down and bushes growing in a circular position, forming a sort of tree-house.

I waited there a minute, intending to go on after a few minutes' rest, when all the songsters I wanted poured in upon me.

Generally, when one goes 'bird hunting,' they play 'hide and seek' with the birds, the game beginning with the bird-lover seeking and the birds hiding, but this particular visit to the woods evidently reversed matters on my part, for at that moment, I seemed to be hiding and the birds seeking.

The Towhee's clear notes, which call his name, sang forth from the upper branches of my so-called house. He changed his position and was silent a minute, then again, as before, he burst forth in melody, letting every member of the happy family of birds know where he was.

A little Carolina Wren seemed very much surprised, when it saw the green figure so closely watching from below, and with sharp *chits*, which grew rather monotonous after calling quite a while, let me know that I was trespassing on its land.

An Indigo Bunting, who was changing to winter plumage, expressed its opinion of me by uttering a sweet but not at all wonderful song on a bush quite near my hiding-place.

Two Catbirds sang an ever-changing duet on the topmost branches of my house.

A Brown Thrasher made me a visit and entertained me the whole time I was there by a most human-like conversation.

A little Maryland Yellow-throat sent forth its curious warble from a near-by bush.

A bright Redstart sang daily thanks on one of the bushes that comprised my house.

There were so many birds singing at the same time that the very trees resounded, and the echoes went in every way, bounding through the woods, awaking every sleeping squirrel.

Is there anything in bird-study more gratifying and encouraging than to have the birds seek you, instead of you seeking them?—SARAH WALDRAN WEAVER (age 13 years), "*Clynmalia*," *Monkton, Md.*

[No comment is needed beyond the following quotation from a letter accompanying the above:

"Two articles sent with very near dates seems quite often to write my experiences to BIRD-LORE, but I was so enthused with my last experience that joy, gratification and encouragement just simply made me write this article.

My pony and her colt are my two best friends in watching birds. 'Ladie' makes no complaints when I tell her we are going bird-hunting, but without a word she takes me to one of my best friends, the woods."—A. H. W.]

AN UNUSUAL EXPERIENCE

Yesterday morning I was over at my friend's house. There were two little Rose-breasted Grosbeaks on her piazza. One was a male and one a female, I think, for one had brighter colors—brown, white and pink—and the other just brown and white.

I told my friend to leave them as the father bird was afraid. So we went into the garden. Soon I felt something on my shoulder. I looked around and there was one of those darling birds. I put it back on the tree, and the two were soon flying finely.—MIRIAM SMITH (age 10 years), *Waltham, Mass.*

[This unusual experience fell to the lot of a Junior Audubon Society member whose teacher writes: "After having made inquiries in regard to the Rose-breasted Grosbeak story, I am convinced it is correct. Several people saw the bird and nest, and the little girl described the bird correctly to me." Look up the plumages of the male and female Grosbeaks in Chapman's Handbook.—A. H. W.]

KINGFISHERS IN LINCOLN, MASS.

Once upon a time, when I was driving with my father, I saw in the sky a bird. It was flying right over the Cambridge reservoir, darting down every now and then. When it came down I saw it was a Kingfisher. One day after that I went over to hunt for the nest. I walked for miles and miles, up and down, but I never found it, and the Kingfishers have been there ever since.—JAMES DENORMANDIE, JR. (aged 9 years).

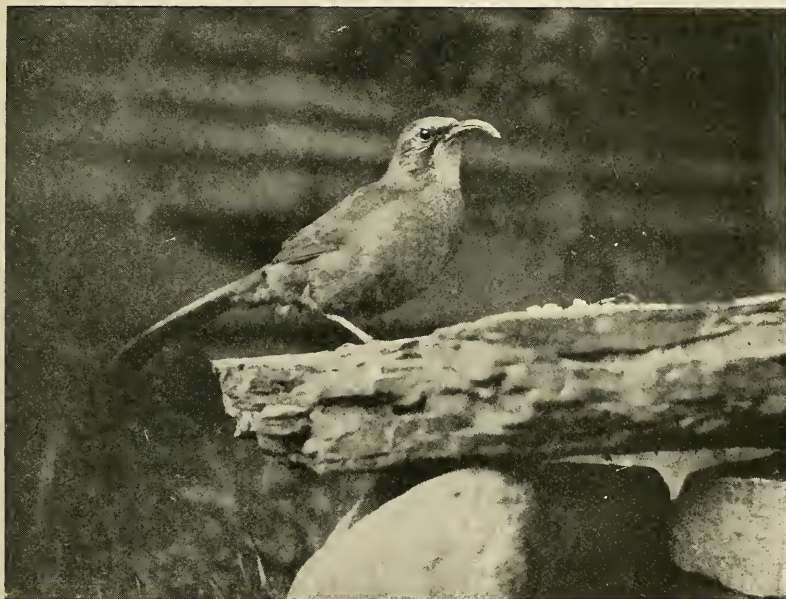
[Hunting for the Kingfisher's hole is an eye-sharpening process. One may easily walk directly by the hole many times without noticing the approach, which, by its appearance, shows the experienced observer whether it is in use.—A. H. W.]

HOW TO ATTRACT HUMMINGBIRDS AND GOLDFINCHES
AROUND A HOUSE

As I was sitting on the porch on the morning of August 12, 1916, I noticed a Hummingbird in the canna bed, which is very close to the house. The little bird flitted from flower to flower, and as I watched it, flew up in a pear tree very near the canna bed. I walked over to the tree and stood under the branch that the Hummingbird was on. It did not seem to be a bit afraid of me. This Hummingbird had a green back and white throat and breast. I had my mother come out and she also watched it. It stayed on the branch a long time, picking and scratching itself. After a while it flew to the canna bed and then up in the tree two or three times. When the little Hummingbird was in the canna bed, its mate came, and they both flew off together. These two little birds come to the flower-bed a great deal. Sunflowers are planted in the back and front yard, and Goldfinches come very often to these and eat the seeds. They stand on the top of the flower and lean way over and pick at the seeds.

I think one nice way to attract Hummingbirds and Goldfinches around a house is to have cannas and sunflowers planted in the yard.—(Miss) GLADYS FANTON, *Good Ground*, L. I.

[See 'Experiments in Feeding Hummingbirds During Seven Summers,' The Wilson Bulletin, Vol. XXV, No. 85. Among our daintiest and most familiar birds, the two species referred to above offer daily pleasure and interest to anyone so fortunate as to have their companionship. The female Hummingbird when perching looks more like a large dragonfly than a bird. The Goldfinch is quite as acrobatic as the Chickadee in its feeding activities.—A. H. W.]



CALIFORNIA THRASHER
Photographed by Emily S. M. Waite

A CALIFORNIA THRASHER

This photograph of a California Thrasher was taken near the 'Cottages' at the upper end of the Ojai Valley, Ventura County, California, which is a veritable paradise for birds, from the humble 'Linnet' to the great Condor sailing over the highest peaks of the Santa Ynez Mountains. We had for implements a No. 3 A. Folding Kodak, with portrait lens, and a wooden box loaded with stones, to which the camera was tied as we possessed no clamp to steady it. We placed a large flat stone on a pedestal of smaller ones, and put food on it twice a day before we tried any snapshots. —EMILY S. M. WAITE, *Nordhoff, California*.

THE WHITE-THROATED SPARROW

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 92

It is in autumn, when the hills take on their dresses of red and gold and the fields stretch away brown and deserted to the blue haze hanging along the horizon, that I go in quest of the White-throated Sparrows. They are not to be found in the deep woods, nor often on the open meadows, but it is in the hedgerows, among the briars of the old fence-corners, or in the thickets on the edge of the forest that one will discover them. When you find one White-throat you are pretty sure to find several others. Very often they are with Juncos, and sometimes a few Song Sparrows are found feeding in their company. There are usually at least a dozen in a flock, and sometimes fifty or a hundred birds will be found together, at least half of which are Whitethroats.

This bird was a favorite with Audubon, and his account of its behavior in the autumn days gives one a splendid idea of the Whitethroat's manner of life at this season:

"How it comes and how it departs are quite unknown to me. I can only say that, all of a sudden, the edges of the fields, bordering on creeks or swampy places, and overgrown with different species of vines, sumac bushes, briars, and the taller kinds of grasses, appear covered with these birds. They form groups, sometimes containing thirty to fifty individuals, and live together in harmony. They are constantly moving up and down among these recesses, with frequent jerkings of the tail, and uttering a note common to the tribe. From the hedges and thickets they issue one by one, in quick succession, and ramble to the distance of eight or ten yards, hopping and scratching, in quest of small seeds, and preserving the utmost silence. When the least noise is heard, or alarm given, and frequently, as I thought, without any alarm at all, they all fly back to their covert, pushing directly into the thickest part of it. A moment elapses, when they become reassured, and, ascending to the highest branches and twigs, open a little concert, which, although of short duration, is extremely sweet. There is much plaintive softness in their note, which I wish, kind reader, I could describe to you; but this is impossible, although it is yet ringing in my ear, as if I were in those very fields where I have so often listened to it with delight.

"No sooner is their music over than they return to the field, and thus continue *alternately* sallying forth and retreating during the greater part of the day. At the approach of night they utter a sharper and shriller note, consisting of a single *twit*, repeated in smart succession by the whole group, and continuing until the first hooting of some owl frightens them into silence. Yet,



WHITE-THROATED SPARROW

Order—PASSERES

Family—FRINGILLIDÆ

Genus—ZONOTRICHIA

Species—ALBICOLLIS

National Association of Audubon Societies

often during fine nights, I have heard the little creatures emit, here and there a *twit*, as if to assure each other that all 's well."

There are some birds whose food-supply consists entirely of one special kind of article. For example we can hardly imagine a Cormorant, Pelican, Osprey, or Kingfisher engaged in consuming any food other than fish. Swallows and Swifts eat insects that they capture while in full flight. To secure such a diet it is therefore necessary for them to travel long distances twice a year to reach lands where the insect-life they desire may be obtained. With Sparrows, however, we find that quite a different condition exists. They are not fitted for capturing fish, like the Pelican or Osprey, but they do eat almost any kind of food that is available.

In the fall of the year White-throated Sparrows consume many berries which they pick off the vines and berry-producing trees. They collect, also, the seeds of those berries that, dried or decayed, fall to the ground. Not long ago I watched for a time a flock of fourteen of these Sparrows feeding on the red berries of a little tree growing in a park. I have not been able to learn the name of the tree, but the berries it produces are evidently very choice from the standpoint of the birds. Some of the Sparrows were busily employed in picking off and eating the fruit. Others, perhaps early comers, were already satisfied, and in a bunched, ruffled-up kind of attitude, sat very still and appeared to take no note of the sounds of banqueting going on all about them. It was only when a vagrant cat appeared on the hillside near by that these drowsy fellows exhibited signs of returning animation.

In collecting weed-seeds the birds hop about among the vines or tall weeds and carefully search through the debris on the ground. When the earth is strewn with fallen leaves and these are dry, the rattling, rustling noise of a flock of feeding Whitethroats may lead one to think a Grouse family is advancing along the ground. Whitethroats fly up and alight on the sides of ragweeds, and, fluttering there, they pick at the seeds that have not yet dropped. I have seen slender, brittle weed-stalks break off in such circumstances, when down would come weed-stalk, birdie and all. It may readily be seen that these birds are valuable to the farmer who spends most of his summer trying with hoe and plow to keep the weeds from overrunning his crops. For this reason laws for their protection have been passed in all the states where this Sparrow is found.

Among migratory birds, the exclusive insect-eaters are among the first, as a rule, to leave their northern homes in autumn, while those that are more omnivorous in their feeding-habits usually linger until the winter is fairly upon them. Many of the Whitethroats do not depart until November, and, in fact, numerous flocks remain all winter as far north as New Jersey and Ohio. Some indeed are often seen throughout the winter at points even north of this region. In suitable localities all over the South, as far as the Gulf of Mexico, they pass the colder months. Here they thrive and grow fat and at times are

killed and eaten. Audubon describes at length the method employed by people in Louisiana to secure the birds in the early part of the last century. They were killed by blowing sharp sticks tipped with squirrel fur through a hollow reed; in short, these hunters used blow-guns much like those employed today by Indians in the jungles of South America and elsewhere. Today the laws of all the eastern states protect the Whitethroat, and its enemies now consist mainly of the Screech Owl, to a limited extent the Sparrow Hawk and Sharp-shinned Hawk, but most of all the prowling, vagrant house-cat.

By the middle of November the majority of these Sparrows have departed from the latitude of New York and will not be seen there again until March or early April. From then until the dogwoods are in full flower these birds are about, and may be seen if one will only take the time to tramp about the country until they are found. They begin to arrive in Canada early in May, and soon all over the eastern part of the Dominion where forests or woodland abound the Whitethroats are to be seen. In the summer they occur as far west as Alberta, and are common in the central part of that province.

Of all the numerous members of the Sparrow Family found in North America no species is better known for its song than this one. In the ever-green forests of the North its clear, beautiful whistle is one of the most characteristic sounds of the region, and it strikes the ear with a freshness that is truly delightful. There are many who have tried to interpret its song and tell us in English what the bird is saying when it sits upon the pine-top and whistles away for half an hour at a time. Mr. Stansell, of Alberta, for example, tells us that the call to his mind strongly suggests the words "Oh see me me me me me." A very common rendering of its song is given as "Old Sam Peabody, Peabody, Peabody." There are many variations of this last translation, in all of which the word "Peabody" is prominent. It seems to the ears of some of our Canadian friends that the bird is always shouting "Peabody," and hence long ago the custom arose of calling it the Peabody Bird.

On the other hand, probably, just as many people know it as the Sweet Canada Bird, for they are thoroughly convinced that when the Sparrow sings it says "Swe-e-et Can-a-da, Can-a-da, Can-a-da." William Hamilton Gibson relates the incident of a perplexed farmer named Peverly, who did not know what to plant until he heard a Whitethroat sing, "Sow wheat, Pev-er-ly, Pev-er-ly, Pev-er-ly."

THE SING-AWAY BIRD

Have you ever heard of the Sing-away Bird,
 That sings where the Runaway river
 Runs down with its rills from the bald-headed hills
 That stand in the sunshine and shiver?
 "Oh, sing! sing-away! sing-away!"
 How the pines and the birches are stirred
 By the trill of the Sing-away bird!

.

'Twas a White-throated Sparrow, that sped a light arrow
Of song from his musical quiver,
And it pierced with its spell every valley and dell
On the banks of the Runaway river.
"Oh, sing! sing-away! sing-away!"
The song of the wild singer had
The sound of a soul that is glad.

—LUCY LARCOM.

It is rather easy to whistle an imitation of the Whitethroat's notes, and so much curiosity does the bird possess that often it will come from a distance at the call, and chirp and look and crane its neck with the liveliest interest. There are comparatively few birds that will do this. The Bob-White will come if called by an expert, and in spring or summer most anyone can gather a number of small birds around him in the woods by merely sucking the back of the hand, thus making a squeaking noise. In this case the birds show evidence of alarm and concern, for such a sound is a fair imitation of a baby bird in distress.

The White-throated Sparrow is quite a handsome bird. With the exception of the Fox Sparrow, bird-students would perhaps vote it the handsomest species of the eastern states. It is six and three-quarters inches long, which is one and a quarter inches longer than the Chipping Sparrow, but this does not well represent the relative sizes of the two birds, as the Chipping Sparrow is much more slender in proportion to its length than is our Peabody Bird.

The nest is usually built on or near the ground. It is made of grasses, grape-vine stems, and other materials of similar character. The lining is usually of fine grasses, although at times feathers, deer-hair, or rabbit-fur is used as a soft bed for the eggs. These range from four to five in number. The pale green ground-color is thickly marbled with various shades of chocolate and brown.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

RECRUITS FOR CONSERVATION

Since the last report of the list of societies and bird clubs that have joined the federation of workers under the Audubon flag by becoming affiliated with this Association, a goodly number of others have entered and thus strengthened the force. Among them are:

The Minnesota Game Breeding and Protective Association. This includes many high-minded sportsmen who realize that both their interests and their inclinations should lead them to care for the song-birds, as well as for game-birds, and who are establishing and guarding refuges that will be of great service to the state.

The neighboring state of Wisconsin has added two societies to the list—the Wild Life Protective Association, which is particularly active, with headquarters in Milwaukee; and the Bird Club of Racine, consisting mainly of ladies intent on education of the young people of that city and neighborhood.

Michigan is represented by the Zoological Society of Detroit, which thus enlarges its influence, and by the Bird Club of South Haven.

Indiana also contributes two additions—the Humane Society of South Bend, which now extends its protection over the

wild as well as the domesticated animals of the northern part of its state; and the Vigo County Bird Club, organized by the ladies of Terre Haute.

Other western states add the Maywood Bird Club of Maywood, Ill.; the Women's Club of Sunnyside, Wash.; and the Normal Bird Club of Glenville, W. Va. The last is the sort of organization we especially like to receive in our ranks, as it consists of persons preparing to teach, and thus to scatter their influence in various parts of the state among the children, where the largest effect is obtainable.

The Savannah Audubon Society of Savannah, Ga., and the Science Club of Cumberland, Md., are other new and welcome members.

Coming eastward, growing interest is manifested by the entry into this Association of the powerful Bird Club at Rhinebeck, N. Y., which enjoys the strong support of Messrs. M. S. Crosby, Tracy Dows, Clinton G. Abbott, and others well equipped to accomplish great things in their community. This club has organized this year Junior Audubon Classes in almost every district school in its field of work. "The importance of these classes," Mr. Dows explains to the people of his

country, "lies in the fact that tastes are formed in early youth, and a child who once gains a knowledge and a love of birds will always have an instinctive sympathy for wild creatures in after life. Such a training tends to make the child a better citizen in every way."

The Burroughs, Jr., Audubon Society of Kingston, N. Y., has its field of work just across the Hudson from Rhinebeck; and its name recalls that the venerable naturalist, John Burroughs, dwells near by.

That a town like Ithaca, N. Y., the seat of Cornell University, should have a strong society almost goes without saying, and we are happy to welcome the Cayuga Bird Club, whose president is the far-known artist of bird-life, Louis Agassiz Fuytes, and whose secretary is Prof. A. A.

Allen, one of the foremost photographers of, and writers on, the habits and home-life of birds.

New England has added to our list the Fortnightly Club of Leominster, the Bird Club of Newburyport, the Bird Club of Williamstown, and the College Club of Wellesley—all in Massachusetts. The last is especially fortunate in enjoying the advice of that accomplished teacher of natural history, Prof. Marian E. Hubbard. A flourishing society in Maine, the Cumberland County Audubon Society, is the latest recruit, and will do good work under the helpful advice of Arthur H. Norton, of Portland.

Looking back over this list, the Association has great reason to congratulate itself on its new members.

AN APPEAL FROM RUSSIA

Editor BIRD-LORE:

There is lately being manifested in Russia a great interest in the protection of nature. During the last decade a great series of reserves has been organized in Russia by various societies and private individuals. Unfortunately, protective measures could not be organized in these reserves upon a rational basis, because the administration of them is entirely ignorant of the practical details of organization or management exemplified in some of the foreign reserves.

The Society of Nature Lovers of Khar'koff, Russia, organized in 1914-15 an exhibition on protection of nature. This exhibit was repeated with excellent results in Kieff. At present, the Caucasian Branch of the Russian Geographical Society collects materials for the working out and the enactment of new laws for the preservation of "monuments of nature." The teaching of the protection of birds is being introduced into some of our schools.

In November, 1916, at the Society of Naturalists in Khar'koff, there was organized a special commission under the presidency of the author of this appeal for the

propagation of the idea of bird-protection among the city and rural population. The commission makes every possible effort to prove to the public the tremendous educational, economic, esthetic, pedagogic, and ethic significance which the protection of birds and, in general, of natural wealth and resources has upon the life of every country. It is in the plans of this commission to publish a large series of popular leaflets for distribution among public-school teachers and children, and to establish a small factory for making feeding-boxes, nesting-boxes, etc.

We most earnestly appeal, therefore, to all lovers and protectors of nature, of birds, game, fishes, forests, etc., to acquaint us, representatives of Russia, with the methods of protection of natural riches and of monuments of nature employed in their respective countries. We request that all material, advice, etc., be kindly sent to the following address, which will remain unchanged for five or six years:

GEORGE BRISQUALINE,
6 Tarassovskaja Street,
Khar'koff, Russia.

COMMENT ON CURRENT EVENTS

Migratory Bird Treaty Bill

On April 10, 1917, the Migratory Bird Treaty Bill was introduced in the House of Representatives at Washington by the Hon. Henry D. Flood, of Virginia, and was referred to Mr. Flood's committee, which is the Committee on Foreign Affairs. On the same day the Hon. Marcus A. Smith, of Arizona, introduced the measure in the Senate for Senator George P. McLean, where it was referred to the Senate Committee on Foreign Relations. On April 20 this committee reported the bill favorably, and at the present writing it is on the calendar of the Senate, ready for a vote.

There appears to be no great reason why the bill should not pass and become a law. The opposition to it is of a weak, illogical character, and surely Congress will find time in the midst of its other activities to conclude the arrangements for enforcing a treaty which has already been ratified between this country and the friendly nation of Great Britain.

Proposed Cat Legislation

Bills intended to restrict the number of vagrant, homeless cats of the country have been introduced of late in the Legislatures of the following states: Massachusetts, New Hampshire, Connecticut, New York, New Jersey, and Wisconsin. Probably in none of these states will the bill pass at this time, although an increasing amount of support of the idea seems to be indicated each year. Thus, in the New York Legislature that never seriously considered the bill before, it recently was brought to a vote in the Senate with the result that it was passed by a vote of twenty-eight to fifteen.

In New Jersey the bill passed the Assembly, and went to the Senate late in the session. It was referred to the Senate Committee on Game and Fisheries and favorably reported by that Committee, but was re-committed by request of its

chairman to the Committee of Miscellaneous Business. It was there amended by striking out all of the original matter and making it read that any cat running at large in the fields or woods would be considered a nuisance and might be killed by any person, without criminal or civil liability. This action, at that late day, was equivalent to killing the bill.

Yearbooks

It is a good plan for Audubon societies and bird-clubs to issue yearbooks, even if on a very moderate scale. This Association is glad to get any publications of that sort and will file them. The yearbook of the Hartford (Conn.) Bird Club is an excellent example and shows that that club, founded in 1909, has an important place in the social and intellectual life of its city. A program of field-meetings and of indoor sessions is arranged for every Tuesday in the year from September 19 to June 16, and two excursion parties for midsummer.

This club now has nearly five hundred really active members.

A useful little pamphlet issued by the Cocoanut Grove Audubon Society, of Florida, contains a brief digest of the bird-laws of that state and a list of its twelve bird-reservations, one of which (Paradise Key) is the property of the State Federation of Women's Clubs.

Plumage Importation Halted In Great Britain

Letters from Mr. James Buckland inform us that the British Government has suspended the importation of the plumage of wild birds during the war, and that he is later going to try to have the prohibition made permanent. Mr. Buckland has been working very hard to secure this measure; no doubt it will be easier to make the rule permanent after the war than it has been to get the matter begun in the previous time of peace.

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Bird-Protective Exhibits

One of the most successful methods by which a bird club or other organization may arouse interest in bird-study and bird-protection is by holding an educational exhibit. This usually consists of displays of bird-houses and nesting-boxes, feeding-devices, nests, charts, pictures and other articles of interest to the bird-lover. The office of the National Association of Audubon Societies has been able to coöperate in such work by lending exhibition material to, and by providing printed matter for distribution at, about fifteen such exhibits this spring.

The high school at Holland, Mich., held a very successful exhibit with motion-pictures and a bird-house contest. The Public Library at Fort Wayne, Ind., assembled a very good educational display, showing books, magazines and other literature, as well as mounted birds and other interesting articles. The Newton Center Bird Club, of Massachusetts, exhibited the latest ideas in bird-houses

and feeding-devices and a large collection of mounted birds and bird-skins. The State Normal School at Montgomery, Ala., is gathering exhibition material for display at its Bird Day Celebration. The North Carolina Federation of Women's Clubs is planning a conservation exhibition for their May meeting at Durham. The Audubon Society of western Pennsylvania and the Sewickley Valley Audubon Society had a very good exhibit in connection with their joint meeting and annual dinner in Pittsburgh.

Other bird clubs, schools, and individual workers that have reported highly satisfactory results from such exhibits are Mr. S. Seibert Knode, of Boonsboro, Md.; Mr. D. J. Fair, of Sterling, Kans.; Prof. Cyrus A. King, of Brooklyn, N.Y.; Mr. O. L. Mitchell, of Cuyahoga Falls, Ohio; the West Tennessee State Normal School, at Memphis; the Ethical Culture School of New York City; the Forest Hills Gardens (N. Y.) Audubon Society and the recently organized Seattle (Wash.) Audubon Society.



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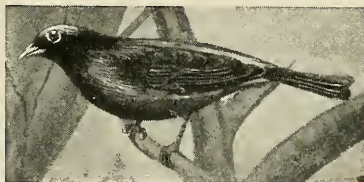
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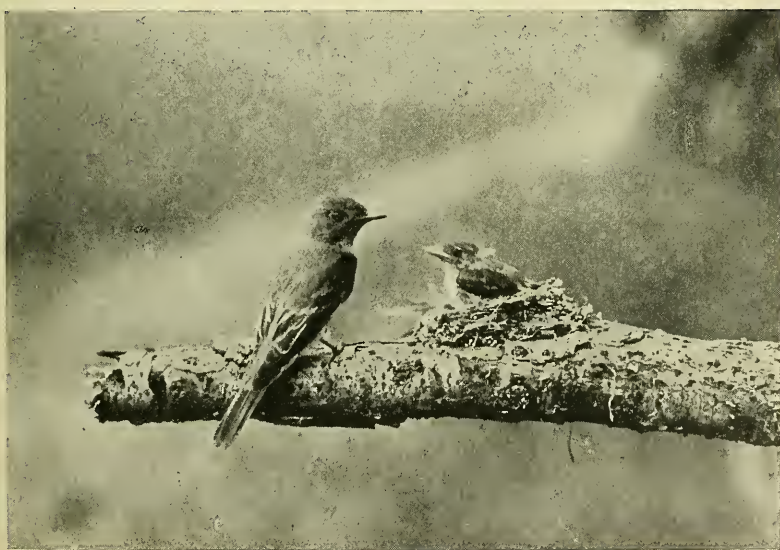
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CONTENTS

GENERAL ARTICLES	PAGE
CHILDREN OF THE MIDNIGHT SUN. Illustrated..... <i>Joseph Dixon</i> ..	185
THE GIANT BIRD DIATRYMA. Illustrated..... <i>Walter Granger</i> ..	193
THE SCHUYLKILL HERONRIES..... <i>F. L. Burns</i> ..	197
WOOD PEWEE'S NEST AND YOUNG. Illustration..... <i>A. A. Allen</i> ..	199
CHRONICLES OF A HUMMINGBIRD FAMILY..... <i>Minette Sherman</i> ..	200
RUBY-THROATED HUMMINGBIRD. Illustration..... <i>A. A. Allen</i> ..	202
NOTES FROM FIELD AND STUDY	203
SEVENTEEN WARBLERS IN A SINGLE TREE, <i>Samuel A. Eliot, Jr.</i> ; WARBLER NOTES FROM BENNINGTON, VT., <i>Dr. and Mrs. Lucretius H. Ross</i> ; EVENING GROSBEEK IN CONNECTICUT IN MAY, <i>R. E. Harrison and J. B. Derby</i> ; HORNED LARKS AT ROCHESTER, <i>Raymond Reuter</i> ; A PAINTED BUNTING IN PENNSYLVANIA; VERMONT NOTES, <i>Dr. and Mrs. Lucretius H. Ross</i> ; FLORIDA GALLINULE IN CONNECTICUT IN APRIL, <i>Arthur G. Powers</i> ; RED-BELLIED WOODPECKER IN IOWA, <i>T. H. Whitney</i> ; SNOWY OWLS IN IDAHO, <i>Alex. Stalker</i> ; A SONG FROM THE NEST, <i>Henrietta E. Delamare</i> ; A PRACTICAL BIRD-BATH, <i>May S. Danner</i> ; DRESSED IN WHITE, <i>Lena L. Johnson</i> ; A WHITE SWALLOW, <i>R. T. Burdick</i> ; AN ALBINO GRACKLE, <i>Lillian S. Loveland</i> .	
THE SEASON	209
BOSTON REGION, <i>Winsor M. Tyler</i> ; NEW YORK CITY REGION, <i>Chas. H. Rogers</i> ; PHILADELPHIA REGION, <i>Julian K. Potter</i> ; WASHINGTON REGION, <i>Harry C. Oberholser</i> ; OBERLIN REGION, <i>Lynds Jones</i> .	
BOOK NEWS AND REVIEWS	213
CRANDALL'S 'PETS: THEIR HISTORY AND CARE'; THE ORNITHOLOGICAL MAGAZINES.	
EDITORIAL	215
THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT	216
CONSERVATION MEASURES, <i>A. H. W.</i> ; JUNIOR AUDUBON WORKS; FOR AND FROM ADULT AND YOUNG OBSERVERS.	
EDUCATIONAL LEAFLET No. 93. THE PHOEBE. With Colored Plate.....	228
<i>T. Gilbert Pearson</i>	
THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT	232
A NEW THREAT TO BIRD-LIFE; OUR ARMY OF RECRUITS FOR BIRD PROTECTION, LIBRARIES AND BIRD PROTECTION; A WORD IN SEASON; NEW MEMBERS AND CONTRIBUTORS; WITH OUR AFFILIATED SOCIETIES.	

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A Conference With Our Readers

THE making of BIRD-LORE is distinctly a coöperative undertaking. The interests of its readers and editors are one. All have that love of birds which induces them to study their ways and to promote an increased knowledge of their beauty and value. Contributors to BIRD-LORE's pages are, in a sense, members of the magazine's staff. They determine largely the character of the magazine's contents, the editors merely selecting from the large number of manuscripts which are voluntarily offered, those which, in their opinion, are most deserving of publication. In short, the relations existing between the editors, contributors, and readers of BIRD-LORE are wholly unlike those which prevail where the editors of a magazine decide upon its policy, character, and contents and offer the finished product to the public on a business basis as a commercial venture.

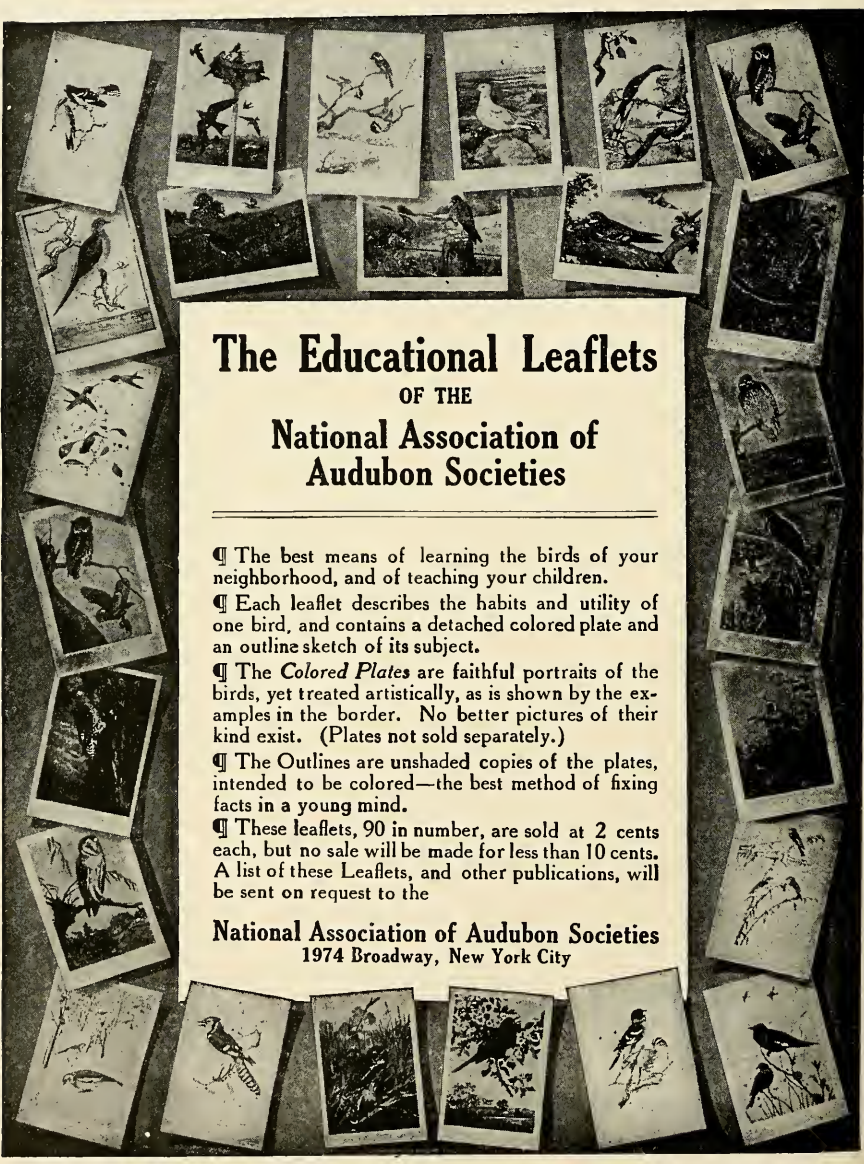
For these reasons we have felt that we should confer with our readers before making a decision in regard to BIRD-LORE necessitated by conditions which for some time have confronted us. Everyone in any degree familiar with the publishing trade knows that in all its departments there has been a marked increase in manufacturing prices. The charges for composition, presswork, and engraving, for example, have increased from ten to twenty per cent, and the crisis has now been reached by an advance in the price of paper of from fifty to one hundred per cent.

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THE LARGE SNOWY OWL, 'OOK-PICK,' ON HIS FAVORITE PERCH



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A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XIX

JULY—AUGUST, 1917

No. 4

Children of the Midnight Sun

By JOSEPH DIXON, Berkeley, Cal.

With photographs by the author

AMONG the many species of birds that migrate through the United States, there are perhaps fewer species of shore-birds (*Limicolæ*) that remain to breed within its borders than there are of any other group of migrating birds. Many of these waders are not content to spend their summers even in the northern Canadian provinces, but push on until they reach the very shores of the Polar Sea, where they rear their young during the two months of continuous daylight.

Herbert K. Job, in 'Wild Wings,' has called attention to the notable fact that, in spite of all the hunting of the day, there were comparatively very few shore-bird pictures. However, photographs of the domestic life of certain species are not so hard to obtain in the far North, provided one has patience and plates which will not 'sweat' from repeated freezing and thawing. In order to be on hand during the breeding-season, one must spend the previous winter in the north, for by the time navigation opens, the young Shore-birds are running about nearly grown.

The Harvard Alaska-Siberia Expedition of 1913-1914, of which, as the representative of John E. Thayer, I was a member, on account of unfavorable ice conditions spent almost an entire year more than was intended on the Arctic coast of Alaska, two-thirds of the way from Point Barrow to the mouth of the Mackenzie River. To some of us this chance to spend a season on the nesting-grounds of so many rare birds was solace enough for enduring the previous six months of extreme cold and darkness. Among the great and small, no birds were more interesting than the wee Semipalmated Sandpiper (*Ereunetes pusillus*).

On May 24, when the brown moss began to peep through the snow in spots, a little Semipalmated Sandpiper with toes cold and numb waded hurriedly along the edge of an ice-filled tundra pool. Here tiny brown larvæ were being washed out by a rapidly increasing stream that trickled down from the lower edge of the

ice. It was much warmer on the bare patches of moss, and the little Sandpiper, having come many miles over snow-covered mountains during the night, felt the cold keenly, yet there was an empty stomach which simply couldn't wait a moment longer with all those fat helpless bugs-to-be drifting along in



WINTER CAMP IN THE LAND OF NINE-MONTH WINTERS

Photograph taken by moonlight

the icy water that gurgled under snow bridges down to the near by ice-covered lagoon.

His appetite partly satisfied, the Sandpiper trotted up on a frozen tussock to see if could spy his mate, for he had not gone on ahead of her on their long Arctic pilgrimage as the males of so many birds do. He found her busily investigating a raft of dead grass stems that had gathered in an eddy. With a sudden flirt of his wings he arose and skimmed quickly over to her. She gave a hearty squeak of welcome as he lit, then turned and proceeded with her breakfast. The fare proved scanty, however, and he soon led her back to his own table.

The male Sandpiper now arose on a short flight of observation. To the east and west a wide treeless plain sloped gently down from the snow-covered Alaskan peaks to the southward. In places this endless field of white was broken by the greenish blue of frozen ponds, while farther off a long black line marked the edge of an ice-covered lagoon. Rough, broken ice-fields stretched away to the north, covering the playground of the seal and polar bear. One short flight was enough to assure the birds that they had reached the edge of the Polar Sea and their home for the summer.

The Sandpipers fed heartily all day on the bountiful food-supply and did not worry about a place to sleep. In fact, it was now May 25, and they seemed to know that for almost two months the sun would not set. At midnight it did

almost touch the still frozen Arctic Ocean to the north, and from 10 in the evening until 3 in the morning, new ice often formed on the smaller pools. During this interval the Sandpipers often huddled together for warmth. However, depending largely on exercise to keep themselves warm, they were out foraging for breakfast by 3 o'clock the next morning.

The frigid, smoky layers of mist that had extended over the tundra from the ice-pack during the night evaporated suddenly, ushering in for the birds a day of twenty-four golden hours. Mr. Sandpiper soon found that it was not going to be all sunshine for him. He had taken only a few short wavy nuptial flights into the crisp air when he observed some bold stranger making love to his mate. He immediately fluffed out his feathers so as to appear as large as possible and proceeded to upset the brazen intruder. Nothing was visible for a moment but two whirling bits of gray and white, but the stranger, evidently surprised by the suddenness and vigor of the attack, sought safety in flight. All that could be seen was an apparently double bird twisting away along a dark broken bank, so closely was the pursuit followed up. Mr. Sandpiper was so puffed up by his victory that he didn't even wait for his next rival to begin operations but gave him a thorough trouncing as soon as he lit on their homestead.

For their homestead it was to be. Mrs. Sandpiper ceased her coquettish ways and no longer bobbed her head to attract the attention of passing males. One morning she was found industriously scratching a shallow hole in the short thick grass on the warm south side of a well-drained hummock, surrounded by connected pools. The next day the cavity was lined with dead willow leaves and contained a beautiful, heavily blotched egg. Each day brought forth an additional egg until there were four. Being remarkably large for so small a bird, they completely filled the nest. In order to economize space, the eggs were kept with the sharp pointed ends facing the center of the nest.



FOUR BEAUTIFUL, HEAVILY BLOTCHED EGGS COMPLETELY FILLED THE NEST

Mr. Sandpiper was now busy making short song-flights at an elevation of about 50 feet above and near the nest. His song seemed to come from every



THE FEMALE ON THE NEST ALWAYS
FACED THE CAMERA

direction, and this illusion was difficult to account for even by the unusual location of the songster. To human ears it sounded like the mellow trill of a katydid, but to Mrs. Sandpiper he was probably an avian Caruso. These artistic endeavors were often interrupted by the appearance of some, perhaps innocent, intruding Sandpiper, always a cause for combat, when the tenor love-notes gave way to baritone war-cries.

As overbearing as the pugnacious male Sandpiper was to all strangers, he was always a very considerate and willing helper to his brooding mate. During the cooler morning hours, from 2 until 4 o'clock, he often relieved her of the household duties and kept the eggs warm while she was away getting her breakfast along the edge of a lagoon some 200 yards distant. He was always very shy, and if visited by the human chronicler of his home-life would trot anxiously about, not returning to the nest as long as the intruder remained in the neighborhood. About noontide, on bright cloudless days, the eggs were often left to take care of themselves for a couple of hours while the parents fed slowly along the edge of some freshwater pond or basked in the sun. The eggs blended so well with the general brown tone of the tundra that they were indis-

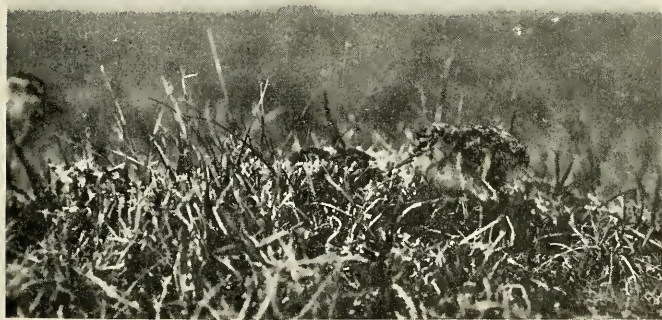


SHE TURNED THE EGGS OVER WITH HER BILL

tinguishable from it at a distance of 10 feet, so there was little danger of the nest being robbed.

The mother bird was very uneasy when frightened from the eggs. With spread tail and tremulous wings, she fluttered away uttering agonized squeaks until she was about 50 yards distant. Then she would assume a true Sandpiper attitude and cautiously return. If the observer was partly concealed in some depression, she would return directly to her treasures, but she always turned the eggs over with her bill, apparently to see if they were harmed in any way. She then fluffed out her breast feathers and tucked the eggs under her.

In June, seventeen days after the four fresh eggs were found, a visit to the nest revealed no eggs and but one newly hatched Sandpiper. He must have just escaped from the shell, as his soft speckled down was still wet and bedraggled. The other chicks could not be found until the observer hid, when the



YOUNG SANDPIPER USING ITS WINGS AS CRUTCHES

mother hastened over and hovered them as they nestled together in a little hollow not over 5 feet from the nest. Thus, the Sandpipers left the nest the very morning that they were hatched.

The young Sandpipers' coats consisted of alternate spots of brown and buffish natal down which blended so remarkably with the general brown tone of the tundra as to render the young birds practically invisible as long as they remained motionless. If their exact location was known, they could sometimes be distinguished from their surroundings at a distance of 8 feet; but if their position was not known, they were frequently invisible when only 3 feet distant. The birdman was often compelled to discontinue his search for them because of the danger of stepping on them before they could be seen.

The gait of the young Sandpipers was a stumbling toddle, while their large feet and legs were all out of proportion to the rest of their slender bodies. By drooping and extending their wings they were able to use them as crutches which often kept them from falling. In spite of this extra pair of legs they

occasionally took headlong tumbles when tripped up by grass-blades. Their note was a low, rusty squeak which often escaped human ears altogether, although the actions of the mother showed that she heard it. Faint as this



YOUNG TOO LARGE TO BE BROODED, PROTECTED BY
MOTHER FROM CHILL WIND

whispered note was, it seemed to be the means of the family keeping track of each other.

Father Sandpiper ceased his song-flights now and helped keep the young warm. It was a cause of much surprise when it was found that the parents made no effort to feed the young. It was soon seen, how-

ever, that such care was not necessary. The young would stumble about and pick up minute gnats and flies with great dexterity, and the shallow algæ-rimmed pools furnished them many a juicy 'wiggler.' One thing was evidently considered very important by the parents during the colder hours of the day: The young must be thoroughly warmed by hovering at intervals not exceeding five minutes.

It snowed the night of July 3, and the fourth was cold and gusty with a chill wind off the ice which was still 4 feet thick around our ship. The youngest Sandpiper was missing that morning and was probably frozen in the snow, although the parents seemed to take equal care of all their children.

Soon after this the largest youngster became very headstrong, insisting upon running about as long as it pleased without being brooded. His father's patience was worn out at last, so he reached over and pecked his wayward offspring on the top of the head until it was glad to stick its head down in the grass to escape the blows. Then the father brooded it with unusual care and solicitude.



FEMALE SANDPIPER AND HER FOUR YOUNG

A hungry Arctic fox prowled around the home of the Sandpipers the morning of July 5, but the circle of tundra ponds which surrounded the nesting-site proved an effective barrier. Following the marauder's tracks along the beach, we came to where he had eaten a family of young Snow-Buntings that he had dug out of their nest deep in a crack in a 'cut' bank.

Another menace hung over the Sandpiper family in the shape of 'Ook-pick,' the large Snowy Owl. If 'Ook-pick' had waited in orthodox Owl fashion until night-time to hunt for his supper, he would have had to wait for over a month for night to fall, so, being a sensible bird, he did his hunting mornings and evenings. Thus, as he sat one morning on his favorite perch, a log that stuck up out of a snowdrift, he saw what he took to be a brown lemming mouse scamper-



MALE SANDPIPER (IN BACKGROUND) BROODING A CHICK. ANOTHER CHICK TO THE RIGHT AND BELOW CENTER IS AN EXCELLENT EXAMPLE OF PROTECTIVE COLORATION.

ing about near Mrs. Sandpiper. He slid from his perch and sailed on silent wings to the spot, but Mrs. Sandpiper had caught a glimpse of him and gave a quick cry of alarm to her children. Not a feather quivered as the youngsters hastily flattened in the grass. Mr. Owl poised directly over them, blinked his large yellow eyes, and doubtless wondered how that lemming mouse disappeared so suddenly. The little Sandpipers remained perfectly still until their mother called them after the danger was past.

By July 8 the young were leading the parents about. They were now too large to be brooded. During one bright, cold day when there was a freezing wind from off the ice, the mother protected one juvenal from the chill wind by crouching on the windward side of him, thus forming a windbreak. By this time the juvenal's wing-quills were half-grown, and the young birds stood well above the short grass where they fed.

A pair of swift-winged Parasitic Jaegers, the worst feathered villains in the Northland, had often cast mercenary glances at the Sandpiper family. The daily occupation of these Jaegers during the nesting-season was the spying out

and devouring of all eggs and nestlings that they could find. The second catastrophe in the Sandpiper household was due to the cunning of these cradle-snatching rascals. One morning the light-colored Jaeger made a rush for a juvenile Sandpiper, but the mother gave the alarm in time for the young to flatten their bodies, stretch their necks forward and remain motionless, thereby so resembling the brown-and-black spotted clumps of moss as to be practically invisible. The oldest youngster, always impatient, did not wait for his mother's note of assurance of the danger being past, but started up as soon as he saw the Jaeger fly on down the lagoon. He seemed to have forgotten all about the other Jaeger which had slipped up behind them in the excitement and now darted in and carried off the shrieking youngster. From that time on the 'Birdman' adopted the Eskimo custom of shooting at every Jaeger that came within range.

By July 26, the young were almost as large as their parents and practically full-fledged, although occasional bits of natal down still clung to them in places. By this time several families had joined together and soon there were large flocks that swooped and circled about high in the air in preparation for their long journey South. There was no visible reason for their early departure, for there seemed still to be an abundant supply of food; certainly much more than there was when the first birds arrived in the spring. However, on August 2, large flocks were seen circling high overhead and leaving for the South. In a few more days the wee Sandpipers were all gone and the shallow tundra pools lay forsaken and tenantless in the waning Arctic sunlight.



UNFAVORABLE ICE CONDITIONS IN THE ARCTIC OCEAN, JULY 25, 1914

The Giant Bird *Diatryma*

By WALTER GRANGER, American Museum of Natural History

A REMARKABLE new bird has been added recently to the ancient avifauna of North America*. This bird lived in the Rocky Mountain region during Eocene time, some 3,000,000 years ago, and was a contemporary of the little four-toed horse *Eohippus*. It is distinguished as being the largest bird, so far as known, which has ever lived north of the Isthmus of Panama, being excelled in size, in the Western Hemisphere, only by the great *Phororhachos* of the more recent Miocene deposits of Patagonia.

Fossil remains of birds are rare as compared with those of fish, reptiles, and mammals, and consequently our knowledge of the past history, or evolution, of the various groups of birds is meager. The reason for the scarcity of bird fossils is partly because of the extremely delicate character of the bones, which are usually the only parts of a vertebrate animal to be preserved; also because the habits of birds are such as to prevent them from becoming entombed in the sands and muds and thereby becoming fossils of a later time; a third reason is that the bodies of dead birds are apt to be devoured by animals, insects, or by other birds.

The oldest and most important fossil bird known is the *Archæopteryx* from the Jurassic limestones of Bavaria, represented by two specimens which show not only the bones but the impressions of the larger feathers. From the Pleistocene of New Zealand come the great flightless Moas, the tallest birds known, and from Patagonia the *Phororhachos*, also without power of flight. Our own country has made a notable contribution to ancient ornithology in its toothed birds—*Hesperornis* and *Ichthyornis*—from the Cretaceous chalks of western Kansas. Scattered and fragmentary remains of other and more modern birds from time to time have been collected in our western fossil fields; often the specimens consisted of a single wing- or leg-bone or a part of a foot, almost never was there enough of the skeleton to determine the exact relationship to modern birds. It was a matter of unusual interest then when a nearly complete and well-preserved skeleton of the gigantic *Diatryma* was discovered last summer.

The presence of a great bird in North America in Eocene times was known as far back as 1876 when Professor Cope of Philadelphia published an account of some fragments of a foot which he had found in northern New Mexico two years before and to which he gave the name *Diatryma gigantea*. Nearly twenty years later Professor Marsh of Yale described a single toe-bone of a gigantic bird from the Eocene parts of southern New Jersey. He named this *Barornis* but the bone cannot be distinguished from the corresponding bone of Cope's genus. Nothing more was known of this bird until 1911 when the writer found in the Bighorn Basin, Wyo., in rocks of the same age as those in New Mexico,

*See article in the Bulletin of the American Museum of Natural History, Vol. XXXV11, Art. XI by W. D. Matthew and Walter Granger.

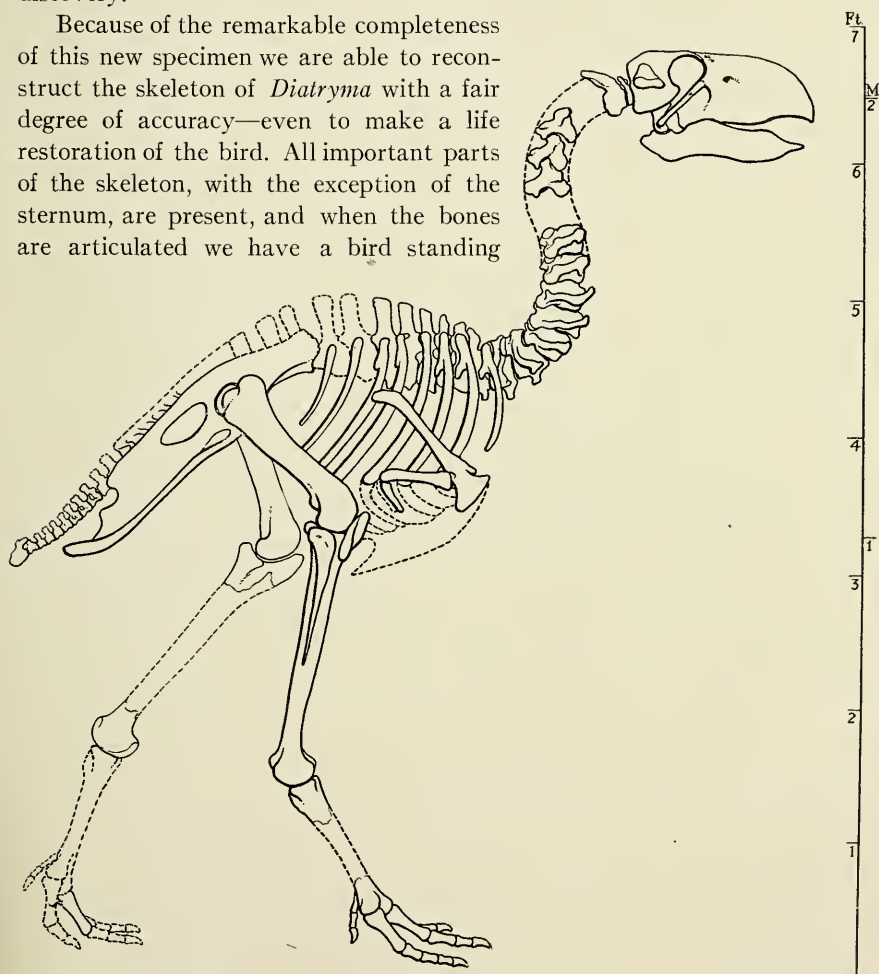


RESTORATION OF DIATRYMA STEINI. THE BIRD WAS ABOUT SEVEN FEET IN HEIGHT. $\times \frac{1}{2}$
COPYRIGHT, 1907, BY THE AMERICAN MUSEUM OF NATURAL HISTORY

a few more pieces of the foot-bones of *Diatryma* of an apparently larger species than the southern one. This Dr. Shufeldt has called *Diatryma ajax*. Last summer, however, Mr. William Stein, one of the American Museum's trained fossil collectors, while searching a small and hitherto unexplored section of the fossil beds or 'badlands' of the Bighorn Basin in northwestern Wyoming came upon this magnificent new specimen which represents a third species and which has been named in honor of its discoverer, *Diatryma steini*.

The bones were found somewhat disorganized and were inbedded in a layer of soft bluish shale. Parts of both legs had been weathered out for some years and were lying on the surface, and it was the sight of these which led to the discovery.

Because of the remarkable completeness of this new specimen we are able to reconstruct the skeleton of *Diatryma* with a fair degree of accuracy—even to make a life restoration of the bird. All important parts of the skeleton, with the exception of the sternum, are present, and when the bones are articulated we have a bird standing



RECONSTRUCTED SKELETON OF DIATRYMA STEINI. $\times \frac{1}{17}$

(Courtesy of the American Museum of Natural History)

nearly 7 feet tall. The massive neck was surmounted by a great head 17 inches long with a powerful deep compressed beak and strong lower mandibles. The legs were of moderate length and stockily built, but the wings were reduced to a point where they could have been of but little use to the bird, even in running. Among living birds the Cassowary furnishes the closest parallel in wing reduction.

Diatryma has no near living relatives. The peculiar South American Seriema shows some general resemblances, especially in the skull and pelvis, but the Seriema is a smaller bird and has the power of flight. Of the living flightless birds, the Ostriches, Rheas, and Cassowaries, there is a similarity in the reduced wings but there the resemblance stops. Among the extinct birds the Patagonian *Phororhachos* with its small wings and large powerful skull resembles *Diatryma* both in size and proportions, but a careful comparison of the two shows that this resemblance is merely a superficial one and that there is no true relationship. *Gastornis* found near Rheims in northern France in deposits of nearly the same age as those in which *Diatryma* was found, may be distantly related, but as *Gastornis* is known only from scattered and fragmentary bones, it is not possible to make satisfactory comparisons. *Diatryma* then stands pretty much by itself in the bird world, and we know nothing of its ancestry or its descendants. It is probable that it became extinct during the Eocene period, along with several contemporary groups of mammals. Of its range it can only be said that it lived in New Mexico and Wyoming and possibly extended its range westward as far as the Pacific coast. The climate of the Rocky Mountain region during early Eocene times was warmer and more humid than now, and the mountains had not reached their present elevation. Of the bird-life of that time and in that region we know but little. The few bits of fossil birds found have been identified as Turkey, Grouse, and Eagle, and the like, but how closely they really resembled these modern birds to which they have been referred it is not possible to say until more complete skeletons are found.

The food habits of *Diatryma* are a matter of conjecture. The skull suggests that it was a flesh-eating bird but a glance at the feet shows small, weak claws hardly adapted to seizing or even holding prey of a size which the bird would be likely to feed upon. Also, it will be noted that the beak is not hooked at the tip as in most modern birds of prey. The beak may have been used in feeding upon large fruits or seeds after the manner of the Parrots. There is, in fact, a good deal of similarity in the structure of the skull between *Diatryma* and the Parrots, a resemblance which may have been brought about by similar food habits. Another suggestion which has been made is that *Diatryma* waded about in the shallow streams and fed upon the fresh-water clams which were abundant there, using the great beak to crack open the shells. Whatever his food habits, *Diatryma*, with his great size and powerful neck and head and strong beak, was undoubtedly the bird monarch of his time and, indeed, there were but few mammals of his day which would have cared to take issue with him.

The Schuylkill Heronries

By F. L. BURNS, Berwyn, Pa

IT IS well known that the Black-crowned Night Heron returns year after year to the same breeding-place, and that the heronries are permanent if undisturbed. I believe that the colonies of the Schuylkill River region are of comparatively recent occurrence, since they were unknown to our earlier ornithologists, and Wilson and Audubon were very familiar with this ground. It would seem probable that the breaking up of the great tide-water colonies of the lower Delaware valley compelled this species to seek asylum inland; and the selection of isolated groves situated on rising ground, often at a considerable distance from any large stream or swamp, proves that even this apparently stupid bird has profited by experience. However, nesting early in April before the leaves have formed, it is at a distinct disadvantage in a deciduous wood.

Heronries containing over one hundred pairs of birds are unusual in this region for economic reasons. There is, of course, a limit to the feeding-range, probably of 15 miles radius in the breeding-season, and even then there must have been an overlapping in the hunting-grounds of the various colonies, since the extreme distance between the Fort Washington and Weisenburg colonies is only 40 miles. I am sure that some sort of communal leadership exists in every colony and an interrelationship of all the colonies of this region.

The first colony of which I have knowledge was located in a grove at the rear of the old encampment of Wayne's brigade, Valley Forge, Chester County. About 1870 a party of Norristown gunners slaughtered many of the breeding birds, and the site was abandoned; the survivors are said to have formed, or materially increased, a colony situated on the Skippack, just above its juncture with the Perkiomen Creek, near Evansburg, Montgomery County. Dr. W. E. Hughes visited it some time previous to 1880, Messrs. F. S. Rose and J. H. Wilson in 1885, and it was found in about the same place as late as 1892, though greatly reduced. Continued persecution had driven it further up the Perkiomen when Mr. R. C. Harlow found about twenty nests on the lower slope of Spring Mount near Zieglersville, in 1907, and it was deserted two years later.

Dr. Warren states, in 1888, that a colony existed for many years along a good-sized stream near Blue Rock, Berks County.

About 1886 Mr. D. N. McCadden and Dr. Hughes discovered two large colonies, scarcely a mile apart, in detached groves at Port Kennedy and Red Hill. I visited the former in 1900 and found about fifty nests in the tallest oak and chestnut trees. Every heronry seems compelled to support one or more families of thievish Crows, but this community for many years had a sort of feudal lord in the form of a Cooper's Hawk. No Heron would build near his nest, hence part of the nests were on the top and the remainder at the foot of the hill. I visited the locality on April 16, 1905, and counted fifty-seven nests, all

inhabited; Mr. C. H. Rogers found but twenty nests with young on May 20; the following winter the timber was cut from this tract, and the birds formed a new colony the succeeding spring at Valley Forge.

The Red Hill colony contained ninety occupied nests in high ash, chestnut, oak and cherry trees on May 26, 1914, though someone had 'shot it up' on May 3, and there were dead birds found. A visit by some friends on June 20 revealed some twenty-five freshly killed adults, shot for their plumes by Italian quarrymen, and the survivors increased the Valley Forge colony the following year, though it is probable that they attempted to breed on the old grounds early in the season.

The Fort Washington colony of one hundred pairs normally was located on the eastern slope of Militia Hill, near the Wissahickon Creek, Montgomery County, in mixed chestnut timber. Mr. G. B. Benners first saw the birds at this place in 1892 and then continuously until 1902, when there were about twenty pairs. At this date he found dead birds lying around and the nests deserted, the work of three boys of rich and influential parents of the neighborhood. They had shot the birds as they flew from the nests and even pulled down many of the nests. Naturally this colony passed out of existence.

Probably the successor to the Blue Rock colony was located on the Sacony Creek near Weisenburg, Lehigh County. Mr. W. H. Leibelsperger writes me that it was a most pitiable sight when he and his friend approached it in May, 1904; the nests and eggs were wantonly destroyed and many of the poor birds slaughtered; only a few birds remained, and a single nest found 60 feet up in a pine contained heavily incubated eggs.

About three weeks later some fifty nests were discovered in a small tract of pine woods near Moselem, Berks County, probably the refugees of the Weisenburg colony.

The Valley Forge colony was founded in 1906 through the enforced removal of the Port Kennedy colony as previously mentioned. Situated in a thicket of saplings of 25 years' growth, I found thirty-five nests at an average height of less than 25 feet, on April 30, and a later visit convinced me they had had a successful season. May 30, 1907, there were twenty-seven new nests, and later in the season Mr. A. C. Redfield counted one hundred and fifty nests, presumably the accretion of the Perkiomen colony. During 1908 it was reported that the Italian laborers working nearby were carrying away bags of young for food. On April 20, 1909, a visit revealed about one hundred nests, not all occupied, and the birds appeared much harried. A visit by Messrs. Redfield and L. S. Pierson on May 9 found the thicket deserted. The birds had been constantly annoyed by Italian pot-hunters and well-meaning visitors. As late as August 8, 1910, I saw eight adults about the ground in an open pasture, waiting for some intruder to depart from the grove, where they were unsuccessfully attempting to nest; the wretched remnants of a promising colony of two years previous.

This colony doubtless united with the Red Hill colony, and the ground remained vacant until 1915 when I counted fifty-six nests, some yet with young, on August 18. My visits in 1916 were made on April 16, May 14, and 28, and July 3, one hundred and twenty-seven inhabited nests were found from 40 to 70 feet up in ash, oak, and cherry trees, and I am pleased to state that the birds had a very prosperous year. They were quite tame, and the only annoyance came from two pairs of Crows nesting in their midst. That they were living off of the Herons was amply proven by the twenty empty nests, the reduced average in a brood and the discovery of four young with their eyes pecked out. Another season I hope to destroy all the Crows' nests in the wood. However, there is no warden, and this fine colony, perhaps the last of its kind in all this region, is at the mercy of the first vicious person that may chance upon it, when it will become only a memory.

I would add a word of caution to bird-lovers when visiting heronries: Do not enter a colony until the leaves have formed a screen; enter at a point that will enable the birds to retire undisturbed to an unoccupied part of the wood; keep together, walk slowly, keep quiet, and do not stay long. Remember that the Crows are looking for a disturbance that will enable them to steal the eggs and young, and knowledge of the locality should be intrusted to the chosen few.



WOOD PEWEE, NEST AND YOUNG

Photographed by A. A. Allen, Ithaca, N. Y.

Chronicles of a Hummingbird Family

By MINETTE SHERMAN, Glendale, Cal.

May 9, 1916.—My home is one of those vine-covered, flower-surrounded bungalows so prevalent in southern California. Enclosing the garden in the rear is a latticework fence over which roses and honeysuckle climb in wild confusion. Within are flowers, bees, and sunshine, and here dainty feathered people gather to eat of the crumbs and grain that we scatter.

This morning, when standing beneath a small pepper tree in the garden a tiny Hummingbird perched just 2 feet above my head. I noticed several long silken cobwebs stretched about the limb. I watched her come and go the rest of the day and knew that a nest was in progress.

At night the children and their father were told of our good fortune, and all were delighted.

May 10.—Early this morning before my sleeping world of people were awake, while the morning was still misty and heavy with earthy odors, I looked for the embryo nest and beheld it fast assuming proportions. As I started to leave, the little Hummingbird darted past with a tiny bit of down which she placed in the nest after which she sat upon it, squirming and shaping the inside with her body. The nest consists of gray cobwebs and fluffs from cat-tails, with occasional bits of lichen or tiny flecks of bark.

May 11.—How can I begin with today's happenings! In the first place the nest must be about half made.

While I was looking in it, she came with a long silken thread—some spider's web, no doubt—but upon seeing me so close, flew to a near by wire. In an instant another came, the male, and flew in violent circles about her. Over the garden fence she darted, poising herself in the air. The male flashed after her and with lightning-like rapidity whizzed back and forth before her "like a bronze pendulum."

I find this to be the Costa Hummingbird, one of the six species that nest within the borders of California.

This afternoon I went out to see how the work was progressing, when a rush of wings announced another bird. This proved to be an English Sparrow. Mrs. Hummer immediately flew at the intruder, chasing her about in the tree quite merrily until the Sparrow became angry and turned upon her. Clinging quietly to a limb, she opened her bill and said as plainly as possible, "Ah, is it your tree, Mrs. Hummer! Ha! ha! I must go away! You are mistaken, my dear friend, I shall not depart until I am ready." Mrs. Hummer observing that the Sparrow no longer feared her, went on with her work while the Sparrow flew away. I passed into the house, chuckling over the encounter and admiring the bravery of the little sprite in attempting to drive away the larger bird.

In about ten minutes I came out again and glancing up into the tree saw what I supposed was Madame at work again. But upon looking more care-

fully I discovered it to be that little vixen of a Sparrow standing in the nest tearing out huge billfuls right and left. What an outrage! What will the Hummingbird do when she returns and discovers this vandalism?

She soon appeared, settled on her nest, and began to work as though nothing had happened.

May 12.—This morning, early, before the others were awake, I went out to investigate, and in peeping into the nest discovered an egg. It is pure white and so thin and delicate that it seems translucent.

May 14.—This morning the nest contained two eggs.

May 16.—Wishing to make a sketch of her, I stood on a chair, but as I raised up over the nest she flew off and whirled about me. I stood very still and she came back giving me an opportunity to sketch her at close range.

May 19.—Just a week ago the first egg was laid. She has constantly added to the nest since then, making it noticeably deeper. Today I stood on the chair as before. This time she remained quietly on the nest. The children and their father came also to see our little friend. I had a fancy to try an experiment such as I had read of some bird-lovers doing. Carefully sliding my hand along the limb until I reached the nest, I placed two fingers on her back and *stroked her feathers*.

May 28.—This morning I beheld the first little fledgling—a tiny naked object no larger than a honey-bee. The little creature is blackish in color and entirely naked except for eight tiny hairs on each side of its backbone. The head is large and moves from side to side; the bill is yellow and short, and on each side of the head are black skinny knobs for eyes.

May 29.—Two tiny bits of bird-life are inclosed in the miniature nest—two little babies wabbling their grotesque heads about. I hoped to see them fed when the mother returned, but when she saw me she became nervous and brooded them instead. I walked away, pretending not to notice. She flew to the honeysuckle vines, and I came back quietly. Returning, she alighted on the side of the nest and fed them from her bill by what the naturalists call regurgitation. They opened their bills very wide, and she rammed hers down their throats, ejecting by a convulsive effort partly digested honey and insects from her own throat. I could see only the babies' bills above the rim of the nest. After each had had a morsel, she brooded them in lieu of rocking them to sleep.

May 31.—It is astonishing how they grow; in two days they have doubled in size.

June 3.—Their bills are turning black, pin-feathers are showing all over them, and an opening of the eye is visible.

June 6.—This morning at about 11 o'clock was the last time I had noticed the mother bird. Early in the afternoon the children came from upstairs, excitedly calling me to come quickly and see a dead Hummingbird caught in the screen. It must either have been unaware of the screen in its flight, or in an attempt to catch insects had fastened its bill in the meshes. Was this

our Hummingbird and what would become of those poor helpless babes? Throughout the day we kept a vigilant outlook about the nest, hoping for the return of the little mother. Giving up in despair, I tried to feed them myself. Preparing some honey and warm water, I tried to force it down their throats, but they shook their heads and would have none of it. Suddenly I heard a whirl of little wings, and from over my head flashed their own mother. Words cannot express my relief.

June 13.—They are now entirely covered with feathers, the green showing faintly on their backs, the wings mottled brown and gray, with three white tail-feathers on each side of the little tail.

June 18.—Yesterday at about 5 o'clock in the afternoon, I peered into the nest and found one nearly out. As I watched, it flew into the topmost twig of the tree and from there to the honeysuckle vine. I approached, carefully putting my hand over it, but it clung so tenaciously that I had to tear from the vine the twig upon which it rested. I carried it in my hands to show to the children. When I tried to put it back it held so tightly to my hand that I was afraid I might injure the little claws in pulling it away. Just when I thought I had the fly-a-way one in the nest with his more peaceful brother, off he flew again into the top of the tree. When I retired for the night he was still there. This morning we could not find him. The other one was perched on the edge of the nest, ready for flight.

June 20.—Yesterday both left the nest. They have become very fluffy and almost as large as their mother but their bills are shorter and the underparts pure white.

June 21.—The pepper tree is deserted; the nest old and forlorn. What a wonderful experience my acquaintance with these feathered people has been! How I shall miss them from my garden!



RUBY-THROATED HUMMINGBIRD
Photographed by A. A. Allen, Ithaca, N. Y.

Notes from Field and Study

Seventeen Warblers in a Single Willow Tree

Spring and the migration were extraordinarily late this year in Pittsfield, Mass. Until May 18 only April birds—not one species typical of May—was seen by the writer. On that day and the following the usual arrivals of May's first two weeks flooded in, and Sunday, the 20th, came warm but cloudy, promising a high tide of Warblers. About 9 A.M. the writer was standing by a bridge over the dirty little river, with mills above and mills below and trolleys clanging by, where a great willow tree sloped out over the surface. Swifts and Swallows were darting low over the water, Grackles, Robins and Song Sparrows hunted along its banks, an Oriole and a Downy Woodpecker were heard overhead, and the voices of a Cat-bird and a Yellow-throated Vireo were not remote; but in the tree itself sparkled a Warbler treasure! First, a number of Northern Parulas were noted; in the same instant Chestnut-sides and Myrtles were seen to be almost equally numerous; and then several Black-throated Greens appeared. Only the two first-named were making any sound; the gray weather seemed to take away the spirit of song, recompensing us by keeping the Warblers low in the leafless but catkin-veiled tree. The fifth species seen was a dun little thing, with a faint flush of yellow on her throat and absolutely no other insignia anywhere. While the idea 'Tennessee?' was still but half-formed—for the writer had never before seen a Tennessee Warbler—a sixth guest fluttered down, clinging to the bark. Pulse leapt in arteries, for here at last was a Warbler the observer had fervently sought each May for fifteen years till it had become a symbol for the unattainably rare—a Cape May! Nothing could have given more delight; but while avid eyes were watching, a flash of gold brought down a gorgeous Black-

burnian, a necklace of black diamonds almost tinkled 'Canadian,' and two black-and-salmon male Redstarts scintillated into the tree. For a few minutes the onlooker revelled amid these riches. Then a wiry song heralded the creeping approach of a Black-and-White, and a Magnolia also twinkled into view. Suddenly a Blackpoll emerged directly under him, and then a Yellow Warbler, flying upstream, paused an instant in the tree. This was unbelievable! Thirteen Warblers in as many minutes in a single tree in such a site? Wasn't it hallucination? One had but to imagine a Warbler, and lo! he was at hand! And now came a wheezy 'song' preluding a handsome Black-throated Blue. The Chestnut-sides and Parulas were now swarming in the scanty bushes at the willow's base. We looked down, and rubbed our eyes: a Bay-breast—one lone plump ruddy male Bay-breast! Then flitted in and out an ever-agile Wilson's Black-cap; and lastly up peered the black mask of a Northern Yellowthroat. Besides these seventeen Warblers the tree held for a while a Warbling Vireo. Save the three species first noted, none was represented by many individuals. The tree looked like nothing so much as a bird-chart by the Massachusetts Audubon Society illustrating the May Warblers of Massachusetts, so vividly alive was its close-bounded area with these clear-marked, brilliant transients, so long halted by the cold and now pouring northward in compact flocks—seventeen species to a flock!—and eddying through a single city willow on the way.—SAMUEL A. ELIOT, JR., *Pittsfield, Mass.*

Warbler Notes from Bennington, Vt.

In regard to R. E. Robbins' query in the March-April BIRD-LORE concerning the increase in the number of Cape May Warblers, our observations, which are

limited to Bennington, Vt., and vicinity, have been as follows: From 1901 to 1911 inclusive, not a single individual of the species was seen; in 1912, a dead male was found on May 8, and a pair was seen daily from May 16 to May 22; in 1913, a pair was seen on May 13, and for two or three days after; in 1914, a pair was seen on May 6; in 1915, a pair was seen on May 16 and several individuals during the following week; in 1916, one was seen May 5 and eight to ten the following week.

The Tennessee Warbler has shown a like increase during the last two years. From 1901 to 1914 inclusive, only one individual was seen (May 11, 1912). In 1915, there was a large migration beginning May 20 and ending May 26. During the last two days of this migration, a large number were in the village, frequenting almost entirely the elm trees. In 1916, there was another large migration, beginning May 19 and ending May 30. During both these migrations, the birds were singing a great deal. The song of the Tennessee Warbler is a loud one—as loud if not louder than the Redstart's. He starts with a repetition of notes like the Chestnut-sided. After three or four, he gives a hitch in the song and then continues but on a different note and not quite so loud. Or it might be described as similar to the Chipping Sparrow's; but shriller.

Two other species of Warblers have shown a marked increase in this vicinity during the last two or three years, namely, the Bay-breasted and the Wilson.

The Evening Grosbeak has visited this neighborhood again this past winter.

On October 7, 1916, we saw a flock of White-winged Crossbills—numbering over 40—on Stratton Mountain, which is a peak in southwestern Vermont.—DR. and MRS. LUCRETIOUS H. ROSS, *Bennington, Vt.*

An Evening Grosbeak Summers in New Hampshire

About the middle of August, 1916, Miss Emma Johnson, of Nashua, N. H.,

noticed, one morning, a peculiar bird feeding upon the seeds of a lilac bush just below her window. As it was an entirely new bird to her, she got her field-glasses and watched it for at least fifteen minutes. There could be no doubt about its being a male Evening Grosbeak. There was the great beak, the bright yellow on head and body, the black wings and tail, and the large white wing-patches. The lilacs were close to the house, and every marking on the bird was plainly visible without the glasses. The bird did not return again. Miss Johnson is a close observer and could not have been mistaken.

This bird may have been injured and left behind or it may have found New Hampshire to its liking and decided to become a permanent resident, as some of us featherless bipeds have. A report has come from Hanover that a pair of these birds once started a nest near that town but left it unfinished to migrate with the flock. This report is rather vague but entirely credible. The bird observed by Miss Johnson may have had a mate, and they may have nested hereabouts. At any rate, it will be well for bird students to keep their eyes wide open and watch the Evening Grosbeaks. If these birds should begin to nest in New England they would be a great acquisition. Has not the Prairie Horned Lark worked eastward until it has reached New Hampshire and become a permanent resident? If we can hold the Grosbeaks at our food stations late enough in the spring, perhaps the breeding instinct will seize upon them before the migrating instinct, and they might remain and breed. The coniferous forests of northern New England offer ideal nesting facilities.—MANLEY B. TOWNSEND, *Nashua, N. H.*

Evening Grosbeak in Connecticut in May

While looking for birds near North Branford, Conn., in a sparsely settled district, our attention was attracted by a persistent chirping which resembled that of an English Sparrow but was clearer and

higher pitched. Upon investigation we found it came from a flock of fourteen Evening Grosbeaks. When we first saw them they were feeding on the ground near the edge of a field, but a little later they flew to a sugar maple where they allowed us to observe them closely. There were about five males in the flock.

This species has not been observed in New Haven County to our knowledge, so late in the season (May 12).—RICHARD EDES HARRISON and JOHN B. DERBY, *New Haven, Conn.*

Horned Larks at Rochester

I have seen in BIRD-LORE notes on the Horned Lark in winter at Troy, N. Y., and on the Prairie Horned Lark in summer in Nebraska. Here in Rochester, N. Y., we have the Prairie Horned Lark all the year round. On March 10, 1916, when we were having the worst part of our winter, I saw two of the birds on the snow and ice while I was skating on the eastern widewaters of the Erie Canal. On April 2, I saw one bird and found its nest with four young in it on the well-kept slopes of Cobbs Hill reservoir, which supplies part of the city with water. The nest was made of just a few pieces of grass woven together on the ground and was within a quarter of a mile of the widewaters.

Again, on October 18, I saw two of the Larks back of the reservoir. They were on a short, level stretch of gravelly soil where there was little grass. I did not see them until I started them from the ground, but they could be easily recognized by the combination of their size, white tail feathers, swift flight and sweet notes. The Prairie Horned Lark has been on the bird-list of the Rochester Park Department almost every month of the year.—RAYMOND REUTER, *Rochester, N. Y.*

A Painted Bunting in Pennsylvania

Miss Esther Heacock writes from Wyncote, in southeastern Pennsylvania, of the visit of a Painted Bunting, which

spent two days, May 13 and 14, 1916, in or near a large fern-leaved beech tree on her lawn. "The bird appeared at first in company with some Indigo Buntings feeding upon the ground. The Indigo birds soon passed on, however, leaving their cousin alone but seemingly very much at home and unafraid. Telephone-bells rang and word was passed around among the members of the Wyncote Bird Club, many of whom came to see the rare and beautiful bird."

Vermont Notes

The observations concerning the Juncos and the White-throated Sparrows reported by Eliza F. Miller in Sept.-Oct. (1915) BIRD-LORE interested us very much, for we had noted similar conditions.

Heretofore, in this neighborhood, these two species have nested and spent the summer in the mountains, never coming to a lower altitude than 1,000 feet and rarely below 1,500 feet. But during the summer of 1915, Juncos were seen at various points in the valley all summer, and on June 27 a pair was found nesting in a dooryard near the edge of the village at an altitude of about 700 feet.

A large number of White-throated Sparrows, taking possession of a hill not over 900 feet in altitude and 2 miles from the foot of the mountains, remained there all summer singing and nesting.

We also noted two pairs of Canadian Warblers nesting at 1,000 feet, which is 500 feet lower than we have ever found them nesting before.

We laid this change in the habits of these birds to the extreme coolness of the summer in this region.

Another unusual event with us was a migration of the Tennessee Warbler which occurred from May 20 to May 26, 1915, inclusive. This Warbler has been observed here but once in the past fifteen years, and at that time only a single individual was seen.

These birds seemed to prefer the tops of the deciduous trees and were singing con-

stantly. The song is a loud one—as loud, if not louder, than the Redstart's. It starts with a repetition of notes like the Chestnut-sided but after three or four repetitions gives a sort of hitch and then continues as before but on a different note and not quite so loud. One observer likened the song to that of the Chipping Sparrow with a hitch in the middle.—DR. and MRS. LUCRETIVS H. ROSS, *Bennington, Vt.*

Florida Gallinule in Connecticut in April

On Friday, April 21, 1916, I received a telephone message from a friend in Hartford saying that he had observed a peculiar bird in his yard with its head caught in the lattice work of the veranda. It was immediately liberated, but again it sought protection in a similar manner. From the telephoned description, it was fairly clear that the bird must be one of the Gallinules, but it was rather difficult to imagine for a moment its mission in a place so remote from its natural habitat. I was invited to take possession of the bird and to exhibit it to some of the local bird-students before restoring it to freedom. I took it home and kept it for twenty-four hours, during which period several members of The Hartford Bird Study Club eyed it with much satisfaction. Not being able to cater to its tastes, I liberated it in a favorable spot.

The bird proved to be a beautiful adult Florida Gallinule. According to Bulletin 201 of our State Geological and Natural History Survey, it has never been recorded in Connecticut in the spring, the only summer record being in New Haven in June, 1899, although several autumn records for the state are available.—ARTHUR G. POWERS, *West Hartford, Conn.*

Red-bellied Woodpecker in Iowa

A few days ago a male Red-bellied Woodpecker was observed for the first time in this locality. While it may be possible, of course, that an occasional individual of the species visits western

Iowa, careful observation of both summer and winter birds has never revealed one before, and the occurrence may be of interest to other readers. Since first observed he has appeared every day at our suet-bags, affording us ample opportunity to confirm the identification as well as the pleasure of studying his beautiful plumage.—T. H. WHITNEY, *Atlantic, Iowa*, April 20, 1917.

Snowy Owls in Idaho

A very remarkable flight of Snowy Arctic Owls occurred in southern Idaho the past winter. The first specimen the writer observed was on November 23, 1916. It was remarkably tame at first. I approached within twenty or twenty-five feet of it, and it did not fly. When I tried to photograph it, however, it soon became quite shy. This Owl (presumably the same one) stayed in the vicinity of the writer's home all winter, so it is believed. The last time I saw it, however, was on December 30. Twice I prevented farmers from killing this very beautiful and valuable bird. Reports of Snowy Owls were common during the winter. One firm in Boise mounted no less than thirty-five specimens. The Owls were reported retreating northward about Feb. 9.—ALEX. STALKER, *Meridian, Idaho*.

A Song from the Nest

Just at the entrance to one of the large ranches near Pasadena, I heard a particularly rich, sweet song, so wandered up among the plows and harrows, under a fine group of oaks, and finally ascertained that my songster must be in a sapling well out of sight of the road. After a time and no end of dodging and searching, I located a tiny, slim, olive-gray bird, with buffy sides to the head, white underparts shaded with yellow and a distinct white stripe through the eye. It was a Warbling Vireo and oh! how he did sing! A glorious, rippling melody, just bubbling over with joy and pride. I could not have believed that such a volume of

sound could come from so small a bird if I had not seen him at it.

After a time he disappeared, but soon after returned with a fine beakful of food. Evidently he was very anxious that I should not see him go to his nest, for he dodged here, there, and everywhere, and although it did not seem to me that I took my eyes off him for a second, I suddenly missed him and knew not where he had gone. By dint of patience I found him again, or rather his head and shoulders, and as I particularly wanted to see his wing-markings, I cautiously moved a little nearer and found that he was singing while sitting on his nest. It was the funniest thing to watch him. He would half lift himself up and pour forth a joyful burst of song, then snuggle down almost out of sight, then raise himself up to sing again, and so on, till Mrs. Vireo came back to take his place. After allowing himself a long rapturous song from a high bough, he flew off in search of food once more.

The nest was a beautiful little thing, so

neat and compact, semi-pensile from the fork of a branch, about 12 feet from the ground and well in sight. It was made of bits of leaves, lichens and vegetable fibers, and matched the surrounding branches so well that although I knew exactly where it was I often had trouble to locate it on subsequent visits.—HENRIETTA E. DELAMARE, *Pasadena, Cal.*

A Practical Bird-Bath

Anyone desiring an attractive bird-bath in the garden may have it at very little expense if the following directions are carried out: Excavate a place in the ground thirty-six inches in diameter and $2\frac{1}{2}$ inches deep in the center, with gradual slope to the sides. Make a mortar, using ten pounds of Portland cement, three times the quantity of sand and enough water to mix easily. Pour into hollow, shape with trowel or the hand until it covers smoothly the entire surface. Dust lightly with dry cement and let it stand for several days before filling



A PRACTICAL BIRD-BATH

with water. Many changes and additions may be worked out, starting with this simple plan. Last summer I added to mine a narrow run-way ending in a small basin 3 inches deep and 6 inches in diameter. The larger birds, like the Robin, Flicker, and Grackle loved to sit in this basin after bathing in larger ones.

Five minutes' work each morning with garden hose and broom will keep the bath clean. In hot weather I let the water drip in it all day, hiding the hose in shrubbery which, when planted around the edges, adds greatly to the beauty of bath.

Do not plant anything higher than 5 or 6 inches or you will have a hiding-place for cats. Violets, hepaticas, dwarf sweet alyssum and low-growing ferns are nice for the purpose.—MAY S. DANNER, *Canton, Ohio*,

Dressed in White

While at my country home in Monroe County, W. Va., this summer, I had the interesting experience of seeing something rare in bird-life.

It was nearly dusk one July evening and I was strolling in the yard when a white bird flitted past me.

I knew there were no Pigeons in the neighborhood, and, besides, the bird was smaller than a Pigeon.

It puzzled me. I followed it with my eyes until it alighted in a low tree in the orchard, but when I drew near the dividing-fence for a closer view, it flew out of sight amid the shrubbery.

About a month later I saw it again, as I went after my mail. It was sitting on the fence near the mail-box. A dozen or more Robins were on the fence and ground. As I approached, all flew across the road into the meadow. I cautiously peered over the fence, and there was my white bird, hopping about among his mates, head cocked to one side in the listening attitude of our old friend, the Robin.

I even heard his cheerful Robin chirp. In size and shape he was like the rest, but

if there was a single dark feather in his plumage, I failed to detect it, so I think I saw that uncommon bird, a snow-white Robin.—(Miss) LENA LEOTI JOHNSON, *Covington, Ky.*

A White Swallow

I am writing to inform you of a bird which was observed here several times during the last week of July, 1916. Three other men and myself observed it July 29, 1916. It was apparently a white Barn Swallow. It was with other Barn Swallows, chasing over hay meadows. It had the size, shape, actions and general characteristics of Barn Swallows, but was pure white, except its bill, which showed dark as it flew. The other Swallows seemed at times to chase it, then at other times it flew among them unnoticed. It is the only pure white bird ever seen by many in this town.—R. T. BURDICK, *Crown Point, N. Y.*

An Albino Grackle

About noon one day the middle of this month, my friend, Mrs. Pound, heard an unusual fussing among the birds in her back yard. Her home is right in town, not more than three blocks from the business section, but she has a lot with trees, shrubs, and flowers in the back yard.

Coming out, she found four of the ordinary Bronzed Grackles in one of the trees, and one exactly like the others except that he had two white feathers, one on either side of the tail, about the middle. The other Grackles were not fighting him especially, but were very evidently curious and anxious to find out about the strange bird, and all of them, including the white-feathered one, kept repeating their metallic calls with rather more emphasis than usual.

We have seen entirely white or albino Grackles in the outskirts of town, but this is the first reported around here having just the two white feathers in the tail.—LILLIAN S. LOVELAND, *Lincoln, Neb.*

THE SEASON

II. April 1 to June 15, 1917

BOSTON REGION.—April was abnormally cold; snow fell on the 9th and the temperature remained below freezing for thirty-six hours. Juncos were present in thousands and Fox Sparrows in hundreds, delayed by the storm for three or four days. After their departure there was little evidence of migration for ten days, until forty-eight hours of mild weather on the 21st and 22d brought Barn Swallows and Myrtle Warblers (early) and Field and Chipping Sparrows (late). Again there was practically no movement of birds for two weeks. A marked increase of White-throated Sparrows was noted May 6, after which came only scattered new arrivals until the 16th, when overdue residents (e. g., Swifts and Oven-birds) began to appear in good numbers.

Thus far cold and rainy weather had prevented a general migration of any magnitude. The trees were nearly bare, the vegetation over ten days later than normal. Birds had appeared in *small numbers, much behindhand*, and had been *silent*. Even the nesting Robins had sung little. The swamps, woods, and scrubland were nearly barren of bird-life. Migrants were noted locally, in small flocks, feeding silently, low in the leafless trees, and often on the ground.

On the establishment of summer weather (May 18-20) there came a rush of Warblers in the normal manner—in full song and well distributed. In spite of cooler and rainy weather, this influx of Warblers, comprising the transients, continued into the first week of June and proved the most remarkable Warbler-migration in the history of this region. It was remarkable for the exceptionally late dates to which many birds tarried, for the great number of birds, and especially for certain rare Warblers in numbers actually and proportionally far above previous records. Every day for two weeks one of our rarest, the Tennessee, was abundant; a dozen or more were frequently seen collected in

some favorable locality and their song was heard throughout Lexington and surrounding towns until June 8. Cape May and Bay-breasted Warblers, usually rare, occurred commonly, although less so than the Tennessee.

A few Evening Grosbeaks lingered in Lexington till May 30, Juncos till the 22d, and there was a definite migration of Pine Siskins between May 20 and June 4. During the first few days of June our breeding Cedar Waxwings arrived. Parula and Black-poll Warblers are reported from West Roxbury on June 15—exceptionally late.—WINSOR M. TYLER, Lexington, Mass.

NEW YORK CITY REGION.—April started with the migration about up-to-date or a bit ahead (e. g., Great Blue Heron and Pine Warbler, Runyon, N. J., April 1), but the failure of Tree Swallows, Yellow Palm Warblers, etc., to reach anything like their usual abundance till toward the end of the month indicated a tardy arrival of insectivorous species. The daily mean temperature of the first twelve days of May averaged 10° below normal, so that a 20-mile walk near Plainfield, N. J., on the 13th, over a route good for a hundred species at the height of the spring migration (normally about this date), netted barely eighty-six, and these included the following birds usually gone northward by this time: Rusty Blackbird, Junco, Yellow Palm Warbler, Ruby-crowned Kinglet, Sapsucker, Siskin (another next day), and Savannah Sparrow—all but the last three (one each) represented by at least ten individuals. Furthermore, there were many more Blue Jays and White-throated Sparrows than usual so late, and Chipping Sparrows and Barn Swallows, of which few if any but breeding individuals are normally here at this date, were still present in flocks. And of the following species, all of which should have been well represented

and many of them very common, not an individual was noted: Kingbird, Crested Flycatcher, Wood Pewee, Rose-breasted Grosbeak, Indigo Bunting, Scarlet Tanager, Red-eyed and Yellow-throated Vireos, and Cape May, Bay-breasted, Black-poll, Blackburnian and Canada Warblers; of still others there were but one or two lonely specimens. Toward the end of the week a heavy movement set in, and observers agree that the height of this spring's migration was on May 19 (96 species were noted by Mr. A. A. Saunders at Norwalk, Conn., on this day), but there must have been a general departure that night, as few transients were present next morning. A hardly less notable wave followed which lasted at least over Decoration Day when 250 Barn Swallows, a Tennessee Warbler, and other Warblers and other transient land-birds were seen at Long Beach, L. I., as well as 1,200 shore-birds of ten species, including sixteen White-rumped Sandpipers. On the 26th and 27th Mr. J. T. Nichols and the writer noted, without special effort, ninety-two species at Mastic, L. I.—one flock contained eighteen species of Warblers besides other birds. Mr. Saunders gives the following Norwalk dates among those later than previously known from Connecticut: Sapsucker, May 13; Rusty Blackbird, May 15; Golden-crowned Kinglet, May 16; Junco, May 17; Ruby-crowned Kinglet, May 18; Blue-headed Vireo, May 24; Siskin, May 26; Savannah Sparrow, May 26; Magnolia, Bay-breasted and Blackburnian Warblers, June 2; Canada Warbler, June 3; Tennessee Warbler, June 9; Black-poll Warbler, June 10. Tennessee and Bay-breasted Warblers were remarkably common about New York City this spring, and the Cape May was up to its standard of recent years.—CHARLES H. ROGERS, American Museum of Natural History, *New York City*.

PHILADELPHIA REGION.—April weather being normal, most migrants arrived on time. An early Wood Thrush was noted at Haverford, Pa., by Mr. Wm. L. Bailly on

April 19, and a rather early House Wren was seen at Beverly, N. J., on April 20. These birds usually arrive about a week later. Good-sized flocks of Black Ducks and an increasing number of Wood Ducks were reported at various points. A fine flight of Greater Yellow-legs was observed along the Delaware River. These birds are apparently increasing. The latest reports of Evening Grosbeaks that I have are: Reading, Pa., April 22, Miss Anna P. Deeter; Mt. Holly, N. J., April 26, Mr. N. D. W. Pumyea; Yardville, N. J., May 7, Mr. C. H. Rogers. A Blue-gray Gnatcatcher was reported by Mr. Geo. Spencer Morris at Wenonah, N. J., April 2.

Cold and rainy weather brought us the most unseasonable May in ten years, and while some of the migrants were on time, certainly the bulk of the Warblers and Thrushes arrived from a week to ten days late and seemed very loath to leave; others came crowding in and a congested migration resulted. Between the 20th and 30th of May the woods were alive with birds, mostly Warblers. Of the rarer species, Golden-winged, Wilson's, Cape May, Bay-breasted and Tennessee Warblers were seen at numerous stations. The Tennessee was especially common and its loud Chipping-sparrow-like song was heard on village streets; this Warbler has been rarely noted about here in the spring. About the middle of May a remarkable invasion of White-crowned Sparrows occurred: flock of twenty-four, Reading, Pa., May 17, Miss Anna Deeter; flock of fifty, West Chester, Pa., Dr. C. E. Ehinger; many smaller flocks reported. Some occupied the lawns during their short stay and fed mostly on dandelion seeds.

On Decoration Day seven members of the D. V. O. C. walked together from Riverton to Camden, N. J., and recorded eighty-two species, including seventeen transient species, few, if any, of which are normally here so late in the month. Among them were Herring Gull, Black Tern, and Tennessee, Bay-breasted and Wilson's Warblers.

Doubtless the birds suffered because of the unseasonable weather, for numbers

were reported found dead or dying, some very much emaciated.

The second week in June (Black-poll Warbler, June 9 and 11, Crosswicks, N. J.—Mr. C. H. Rogers) saw the end of the migration, which was the longest drawn out, in many respects the most interesting ever witnessed in this vicinity.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—April and May showed a continuance of the peculiar conditions of March. The migration as a whole proved to be exceedingly interesting and furnished many unusual records. Notwithstanding the cold weather, which, excepting for a few days, continued throughout the entire period of migration, a number of early migrants arrived ahead of time, several of them earlier than previously recorded. Among these may be mentioned the following (the dates in parentheses representing their earliest previous records): The Indigo Bunting, April 22 (April 25, 1908); Yellow-breasted Chat, April 14 (April 16, 1876); Blue-winged Warbler, April 24 (April 26, 1891); Northern Water-Thrush, April 21 (April 22, 1894); Rose-breasted Grosbeak, April 29 (May 1, 1907); Whip-poor-will, April 1 (April 8, 1909) and the Greater Yellowlegs, April 8 (April 19, 1887).

All the Swallows, except the Bank Swallow, arrived about a week ahead of their usual time, and many other species several days in advance of the average. On the other hand, a number of species, particularly the late migrants, were very much behind time, showing thus the great irregularity of this year's migration. For example, the Yellow-billed Cuckoo and the Black-billed Cuckoo came on May 11, four days late; Ruby-throated Hummingbird, May 11, ten days late; Warbling Vireo, May 11, ten days late; Nighthawk, May 11, eight days late; Bay-breasted Warbler, May 17, six days late; Yellow-bellied Flycatcher, May 24, ten days late.

The first appearance of most of the species that arrived ahead of time, as well as of other common birds that arrived about as usual were, however, represented

by one or two, or at most, a few individuals, and the bulk of the species was considerably delayed in arriving.

Evidently influenced by the unseasonably cool weather, the winter residents and migrants remained much later than usual, in many instances far beyond any previously known record, and at the present writing (May 31) many migrants are still here. Some of the most interesting are as follows, the date in parentheses indicating, as before, the latest known previous occurrence: Bufflehead, April 15 (April 10, 1859); Ring-necked Duck, April 11 (March 13, 1842); Goldeneye, May 20 (April 1, 1859); Lesser Yellowlegs, May 17 (May 1, 1900); Red-backed Sandpiper, May 12 (April 22, 1887); Herring Gull, May 20 (May 10, 1887); Ring-billed Gull, May 20 (April 28, 1887); Sora, May 20 (May 5, 1900); Swamp Sparrow, May 27 (May 19, 1859).

A number of birds of rare occurrence about Washington made their appearance during April and May, among them the Double-crested Cormorant, seen on several days in May, the latest by Mr. L. D. Miner on May 20; the Laughing Gull, seen on May 20; the Black Tern, seen on May 17 and on several earlier dates; the Caspian Tern, noted on May 20 and several earlier dates; the Common Tern, on May 20 and 26 and on several earlier dates; the Northern Pileated Woodpecker, seen on April 13; the Red-backed Sandpiper, seen May 12; the Little Blue Heron seen by Mr. William Palmer at Miller, Va., in May; and the Prothonotary Warbler, seen on May 13, at Falls Church, Va., by Mr. I. N. Gabrielson.

Furthermore, a number of species, including several of more or less uncommon occurrence in this region, have been unusually numerous this spring. Such are the Yellow-bellied Flycatcher, White-crowned Sparrow, Northern Water-Thrush and Blue-winged, Black-throated Green, Cape May, Bay-breasted, Mourning and Tennessee Warblers.

Birds as a whole were this spring rather unusually abundant, and this, in combination with the large number of exceptional occurrences and late records, make the

migration a memorable one in our local ornithological annals.—HARRY C. OBERHOLSER, Biological Survey, *Washington, D. C.*

OBERLIN REGION.—All records were broken for lateness and for the scattering character of the migration for April and May. There was a small movement—ten species—on April 3 and 4. From the 16th to the 22nd there were daily arrivals of from three to five species, and from then to the first of May they filtered in one at a time, with three on the 25th and 29th, and four on the 30th. On May 7 there were seventeen moving species. On the 13th, 14th and 15th, five, nineteen and eleven species respectively were moving, and on the 16th, six. This constituted the largest migration wave of the season. From the 18th to the 22nd, thirty-seven species were moving, with scattering movements each day until the 29th, when twenty species moved, most of them records of departure. Late Warblers and Thrushes were recorded on June 5.

The most notable feature of this season of migration was the mortality

among the more strictly insectivorous birds. The first Purple Martins came on April 2. After about a week of fair weather there came nearly a week of rain and cold which caused the death of nearly all of them. Many were picked up dead or dying on the ground beneath the houses, others died within. All were hardly more than skeletons. Another lot arrived on the 14th and shared the same fate. Barn and Tree Swallows came with this flight, and while more of them survived, some were starved to death. A third Martin arrival occurred on the 24th. Apparently these were wiser, for their numbers fluctuated with the weather. It appeared that they returned southward for brief periods during the unfavorable weather.

Among the smaller birds, the Yellow-throated Vireo and Oven-bird seemed to be the greatest sufferers; more were found dead or dying from starvation than of any other species. It is not possible to give any reliable estimate of the extent of the destruction of the smaller birds. All one can say is that more dead birds were found this spring than have been found in the six previous years.—LYNDS JONES, *Oberlin, Ohio.*



TOWHEE FEEDING YOUNG
Photographed by Avis Criss, Amsterdam, N. Y.

Book News and Reviews

PETS: THEIR HISTORY AND CARE. By LEE S. CRANDALL, Assistant Curator of Birds, New York Zoölogical Park. Henry Holt & Co., New York. 12mo. XII + 372 pages, numerous illustrations.

Mr. Crandall's book treats of Mammals, Birds, Reptiles and Batrachians, and the Aquarium. "Every normal child," he writes, "of whatever race or creed, is born with an innate love of wild things. If allowed to languish from lack of intelligent parental interest and supervision, this natural instinct is gradually lost or degenerates into unintentional cruelty of ignorance. Properly fostered and developed, it is certain to exert a beneficent influence on the trend of developing character. . . . The sterling qualities of kindness, responsibility and regularity are acquired, and many of the problems which perplex the adolescent adjust themselves normally by constant contact with reproductive life."

This is so true that we sometimes regret that the stringency of our laws prohibits us from keeping as pets, *under proper conditions*, certain of our birds which appear to thrive in confinement under proper conditions.

However, there are many other forms of life which take kindly to captivity and with which we may establish those intimate relations resulting from daily associations with creatures that are dependent upon us for existence. It is the longing to establish this relation rather than the desire to imprison, which causes us to confine our pets. No pet is loved more than the one which, given its freedom, still shows its fondness for us by refusing to make good its escape.

Here lies the chief charm of 'bird gardening.' Our lunch-counters, bathing-places and nest-boxes promote an understanding between us and our bird pensioners and tenants which turns the species into the individual; the passing acquaintance into a friend.—F. M. C.

The Ornithological Magazines

THE AUK.—The April issue is largely filled with semi-popular articles that are well worth the perusing, while a sprinkling of the technical leavens the loaf. An obituary on Prof. W. W. Cooke, an A. O. U. Fellow, from the facile pen of Dr. T. S. Palmer, pays tribute to the excellence of the life-work of this indefatigable toiler whose chief contributions cover the field of bird migration in North America. A portrait accompanies the obituary.

Dr. C. W. Townsend 'In Audubon's Labrador' takes us, in 1915, with him over the same ground traversed by the great ornithologist in 1833 and shows us photographs of the country and some of its feathered denizens. It is of interest to note that on the original trip Audubon named Lincoln's Sparrow after a member of his party who secured it, and this was the only new species he added to his list. Dr. Townsend also discusses the status of 'The Labrador Chickadee (*Penthestes hudsonicus nigricans*) in Southward Migration,' and Mr. H. W. Wright, writing under a similar title, deals with the 'wave' of this bird that reached Boston and the vicinity in the fall of 1916.

Swinging to the other side of the continent we may read what Mr. F. S. Hersey has to say on 'The Present Abundance of Birds in the Vicinity of Fort St. Michael, Alaska.' Comparing his observations with those of Mr. E. W. Nelson, the pioneer of 1877-1881, the most marked changes in the bird-life of this dreary locality seem to be in the diminution of the Ducks and Geese.

Mr. J. A. Farley in 'Ornithology at St. Marks' strikes an original vein, cleverly and pleasantly introducing us to the various birds represented in the mosaics in the ceiling of the atrium of the ancient Venetian basilica.

Mr. H. Mousley records 'The Breeding of the Black-throated Blue Warbler at Hatley, Quebec,' and in 'Notes and News,

will be found a number of records by Mr. Mousley and others bearing on the influx of various species from the north during the past winter—Evening Grosbeaks, Hudsonian Chickadees and others among them.

A new species of Red-winged Black-bird (*Agelaius phoeniceus grinnelli*), from western Central America, is described by Mr. A. B. Howell, and a new name for the White-breasted Nuthatch, *Sitta carolinensis cookei*, is proposed by Mr. H. C. Oberholser, the old one by a tragic interpretation of nomenclatural rules, being transferred to the Florida form. It would be convenient to have the 'Notes on North American Birds' by Mr. Oberholser presented in systematic order rather than in the haphazard way the series has begun—a systematic ornithologist ought to be systematic first of all. His 'Second Annual List of Proposed Changes in the A. O. U. Check-List,' a compilation of published items is, however, a useful contribution.—J. D.

THE CONDOR.—Of the seven general articles in the March 'Condor,' the two local lists merit special attention. Rust's 'Annotated List of the Birds of Fremont County, Idaho,' occupies nearly one-third of the number and is illustrated by a map and twelve photographs. It includes notes on one hundred and three species based on observations made in the summer of 1916. Fremont County adjoins the western boundary of the Yellowstone National Park, and although it has a much larger proportion of sage brush country within its boundaries, a comparison of its bird-list with that of the Park would be instructive. The carefully prepared 'List of the Birds Breeding in San Francisco County, California,' by Hansen and Squires, is of peculiar interest in showing some of the changes which have occurred in a district of forty-one square miles where within the last seventy years a great metropolis has been built. If the ten species practically limited to the Farallon

Islands and the introduced Sparrow and the Ring-necked Pheasant are omitted, the number of species is reduced to fifty-eight. The most remarkable facts are the finding of the Robin, Junco, Pine Siskin, and Pigeon Guillemot in recent years, and the absence of the Brown Towhee which is so abundant and characteristic elsewhere in the Bay region. This list should be compared with the one published by Ray in 'The Condor' for November, 1916, pages 222-227.

Sell describes graphically the havoc wrought among the Brown Pelicans and other water-birds at Corpus Christi, Tex., by the storm of August 18, 1916. As if by way of contrast, this article is followed by a chapter of Mrs. Bailey's delightful description of the peaceful bird-life of the humid coast as observed at Tillamook Bay, Ore.

From a study of one hundred and twenty-three specimens of Williamson's Sapsucker, Swarth concludes that two forms are recognizable and separates the Rocky Mountain bird from the typical California form under the name *Sphyrapicus thyroideus natalia* (Malherbe).

Wetmore describes an abnormal egg of the common Coot (*Fulica americana*) found near the mouth of Bear River, Utah, May 29, 1916, and attributes the abnormality in size and markings to "continuous excitement and fear and their reaction through the nervous system, upon the ordinary functions of the oviduct."

Palmer gives the full names of fifty-two writers on California birds—comprising about half of the list of those whose names were incomplete in Grinnell's 'Bibliography of California Ornithology.'

Among the shorter notes Oberholser records the total number of species and subspecies of birds now known from Texas as 605. Clay adds the Savannah Sparrow and Grinnell the Eastern Goshawk to the California list making the total number of species and subspecies in that state list apparently 544.—T. S. P.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE Editor of BIRD-LORE has been called to Washington to serve as the Director of the Bureau of Publications of the American Red Cross. The duties of this position leave but a small margin of time for other things, and he therefore trusts that for a time BIRD-LORE's correspondents and contributors will pardon all delays in acknowledging their communications.

WE regret that circumstances beyond our control have prevented the inclusion of a colored frontispiece in this issue of BIRD-LORE. The October number, however, will contain a plate of Swallows; the Martins will be treated in December; the Tanagers in February and April. This will leave only the Shrikes, Waxwings, Larks, Crows and Jays, Blackbirds and Orioles, in all five families, three of them with but one or two species, to complete BIRD-LORE's series of colored plates of North American Passeres. This will mean that BIRD-LORE has figured in colored drawings, one-half natural size, nearly half of all the birds of North America.

BIRD-STUDENTS throughout the West will welcome the appearance of a pocket edition, bound in limp morocco, of Mrs. Bailey's standard 'Handbook of Birds of the Western United States.' The practical working value of the book is greatly increased by its new form.

WE hope that the publication in this issue of BIRD-LORE of the occurrence of albino

birds will not bring us mere records of the observation of abnormally colored birds. Albinism in itself, as we have before remarked in these columns, is by no means noteworthy. It may be manifested by any species, and whatever may be the underlying factors, they express themselves through an absence of pigment and consequent lack of color.

The unusual, of course, always claims our attention, and the appearance of a white, or partially white Robin, for example, invariably excites interest and comment. This comment, however, is not worthy of record unless it includes some observation on the habits or actions of the bird concerned or of other birds in their relations to it. To illustrate: One of the records in this issue tells of an albino Robin seen in the same locality after an interval of a month. Here the bird's peculiar markings permitted the identification of the individual, always an important matter in field-work. A second record relate to a white Swallow which other Swallows seemed to chase; and a third describes a partial albino Bronzed Grackle about which other Grackles were 'evidently curious.' The facts given in both these cases indicate that the albino birds apparently were recognized by birds of their species but were not accepted as normal; evidence that birds possess a power of discrimination.

WE learn with great regret that Norman De Witt Betts, an associate member of the American Ornithologists' Union, and a former contributor to BIRD-LORE, was killed by lightning on May 21, 1917, on a ranch in northeastern Utah, in his thirty-seventh year. Mr. Betts' studies in bird-life were made chiefly at St. Louis, Missouri, Boulder, Colorado, and Madison, Wisconsin, localities where he was successively stationed in the employ of the U. S. Forest Service. He left the Service a year ago to become a ranchman in Uintah County, Utah, a region, where he would doubtless have made field studies of much value.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

CONSERVATION MEASURES

While the attention of the nation is centered upon ways of conserving all available food and economic products, it is a fitting time for Audubon Societies to consider the ultimate uses to which birds are put, and especially, dead birds.

In the preceding issue increased production of poultry and game was urged with a view to supplying more families with fresh, palatable meat and to improving present market conditions. No account was taken, however, of what might be called the by-products of dressed poultry and game, namely, feathers, and in the instance of poultry which is not put into cold storage, feet, heads and entrails.

If the estimate of a practical poultryman is approximately correct, there are about eight thousand feathers on every fowl. For commercial purposes these feathers are divided into two classes—quills and feathers. The first, so far as the writer knows, are of no use as the trade is now managed, except to make artificial flowers or to be used as quills for millinery purposes, and since quills from larger birds than fowl and game are in greater demand, poultrymen are quite as apt to throw away wings and burn them on a dump-heap as to waste time trying to save them. On poultry-farms where only a thousand fowls are kept, this waste is considerable, while in larger establishments the loss would annually net an appreciable sum of money.

There may be several ways of utilizing wings or 'quills' (which include, of course, tail-feathers), but the most apparent one is the following easy method. Recalling the homely inventions of our grandmothers, everyone who can think back two generations must have seen or heard of the familiar 'wing' used about the store, hearth or house in general for dusting and brushing purposes. To this day a good wing, that is one which has been properly cured and handled, is quite, if not more, desirable than a cheap bristle brush, since the latter wears rapidly and unevenly, and is becoming more and more expensive along with brooms.

To make a wing usable and durable for household purposes, it should be dried a short time and then neatly bound at the cut end with a piece of cloth tightly sewed about it. A loop or small brass ring attached to the cloth handle, by which it may be hung up, completes the simple process unless one takes pains to disinfect the feathers. The wings of Turkeys and Geese are larger and more

like a regular brush, while the wings of fowl are softer and better adapted to dusting nooks and corners not easily reached by a cloth.

The tail-feathers of poultry and game are more difficult to utilize satisfactorily, being loose instead of firmly attached to a bony framework, but with a little patience they can be gathered firmly together, and then tied and bound into very useful dusters, almost round in shape. Reckoning the value of such a wing or duster at ten cents—and surely one is worth that sum if small cheap bristle brushes are worth thirty-five and forty-five cents—the saving in actual money by utilizing such a waste product would be great. Moreover, in many homes where rigid economy must constantly be practised, the saving effected in this way, small as it might be, would be worth while, especially since it would revive a custom common to every well-ordered household in days gone by.

The contour feathers of birds are commonly sold for about ten cents a pound, in New England at least, to middlemen who make a profit of two cents a pound in passing them on to manufacturers of cheap mattresses. It is said that such mattresses are particularly used by French-Canadians who make up so large a part of the manufacturing population of New England. When one considers how many contour feathers it takes to weigh a pound, it will be seen that such a feather-mattress calls for the plumage of many birds, but as this is a practical way of utilizing the plumage of dressed poultry and a far better one than any ornamental device known to millinery, it need not be discouraged.

Just how many 'quills' and 'feathers' of domestic fowl find their way to manufacturers of millinery goods the writer does not know, but it must be evident to every thoughtful person that the plumage of poultry is far better conserved in beds and brushes than in bizarre, inartistic ornaments for women's headgear. This season an unusual number of such ornaments, in addition to wings, are seen on hats. To a person of taste, such a display is actually painful. As a keen observer remarked: "If women *were compelled to wear* such crude, fantastic adornments as one commonly sees, they would probably feel injured and rebel." Why should the illusory, deceptive word, *style*, which connotes so little, hold women of common sense, acumen, and otherwise good morals in thrall! It makes no difference whether feather ornaments are real or imitations, the result is the same in kind, and any woman who persists in wearing wings and the present abominations (artistically considered) known as 'aigrettes,' which crisp and curl in any or all directions the maker may dictate, certainly commits a real offense against the canons of good taste, and, furthermore, persists in being a stumbling-block to less intelligent women and girls who follow the lead of the so-called well-dressed woman.

It is not pleasant to hear men sneeringly remark that women will never give up using feathers on hats, when women do so many things of much larger import and make sacrifices that men have never been known to make.

The time has come now to drop this childish fashion, to realize that any and all parts of a bird's plumage are useful for more practical needs than for

millinery purposes and to recognize the glaring trespass against good taste and public manners committed in wearing unnecessary, obtrusive, and distorted headgear. This practice, upheld in the name of Fashion, is on a par with the monstrosities of billboard advertising, now so generally condemned in communities where the landscape and public morals are esteemed. If any reasonable justification of adorning hats with the plumage of birds, whether real or imitation, could be given, the case might be different. The whole matter has become an issue of perverted taste, a relic of savagery handed down from uncivilized forbears who chose in childish love of bright colors and fantastic forms, to adorn themselves with feathers.

As to uses of the feet, head, and entrails of birds, the writer would welcome any information from persons who actually know what disposal is made of this so-called refuse. Aside from fatty and oily portions, and the possible use of parts of this matter in making 'meat-scraps' for poultry, the probability is that most of it is destroyed.

Let Audubon Societies investigate the whole subject thoroughly and discover the best means of conserving this waste, which if properly managed should yield the producer as well as the consumer of poultry and game better results.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXIV: Correlated with Music, Public Speaking, and Design

[NOTE.—In view of the constant increase in correspondence, the Editor of the School Department deems it wise to devote this midsummer number to articles contributed by its readers.—A. H. W.]

BIRD PAGEANT GIVEN AT JOHN B. ALLEN SCHOOL Seattle, Washington

By L. LILLIAN MITCHELL

PROGRAM

PART ONE—PROLOGUE

(Orchestra Plays)

- I. Father Time and Mother Nature.
- II. Flowers appear.
- III. Birds appear.
- IV. Wren Drill.
- V. Woodpecker Song.
- VI. Crow.
- VII. Hummingbird Dance.
- VIII. Swallow Song.

PART TWO—BIRD-LIFE

- I. Robins' Nest.
- II. Cat catches one Robin.
- III. Boy and girl catch a little Robin and put it in cage.
- IV. Value of birds.
- V. Pleasure derived from birds.

PART THREE—DEDICATION OF BIRD-BATH

Boys' Chorus Sings.

I. Bath presented.

II. Speech of thanks by Father Robin.

III. Bird Pledge by School.

IV. Birds flutter around Bath.

V. Orchestra.

Directions.—Reserve front of stage for visitors. To left of stage, shrubs and bushes; entrance for Father Time, Mother Nature and Flowers. To right of stage, seats for orchestra and school. Background filled with trees. Center back of stage, house and a few feet in front, slightly to right, bird-cage. Left center of stage, inside of shrubs and bushes, a tree with three shrubs running diagonally across toward right front of stage. A few feet in front of this tree is placed a bird's nest. A bird-bath stands on right front well toward the footlights.

EXPLANATION

PART ONE—INTRODUCTION

Father Time and Mother Nature slowly enter the place selected for the pageant. Father Time carries a large dial on which is printed the seasons. Mother Nature carries a wand of branches of different trees. They cross stage once, then Father Time turns the dial to point to Spring. Mother Nature looks at his sign, then slowly waves her wand. A little girl, dressed to represent a crocus, trips forward and dances. When she finishes she glides to the back of the stage and Mother Nature again waves her wand when girls, dressed to represent a violet, a daffodil, and a tulip, each come on separately and dance. As the last flower finishes, the other three join her and all dance to the back of the stage.

Mother Nature waves her wand again and all of the birds in their costumes flutter forward and flit, dip, and glide around. Soon they all fly into the woods at back of the stage. Again the wand is waved and two little Wrens from the primary room come on to stage and flit and dip while the rest of the room sing the "Wren Song." Then at the call of the wand three children representing Woodpeckers come forward and tap on trees while their room sings the "Woodpecker Song."

Next, one boy, dressed as a Crow, comes forth and clog-dances. He is followed by seven little Hummingbirds who flit and twist and turn on all parts of the stage as their room sings about the "Hummingbird."

Last come five little Swallows, who dip gracefully as their room sings the "Swallow Song."

Father Time and Mother Nature leave the stage as it is being made ready for Part Two, and all of the little birds hover around the woods at the back of the stage, where they can be seen but not heard.

PART TWO—BIRD-LIFE

A Robin's nest, large enough to hold three little children and a doll dressed to represent a Robin, should be put in place before the pageant begins and kept from view by a screen. A bird's nest containing another doll Robin is placed in a tree that is near by. A cage made of wire netting and large enough to hold one of the children, who represents a little Robin, is in the center back of the stage. It is screened off during Part One. (Four attendants remove the screens at the right time.) Three children, dressed in green, each holding a bush behind which to hide, sit down in different parts of the stage.

The screen is removed from the Robin's nest showing the three little children, the doll Robin in the nest and the father and mother Robin by the nest. The father and mother Robin fly away to get food. When either of them returns to the nest with imaginary food all the little Robins stretch up for it. (The mother Robin comes three times and the father Robin twice.) A cat is seen wandering back and forth; when both birds are away from the nest it sneaks over and seizes the doll Robin and carries it off into the bushes, after having worried it. The old Robins see the cat worrying it and fly frantically to the nest. The mother Robin quiets the little ones and the father Robin chases the cat.

As the father Robin and the cat disappear in the bushes, a little boy and girl run across the stage and point at the bird's nest in the tree. The boy climbs the tree and takes out the doll Robin and gives it to the little girl who fondles it and then runs and puts it into the cage. (As the little girl comes running, the attendant, who is behind the screen that hides the cage, takes the doll, removes the screen, and exposes the child Robin, which got into the cage while the boy was climbing the tree.) The frightened bird tries to get out and the boy pulls grass and throws into the cage, which frightens it more than ever. The girl goes in search of worms, wanders off into the woods, and gets lost. The cat sneaks over, puts his paw into the cage and tries to catch the bird. The boy drives the cat away and it disappears in the woods.

Five or six boys and girls rush over to the cage and question the boy, in pantomime. He shakes his head, and they hurry out into the woods to look for the little girl. (They put their hands up as if shouting, and run back and forth, until one designated searcher has crossed the stage three times. Then another searcher discovers the girl sleeping behind a bush. Motioning to the rest of the searchers, they embrace the girl and carry her home.) As they near the cage where the boy is still watching the bird, which is drooping now, the boy runs out to meet them and he and the girl hurry to the cage. The girl stands, gazing thoughtfully at the drooping bird for a moment. She slowly lifts the cage and takes out the bird. She nestles up to it for a moment and the bird flutters, straightens up and slowly flies away to its nest. The searchers then lead the little boy and girl away.

The father and mother bird now begin to coax the little Robins out of the nest. They give a call-note and fly back and forth. Finally the little ones move, half tumbling and half crawling out of the nest. Then the father and mother birds begin to pick bugs and insects off the shrubs, followed closely by the little Robins who occasionally fall down and who always open their mouths wide when offered something to eat. The old birds pick at the roots of the shrubs, too. The shrubs begin to grow. They rise slowly until they are standing up. Soon the Robins begin to fly farther away and finally coax the little ones, who are flying better by this time, out into the woods.

The screens are now arranged to represent a house, and a rocking-chair is placed in front of it. An old man (a boy with white hair and beard, wearing an overcoat and leaning on a cane as he limps along) comes out and sits on the chair. A Bluebird appears and flits back and forth while the rest of the children in the room sing the song "Bluebird." The man watches for the bird and smiles happily every time that it appears. The Bluebird then flies into the woods and the stage is cleared for Part Three.

PART THREE

[As the different sets of birds finish their part of the program they retire to the woods which are set at the back of the stage and fly quietly back and forth during the conclusion of Part Two.]

The principal, or whoever presents the bird-bath, unveils the bath, which has been standing in one corner covered by the flag. As he does so all of the birds from the woods flutter in and fly around the bath. The person who presents the bath makes a short,

appropriate, dedicatory speech to the birds and then father Robin steps forward and responds thus: "We thank you for your kindly interest in our behalf. May this bath be a blessing to many thirsty birds." [Turning to the school, which is seated on benches]: "And now pupils of the (John B. Allen) School, in view of the countless perils confronting us, and of our helplessness before them, we implore your help in creating a way of deliverance, through better knowledge of us and of our value, more thoughtfulness for us, and more sympathy with our weakness and our love of life." The school then gives the following bird pledge: "We promise to do all that we can for our native birds by treating them with kindness and by providing them with food, water, and homes."

The orchestra plays a selection, and a child comes forward with a flag. The whole audience stands, giving the flag salute and pledge, singing "The Star Spangled Banner" in conclusion.

[Those teachers who are interested to train their pupils to give a simple pageant, presenting few practical difficulties in staging, will be glad to know that the above was so favorably received, when given by the John B. Allen School at Seattle, Washington, that visitors in the audience urged its publication.

"In regard to further instructions concerning the costumes and the bird's nest, see pictures of children dressed as birds in 'Bird Children' by Elizabeth Gordon. The costumes used were all made of lining, except those of the Hummingbirds, who were costumed in cheese-cloth. Most of the costumes completely covered the arms, while a few had straps to run the fingers through. The tails were wired so as to make them stand out. Each child was measured and the costume made large enough to be worn over the clothing. The cat's costume was cut like a child's sleeping-suit and a stuffed tail was sewed on made of black lining.

"The bird's nest was made by placing a log across the front and setting a few stakes between which were woven twigs. The whole was covered with old grass. This was placed on a small elevation on the field chosen for the pageant. If there should be no elevation a small platform could be erected and covered with boughs."—A. H. W.]

FOR AND FROM ADULT AND YOUNG OBSERVERS

THE STORY OF 'BEAUTY'—OUR TAME ORIOLE

One morning late in June my little sister, while playing in the school-yard, saw a baby Oriole fall from a tree. She picked it up and placed it in some bushes where she hoped it might be safe. As soon as school was out she found it and brought it home, just a little fluffy ball of tan and light yellow, with two rows of white feathers like dandelion down along the sides of its head. One of its feet had been injured, for the toes were very much inflamed and one nail was missing.

Mother had read, 'First Aid to Birds' in the *Youth's Companion*, and she thought she would like to try helping the little one. We made a mush of egg-yolk and boiled potato, and, placing the bird in a berry basket lined with grass, we fed it from the end of a pointed orange-spoon. Drops of water were given in the same manner and an occasional bit of berry or worm. For the first few feedings it was necessary to force open the bill by a slight pressure at the

sides but soon merely the touch of the spoon was the signal for opening the mouth at once.

In a couple of days Beauty began to hop to the edge of the basket, then off the basket to the floor, and from the floor attempted to fly to the chair-rounds. At first our bird could only reach the very low ones, but each day it reached a higher one and soon could fly anywhere about the room. When first learning to do this, it would back off about a foot and then give a sort of leap. If it failed it would back off a little farther and would finally gain the round.

When very young it kept up an almost incessant calling, but as it developed this changed to an occasional low, soft call or a quick trill or chatter in answer to our call or whistle.

The tail and wings developed rapidly and by the end of two weeks Beauty was almost an exact reproduction of Mother Oriole. The feathers under the wings and along the sides of the breast seemed to become a deeper yellow each day.

We soon placed Beauty in a cage with a shallow dish of water and also one of food, and before long the little bird was beginning to drink and pick up things for itself though it still liked to be fed. One day we found it soaking wet. It had been down in the water-dish for a bath. Some of these warm days Beauty washes several times and has become so tame as not to seem afraid of anyone. Before being able to fly, Beauty would hop after mother's



RUTH AND 'BEAUTY'

"For the first few feedings it was necessary to force open the bill by a slight pressure at the sides"

skirts, and as soon as strong enough to use the wings, would fly after us everywhere, lighting on our heads, shoulders, or hands, coming to the table at meal-time, and taking a helping of anything if allowed to alight on the dish, the remains of cereal, butter, cocoa, berries, etc.

After our bird had lived with us for about three weeks we hung its cage from an upper window near an elm tree. How it loved that elm tree! It spent most of the time in it, coming back to the cage quite often for food. If the window was open it would come in for a time and then fly out again. Once in a while it flew to trees farther off but always came back when we whistled or called.

Our pet found the water on a bird-shelf about fifty feet away and loved to bathe there, though still drinking in the cage. Beauty constantly surprised us

when we were out in the yard by lighting on us when we least expected it, or coming down in the flowers we were gathering, to look for little insects among them.

At night we coaxed this baby Oriole to the cage with sugar, which it would always come for, and then we closed the door for safety's sake. Early in the morning Beauty called to have the door opened and seemed so glad to get out to the tree and the bugs again!

Just now our bird is sitting on the table eating peanuts which little sister is crushing for it. Beauty loves to have a taste of everything—meat, potatoes, vegetables or ice-cream—and begs for a share of them all and is so very wise and cunning, with head on one side waiting for something more.

We cannot begin to describe how cunning our pet is, and we are all so fond of this little bird founding! We wonder if it will fly south with the Orioles in the fall and if it will come back to us next year. We should know it by the crippled foot, and how we hope Beauty will come back to us again!—RUTH H. SCOTT (age 12 years), *Wake Robin Junior Audubon Society, Kingston, N. Y.*

[The teacher who forwarded this contribution writes: "Last spring, I formed a Junior Audubon Society with twelve little girls; other children heard of it and wanted to join. Before school

closed we had over seventy members. In May many of them spent a Saturday at Slabsides with John Burroughs. I have known him for many years.

"We took walks once a week, after school, and to most of the children, it opened up a new world. They began to notice all the birds and then try to find out their habits and loved to tell about what they had noticed.

"I am enclosing a little story that I thought perhaps you could use in BIRD-LORE. It might be a help to some other little folks to know how to make friends with the birds. It would be impossible to tell of the many cunning things 'Beauty' did. I was a personal friend of his.

"The little girl who is sending it has been especially interested in birds for two or three years, knowing most of our familiar birds by call as well as by sight.



"AT NIGHT WE COAXED THIS BABY ORIOLE TO THE CAGE WITH SUGAR"

"Last winter she had a Chickadee come and feed from her hand.

"The development, growth and friendliness of 'Beauty' was such a wonder to all the neighbors, we thought others might like to know about our pet. We enjoyed the story of 'Pete' in the May-June number. Just now the children are caring for a baby Robin until it is able to fly and care for itself. It was rescued from a cat."—A. H. W.]

A PARTRIDGE FAMILY

On the morning of June 7, in a pile of dead pine branches, I saw a single Partridge or Ruffed Grouse. This did not arouse much interest, but about four in the afternoon, while returning from a short ramble, I was surprised to see a flock of what I took to be seven or eight downy yellow-and-brown baby chickens of a very small size.

I did not hold my idea concerning baby chickens long, for very soon I saw an angry female Partridge who came at me with half-open wings, screaming, 'Hide! Hide!' very much like a cat.

Most people think that the parent Grouse pretends to have a broken wing and that the babies drop wherever they are, but this was not the case in my experience.

The mother, after the first attempt to frighten me, flattened every feather and went over the ground as if on wheels. Then she fluffed out all her feathers, spread her tail to almost a half circle, and erected her crest so as to seem twice her size, and then repeated her tactics.

The little ones ran as fast as they could—which is pretty fast—for ten to twenty feet, to a place of concealment where it was impossible to find them.

As soon as the chicks were hidden, the mother ran to some distance where she took wing noisily and departed.

I have not seen or heard anything of them since.—PHILIP J. DARLINGTON, JR. (age 12 years), *Winchester, N. H.*, R. F. D. 4.

[As readers of this article might be confused by the use of the names Partridge and Ruffed Grouse, it may be well to recall that in the North, the Ruffed Grouse is commonly known as Partridge, while farther South, the common name Partridge is applied to the Quail or Bob-white.—A. H. W.]

GULLS AT BANDON, OREGON

I am a member of the Sandpiper Bird Class at Bandon. This is a little town of about 2,000 people. It is picturesquely situated at the mouth of the Coquille River, on the south side. From any part of the town there is a beautiful view, but we built our small home as near the great Pacific Ocean as we thought it safe to live, so we enjoy the beach, which is considered by everyone who has had the pleasure of seeing it, as the most beautiful one on this coast. There are many enormously large rocks which Nature has carved in ages gone by. Among these are the Sphinx, or Great Stone Face, Duchess, Monk, Table and Cross rocks and the Cave of the Winds.

These rocks are the homes of Gulls, Murres and Puffins. The Gulls are very pretty birds, especially the grown ones, which are a bluish gray and white. The young are speckled brown and white in color. They have rather long legs, very large wings but a small body. The neck is long, with head similar to that of a Duck, but with a pointed beak bent at the point.

When seen on the beach or flying, they look large and heavy, but we have picked up injured ones on the beach and found them very light in weight. Sometimes they have a wing injured by a shot or a crippled leg where a crab's claw has had hold, or so it looks to us. They are graceful birds in flight or



GULLS AT BANDON, OREGON

"The beach, which is considered by everyone who has had the pleasure of seeing it as the most beautiful one on this coast"

when walking. Of all birds I think them the least timid, and am sure they could be easily tamed. For a long time one would come and sit in front of our house and we would feed it and talk to it. Each day it came closer, but after a time it came no more.

As everyone knows Gulls are scavengers and will follow ships on their voyages, watching for any scraps of food which may be thrown overboard. A great many people are annoyed because they come and steal food from their chickens. At noon each day they visit our school-house to look for bits of lunch which the children leave. For a time some of the boys tried to catch them. They soon learned the lesson and now stay perched out of reach until the lines form for the children to return to lessons, when down they fly for their lunch. People think it odd they do not bother us as we are so near the beach.

The only time we see them is when they are leaving the rocks soon after sunrise on their way to the wharfs or river beach, and again just at sunset when they are going to rest for the night, unless by chance a dead animal or fish has been thrown up on the beach, or the season for clam-digging is on. When the tide is low they feed on crabs which they catch by a leg, then fly to a rock where they drop their prey, thus breaking the shells so they can eat the meat.

The other day as I was walking by the river I saw a full-grown Gull flying around with a piece of meat, and two younger ones were flying after, screaming their loudest. I think the parent Gull was either teaching them to fly or to steal. They are such thieves! At almost any time one can see two of them having a tug of war over a fish. One will have the head, the other the tail, and they will pull and fight until one wins and flies away with the booty, or another Gull swoops down and grabs it, leaving the other two very angry.

As we walk along the river to town, which is about half a mile from our home, we have noticed Gulls by hundreds on the north side of the river near the lighthouse, watching for fish and crabs. As soon as one secures a prize it begins to scream.

In the fall of the year when the salmon start to run, the Gulls go farther up the river to the seining-grounds and to the cannery. Here they find plenty of food.

Although to some they are most annoying, they are very useful, as they keep the ocean and river beaches free from all refuse and decaying matter. They are protected by law, yet some boys and men delight to shoot at them.

Their nests are made in deep grooves in the rocks, lined with straw, grass and mud. There they are nearly safe from human hands. This is unlike the Murres which lay their eggs scattered about on the great rocks, so they may be easily picked up by anyone who can climb the rocks, which is not an easy task, yet many people do it.—IRENE BARNEKOFF (age 14 years), *Bandon, Ore.*

[Perhaps some of our readers may have noticed a newspaper item last winter about Sea Gulls off the coast of Ireland, which "assisted airplanes in finding the positions of submarines for the motor patrol boats stationed along the route of incoming and outgoing ships." The article states that "these birds, which have keen vision, can sight a submarine below the surface of the water and fly down to see whether it is some new kind of fish. The motor boats then run up at full speed and start to shoot bombs in the sea to find the suspected submarine."—A. H. W.]

THE SUMMER TANAGER

Last year a Summer Tanager built a nest on an oak tree near the house out at the farm. Every evening I would watch the mother sit on a low branch and call her mate, and I would watch the mate come and they would go to bed.

I watched them teach their babies, but the babies were not very pretty. It took them two days to learn. This year they came and built again.—ROBERT S. COLLINGS (age 10 years), *Hot Springs, Ark.*

[The youngest member of the Boys' Audubon Club, which is the Bird Protectors' Club of Hot Springs, sends the above. As a bit of unaided observation on the part of a boy only ten years old, it conveys first impressions of bird-life vividly. Such first impressions are the ones which stay by one the longest and lay the foundation for more extensive knowledge in later years.—A. H. W.]

A BIRD RECORD OF NOTE

Harold Fredrickson, an eleven-year-old lad, has a list of birds identified during the year 1916 which any boy should be proud of. The list includes ninety-eight species, all of which have been seen during the year 1916, in and about Charles City, Iowa.

The first actual record for a Cardinal seen at Charles City, for several years, is on this boy's list.

He serves as Vice-President of the Toksali Nature Club, a Junior Chapter of the Califor Naturalist Club, and also acts as curator of the Club. All specimens of nests, and other nature material, found while the Club is tramping are given into his care. During the winter months, the Juniors study the animals, birds, etc., from specimens at hand. They never kill, however, for a specimen, except in the order of insects.

The Califor Naturalist Club has for several years published the list of birds seen by Club members during the year. Making use of these lists, and several others of individual observers, the Corresponding Secretary, Carroll Lane Fenton, recently compiled a list of the 'Birds of Floyd County.' This list was published in the 'Wilson Bulletin.' The President of the Naturalist Club is now working on a list of the 'Mammals of Floyd County,' and as soon as possible, lists of the insects, mollusks and reptiles will appear. Mrs. F. May Tuttle, an honorary member of this Club, is now compiling a list of the 'Flora of Mitchell County.' When this list is completed, it is to be published by this Society, and with the other lists, it will form quite an accurate and complete list of the wild life of this part of Iowa.—HOWARD C. BROWN, *Charles City, Iowa.*

[Practical work of this kind is most desirable, since local observers covering limited areas can obtain reliable data which is necessary to fill in gaps in observations covering larger areas. Bird clubs should everywhere be encouraged to keep accurate systematic records for uses of comparison.—A. H. W.]

THE BLUEBIRDS

A male Bluebird sitting in a tree,
Sings a sweet song to you and to me;
His tender mate is on the nest,
Sheltering some little eggs beneath her breast.

—MARJORIE CARLSON (Age 8) *Garfield School, Minneapolis, Minn.*

THE PHŒBE

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 93

There is a little camp in the woods on the New York side of Lake Champlain where three children and their parents go every summer. It is a good place to see birds. In fact, the children are awakened every morning by birds singing in the trees all around them. There are Redstarts and Chestnut-sided Warblers about every day. Near by the Oven Bird calls "teacher, teacher, teacher," until one begins to wonder what has become of that dear instructor. Sometimes the old Grouse follows her young through the thicket and under the veranda. In the evening it is pleasant to sit on the porch and listen to the Veeries. Sometimes a dozen sing until the night shuts in upon them.

Of all the birds, however, that visit "Bird Nest Cottage" the Phœbe is the most trustful. She and her mate may be seen at almost any time, either on the veranda-railing or on some bare limb of a tree near by.

When the family arrives on the fifteenth of June, the children, after one look in the camp, all rush out to find the Phœbe's nest, and for several years they have never been disappointed.

Three seasons this bird built under the veranda, placing the nest on cross-timbers. Last summer the nest was made on the top of a window-facing just under the low-hanging eaves. This place would be a very insecure foundation for a nest as large as that built by the Phœbe, as the projection is less than an inch from the side of the wall, if the nest were made of sticks and straw, but the Phœbe builds her cradle chiefly of mud, so she can plaster it to the wall almost anywhere that there is just a little support. Moss is usually employed in addition to the mud.

Four white eggs are laid. These are rarely adorned with a few brown spots. The children, however, have never been able to discover whether this particular Phœbe lays pure white eggs or whether they are spotted. The reason for this is that the eggs are always hatched by the middle of June.

All day long the plaintive *pewit phæbe* of the parent birds may be heard, and every few minutes one of them brings food to the nest.

One night we took an electric torch and climbed down the rocks under the veranda to see what the Phœbe family was doing. There, sprawled all over the top of the nest, were four well-grown youngsters—the parents were nowhere in sight. Had the little ones been hatched only a few days we should probably have found the mother at home, but now there was no need for her presence to keep the babies warm, for they were not only nearly as large as their mother, but well covered with feathers. The night was warm, so it was more com-



THE PHOEBE

Order—PASSERES
Genus—SAYORNIS

Family—TYRANNIDÆ
Species—PHOEBE

National Association of Audubon Societies

fortable for everybody to leave the young ones by themselves, while the mother roosted in a tree near by. I suppose it was a great relief to her to be able to get an unbroken night's rest once in a while after a hard day's work feeding them.

There are other camps in the neighborhood, and probably every third one has its pair of Phœbes. Some of the people do not like to have the birds around,



A PHOEBE AT ITS NEST IN THE FACE OF A CLIFF

so I have heard that they tear the nests down, but at "Bird Nest Cottage" Phœbes are always welcome.

Phœbes build their nests in a great variety of places, but the most of those I recall having seen were situated on some structure made by the hands of man. Thus they build on the joists of barns or other outbuildings; on the cross-pieces of verandas; under the eaves; on the cross-pieces of culverts or bridges; or on the sides of rock walls. Once I knew a Phœbe that made her nest on the side of a disused open well. The spot selected was about six feet below the level of the ground and was protected by a broken piece of

rotting curbing. Stone piers of country bridges are favorite places and the bird is widely known as "Bridge Pewee."

Mr. John Burroughs thinks the Phœbe does not show any very great amount of intelligence when it comes to adjusting its mind to new conditions. In BIRD-LORE, some years ago, he recounted an incident of a Phœbe that suddenly found herself deprived of the one spot on the ledge of a rock where she had been building her nest for years, and which may have constituted the only place where she had ever had a nest. At this juncture he states:

"A new stone house had been built upon the rocks above me, with a piazza all around it, covered by a continuation of the main roof down the required distance. After much inspecting of this piazza the birds concluded to build a nest upon the plate beside one of the rafters. Now this plate was about thirty feet long and there were ten rafters notched upon it, and hence ten plates exactly alike. The bird selected the fourth rafter from the end nearest the woods, and began her nest upon the plate beside it. She was in a great hurry and worked 'on the jump,' so to speak. She got her mortar in the ditch near my cabin. One morning I watched her for some time. She made a trip every minute, carrying her load up a steep grade about one hundred yards. The male looked on and cheered her, but did not help. He perched upon a dead sunflower-stalk near the ditch, flirted his tail, and said, or seemed to say, 'Go it, Phœbe, you are doing well; you are the wife for me.' Every trip the mother bird made he would accompany her a short distance and then return to his perch.

"As the nest-building seemed unusually prolonged, I went up one morning to the new house to see how matters were progressing. Instead of one nest I found five in process of construction. Some had only the foundation laid, others were an inch or two high, and one was three-fourths finished. I sat down to see what it all meant. Presently the eager builder came with her beak loaded and dropped down upon one of the nest-foundations. She seemed to hesitate a moment, as if she had a suspicion that something was wrong, and then put down her material and flew quickly away. The next time she struck the nearly finished nest and put down her load without hesitating. I watched her for half an hour and soon saw how it was with her—why she scattered so. I concluded she was misled by the sameness of the rafters—they were all alike, and whichever one she chanced to hit in her hurry, there she deposited her mortar. She had been used to a ledge where there was but one building-site; here there were half a dozen or more, with no perceptible difference between them. So I hit upon a plan to concentrate her—I put blocks of wood or stones in all the nests but one and watched the result. When now she came upon these strange obstacles she would hover about for a moment until she discovered the largest and unincumbered nest, when she would alight upon it and leave her load. She then soon took the hint, finished the one nest, laid her eggs, and went forward with the incubation."

John James Audubon, the great naturalist, tells us in one of his books of the movements of a pair of these birds about their nest. He hid in a cave near the nest while the birds went about their daily affairs. He says:

"There was a remarkable and curious twittering in their note while both sat on the edge of the nest at those meetings, and which is never heard on any other occasion. It was the soft, tender expression, I thought, of the pleasure they both appeared to anticipate of the future. Their mutual caresses, simple as they might have seemed to another, and the delicate manner used by the male to please his mate, riveted my eyes on these birds, and excited sensations which I can never forget.

"The female one day spent the greater part of the time in her nest; she frequently changed her position; her mate exhibited much uneasiness, he would alight by her sometimes, sit by her side for a moment and suddenly flying out would return with an insect, which she took from his bill with apparent gratification. About three o'clock in the afternoon, I saw the uneasiness of the female increase; the male showed an unusual appearance of despondency, when, of a sudden, the female rose on her feet, looked sidewise under her, and flying out, followed by her attentive consort, left the cave, rose high in the air, performing evolutions more curious to me than any I had seen before. They flew about over the water, the female leading her mate, as it were, through her own meanderings. Leaving the Pewees to their avocations, I peeped into their nest, and saw there their first egg, so white and so transparent that to me the sight was more pleasant than if I had met with a diamond of the same size."

Very often the Phoebe rears two broods of young in a year. In such cases the first nest is rarely used a second time. Their nests are often infested with insects that must render the lives of the young very uncomfortable, in fact they are sometimes killed by the attacks of these parasites.

Few birds are greater insect-eaters. One need only watch a Phœbe a few minutes to become convinced of this fact. True Flycatcher that he is, the bird lies in wait for his prey. His watch-tower is some dead limb or stake. Here he sits, frequently jerking his tail nervously and calling in his petulant, impatient way until some insect comes flying along. Then out he darts, seizes his prey in his beak, and returns to his perch.

Phœbes eat many beetles, weevils, grasshoppers, and wasps, as well as flies that bite and sting cattle. A few seeds are taken and the bird eats also an occasional cherry, elderberry, or other wild fruit. It is among the first birds to arrive in spring, and is the only Flycatcher in the United States that spends the winter north of the frost-line. It may be seen in Florida, Louisiana, and other southern states in the winter.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

A NEW THREAT TO BIRD-LIFE

The war situation has resulted in an increased menace to bird-life in the United States. There is growing evidence that owing to the high cost of meat and other food-staples, Italians and Hungarians in the North and negroes in the South have turned an unusual amount of attention to the killing of song-birds, and as the war goes on this slaughter will tremendously increase unless checked.

This matter has promptly been taken up by the Association, and by the quick assistance of the members a campaign has been launched to meet this new drive against our birds. At the present time the Association is active through the press in calling the attention of the public to the necessity of each individual exerting his or her influence to see that birds are protected. It is absolutely impossible for the limited game-warden force of the country to watch every irresponsible person who goes out with a gun, but if the people of the country who are interested in birds will investigate every gunshot they hear, will warn their employees not to kill birds, and to watch for others with a view to reporting violations to their game-warden or to this office, great good can be accomplished.

The Association also has prepared cloth 'warning notices' which will be sent free to anyone willing to post them on their property, by the roadside, in country stores, or elsewhere. These posters call attention to the law on the subject, and ask people to report violations. They are printed in English and Italian. Across the top runs the legend, "Shooting on this Property is Prohibited." Thus the posters will serve property-owners as trespass signs, and when placed elsewhere they may be turned in half an inch at the top so that this line is not displayed. Write at once for a supply of these.

As Secretary of the Association I wish to urge all our members and other readers of BIRD-LORE to exercise unusual vigilance, for such service will greatly be needed during the coming summer and autumn. If you find anyone illegally killing birds, try, if possible, to get the person's name and address. Collect every available fact on the subject, and if you do not know the local game-warden, write or wire the facts to the office of the National Association and we will take the matter up through the state authorities. The Association stands ready to go to the expense of employing a lawyer, if neces-



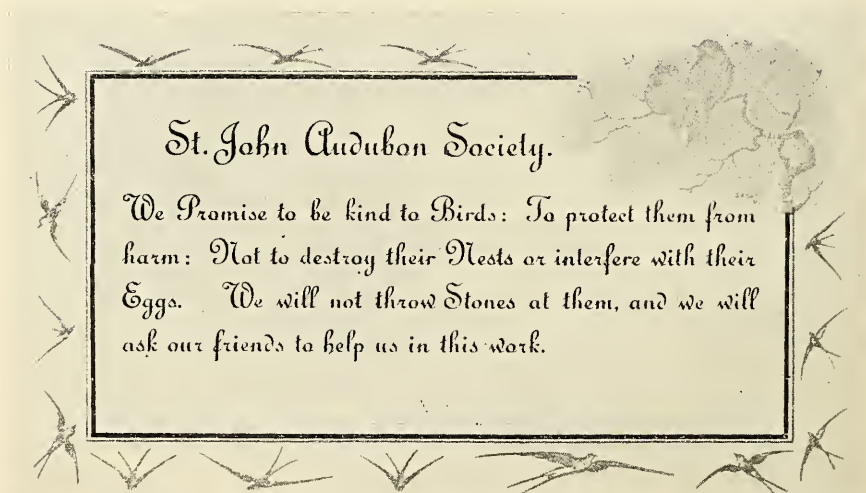
ST. FRANCIS AND THE BIRDS
From a drawing by A. G. Learned

sary, or take other steps necessary to bring such offenders to justice.

This is the time when all Audubon Society members should be particularly alert. The enormously enlarged acreage being put under cultivation in this country means that the greater crops of succulent plants, grains, and vegetables will furnish additional food for insect-pests. A large per cent of the eggs laid by insects never reach maturity. One reason for this is the lack of food. With increased food there will be an increased number of insects.

This means we need a greater number of birds. We must wage a campaign of the utmost vigilance. Birds should be fed during the time of the year when their natural food is scarce. More nesting-boxes should be placed for them, and drinking-fountains should be provided in dry regions; and, above all, look out for the man or boy with a gun!

The food now destroyed in America by insect and rodent pests would feed the people of Belgium! Can we spare a single insect-eating bird?



PLEDGE CARD USED BY THE MEMBERS OF THE ST. JOHN, NEW BRUNSWICK, JUNIOR AUDUBON SOCIETY. IT IS ATTRACTIVELY PRINTED IN THREE COLORS

OUR ARMY OF RECRUITS FOR BIRD-PROTECTION

Think of educating 261,654 children to the beauty and value of bird-life in a single school year! This is the record of the National Association for its Junior membership system the past year. Think of the effect that this should have on the next generation, when these boys and girls have taken their places in the Nation's work! There were 11,935 of these Junior Audubon Bird Clubs formed between June 1, 1916, and June 1, 1917.

It would seem that the record made last year was the absolute limit with the funds that were at our disposal for the purpose,

but this year's record exceeds last year's figures by 1,034 classes and 56,516 members. These results were achieved at a cost of \$25,000 (in addition to the children's fees) subscribed for this purpose. Five thousand dollars came from Mrs. Sage and \$20,000 from an unnamed benefactor who has magnificently supported this work in the past.

These clubs were formed in every state of the Union, and more than 8,000 children were enrolled in Canada. The following list shows the distribution of these Junior Classes and their membership; it also

shows the number of children enrolled in each of these states the year preceding. This comparative arrangement therefore shows the increase in the various states.

STATISTICS OF JUNIOR CLASSES

Southern States (Sage Fund)

States	Classes		Members	
	1917	1917	1917	1916
Alabama	32	530	384	
Arkansas	28	643	203	
District of Columbia	3	77	247	
Florida	216	4,040	2,777	
Georgia	131	2,578	2,293	
Kentucky	114	2,391	1,284	
Louisiana	30	542	340	
Maryland	150	3,360	3,425	
Mississippi	38	991	360	
North Carolina	134	2,925	2,443	
South Carolina	61	1,600	980	
Tennessee	101	2,541	1,063	
Texas	150	3,960	2,123	
Virginia	120	2,356	1,517	
West Virginia	196	4,130	3,455	
Totals	1,504	32,673	22,942	

Northern States

(Children's Educational Fund)

States	Classes		Members	
	1917	1917	1917	1916
Arizona	8	176	63	
California	348	8,431	2,119	
Colorado	70	1,771	2,221	
Connecticut	611	12,546	9,137	
Delaware	7	109	141	
Idaho	34	364	610	
Illinois	433	11,722	7,961	
Indiana	359	6,490	5,677	

States	Classes		Members	
	1917	1917	1917	1916
Iowa	279	5,832	4,154	
Kansas	114	2,447	3,081	
Maine	79	1,585	1,162	
Massachusetts	519	10,802	6,536	
Michigan	542	10,855	14,334	
Minnesota	427	9,441	8,094	
Missouri	115	2,999	3,103	
Montana	41	1,063	2,011	
Nebraska	127	2,080	2,793	
Nevada	22	478	180	
New Hampshire	317	6,165	4,591	
New Jersey	579	14,382	8,226	
New Mexico	10	165	79	
New York	1,841	41,514	35,536	
North Dakota	90	1,888	477	
Ohio	1,121	22,249	20,657	
Oklahoma	55	1,149	711	
Oregon	190	4,100	4,243	
Pennsylvania	732	17,404	8,304	
Rhode Island	44	1,215	1,280	
South Dakota	43	785	1,131	
Utah	33	738	1,521	
Vermont	48	873	1,240	
Washington	604	14,666	5,987	
Wisconsin	138	3,070	4,188	
Wyoming	11	103	290	
Canada	449	8,048	10,350	
Totals	10,431	228,981	182,196	
Grand Totals	11,935	261,654	205,138	

Many charming letters, often with excellent photographs, come to us from this army of enthusiastic young bird-watchers, and a whole magazine might be filled with them, could the requisite space and expense be spared. All it is possible to do now is to offer some sample pictures with descriptive legends.



BIRD PAGEANT GIVEN BY THE LITTLE FOLKS OF THE JOHN B. ALLEN SCHOOL OF SEATTLE, ON THE OCCASION OF THE PRESENTATION OF A BIRD-BATH
(See page 218)



JUNIOR AUDUBON CLUB OF PUBLIC SCHOOL NO. 3, RENSSELAER, NEW YORK



PRIZE-WINNERS IN THE BIRD-HOUSE CONTEST OF EVERETT, WASHINGTON

LIBRARIES AND BIRD-PROTECTION

The public libraries in the United States and Canada number perhaps 6,000, not counting those of schools and colleges. New York State alone has 576 according to last accounts, and no considerable town or village in New England lacks something of the sort. All these ought to be, and most of them are in varying degree, not only reservoirs of information but fountains of improving influence. Whether this latter usefulness is exerted depends largely on the initiative and energy of the librarian, but in many cases where this is not apparent it may be roused, willingly enough, by tactful suggestions from without.

One of the directions in which a library may serve its community well is in stimulating and promoting an interest in birds and bird-protection among the younger readers of its books. A long list of libraries might be made that have done this to great advantage, and some of them have been conspicuous in this service. In Columbus, Ohio, for example, in Brookline, Mass., and elsewhere, the library has furnished not only a reading-room for flourishing Audubon Societies or bird clubs, but space for extensive exhibitions that have awakened the whole town to the value of the subject.

Many librarians have been themselves the organizers of bird clubs, Junior Audubon Classes, and similar movements, and have freely opened their facilities for study. One such, in California, has placed dozens of nesting-boxes, food-tables, baths and other bird-attracting apparatus on the library grounds, and has gathered about her a club of more than 150 school-teachers and pupils.

When such personal leadership is not taken, much may yet be done by a librarian to help in this matter. The need of books of reference for bird-students should be recognized and such books supplied. Some of them are too costly to be bought by the ordinary child, yet should be accessible to him. It is the function of the library to provide them. Such periodicals as *BIRD-LORE*, *The Condor*, and



Blue-Bird might be subscribed for. The publications relating to birds by the United States Department of Agriculture, the state governments and experiment stations, which usually are very instructive, ought to be displayed and attention called to their value. Notices should be placed on a bulletin board of new books, and of good articles in current magazines, in the field of nature-literature; and pictures should be shown wherever practicable. The colored plates issued in its Educational Leaflets by this Association should be displayed on bulletin boards in all libraries, with information as to where copies may be obtained.

In these and other ways, libraries may, and should, give aid to the cause of bird-protection and bird-study, and thus render a service to their communities for which they are peculiarly well fitted.

Audubon Prosecutions

One of the great roosting-places of Robins which resort in winter to the more comfortable region south of the Ohio River and gather in enormous numbers at certain favorable places, was, last winter,

in the mountains near Rugby, Tenn. Millions roosted in the evergreen trees on the hillsides and at evening gathered in the branches in such clusters that dozens might be killed by a single charge of shot. "It has been the custom," says a local newspaper, "of the people in the neighborhood to kill the Robins by the thousands. In fact, this winter two carloads of the birds have been shipped to the markets from Rugby. It was known to everybody about the place that the Robins were being killed, and nobody seemed to care anything about it one way or the other. Certainly the plain folks of Rugby did not know it was against the law to kill the birds."

This is the same sort of information that used to fill western papers when the vast flocks of Passenger Pigeons suffered slaughter year after year until presently all were gone. The men and boys of that time took no heed of law or thrift; and the "good people" of Rugby were equally ignorant and thoughtless. But before the shooting had gone far, "an agent of the Audubon Society," we are told, went to the town, told the people the killing of Robins was against the law, and to prove



PHOTOGRAPH OF 527 SKINS OF BIRDS OF PARADISE

Seized by Government Agents at Laredo, Texas, January 29, 1916. They were being smuggled into the United States. These were divided among educational institutions by the Government, a number being sent to the National Association of Audubon Societies.

it had a dozen or so arrested, and found a judge who fined them all. "They said they did not know it was against the law," the report proceeds, "but now that they are acquainted with the fact, they will cease shooting the birds. No further trouble is expected from the region, and the lives of tens of thousands of Robins have been saved."

All this is gratifying, and it shows what may be done by a wise and energetic man, with the Audubon spirit in his heart and knowledge in his head to correct the bad traditions of a community whose chief faults are owing to lack of education. We greatly need more energetic local Audubon workers like this splendid man, to fight for the wild birds.

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Enrolled from May 1 to July 1, 1917.

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		Total	\$3,150 46

WITH OUR AFFILIATED SOCIETIES

The issue of a *Bulletin* has also been begun by the New Hampshire Audubon Society, under the active leadership of the Rev. Manley B. Townsend, at Nashua. This will be published irregularly, and, to judge by the initial number, will be a series of instructive leaflets rather than a news-sheet. The first issue gives admirable advice on feeding birds in winter, peculiarly adapted to circumstances in that snowy state. It is neatly printed and prettily illustrated.

The societies affiliated with this Association are well aware of the value of printer's ink, and excellent periodicals and leaflets come to us from various quarters of the field. It is a good sign, showing that an organization seeking publicity in this way is doing something worth telling about. That some of the older and stronger Audubon groups should not have done more publishing than they have is rather surprising. Why, for instance, did the Massachusetts State Society wait until now to offer their *Bulletin*? This publication began in February, 1917, and is issued monthly. It is not only a chronicle of the affairs of the Society and a source of information as to protective legislation, educational work, lectures, exhibitions, new books, etc., but carries noteworthy

items of ornithological news and pleasant stories of bird-life. Such a bulletin is not only inspiring and valuable to a society as a 'house-organ,' but, as edited by Secretary Packard, may greatly extend the reputation and utility of the Massachusetts Society in all New England. Among other things, the last number reports the remarkable success last winter of the customary course of bird-lectures given in Boston.

In Rhode Island the State Society is represented by the series of *Bulletins* of the Park Museum in Providence, which is in charge of the State Society's Secretary, H. L. Madison. This publication is especially useful to teachers in their nature-study classes.

The Hartford Bird Study Club is the largest and most conspicuous organization of the kind in Connecticut, although the State Society has carried on a far more general educational work in the schools and by means of traveling libraries. No serial publication is supported by either, but the Hartford Club issues annually a *Year-book* that is a model of its kind. Year-books are also issued by several other large bird clubs, especially those of Brookline, and Milton (Brush Hills Club),

Mass.; Greenwich, Conn.; Meriden, N. H.; Bedford Hills and Rhinebeck, N. Y.; Morristown, Pa.; Somerset Hills, N. J.; and Buffalo, N. Y.

The interests of bird-protection in Ohio, and especially those of the strong Bird-Lovers' Association in Cleveland, are fostered by the pretty little magazine *Blue-Bird*, which was founded by the Ohio agent of the National Association, Dr. Eugene Swope, but is now edited and published by Mrs. E. C. T. Miller, President of the 'Bird Lovers,' at Cleveland. Indiana, Michigan, and the other north-western states are doing good work through their State Societies, but thus far have not attempted much in the way of publications. It seems a pity *The Way-side* was permitted to expire.

The Audubon Society of Buffalo, now in its ninth year, has long been active in spreading its influence through a regular series of newspaper articles, by the publication of an annual *Bird Almanac*, circulars, yearly reports, and various leaflets. The untiring agent in this useful activity has been Mrs. G. M. Turner, who has held the

office of secretary for eight years, but now is retiring because of a change in her residence from Buffalo to Riverside, Cal. Few ladies in the field of Audubon work have been so wise and faithful and have accomplished so much good as has Mrs. Turner in western New York, and a host of good wishes go with her to the Pacific Coast. At the meeting of the Buffalo Society on June 19 she was presented with a certificate of Life Membership in the National Association, the Society paying the \$100 fee in recognition of her splendid services.

Illinois, however, is still 'going strong,' not only by constantly sending out several kinds of circulars, migration-records, posters, etc., for local use by teachers and amateurs, and by furnishing to schools traveling libraries and collections of lantern-slides relating to birds, but by the issue twice a year of its *Bulletin*, which is really an illustrated magazine of general interest and value to bird-students.

'The Woodpeckers' Convention,' a playlet by Mrs. F. T. Bicknell, is delighting thousands of children in California.



THE BIRDS' CHRISTMAS TREE

Note small packages of food suspended from limbs. Woodruff Junior Audubon Class, West Helena, Ark.

Ingersoll's New Cumulative

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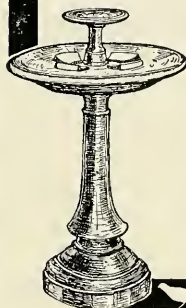
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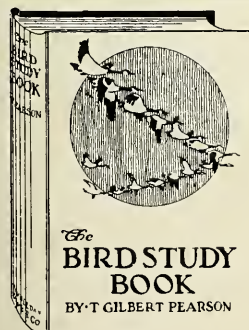
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The National Association of Audubon Societies

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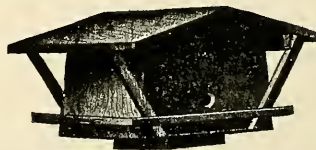
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Bird-Lore



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FRANK M. CHAPMAN
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September-October, 1917

CONTENTS

GENERAL ARTICLES

	PAGE
FRONTISPIECE IN COLOR—PURPLE AND GRAY-BREASTED MARTINS, BARN SWALLOW..... <i>Louis Agassiz Fuertes..</i>	
THE SUMMER LIFE OF THE VIRGINIA RAIL. With photographs by the Author..... <i>Verdi Burtch..</i>	243
TWO BLUE JAY PHOTOGRAPHS..... <i>George Shiras, 3d..</i>	249
AMERICAN EGRETS IN NEW YORK CITY. With photograph by the Author..... <i>Clark L. Lewis, Jr..</i>	251
NESTING HABITS OF THE CLIFF SWALLOW. Illustrated..... <i>Manley B. Townsend..</i>	252
REMARKS ON THE NESTING HABITS OF SWALLOWS.....	257
AN EXPERIENCE WITH A ROBIN. With photographs by the Author..... <i>Mrs. J. L. Harrington..</i>	259
NOTES ON THE PLUMAGE OF NORTH AMERICAN BIRDS..... <i>Frank M. Chapman..</i>	262
BRONZED GRACKLE..... <i>Photograph by H. & E. Pittman..</i>	263

NOTES FROM FIELD AND STUDY.....

A WREN NEST TRAGEDY, <i>M. C. Nisbet</i> ; THE CAPE MAY WARBLER, <i>Edward G. Kent</i> ; AN EXPERIENCE WITH AN AMERICAN BITTERN (Illus.), <i>Wilbur F. Smith</i> ; KILLDEER IN CONNECTICUT, <i>Robert S. Judd</i> ; A BIRD ON THE HEAD, <i>L. B. Pettec</i> ; NOTE ON THE BARRED OWL, <i>W. Edwin Coon</i> ; THE GOLDFINCH, <i>Theresa Wood</i> ; A LEAF FROM A ROSE-BREAST'S LIFE, <i>L. Elizabeth Clark</i> ; UNUSUAL VISITORS AT A FEEDING-TABLE (Illus.), <i>H. N. Henderson</i> ; AN IOWA CARDINAL, <i>William Norton</i> ; MIGRATION ON THE GREAT LAKES, <i>Leonard A. Ericson</i> ; SUMMER BIRDS OF SWOPE PARK, <i>Albert E. Shirling</i> ; NOTES ON THE VARIED THRUSH, <i>Harold Anderson</i> ; THE WESTERN MEADOWLARK AND OTHER BIRDS NEAR EDMONDS, WASH., <i>Mrs. Eugene D. Lindsay</i> ; THE BARN OWL'S VOICE, <i>Joseph W. Lippincott</i> .	264
---	-----

THE SEASON.....

BOSTON REGION, <i>Winsor M. Tyler</i> ; NEW YORK CITY REGION, <i>Charles H. Rogers</i> ; PHILADELPHIA REGION, <i>J. K. Potter</i> ; WASHINGTON REGION, <i>Harry C. Oberholser</i> .	175
---	-----

BOOK NEWS AND REVIEWS.....

BERGTOLD'S 'A STUDY OF INCUBATION PERIODS'; KUSER'S 'WAYS TO STUDY BIRDS'; FINDLEY'S 'BIRDS OF THE CAMPUS'; THE ORNITHOLOGICAL MAGAZINES; BOOK NEWS.	278
--	-----

EDITORIAL.....

	281
--	-----

THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT.....

IMPROVING METHODS OF TEACHING BIRD- AND NATURE-STUDY, <i>A. H. W.</i> ; JUNIOR AUDUBON WORK; THE SAND-SPIT; FOR AND FROM ADULT AND YOUNG OBSERVERS.	282
---	-----

THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT.....

NOTICE OF ANNUAL MEETING; THE MIGRATORY BIRD-LAW; NATIONAL ADVISORY COMMITTEES; VENEZUELA TO PROTECT EGRETS; BATTLE FOR THE CROPS (Cartoon); NEW MEMBERS AND CONTRIBUTORS; THE FIGHT FOR SONGBIRDS; A DANGEROUS MOVE THWARTED; NEW YORK CONSERVATION COMMISSION.	293
--	-----

* * * Manuscripts intended for publication, books, etc., for review and exchanges, should be sent to the Editor, at the American Museum of Natural History, 77th St. and 8th Ave., New York City.

IMPORTANT NOTICE TO ALL BIRD-LORE SUBSCRIBERS

BIRD-LORE is published on or near the first days of February, April, June, August, October, and December. Failure to secure the copy due you should be reported not later than the 18th of the months above mentioned. We cannot supply missing copies after the month in which the number in question was issued.

Notices of changes of addresses, renewals and subscriptions should be sent to BIRD-LORE, HARRISBURG, PA. Each notice of a change of address should give the old address as well as the new, and should state whether the change is permanent or for just one or two issues.

A Conference with Our Readers

THE RESULTS

THE results of the 'Conference with our Readers,' called for in the last issue of BIRD-LORE, are most gratifying. The vote in favor of an increase in subscription price, rather than a decrease in the size of the magazine, is practically unanimous. But, greatly to our surprise, a large proportion of the voters urge an increase, not from one dollar to one dollar and a half, but to two dollars annually, while many declare that they will not be without BIRD-LORE at any price!

An increase to two dollars we cannot seriously consider. From the beginning it has been the aim of those responsible for the policy of BIRD-LORE to produce the magazine at the lowest possible cost and to increase its size as rapidly as the returns from subscribers permitted. Thus, the magazine has grown from a yearly volume of somewhat less than 250 pages and no colored plates, to one of over 500 pages and a dozen colored plates without increase in the subscription price.

It was our plan to continue to enlarge the magazine to the limit of the purchasing power of one dollar, when, as explained in our last issue, we were confronted by increased manufacturing charges due chiefly to the higher cost of labor and of paper. As a result we have had to decide whether to raise BIRD-LORE's subscription rate or reduce its size.

Reduction in size meant the abandonment of plans for the magazine's betterment and the rejection of many valuable contributions. The unanimous vote to increase the price is, therefore, welcome, not alone as a practical estimate of BIRD-LORE's value, but also because, in conforming to the expressed wishes of our readers, we shall now be permitted to carry out our plans for the magazine's improvement and, we trust, enlargement.

This, however, can be done only by retaining our present subscription list. Our enthusiastic readers who have urged us so emphatically to maintain our highest standards at whatever cost, must realize that there are many subscribers to whom, in these troubled financial times, an increase of even fifty cents a year in the price of BIRD-LORE may be the factor which will prevent a renewal of their subscriptions. We hope, therefore, that our supporters will not only *vote* for a larger BIRD-LORE but will

work for it. To this end we direct their attention to an announcement on another page.

SOME OF THE 'VOTES'

We trust that the writers of the following letters will pardon us if we yield to a natural temptation to place on record some of their 'votes,' which we ourselves have received with so much pleasure.

It would be a real misfortune to have BIRD-LORE in any way fall from its present standard. I enclose ten dollars toward keeping it as it is.—THEODORE ROOSEVELT, *Sagamore Hill*.

We can not afford to have BIRD-LORE cut down in size. It brings us in touch with the birds of the whole United States, and is full of instruction and interest and arouses the different Audubon Societies to a keener realization of their duty in bird protection and bird education.—MRS. F. T. BICKNELL, *Los Angeles, Cal.*

By all means keep BIRD-LORE at \$1.50 or even \$2. Those who love birds have a stratum in their natures that stands for better things, even at some small sacrifice.—MRS. CHAS. E. BIRGE, *New York City*.

I cannot do without BIRD-LORE, no matter what the price is.—MAUDE B. CHAMBERS, *Harpers Ferry, W. Va.*

I should not like to see BIRD-LORE smaller. Better charge us the \$1.50. You have a mission.—J. F. COOPER, *Providence, R. I.*

There seems to me no question that the magazine should not be cut down and that the price should be increased.—F. N. DOUBLEDAY, *Garden City, N. Y.*

I want to very promptly assure you that for my part I would continue my subscription if you doubled the price, and I hope that you can with certainty arrange to keep the magazine full size and full power.—WM. S. ESSICK, *Harrisburg, Pa.*

For myself, I would gladly pay double the present price and maintain the present satisfactory manner in which the magazine is brought out.—Wishing you success.—S. B. GAVITT, *Lyons, N. Y.*

By all means advance the price of BIRD-LORE to \$1.50 or even \$2, rather than reduce the size of the magazine.—ROY LATHAM, *Orient, N. Y.*

No smaller magazine for me. Make it \$1.50 by all means. By so doing you will be doing your bit for conservation—conservation of the birds means conservation of the fruit crops.—C. O. ROADS, *Groton, N. Y.*

It has long seemed to me to be one of the most valuable magazines published. . . . It therefore seems to me that it would be better to raise the price to \$2.—LEE RUSSELL, *Worcester, Mass.*

By all means continue the present standard of BIRD-LORE, even at a price of \$1.50 or \$2 the year.—CHARLES VAN AKEN, *Elmira, N. Y.*

Quite aside from the pleasure which BIRD-LORE brings to a steadily increasing number of bird students, I believe that there is another and more important reason for keeping this interesting and useful magazine at its fullest point of efficiency. Your article, "A New Threat to Bird-Life" indicates this reason.

I favor most heartily the maintenance of BIRD-LORE at its present standard of excellence at an increased cost in subscription in order to support most effectively the educational and protective work of the Audubon Societies.—TERTIUS VAN DYKE, *New York City*.

I wish to say that the magazine would lose so much by being reduced in size that in my opinion it would be better to raise the price. I'm willing to cut more lawns!—EGBERT WALKER (First Class Boy Scout), Troop 3, *Bay City, Mich.*



1. PURPLE MARTIN, Adult male
2. PURPLE MARTIN, Female
3. GRAY-BREASTED MARTIN

4. BARN SWALLOW, Adult
5. BARN SWALLOW, Young

(About one-half natural size)

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XIX

SEPTEMBER—OCTOBER, 1917

No. 5

The Summer Life of the Virginia Rail

By VERDI BURTCH, Branchport, N. Y.

With photographs by the author

ARRIVING in the marsh at Branchport, N. Y., the last week in April, the Virginia Rail at once makes itself at home, and its grunts and calls can be heard every day from all parts of the marsh. Keeping close in the grass and flags it is seldom seen, but when disturbed it utters a sharp *kep'* and then a grunting noise which is very like the grunting of a pig calling for its dinner. This note is uttered by both sexes. Early in May in the evening and in lowery weather we hear the love-song of the male, *kid kid-ic kid-ic kid-ic kid-ic kid-ic*, he says, then moves along a little way and repeats, *kid kid-ic kid-ic kid-ic kid-ic kid-ic kid-ic*, sometimes keeping it up for hours at a time.

The nesting habits of this beautiful Rail are very interesting, but to study them successfully requires much patience on the part of the observer. A site is chosen in a tuft of grass around the edge of the swamp or near a bunch of bushes. Sometimes it is in a low bush or in a bunch of dead weeds, and again it will be out in the water in the cat-tails. The nest itself is of dead grasses and flags and is cunningly concealed by arranging the dead grass and flags about it in a very natural manner. Later, the growing grass and flags conceal it very effectively. If one gets near the nest he is almost sure to hear the note of alarm and the grunting of the birds as they move rapidly around through the weeds.

On May 11, 1908, the eggs were just beginning to hatch in a nest that I had found some few days before, and, as I approached, the female slipped from the nest and away through the cat-tails. She was quickly followed by the two little ones, although they were but a few hours old. The nest was surrounded by water so the birds had to swim, but even then they managed to elude me. Hoping to get a picture of the nest and eggs I set up my camera, and, while focusing, the mother appeared, carrying one of the little ones in her bill, dropped it into the nest, went on, and settled down to brood.

This habit of leaving the nest (when disturbed) so soon after they are hatched makes the young very difficult to photograph. However, this can be accomplished by leaving the camera set up and focused on the nest, returning cautiously after an hour or two, when they will have come back to the nest; or the shutter can be released by attaching a thread to the release lever and running it back to some convenient place from which the nest can be seen. The surroundings of the nests preclude one's getting but glimpses of the adults as they scamper about the nest. Last May we were fortunate enough to find a nest in a bunch of sweet flag which stood alone in a rather open place so that the bird had to cross the open when going to and from the nest. On my first



FAILING TO CALL HER YOUNG TO HER SHE CAME AND PICKED ONE FROM
THE PIT AND CARRIED IT AWAY INTO THE FLAGS

visit the female left the nest as soon as I came near and ran across into the flags, where she kept running from cover to cover, showing herself but a few times and giving me no opportunity for a picture.

June 13 I was more fortunate. This time she left the nest as before but returned at once, coming at me with wings drooping and feathers ruffled. This she did again and again. She would come right up to and strike the camera. She moved so quickly that it was impossible to keep her in focus, but focusing on a point about four feet away, and following her with the lens until she came in focus, several good pictures were secured.

She came out from cover time after time, running at me with wings drooping and feathers ruffled, and seemed determined to drive me away. I could easily bring her to me by giving the flags by the nest a little shake, when she would give little grunts and run right up to the camera. To catch her with wings drooping was a task. She came so quickly and so close, her image grow-

ing rapidly until it covered the ground-glass as she jumped up and struck the camera.

June 17 the eggs were beginning to hatch, and there were six silky, black little ones in the nest. Three of them followed the mother when she left the nest and hid in the flags around its base. The three others were not yet dry and with their bright eyes shining lay kicking and struggling to get out of the nest. Soon the mother came back calling softly *ka ka ka ka ka*, and the young ones left their hiding-place and ran to her. One of them fell into one of my



EGGS AND NEWLY HATCHED YOUNG OF VIRGINIA RAIL

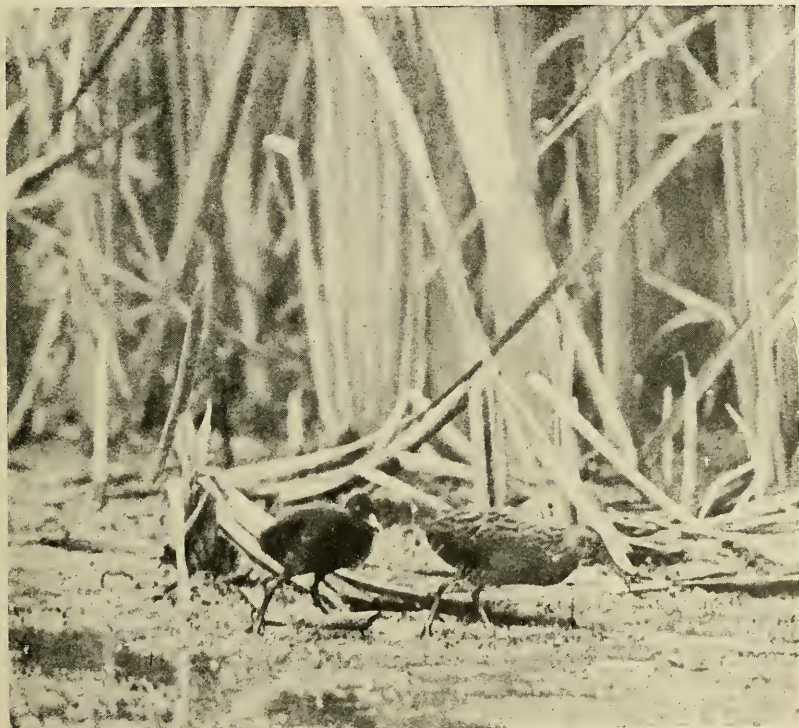
foot-tracks, and the mother came quickly and, taking it up, ran off into the flags, carrying it dangling from her bill as a cat carries her kittens. The male now showed himself for the first time. He kept close to the outlying cover, scolding as he dodged in and out among the flags and grass.

Next day as I approached, the female was on the nest brooding and the male began to scold from the cover. A few times he came out and charged at me with wings drooping but did not come close like the female. When the female left the nest, the young (and there was now a nestful) immediately followed, scattering and hiding in the grass. There was now but one egg left unhatched, and the chick came out of it twenty minutes later. Soon after



WHILE FOCUSING MY CAMERA, THE MOTHER APPEARED CARRYING ONE OF THE LITTLE ONES IN HER BILL, DROPPED IT INTO THE NEST AND THEN SETTLED DOWN TO BROOD IT.

leaving the nest the mother came back and called softly, when, as if by magic, little animated balls of black appeared to spring up all around and roll to her. I caught ten of them, and, putting them into one of my foot-tracks in the soft mud, they remained quietly until the mother came and called, then, peeping faintly, they tried to climb out. Failing to call them to her, she came and picked one from the pit and carried it away into the flags. I followed at once but before I could catch up with her she had dropped it and came back to meet



WHEN FEEDING THE MOTHER CAME OUT ON THE MUD, A YOUNG ONE FOLLOWING HER

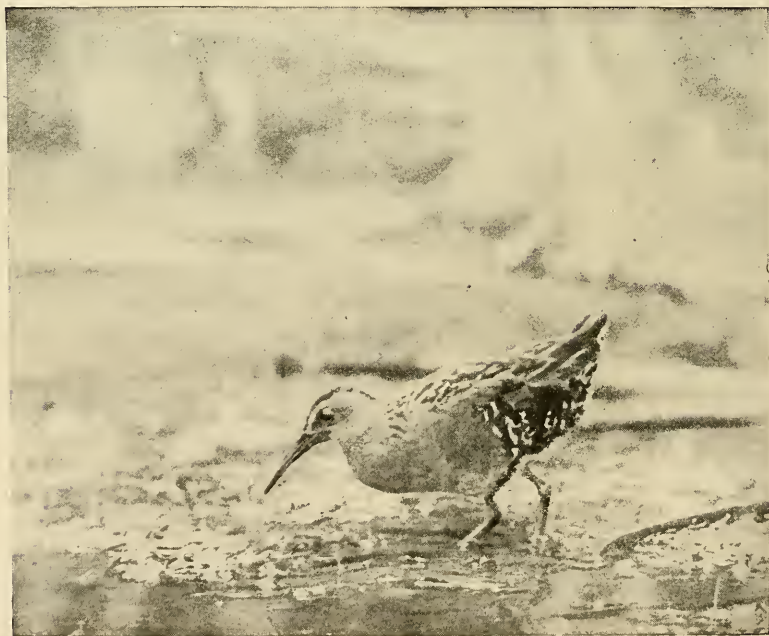
me. I found the little one where she had dropped it, lying on its back kicking and struggling to rise. Again she came and carried another one away, then came back and called softly *kiu kiu kiu kiu*, ending with the grunting noise. Two of the little ones managed to climb out and ran toward her when, calling as she went, she led them into the flags where she remained quietly for some time. During all of this time the male kept to cover, showing himself but a few times as he dodged in and out among the flags. The young are born with their eyes open and gain strength so rapidly that they are able to leave the nest before they are fairly dry. They are covered with long, silky, jet-black down, rather thin on the top of the head and on the wing where

the flesh shows through. The outer digit of the wing is armed with a tiny claw, and they use the wing and claw to help themselves over obstacles and in climbing into the nest. The bill is fleshy horn-color with a black ring around the middle, the tip being white on the upper and black on the lower mandible.

Later in the day the female met me about three rods from the nest, and no little ones could be found except the one last hatched which was still in the nest. A few days later none of the family was to be found.

Late in July both parents and young will be found on the muddy shore where they feed and dodge back into the flags at the least sign of danger. At this time the young are about half grown and still keep their downy appearance. When feeding, the mother comes out on the mud, a young one following, and when she finds a choice morsel it is there to receive it. Back in the flags the other young are following, uttering plaintive peeps. As soon as one is fed it returns to the flags and another one comes out to take its place.

Here on the mud and in the flags they can be found every day, the young developing rapidly, the down giving way to black and dark brown feathers, until early in October when they leave for the South.



VIRGINIA RAIL, FEEDING



A MARQUETTE (MICH.) BLUE JAY



AN ORMOND (FLA.) BLUE JAY.

Two Blue Jay photographs by George Shiras, 3d

[The last photograph made by Mr. Shiras before leaving his summer home at Marquette, Mich., in October, 1916, was of a Blue Jay at his feeding-stand beneath the balsams.

The first photograph he made after reaching his winter home at Ormond, Fla., was of a Blue Jay at his feeding-stand under the cabbage palms.

The Blue Jay is migratory only to a limited extent at the northern limit of its range, and this incident illustrates its wide distribution and the strikingly different conditions under which the species lives. Hence, we have two races, a large, pale Northern Blue Jay, and a smaller, darker Florida Blue Jay. The differences in color between the two forms can be seen in the photographs.—ED.]



A NEW YORK CITY EGRET

American Egrets in New York City

By CLARK L. LEWIS, JR., New York City

With a photograph by the author

LAST summer (1916) three beautiful American Egrets (*Herodias egretta*) made their appearance in Van Cortlandt Park, New York City. They were reported to have arrived on July 16. As the neighborhood appealed to them, they settled down in the vicinity of the pond, at the southern-most extremity of the Park, and remained for a number of weeks. The birds finally disappeared, one by one, the first to leave quitting the Park sometime around August 10, the next, a few days later, and the remaining Egret on October 10. Their roosts were located somewhere in the northern part of the Park woodlands, just where I do not know. At the approach of dusk the Egrets would rise into the air and fly northward. Their flight was slow and graceful, and often I would watch them until they were lost from sight in the darkening horizon. Every morning found them back at the pond where they spent the long summer days, feeding upon small fish, insects, and other forms of Heron food.

The neighborhood of the pond seemed far too civilized and noisy to warrant any length of stay for these birds, whose habitual haunts are semi-tropical swamps and marshes. The pond is bordered on the north by a much-used automobile road-way, on the east by a branch line of the New York Central Rail Road, on the west by Broadway with its noise of passing vehicles, Subway trains, trolley cars and never-ceasing crowds of pedestrians, and on the south by a small strip of land which boasted of a few trees and wild vegetation. Tall grass formed a border around the pond. The water was practically open and thus afforded the Egrets plenty of room to move about.

However, this change of atmosphere and surroundings did not seem to trouble these beautiful white creatures, but made them rather unsuspecting and fearless. Excellent observations of the birds, some as close as eight to ten feet, were obtained. On September 9 I took several photographs of the remaining bird. The one shown here gives a characteristic pose.

[To one who has known the Egret when every man's hand was raised against it, and nearly every woman's head bore the aigrette plumes which gave eloquent, if silent, testimony to her heartlessness, it is as surprising as it is pleasing to observe that under proper protection this beautiful bird may again become a part of our lives.

In a vain effort to rob it of protection in New York, the milliners' agents claimed that the Egret did not belong to the fauna of that state, but the photograph and observations of Mr. Lewis are welcome evidence to the contrary. (See also Mr. Rogers' note on page 276.)—ED.]

Nesting Habits of the Cliff Swallow

By MANLEY B. TOWNSEND, Nashua, N. H.

IN a former issue of BIRD-LORE I asked the question, "Do Cliff Swallows ever build upon painted barns?" That the query was of more than ordinary interest is attested by the many letters I have received bearing on the subject. Believing that the readers of BIRD-LORE will welcome the results of this correspondence, covering a wide territory, from New Brunswick to Oregon, I am boiling down and digesting the important facts and here offer them for comparison and study. The value of coöperative effort in determining any fact is here clearly demonstrated. Local conditions often cause local habits. Only comparative study over a wide area can give conclusive testimony.

Wm. J. Cartwright of Williamstown, Mass., writes: Up in the hill town of Savoy, Mass., a typical backward New England farm community where I chanced to visit this past summer, I found great numbers of these birds. One colony had thirty nests and another twenty-eight, all of which had young birds in at the time. Others had fifteen or more nests and the remains of many former nests. In every case they were on unpainted barns. In one case the farmer had accumulated enough money to paint three sides of his barn, yet the colony of about thirty pairs of Swallows still built their nests on the remaining unpainted side where they have built for a number of years. It will be interesting to see if, when the remaining side is painted, they seek new quarters.

But I did find one exception. On one painted barn I found five nests, three of which were occupied. The barn was built of rough unfinished boards and painted red. They were on the east side of the barn, directly over the barnyard, where the old birds spent a good deal of their time catching the many insects about the damp yard. It is significant that this was an exceptionally small colony for that locality, all others being at least three times as large. Several hundred yards on either side of this barn there were unpainted barns, but there were no nests of Swallows on them. These barns were on abandoned farms, or were used for the storing of hay, and so no cattle were about them to draw the food-supply of the Swallows.

Has anybody else noted a like circumstance in regard to these Swallows and their nesting-places?

Mrs. G. E. Barton, of Holland Patent, N. Y., writes that when she was a child in a pioneer town, from 1876 to 1880, at Glyndon, Minn., she used to see "thousands of Cliff Swallows' nests on painted buildings. The N. P. R. R. reception house was 200 feet long and painted white. It harbored Swallows the whole length, and sometimes nests overlapped. The same was true of the schoolhouse and other buildings." It is not stated whether or no the boards to which the nests were fastened were painted.

Rev. Ceo. Roberts, Jr., of Lake Forest, Ill., writes that "a colony of Cliff Swallows have for years nested under the inner eaves of the large piazza of a hotel in the Adirondacks, New York state. The hotel is an old structure, painted white. The nesting is of annual occurrence." On inquiry, Mr. Roberts was unable to recall whether or no the eaves against which the nests were plastered were also painted.

Mrs. J. F. Merrill, of Northwood Narrows, N. H., reports two colonies on painted buildings, one on a white schoolhouse and another on a red barn.

Althea R. Sherman, of McGregor, Iowa, writes about a barn built seventy years ago on which the Cliff Swallows formerly built three rows deep. The building has been remodeled and painted. Six years ago only five or six nests remained, and the last time visited there was but one nest. The species is reported very scarce in that section of Iowa, and its scarcity is attributed to "that miscreant, the English Sparrow." There is probably much truth in this explanation. Personally, I have known the English Sparrow to take possession of the nests of the Cliff Swallows, though not very often. In some parts of the country, however, they may be more troublesome. I used frequently to pass a large colony of Cliff Swallows, the nests of which were built on an unpainted barn near Sioux City, Iowa, where the English Sparrows were abundant. This is a point that will bear further investigation. Who has any information upon it?

Mrs. Emma P. Farr writes of a small colony of Cliff Swallows nesting last year on a painted ice-house near Union Village, Woonsocket, R. I. "The painting was done with yellow ochre, mixed with oil. The birds have not returned this year, and early in the fall last year's nests had all fallen off." Mrs. Farr asks if nests on unpainted buildings drop as easily. To this query an emphatic negative may be given.

Mary E. Raker, thirteen years of age, writes an interesting letter from Portland, Ore., showing keen observational powers in one so young. She reports one nest built against a gray house under the eaves of the gable end. There were a few unoccupied nests from previous years.



BARN SWALLOW TURNING
Photographed by A. A. Allen, Ithaca, N. Y.



BEFORE THERE WERE BARNs. NESTS OF CLIFF SWALLOWS IN RUSH COUNTY, KANSAS
Photographed by S. W. Williston

Mr. Howard H. Cleaves writes from the Public Museum, New Brighton, N. Y., to the effect that he has observed a colony of a dozen pairs of Cliff Swallows on a set of farm buildings at East Jewett, N. Y. "Three or four of the nests are under the eaves of an old barn which has no paint, but the remainder are attached to a smaller outbuilding which wears a yellow coat." Mr. Cleaves also reports two pairs of these Swallows breeding on a red barn between Boardville and Erskine, N. J. "The paint was scarcely more than a stain. One nest was attached to timbers that had been treated with this stain, the other was located on an untouched area." In June, 1911, Mr. Cleaves noted "three or four nests of Cliff Swallows attached to a stucco barn or shed at Lenox, Mass." He also calls attention to a reproduction of a photograph taken by Fred B. McKechnie of a colony of Cliff Swallows at Lunenburg, Vt., and published on page 341 of the March, 1914, issue of the *National Geographic Magazine*. The building on which the colony is located is obviously painted, though a narrow moulding nailed along the side of the structure insures the nests against disaster by falling.

Mrs. Al. Bayhouse, president of the Idaho Audubon Society, reports a colony of forty-two nests of Cliff Swallows built under the eaves of a barn at the Soldiers' Home at Boise. The barn is painted dark red, trimmed with white, and the nests "were on the white boards under the eaves." There were about three hundred birds in the colony. Mrs. Bayhouse also reports one occupied nest on a white house last year, and another on "a barn painted some dark shade."

One of the most interesting reports was from Dr. Guy C. Rich, of Los Angeles, Cal. Dr. Rich, who was for many years the leading ornithologist in northwestern Iowa, says that he has found the Cliff Swallows nesting in the sand-pits along the Big Sioux River near Sioux City, Iowa. I quote from his letter—"While you make inquiries about the choice of painted barns for Cliff Swallows, ask if anyone has noticed them breeding along with Bank Swallows in a dirt bank. I am not sure that you ever visited the sand-pits up on the Big Sioux, but I saw the small mud pellets plastered along the entrances of several holes and found the eggs in some of the burrows." This is truly a unique observation. Has this been noted by anyone else?

Now for my own personal observations this summer of 1916. I have examined with great care thirty-four colonies and here append the result of my investigations. The nests were located in New Hampshire, Maine, and New Brunswick. Five of these colonies were on painted edifices and all the rest—twenty-nine colonies—on buildings innocent of any evidence of ever having been painted. Several of the colonies on unpainted barns were very large, many of them comprising from three hundred to four hundred birds.

Of those on painted buildings, the following facts will be of significant interest. On a large painted barn at St. John, New Brunswick, a large colony had built upon a supporting cleat under the eaves. A similar case was observed

at Machias, Maine, where a large colony had built on a painted barn, the nests supported by a wide cleat. A painted outhouse in Kennebec, Maine, had a few nests under its eaves. At China Lake, Maine, forty nests were noted stuck on the unpainted boards of a dark red barn. Most of the paint had worn off. A painted schoolhouse in Northfield, Maine, had a half-dozen nests plastered under the painted eaves, but the boards were noticeably rough, affording a good clinging surface. The scars of several nests on the smooth painted boards of another schoolhouse in Wesley, Maine, were noted. The site had evidently been abandoned as unsafe. It may here be noted that last year I observed a painted barn and a painted hall, both in New Hampshire, upon both of which were the scars of Cliff Swallows' nests. The birds had repeated the experiment.

At a certain farm a set of five buildings, three painted and two unpainted, had nests on the two unpainted buildings and none on the others, although (excluding the house) they were apparently as well suited for nesting purposes as those chosen.

An interesting observation was made at an abandoned farm in Washington County, Maine. Both Cliff and Barn Swallows were abundant. Hundreds of both species were nesting *inside* the big barn, a smaller building, and a lean-to shed. Has anyone else ever noted the Cliff Swallows nesting inside buildings? The nests were built precisely as usual when located under the eaves—bottle-shaped, with entrance at the lower end. They were attached to the rafters.

The facts here given, covering a belt of territory reaching from ocean to ocean, may be thus summarized:

1. Cliff Swallows prefer unpainted buildings, and the greater number of colonies are found thus situated.
2. These birds frequently choose a painted building if there happens to be a supporting cleat under the eaves. Some farmers especially provide such an accommodation. The colony may be large in such a case.
3. When the space under the eaves is left unpainted, the Swallows do not object to painted buildings.
4. Birds that nest in colonies are very tenacious of their ancient breeding-places. They will often accommodate themselves to changed conditions that would ordinarily repel them. When the mangroves in which the Pelicans nested on Pelican Island, Fla., were destroyed, the birds built upon the ground rather than leave their ancestral homes. The tall pines near Nashau, N. H., in which a large colony of Black-crowned Night Herons nested were cut down last year. The birds simply moved a few rods away to small pines in a much less favorable situation. When an unpainted building long occupied by Cliff Swallows is at last painted, the birds are extremely reluctant to leave and will continue to breed there unless repeated disaster by the falling of the nests forces them away, as some woodland plants will continue to grow in the open after the forest shelter has been removed.

5. Colonies on painted buildings, with the nests attached to painted boards, are not unknown, especially if the boards are rough. Colonies thus situated are usually small—from one to a half-dozen nests—occasionally a few more.

6. Nests built against paint drop off easily and discourage the return of the birds. On unpainted buildings the nests usually persist and are generally repaired and used for two or more successive years.

7. Cliff Swallows have been known to breed in the abandoned burrows of Bank Swallows and to build inside, as well as outside, farm buildings.

8. The English Sparrow is a nuisance. His continued presence has a tendency to reduce, if not to completely eliminate, the Cliff Swallows. He should be exterminated.

Remarks on the Nesting Habits of Swallows

By ARTHUR H. NORTON, Portland, Maine

DO Cliff Swallows ever nest on painted barns (or buildings)? is a question asked of BIRD-LORE readers, to which I answer "They certainly do." Why they so seldom nest on painted structures in the Northeast, is probably due to the same old reason why black sheep eat less than white sheep, or because there are less of them. The practice is, I feel sure not exceptional, yet the case is one of those in which I can cite but few instances with absolute certainty, nor can I with equal certainty recall more than three unpainted structures upon which Swallows nest, though I have observed many nesting colonies.

At White Head Island, Knox County, Maine, a United States Life Saving Station was built in 1874, with rafters supporting long eaves, finished with panels. Like all other stations and lighthouse establishments, this was kept heavily coated with white paint. On the Island at the time was a large old barn, with eaves formed by butts of shingles only, and unpainted. I had never known the Eave Swallows to nest on it, nor on the old-fashioned house near it, but the birds soon discovered the new station with its long eaves and formed a large colony there, where they remained for many years, or until the old eaves were remodeled, joining a shed-roofed boat-room on one side. I have not seen the house for some years, and do not know whether the birds still find a nesting-place there.

The dirt of this large colony of Swallows on the otherwise immaculate building, was a source of irritation, to say the least, to the keeper, my father, and each year the resolution to prevent their occupancy was announced, but through his sympathy for the birds and my own pleading for them, they were allowed to remain. My father's house on the same island, also painted white, was occupied by a smaller colony of the birds.

These Swallows are very partial to the immediate vicinity of the sea, where

the warehouses, barns, and fish-houses, on which they nest in large numbers, are seldom or never painted.

Though known as Eave Swallows, they are by no means confined to the eaves of buildings for nesting-places but not infrequently enter the buildings and nest on the rafters as the Barn Swallows do, though building their own covered nests. I recall several instances of this kind, notably the long rain-shed of the lighthouse establishment at White Head and the boat-house of the same place, where I knew them to nest year after year.

On the other hand, a pair of Barn Swallows departed from their nominal habit of barn nesting and built under the eaves of our house (on a little shelf) until ousted by the increasing colony of Eave Swallows.

When the old glass-sided box, with its perforated tin cone for ventilator, within which a lamp was carried, gave way to a more or less modern lantern, a knot was picked out of one of the ends of the barn loft, and the old glass-sided lantern fastened up over it, for a 'Martin house.' For, though the bird-house idea has recently engaged the attention of city men "to the westward," the settlers along the coast of Maine have had their 'Martin houses' for three or four generations, and they were as much a part of the well-ordered 'place' as was the bed of bright flowers of European origin brought over by the great grandmothers of an earlier generation.

Surely, "Westward the course of empire takes its way," even with bird-houses! Nor has the old custom been forgotten in this generation of urban invasion, for many of the old farms along the country roads, and even the temporary camps of fishermen on the outer islands, still support 'Martin houses.'

To return to the old lantern in the barn loft, though its glass sides were objectionable to its intended tenants, it was usually occupied. One year it was taken by a pair of Barn Swallows, who certainly raised one brood in it. The nest, like that of the Tree Swallow was *without mud*.

On Matinicus Seal Island, though several open fish-houses existed and were occupied by Barn Swallows, one pair nested for some years (perhaps yet) on a niche of a wall of rock. I found the nest in June, 1896, containing four eggs, and remarked that it was but a few feet above the surge of the breakers. The nest was of the usual type.

On our coast the Tree Swallows are commonly known as 'Martins,' and are abundant, nesting in the numerous hollow stumps, hollow limbs, and tree trunks, and in niches in buildings affording a dark retreat.

Prostrate hollow logs dying in the open on the ground often are used as nesting-places. One of my earliest recollections is of an old wooden pump laid on the ground in a pasture, which was occupied as a breeding-place by a pair of these Swallows for several years. They are the ready and almost exclusive tenants of the coast Martin-houses already mentioned. Unlike their kin, they do not form colonies, being jealously watchful and pugnacious toward all birds of similar nesting-habits, including their own kind.

An Experience with a Robin

By MRS J. L. HARRINGTON, Altamont, N. Y.

With photographs by the author

ONE evening just about dusk during the first week in June we discovered that our neighbor's cat had a little baby Robin cornered ready to pounce upon it.

We took the poor frightened bird and placed it on the barn roof in hopes that the old birds would come and care for it. But it was fast getting dark and they never came. Knowing that the cat would have the little Robin before I would be up in the morning, I fed him and put him in a basket partly filled with hay for the night.

The next morning I opened the basket and fed him a worm or two and some bread and milk. Then he tried to tuck his head under his little wing and went to sleep.

After he had had his nap we put him out where the old birds might see and hear him but they did not return. We had to care for him until he was able to



BOBBY ON ONE OF HIS DAILY VISITS

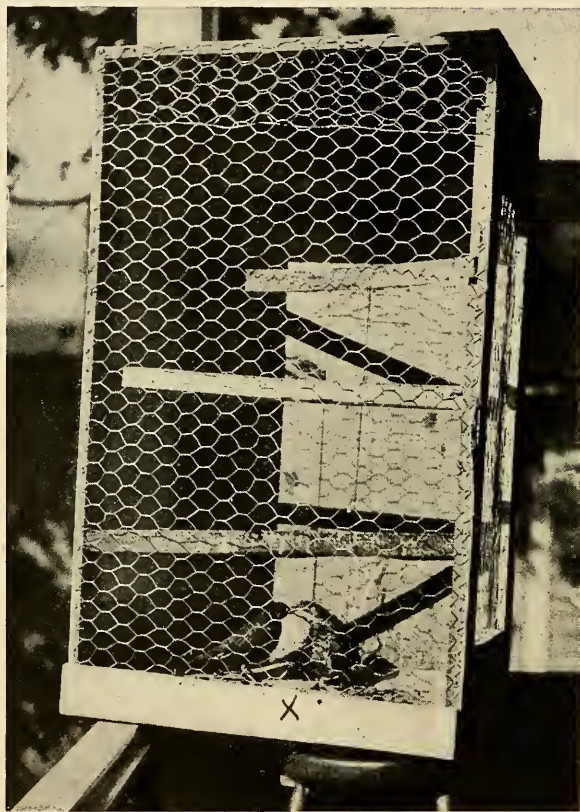
look out for himself. He was so young that downy feathers were still in his plumage and there was just a mere beginning of tail feathers.

My husband built a large airy cage for the little Robin, and we put him out on an upper porch, and he chirped, and ate and slept and grew like any healthy child.

The first day or two he kept trying to get out but he soon got used to his cage and was apparently happy. He learned to answer to the name Bobby and would chirp back every time we called him. At first he did not know how to pick up his food. He just opened his mouth and let us put the food in it. I would dip my finger in water and he would open his mouth and catch the

drops from my finger. After we had had him about two weeks he began to pick up food for himself though he still liked to have us feed him.

Just about this time my neighbor came running over with another baby Robin, which she had taken right out of the mouth of that same cat, and wanted to know if I would adopt it. This one was older than Bobby was when we got him, and was so frightened that he would not eat. I worked over him for a couple of hours but he would not open his mouth. At last, I tried to open it, thinking if I could only get one worm in he would eat. That frightened him



BOBBY FEEDING THE LITTLE BIRD

so he fainted away, so I gave up and put him in the cage with Bobby as soon as he became conscious.

Bobby was inclined to peck him at first, but by night had grown quite friendly toward him. The next morning Bobby didn't eat well. He kept taking food in his mouth but did not swallow it. I was occupied so could not wait to see what evidently happened. But from the sounds that came from the porch Bobby was feeding the little one.

After breakfast we went out to feed them some worms. The little one would not take a thing from our hands and did not know enough to pick them up. Bobby would take a worm and break it up in inch lengths and have his mouth full of the pieces but would not swallow. We were puzzled. Just then Bobby hopped up to the little one and pecked him twice on the bill. The little one opened his mouth and in went the pieces, one at a time.

From that time Bobby took entire charge of the little one and would not eat a thing himself until the little one was so full he refused to eat any more.

Bobby would still eat from our hands and twitter and flutter his wings just as the little Robin did when he fed him.

From the first week we had Bobby he would take a bath every day. The third day after we had the little Robin, when I put the basin of water into the cage he went right into it. Bobby hopped up on the perch nearby chirping and twittering and went through all the motions of drying his feathers though he was not wet a bit. I wondered if he were trying to teach the little one. They both enjoyed their bath and on real hot days went into the water two or three times.

They both looked alike and we could not tell whether they were both males or females. We fed them worms, cherries, berries, scraped beef, and bread and milk and they grew rapidly.

After we had had them six weeks we let them go as they seemed strong enough and old enough to care for themselves. The younger one having been bird-fed, flew away and we never saw him again; but Bobby came back every day and took his bath and let us feed and pet him.

The wild Robins were horrid to him. They would fly at him and even when he was within six feet of me they would fly down and pick out a bill full of his feathers. We never could understand why they disliked him so.

Every day I would go out into the garden and call Bobby and he would come flying down at my feet or alight in a branch near my head and take whatever I offered him or just talk to me in his bird language. He came to the upper porch, usually about 12.30 P.M., every day for his bath. He was so tame we were afraid the cats would get him for he did not watch out like the wild birds.

One day I saw the same cat that had caught them in the first place coming from the garden. I hurried out and called Bobby but he did not come and we never saw him again.



Notes on the Plumage of North American Birds

FORTY-FOURTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Purple Martin (*Progne subis*, Figs. 1, 2).—As the plate figuring a pair of this species clearly shows, the adult male and female may be readily distinguished, but the young male, even in its first breeding plumage, cannot, at a glance, be distinguished from the female.

In its nestling, or juvenal plumage, the male is essentially like the adult female. This plumage it retains until after it leaves us for the South. Some time during the winter the postjuvenal molt occurs, and the bird acquires its first breeding plumage. This bears a general resemblance to that of the female but has a scattering of the steel-blue feathers of the adult male, which are more conspicuous in the gray underparts than above. At the succeeding molt, which also takes place after the bird migrates, and doubtless therefore in its winter quarters, the adult steel-blue plumage is acquired.

It is interesting to note that Martins and Swallows, birds which make extended migrations, leave for their southern homes before gaining the fresh set of feathers which we might imagine they would require before embarking on their long journey. Possibly their aerial habits leave their plumage so little worn, that even after breeding it is still serviceable and, unlike that of vegetation-haunting species, in condition to meet the demands made by migration.

The Eastern Purple Martin (*Progne subis subis*) is found locally throughout the United States and southern Canada, except on the Pacific coast where it is replaced by a closely related race, the Western Martin (*Progne subis hesperia*), the male of which resembles the same sex of the eastern bird, but the female is decidedly paler and whiter below than the female of *Progne subis subis*.

Gray-breasted Martin (*Progne chalybea*, Fig. 3).—The Gray-breasted Martin is a species of tropical America which ranges as far north as Texas. It is smaller than our North American Martin, but both sexes so closely resemble the female of that species that for many years Texas specimens of *chalybea* were considered to be Purple Martins. Their true identity was made known by Mr. W. De Witt Miller ('The Auk,' XXIII, 1906, p. 226).

Barn Swallow (*Hirundo erythrogaster*, Figs. 4, 5).—The male Barn Swallow averages brighter in color and, in some cases, has a longer tail than the female, but the sexes are often alike in color and size and cannot therefore be distinguished by external characters.

The young bird (Fig. 5) on leaving the nest is much paler below and duller above than the adult, and the outer tail feathers, which, when fully grown add so much to the appearance of the Barn Swallow, are not more than half an

inch longer than the central ones. However, they seem to answer all the requirements of successful aerial navigation. Not only are the young birds' first flights made with evident ease and precision, but, contrary to the rule among passerine birds, they migrate to winter quarters before changing this nestling plumage for their first winter dress. For this reason we do not yet know exactly when the postjuvenile molt occurs, nor do we know whether there is a spring or prenuptial molt.

Dwight records specimens from South America which were completing their molt in February, but whether it was a postjuvenile or prenuptial molt cannot be determined.

A specimen taken at Corumbá in southwestern Brazil, March 23, is in fresh plumage and has evidently just completed a molt, but no traces of the preceding plumage remain, and one cannot therefore say whether it was that of the adult or of the immature bird.

A specimen taken December 19 at Juntas de Tamaná in western Colombia, still wears the nestling plumage. It is not conceivable that this bird would have both a postjuvenile and prenuptial molt before returning to us in its breeding dress, and it therefore indicates that the young bird, at least, molts only once after leaving us, and that at this molt it acquires the plumage of the adult.



BRONZED GRACKLE

Photographed by H. and E. Pittman, in Manitoba

Notes from Field and Study

A Wren Nest Tragedy

On May 30, 1916, I noticed the Wrens had not built in the hanging Wren-house, so I cleaned it out thoroughly. In less than an hour a pair were hard at work and soon the nest was finished and a Wren was on the nest.

Then one day I noticed great excitement. Madam would not go in or near the house. Her mate coaxed and coaxed with continual singing, from house to tree and over again. Such scolding from her and twittering and fluttering!

Finally she flew to the roof of the house but only for a second, then away, then back again. Then she tried the porch, a hole in a post, anywhere for a nest, then back to the house and in. She looked as though she was trying to pull the nest to pieces. Then away and back, pulling at it three different times. Then both flew away, and I never saw them again.

Upon investigation I found she had pulled out her three eggs, put tiny holes in them, and thrown them on the ground. Has any one ever heard of a bird doing that before?—M. C. NISBET, *Irvington-on-Hudson, N. Y.*

The Cape May Warbler

I was interested in reading in the April, 1917, issue of *BIRD-LORE* the statement regarding an increase of the Cape May Warbler.

For several years past I had not seen one of these Warblers, but during May, 1916, they appeared in comparatively large numbers in and near Boonton, N. J.

This was true of many others of the Warbler family; those uncommon in former years being present in large numbers, particularly Bay-breasted and Blackburnian Warblers. There were days when numbers of the birds were to be seen in the trees and shrubbery, and it was possible to get very close to them so

that they could be easily identified, even without the use of glasses.—EDWARD G. KENT, *Jersey City, N. J.*

An Experience with an American Bittern

One day last fall a newspaper in a nearby city printed a story of a "strange bird in a battle with two savage bulldogs" and told how the local constable, whose aid was sought to shoot the bird, captured it by throwing a blanket over the bird's head and identified it as a "Spanish Corseva," common in Argentina.

It sounded like a real nature-faking story, yet thinking some member of the Heron family was in trouble, I traced it, after considerable effort, to an old stable, where, in a dark corner, I found an American Bittern.

The bird may have hit a wire or the branch of a tree and fallen to the ground in someone's dooryard, where it was attacked by the dogs, but it was useless to try and make the people believe the bird had not been the aggressor and first attacked the dogs.

The Bittern did not appear injured, though weak from lack of food, the whole corn offered by its captor not being relished as a substitute for small fish and frogs, so I thought to take it to the shore and let it go where food was plentiful.

I had often heard stories of wounded Herons striking at people's eyes. Nevertheless, I was taken unawares when the Bittern, with a lightning-like thrust, gave me an exhibition of how she speared fish. Fortunately, the blow fell on the end of my nose and again within an inch of my eye, causing the blood to flow freely, and after that I kept my face out of range.

I wanted a photograph of the bird before letting it go, so focused my camera on a rock where I placed the Bittern and jumped back, planning to press the bulb before she flew away, but I was much sur-

prised to see her 'freeze,' when picture making became easy.

While I remained still, with a movement so gradual as to be almost imperceptible, the Bittern would stretch out her neck and turn and start to walk away, but at a call or a clap of the hands she would 'freeze' again, and then repeat the stealthy effort to slink away.

At times the wings would be dropped to the ground and the crest feathers

luck on her nest journey southward.—
WILBUR F. SMITH, *South Norwalk, Conn.*

Killdeer in Connecticut

During the fall of 1916 while repairs were being made around the dam of one of the local reservoirs, the water was lowered about eighteen inches. This laid bare a great area of lake bottom at the upper end where the water is normally



AMERICAN BITTERN

raised, and when facing me the mass of breast feathers would be fluffed out, giving her a formidable appearance which I imagine caused her captor to run for the blanket.

After getting all the pictures I wished, I gave her a toss into the air and she flew off and alighted on the shore at the edge of some salt-water grasses, and so perfectly did the yellows and browns of her feathers blend with the yellowing grasses that she seemed to vanish from sight, and I left her hoping she would have better

shallow and where a rich growth of vegetable and minute animal life had existed. In fact, the conditions very nearly duplicated those existing around western prairie sloughs in the summer as the water slowly recedes by evaporation leaving exposed such a wealth of food for the waders.

It was late in the afternoon, October 29, while out walking that we first noticed these unusually favorable conditions and saw at that time, besides a Solitary Sandpiper and one Greater Yellow-legs, a

flock of five Plover which I was reasonably sure were Killdeer, but, unfortunately, the glasses were at home and in the waning light I could not be positive of such an important identification.

On the next visit to the lake, November 11, we were delighted to find the Plover still there and this time were able to make sure that they were really Killdeer. Having known them in Dakota it was like meeting old friends, and it was with the keenest pleasure that I followed them from one muddy flat to another as they nervously and cautiously kept their distance.

It was hard to estimate the total number correctly. While on the flats, all would 'freeze' as we approached, and but for an occasional low nervous *dee* we might well have passed them by, so well did their colors blend with the ground, but just so near, and then with plaintive notes of alarm a bunch of ten or twelve would jump as one bird to fly and wheel in close formation and alight at a safe distance. Often on our going forward a second bunch would fly from the same vicinity, and I was able to count at one time twenty birds on the wing which I feel was very near the total frequenting the lake.

Once a cover of low thick bushes near the shore enabled me to approach close to some feeding birds, and it was indeed a treat to watch at one time so many of these birds now so rare in the East.

Now that I have the Killdeer on my list as an old friend new found in Connecticut, I have one great pleasure of like sort to look forward to, and that will come when I first find on our hills that splendid bird, familiar in the West, with all the romance of the Open in his voice, the Upland Plover.—ROBERT S. JUDD, *Whitneyville, Conn.*

A Bird on the Head

I wonder if a belated bird-story will interest you and the readers of BIRD-LORE? Last summer while standing by our R. F. D. mail-box I was suddenly aware of the distressed cry of a small bird,

and almost instantly felt it alight on the top of my head. Another instant it was gone, and I at once felt a rush of air and the flap of larger wings, and was amazed to see a Sparrowhawk pursuing a very small bird which took refuge in shrubbery close to the house. Now why did the little bird light on my head when there were vines, trees, and shrubs all about and the mail-box screened by golden glow taller than my head?

I add another story quite as true as the first:

A friend sitting under our trees was given a carnation which was placed in her hair. Very soon after a Ruby-throated Hummingbird fluttered over her and dipped into the flower a number of times.—L. B. PETTEE, *Salisbury, Conn.*

A Note on the Barred Owl

On January 8, 1916, I visited a bird food-box which had been erected in a rather extensive wood-lot not far from town. On this trip I noticed a small gray mass containing bones at the foot of a tree a few feet from the food-box. Near this were the tracks of a squirrel, with wing marks in the snow on each side. On account of limited time, the gray mass was not examined but the place was kept in mind. On January 31, a special trip was made with the idea of identifying the Owl, which had been seen at a distance a couple of times before. It was found a short distance from the food-box, but its shyness made a close approach difficult. However, this time I managed to get close enough to obtain a good, clear view and found it to be the Barred Owl.

Now, as my curiosity was aroused concerning the food of the Owl, I proceeded to the place where the pellet had been seen and examined it. The greater part consisted of small bones and gray fur, in a compact mass. Eleven more pellets were found beneath the same tree. These, together with the first one examined, were found to contain the bones of either one or two rodents. The same place was visited on March 24, 1917. This time forty pel-

lets were examined—thirty-four beneath the same tree and six under a neighboring one. All of these contained the bones of rodents. One particularly large pellet had the jaws of five rodents in the mass. Of the remaining pellets, one held the jaws of three rodents; several, two; and the rest, one each. One pellet had a large snail-shell crushed while another one had a small shell, whole. A couple more had the remains of a single crawfish in addition to a rodent each. Eight pellets, composed of fur and rodent bones, were examined March 31. Judging from the shape and coloring of the various jaw-bones, I should say that at least three different kinds of rodents had been devoured.

Of all the pellets that were examined—sixty in number—not one yielded the remains of a bird.—W. EDWIN COON, *Conneautville, Pa.*

The Goldfinch

For days, one January, the Goldfinch note was in the air. When the first bird who sang it came near enough to show the green of his bronze coat and sang his summer song in his winter voice, I winked, grinned, kicked one foot with the other, went through all the wakening exercises one dares with a bird fifteen feet away. I was surely awake.

He faced me with a breast without a sparrowy mark, turned upon me a back of softest greenish bronze, and just as I opened my heart to him the tree over my head was filled with his brethren.

Looking him up in my meager library, I find that, like the poor, him "we have always with us." Like the poor, also, he endures much, lives on little, and keeps cheery under a stress that sends many of his stronger, better-equipped brethren to a softer clime for the winter.

Next time you see him in July, harvesting thistle and dandelion seed, in his summer dress of gold, set off by his jaunty cap and epaulets of nature's own black, or when he dances over your head to the tune of his own *per-chick-o-reel* try to think of him in sober bronze, cap and

shoulder-straps gone rusty, and with the same diverging flight, fighting a winter's blast.

Like the summer girl in her winter suit, the fluff all gone out of her attire, but like her, too, the summer's gold and sweetness stored in the stronghold of his heart to bubble out in the very face of the winter. It was the same cheery song, only just gone mellow ripe.

The children came calling, one July day—

"Oh, Auntie, come quick! Some Goldfinches are killing a little green bird!"

Four male Goldfinches and one female were making a kaleidoscope of the ground in front of the house. We reached them, finding the little green bird limp, though warm. One male went away but the war continued between the other three over the dead body of the little lady.

Withdrawing a little way we watched. The situation soon disclosed itself. Two of the birds would light by the dead beauty, and how the feathers flew. I could scarcely hold the children back from storming the little savages. She had a knight of her own color, however, "whose strength was as the strength of ten because his heart was pure."

It was pounce and dart! Dash and counter-dash, for a minute or two and the two brigands retired to the 'phone wire across the street. Sir Galahad lit beside his lady fair, fluttered about for a minute or two, and then took station on the light wire overhead. The same program was carried out at intervals for half an hour. If one of us went near or picked up the dead bird her champion hovered around, and when we laid her down, satisfied himself no new harm had come to her and then took up his watch, the marauders looking on.

Toward night their interest seemed to wane, and they finally went away singing *per-chick-o-ree* as blithely as though murder had not sullied their hearts.

Not so Sir Galahad. Late bedtime found him still at his vigil. Morning and noon of the next day found him there. But in the afternoon he was gone. The boys

buried his bride—was she? It was their mating season. Had the belle of the flock, after near a year's flirtation, made choice of the truest heart of them all? Or had the sister of the household displeased by her mating?

How quickly we read romance into all that has its seeming. One thing I know, when a flash of gold, or a merry *per-chick-oree* brings the dastards to mind, the picture fades, but Sir Galahad in his lonely vigil stays. He has done what he could to redeem the reputation of his race.—
THERESA WOOD, 4071 Sisson St., East San Diego, Calif.

A Leaf from a Rose-breast's Life

One Saturday afternoon in June, 1913, I discovered a tiny birdling in my front yard. It was very scantily covered with yellowish down and so weak it could flutter only a few feet along the grassy lawn. I did not know what it was until, after retiring to the front porch, I saw a mother Rose-breasted Grosbeak intently guarding it, from a buckeye tree nearby. She did not feed it often; perhaps it was too young to need much food.

The next morning, on stepping out onto my kitchen porch, where a plum tree reaches over the doorstep, I was surprised to see both father and mother Grosbeak within a few feet of my head, watching me intently and apparently with great concern.

Usually they are shy birds, but they did not fly, and approached very near my face. Meanwhile I was looking in every direction to discover the baby bird. The parents seemed so distressed I turned to go in the house, when, there behind me, huddled in the corner of the porch, was the young bird. I hurried indoors but they evidently feared for its safety and soon removed it.

Later in the day another little one, weaker than the first, appeared on the front lawn watched over by the mother while the male guarded the older one in a rose bush in the back yard.

Monday was cold and cloudy. Soon

after noon it grew dark and a storm threatened. Mother Grosbeak guided her little one under a hard maple tree nearby, and, a foot or more from the ground, onto a dead branch that lay under the tree.

The foliage of the tree was very dense, a light shower would not have reached the little bird. But the storm was very severe. The wind blew violently and rain poured in torrents. The dead branch shook and the heavy rain beat upon the tiny form; but it remained motionless except as the wind shook the branch. Later the wind grew less, but rain continued, and I think it rained all night. It was very cold.

Early next morning I looked out with little hope of seeing my bird, but there it was, just where it had been all afternoon the day before. It was still raining and the mother watched from the tree above.

About eleven o'clock the rain ceased. Then the object of my solicitude hopped down as lively as you please, evidently calling for an early dinner. Oh, the wisdom of that mother! Had she permitted her little one to remain on the ground it would have been washed down the terrace to the driveway and carried out to the street gutter.

For about twenty hours the little nude creature clung to its perch, apparently as lifeless as the branch on which it rested, and was pelted by the cold storm.

That afternoon the whole family disappeared. I thought I had lost them, but was delighted about two weeks later to see all four of them again in my trees. Young birds, like little children, love the water. Again and again they came to drink or splash in the pan a few feet from my kitchen window. I greatly enjoyed watching the change in the plumage, especially of the male bird, as the weeks passed. The family life of the Grosbeaks seems ideal. They surely enjoy each other, and I saw the four in my trees almost daily the rest of the summer until migrating time.

Bird students tell us of seeing so many dead bodies of little birds after a storm.

The wonder is that so many survive the storms that are often frequent during the nesting season.

I had a large bittersweet vine winding spirally round the trunk of a large tree.

One day, when a storm was threatening, a mother Robin coaxed her little one onto the trunk of the vine. She tried to have it go farther up around the tree. When she did not succeed, she hopped up beside it and pushed it up the spiral stalk until it was around on the east side and close to the trunk. The storm soon came from the west but the little bird was safe and dry.

—L. ELIZABETH CLARK, *Galesburg, Ill.*

Unusual Visitors at Feeding-Table

With photographs by the author

For several years we have maintained a feeding-table in our back yard. We live in a town of about five thousand inhabitants, and our home is just two blocks from the center of town, a corner lot 60 by 160 feet. We have four peach trees, two plum trees, one cherry tree and a large honeysuckle vine on back porch. On lot adjoining, and along our line, is a grape-arbor and a walnut tree, making just a reasonable amount of perching for the birds.

The feeding-table is 2 by 3 feet, sup-

ported by a bracket attached to a post, under the outer branches of a peach tree. We find it convenient for the birds to have a perching-place before alighting on the table, yet the Blue Jays and Woodpeckers often fly direct to the table. On two of the trees, and on top of the post on which the table is attached, we have suet. For several winters we have had for regular boarders, Chickadees, Titmice, Cardinals, Blue Jays, Woodpeckers, Nuthatches, Song Sparrows and Robins.

Last winter and this we have had two unusual visitors, and for this reason I send you this article, together with the photographs, so that none may doubt the truth of this statement. On February 6, 1916, a Towhee appeared on the table. He seemed very shy at first, but on finding plenty of feed whenever he wished, he soon became accustomed to the surroundings and remained with us until in March, when it became warmer, and he no doubt started out to find his mate.

We have found several male Towhees wintering in this locality each year in the timber where they could find food and shelter, but we have never known one to appear in town at a feeding-table.

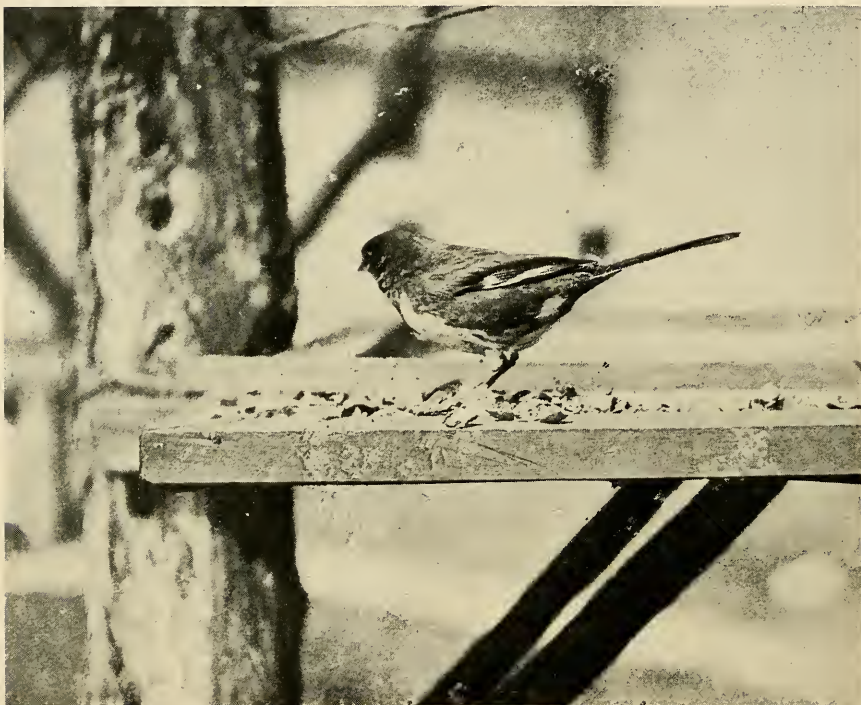
On December 18, 1916, a Mockingbird appeared on our feeding-table. To say that we were delightfully astonished is



MOCKINGBIRD EATING WALNUTS

putting it mildly. We knew at a glance it was a Mockingbird, but we lost no time in calling in our bird-loving friends, all of whom were delighted to know that we had such a rare winter guest. He very quickly made himself at home and was

would watch their chance to get their share of the food when the Mockingbird released his vigilance. When he wants his meal all must go but the Blue Jay which he did not try to conquer, although he shows a disposition to fight if he dared.



A TOWHEE ON THE FEEDING-STAND

soon sole owner and overseer of the coveted feeding-table. He seemed to have a distaste for the bright colors of the Cardinals for he took great delight in chasing them out of the yard. He tried to drive the Red-bellied Woodpecker from the table, and a battle ensued such as we have never witnessed among birds. The Red-bellied was not going to be driven, as he had several years' prior claim. They would flutter in air, facing each other, drop to the post and branches of the tree, the Red-bellied with mouth open, and one time he hung with back down for probably a minute waiting for the next thrust, but the Mockingbird finally won. All the birds

He moves out of the way but never runs. At this writing, March 12, 1917, he is still very much at home.

The Mockingbird is an occasional summer resident in this county (Clinton). Possibly three or four pairs are reported every summer from widely separated localities in our county, but why this one remained over or where it came from will always be a mystery to us. He eats walnut kernels, crumbs, and suet. We have never seen him eat sunflower or any kind of seed.

This winter we have had at our table the following birds: male and female Hairy, male and two female Downies,

one male and female Red-bellied, two Flickers, eight Blue Jays, two Bronzed Grackles, five Song Sparrows, one Towhee, eleven Cardinals, one Mockingbird, one Carolina Wren, one White-breasted Nuthatch, two Tufted Titmice, three Chickadees, two Robins, and have seen in the yard but not at the table, one Sparrow Hawk, one Screech Owl, and one Brown Creeper.

I have a 22 rifle and with BB caps keep the English Sparrows thinned out. I raise the window slightly or open the door just enough to see out, and the explosion is all inside the house, so that the report does not alarm the other birds. I have killed Sparrows not a foot from the other birds and not frightened them. They look down at the fallen Sparrow and wonder what's happened.

The Cardinals, Song Sparrows, Mockingbird, Robins and Towhee roost in vines on the back porch. The Cardinals and Song Sparrows sing all winter. We have heard the Song Sparrow singing happily when the thermometer registered below zero. The last few days the Towhee sings in a low voice almost constantly, a rolling almost continuous warble reminding us of the whisper-song of the Catbird, possibly a little louder. He returned to us again this year about the time he came last year. We feel certain it is the same bird, for he went immediately to the feeding-table and made himself at home.

Bird-lovers who have not provided a feeding-table for the birds are missing the greatest pleasure in their study.—H. H. HENDERSON, *Wilmingon, Ohio.*

An Iowa Cardinal

For two winters—fierce Iowa winters when the mercury may sink to sixty degrees of frost—the Cardinal has neighbored with us. Against the background of our Iowa snows, with his fiery tropic plumage, he is as *outré* as a palm in Iceland.

The 'Kentucky Cardinal' of James Lane Allen is a shy and timorous bird. He conceals himself in the cedars and shrubbery of the garden. *Peace, peace, peace* he softly sings. But my Iowa Car-

dinal is more aggressive than the Blue Jay or the English Sparrow; his outbursts are dramatic and spectacular; his *tzip, tzip, tzip*, is a song of battle. Almost any morning at breakfast we may see him perched upon a branch of Japan lilac just outside the window. Thence he launches himself, a flaming thunderbolt, directly at us. Hurling through six or seven feet of air, wings and tail-feathers wide outspread, he strikes the upper window-pane and falls to the snowy sill. He gasps for breath, his little bill opening and closing. His tail twitches with excitement. With an occasional *tzip, tzip*, he hops along, pecking fiercely at the glass. Then flying straight upward he strikes the upper pane a glancing blow and whirls back again to his perch upon the lilac. Discouraged? Not at all. Try, try again, is his maxim. For hours he gives us an exhibition of aeronautics as fascinating as that of Sea Gulls astern the ship. And all so close at hand. I wish I had a movie film of it. And many a summer afternoon as I am working in the garden I hear the red bird assaulting a basement window screened by a tall barberry.

When the Cardinal began rapping at our dining-room window at breakfast we imagined that he was asking for admittance. He is trying to come in out of the alien cold to his native Louisiana warmth, to shelter, to food, and good friends within. To test this theory we left the window open, but the game was off, the Cardinal flew away.

We failed to understand our Cardinal because we did not look at things from his angle. With my eye at his precise viewpoint on the lilac branch, I found that he could see nothing within the room; the glass was not an invisible barrier, but a broad and perfect mirror. What he saw was another Cardinal, a rival, alert, aggressive, his black beady eyes aflame with war, his wings stirring for attack. The Cardinal may confuse the objective and the subjective, but his strategy is classic. He believes in a swift offensive. He strikes and collects his justifying causes later.

I wish I knew what the English Sparrow thinks who often sits on an upper limb of the lilac and watches the battle with his head cocked on one side, an impartial neutral.

"What has the long war brought you, my fiery terror, but headache and disappointment! That other Cardinal, why attack him? he hasn't disturbed you, he doesn't keep you from sitting in the sun. Isn't the world wide enough for you both? Look at me, I raise family after family of Sparrows every summer, and yet there is room for all!"

The war at the window-pane has gone on now for two years. The Cardinal still is attacking his own image, attacking his own hate, his own dreams of conquest, his own belligerency. Fortunately, the object of his attack is a phantom image and not a peaceful neighbor of flesh and blood. Yet I fear for the consequences. Stout as is my Cardinal's little bill, it seems that it must be broken by the multitude of blows he strikes the unyielding glass. If it is an ancestral habit, this of beating against barriers, a Lamarckian might explain the blunt bill of the species by impact. Just so Rudyard Kipling explains the long-drawn trunk of the elephant as the result of tension. But even if my Cardinal's bill is not broken or worn to a frazzle, even if his little neck-bones are not dislocated by the furious blows he strikes, what must be the results in character? Battle, I fear, is already a fixed idea. The Cardinal sees red continually; he has gone war mad. Yet in the past, in Kentucky, it would seem that the Cardinal, according to James Lane Allen, was a peaceful bird, a lover, so to say, of philosophy and poetry. It can not be our Iowa environment which has so changed him. No, safe in the interior of the continent Iowa is pacifist to the core. It must be the cosmic *krieglust* which has obsessed the Cardinal. He will never cease fighting until, quite worn out in battle, his black flag still wrapped above his breast, he lies dead upon the ground.

—WILLIAM NORTON, *Mount Vernon, Iowa.*

Migration on the Great Lakes

I have spent about fifteen years of my life on the Great Lakes and have always taken a great interest in the migratory birds we had as passengers every spring and fall.

I have counted as high as 1,000 song-birds on a 500-foot steamer at one time. They come aboard during a fog, and if it turns to rain in the night, most of them perish from cold. I hit upon a way of saving thousands, during the fifteen years I spent on the Lakes, and I'll tell you how.

In the spring of 1903, on the steamship "F. B. Morse," we anchored near the Apostle Island group in Lake Superior, in a heavy fog. We had the biggest bunch of migratory birds on the vessel I had ever seen. I counted over one thousand, just before dark. As second mate I had the anchor watch, from 6 P.M. till 12.

About 8 o'clock a cold rain began to fall, and the poor birds, unable to find shelter, fluttered around the electric lights thicker than flies. They soon began to fall on the deck exhausted, and that is their 'finish' unless you can get them right away into a warm place. I went back in the galley and got a small basket and started picking them up. As soon as I had the basket full, I carried them into a steam-heated room and dumped them on the floor. I picked up over four hundred birds that night, and every one survived.

We arrived in Ashland about daybreak, and I went in to look at my charges before turning them out. They were a varied bunch. Warblers, Wood Thrushes, Finches, Song Sparrows, and High-holders, a few Catbirds, and others I couldn't classify, not being very well versed in ornithology.

I shall never forget how beautiful the Wood Thrushes looked. I counted just six of them, and they were not at all afraid when I picked them up.

After feasting my eyes on them a few minutes I opened the door, and in two minutes the room was emptied. I felt more than repaid for the little trouble I

had when I saw them on their way across the bay.

After this I saved birds' lives every spring and fall in the same way. I think a good deal could be done by erecting bird-shelters on the steamers plying the Great Lakes. This would only cost the owners a few cents and would save thousands of our feathered friends every spring and fall. Just a little box between the hatches here and there, where they would find shelter from the rain would do. The birds get very tame while aboard a vessel and will almost eat out of your hand.

A few minutes on the cold steel deck in a rainstorm soon 'keels' them over, so let us start a campaign among the vessel owners to have some bird-shelters built.—LEONARD A. ERICSON, *Duluth, Minn.*

Summer Birds of Swope Park

This report is based upon a census of the summer birds of Swope Park, Kansas City, Mo. This park covers an area of 1,332 acres. The greater part is well-wooded upland with hills having rather steep, rocky slopes and ragged limestone cliffs.

A small stream, the Blue River, flows through the park and furnishes some alluvial flood plain. Other smaller streams leading into the river furnish moist, well-wooded regions suitable for certain species. Other parts of the park are quite dry in summer.

Parts of the park are frequented by great crowds of people, while other rather extensive areas are quite secluded and offer shelter for the more retiring species.

The census was begun the second week of June, after the migrants had left. It was conducted by carefully traversing a different section each morning and listing the singing male birds, every effort being made to avoid an overestimate of the numbers.

A total of 2,026 male birds was listed, representing 74 species. Supposing each of these were paired, there would be over 3 adult birds to the acre in the park.

The birds that love semi-seclusion head

the list, while the more sociable species like the Robin, Thrasher, House Wren, Rose-breasted Grosbeak, Chipping Sparrow, English Sparrow, and Orioles are fewer.

The Indigo Bunting heads the list with 164 male birds; the Tufted Titmouse, 158; Black-capped Chickadee, 153; Red-eyed Vireo, 86; Downy Woodpecker, 76; and Kentucky Warbler, 74, come next in order listed.

Nine species of Sparrows and their relatives were listed, with 402 male birds. (English Sparrows were not included in the census.) There were 12 species of Warblers with 244 males, the Kentucky Warbler leading with 74 males; 5 species of Vireos with 102 males, the Red-eye taking the lead; 5 species of Flycatchers with 156 males, the Great-crest being the most numerous; 3 species of Woodpeckers with 150 males, the Downies taking the lead.

The Turkey Vulture took the lead among the raptors with 16 pairs. (Probably underestimated, the rock ledges being quite favorable for this species.)

Conditions in the park are unfavorable for water birds, 3 Green Herons being the only representatives of this group.

A few other comparisons include: 41 pairs of Cowbirds, 73 Blue Jays, 42 Crows, 6 Whip-poor-wills, 1 Nighthawk, 27 Acadian Flycatchers, 22 Scarlet Tanagers, 8 Summer Tanagers, 4 Bob-white.

There were more Cerulean and Parula Warblers than Robins or Bluebirds; more Red-bellied Woodpeckers than Red-headed Woodpeckers. The Wood Thrush leads in the Thrush family with 55 singing birds.—ALBERT E. SHIRLING, *Kansas City, Mo.*

Notes on the Varied Thrush at Bellingham, Wash.

Of the winter birds here the Varied Thrush is perhaps the most abundant, equaling, if not surpassing, in numbers the Rusty Song Sparrow, Oregon Junco, and a few others which can be considered common.

The birds appear in the woods along Whatcom Creek about the middle of November (November 14, 1914), and depart in April (April 26, 1914; April 16, 1915). Although they are supposed to be "resident in coniferous forests throughout the state from sea-level to limit of trees," I have never observed one here during the summer months.

Upon their arrival the birds are shy and do not allow a very close approach; later, however, especially if the ground is covered with snow, they can be frequently found among the houses in the city, sometimes even coming upon the steps if food is placed there.

In the woods the birds are usually found upon the ground, searching for food among the leaves. When one approaches they rise quickly, uttering a short *clut*, and fly into the nearest tree. Though their size and shape are much like that of the Robin, their position and manner when perching are different. They assume a stiff, leaning-forward attitude, the stripes on the sides of the head exaggerating the length of the bird. If the observer persists in following them, they will always keep a safe distance ahead.

I have heard nothing that might be called a true song from these birds, though call-notes are numerous. Perhaps the most common one which, strangely, is heard most frequently on rainy days, is a drawn-out *ü*.

The winter of 1915-16 was an unusually severe one for this part of the state, and consequently a large number of the birds were deprived of their customary amount of food. As there were many birds in the back yard, I placed some boards upon the snow and covered them with bread crumbs. A few minutes later a half-dozen birds were there. One Varied Thrush, the largest and most conspicuously colored, immediately drove the others away and took possession of the food. As this continued for some time and the others were deriving no benefit from the food, I divided the food and placed half of it farther away. Now, when the birds returned (for they had flown out of the

yard when I approached) the fun began. First one would dart down and seize a piece of bread. At once, like a flash, and with the feathers on his head raised in anger, the tyrant would be after him. At the same time, another which was waiting for just this opportunity, swooped down on the other food-board. By the time the Thrush could get back the other would be gone, and with it a piece of food. Thus back and forth for nearly half an hour the fight for possession continued, the others always the victors, for invariably they secured a crumb. Finally, he tired and flew away, and the others, without fighting, ate the food. Later some English Sparrows arrived, but, as they did not disturb the Thrushes they were not disturbed themselves.—HAROLD ANDERSON, *Bellingham, Wash.*

The Western Meadowlark and Other Birds near Edmonds, Wash.

Usually each spring and autumn flocks of Western Meadowlarks, ranging in number from twenty to forty, come to our farm called 'Fruitdale.' But neither last spring nor at the present time (October, 1916) do I see more than one or two of these birds at a time under the apple trees or in the fields. I attribute the reduction in their numbers to the heavy snows which covered the ground in January and February, 1915.

During the snowy weather we set a table in the rose-garden, only a few feet from the house, and on top and beneath it we scattered grain and apples. Daily, for more than five weeks, we saw various ones of the following birds (those named first came in largest numbers): Varied Thrush, Red-shafted Flicker, Junco, Song Sparrow, Towhee, Robin, and Chickadee. Several times we saw Brewer's Blackbird, Yellow-bellied Sapsucker, House Finch, California Quail, and Gambel's Sparrow. One weak Meadowlark came now and then. It stood about, apparently trying to pick up the grains of wheat when undisturbed by Varied Thrushes or Flickers. One day, in a grass-plot cleared of snow

for the chickens, I saw the same Lark, or another, probing in the wet grass for food.—MRS. EUGENE D. LINDSAY, *Edmonds, Wash.*

The Barn Owl's Voice

A person once described as 'abominable' the night noises made by Owls, and though true bird-lovers will never agree with him, it would have to be admitted that the Barn Owl is no 'true songster.'

After listening night after night to the harsh screams, and even louder growling, rattling noise he can make, sounds which in the dark hours fairly make the shivers jump up and down one's spine, I can well imagine that woods could seem haunted and that, in the silent flopping flight of the big whitish bird, any superstitious person could see a ghost or almost any uncanny being of the visionary world. Like young Crows, the young of the Barn Owls receive the care of one or both parents for a long time after they can fly, and during all this period, as well as earlier, they make their strange clamor at feeding-time.

As I write this—August 25—a number of their weird rasps come from nearby trees. I have grown to like the sounds. They began at dusk when out of the swamp stole one of the parents, like a white shadow, straight to the hollow in a partly blighted chestnut tree that stands alone in the pasture. The old Owl circled the tree; then out flew a young one and then another and another until five shadowy white forms flopped apparently aimlessly around and around the pasture, amid screeches, which on other evenings I have heard half a mile and which are simply inimitable. This has happened nearly

every evening throughout August and September in the years I have spent here.

It is one of the old Owls that makes the growling rattle which, reverberating among tree trunks, sounds almost like a menagerie let loose. The sound seems usually to be made while the bird is flying with, or to, its mate. When coming toward one it is truly terrifying, particularly if in some gloomy recess of a wood. The Barn Owl itself is such a queer-looking creature that even country boys look upon it with dread, and Crows awake into a perfect frenzy when they find it. And yet was there ever a creature more innocent of meaning offence to man or bird? Every disgorged pellet of fur, bones, and teeth which I could find has been examined without discovering a sign of feathers.

Mice, destructive little creatures, almost fill the bill-of-fare, and these Owls are very clever in hunting them. A 'mousey' spot in a field is silently quartered again and again, with intervals between during which the Owl sits on a tree, fence, or building nearby and listens and watches. Mice come out of hiding after danger has apparently passed and sooner or later are caught off their guard. Down swoops the circling Owl, then up again and off to the waiting young who see the dangling mouse from afar and raise their voices in joyous clamor. It is not a beautiful sound, but to the thrifty farmer it heralds better, bigger crops. The old half-dead chestnut tree, unsightly as it is, has a lease on life as long as it can harbor Barn Owls.—JOSEPH W. LIPINCOTT, *Bethayres, Pa.*

THE SEASON

III. June 15 to August 16, 1917

BOSTON REGION.—Following a late, rainy spring, the summer proved typical of New England—ideal summer weather in June, periods of intense heat, high

humidity, and drought in July relieved by the thunder showers of early August.

The nesting birds laid full sets of eggs which, in the main, hatched successfully,

in consequence, presumably, of the abundance of moisture. The Baltimore Oriole and the Warblers were so delayed in arriving on their nesting-grounds that they built ten days or so later than normal. The Woodcock, however, arriving on time, were not delayed in nesting and, in spite of the backward season, brought out their broods at the usual date.

A marked diminution in numbers was noted in the following breeding species: Wood Pewee, Warbling, Yellow-throated and Red-eyed Vireos, and Yellow Warbler. The Wood Pewee and the first two Vireos have been becoming gradually less numerous in this region for some years, but until this season the Red-eyed Vireo and the Yellow Warbler have shown little or no change in numbers. Throughout the season the song-birds sang little. The species which were present in increased numbers were the Ruby-throated Hummingbird, Field Sparrow, Nashville Warbler, and House Wren. For the last few years the House Wren has been steadily regaining its former haunts in eastern Massachusetts from which it was driven, some forty years ago, by the House Sparrow.

The first evidence of the autumn migration which I saw in Lexington was a Tennessee Warbler on August 11.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK CITY REGION.—Possibly the chief feature of this summer hereabouts, and one generally noticed, has been the late continuance of the song-season of many species of birds, perhaps correlated with the unusual luxuriance and freshness of the foliage in mid-August. For instance, Mr. John Treadwell Nichols heard individuals of Bob-white in full song at Mastic, L. I., on August 20; Song, Chipping, and Field Sparrows, August 19; Towhee, August 18; Wood Pewee, Grasshopper and Henslow's Sparrows, Scarlet Tanager, and Robin, August 12; Wood Thrush, August 11; Long-billed Marsh Wren, August 5; Pine Warbler, July 30; and the writer noted Song Sparrows still singing in northern

New Jersey on August 19 and House Wrens on the 12th. All these are late dates, especially for the Wood Thrush and Robin, which usually stop singing by the first of August, and for the Pine Warbler, usually silent by the end of June.

One of the few definitely determined breeding-stations of Henslow's Sparrow on Long Island is at Mastic, where Mr. Nichols noted this year an apparent extension of the occupied area to points a mile and a half further north and four miles further west.

Very welcome visitors have been an unusual number of American Egrets. What is most probably—to judge from one slightly drooping leg—the same individual that was the last to leave Van Cortlandt Park last October, has returned there, and there are several other records from Mastic, Quogue, etc. Mastic further notes several Little Blue Herons.

The southbound shore-birds have been arriving on time, with Dowitchers and Willets as near the city as Long Beach. Two Pintails and a Mallard at Mastic on August 12 are the earliest records for Long Island. On the other hand, none of the small land bird transients regularly present by mid-August has been reported.—CHARLES H. ROGERS, American Museum of Natural History, *New York City.*

PHILADELPHIA REGION. — Normal weather conditions prevailed throughout June and July, with the exception of heavy rainstorms which commenced on July 9 and continued with little intermission until the 12th. During this time three and one-half inches of rain fell. The cold May weather set back to some extent the nesting operations of some of the late migrants. A normal number of young seemed to be present in the woods and fields, however. The only setback being caused by the storms above mentioned, just how much native birds suffered I can not state, but I can say with certainty that young House Sparrows were killed in large numbers. I have noticed that these storms are more severe on House Sparrows than on native birds.

About June 20, I noted Purple Grackles, Starlings, and Doves roaming about the country for their daily ration. At this time these birds commence to assemble in a definite roosting-place at night, and as autumn approaches and the birds increase, these roosts become the rendezvous of great numbers of Grackles, Starlings, Robins, Doves, and other birds.

Mid-July usually brings the first flight of Swallows, or, if we live along the sea-coast, the first flight of shore-birds may be noted. I noticed the first flock of Barn Swallows this year passing over on July 24. A few days later I heard the migratory lisp of some lone Warbler. I have often found the Northern Water-Thrush to be the first real fall migrant of the Warbler family. I have observed it the last week in July, but not this year. This bird seems to be a sort of forerunner of the vast host of Warblers that pass southward during the months that follow.—J. K. POTTER, *Camden, N. J.*

THE WASHINGTON REGION.—The aftermath of this spring's remarkably late and irregular migration extended well into June. Nearly all the late migrants remained beyond their usual time of leaving, and several broke the record for the lateness of their stay.

Those of the latter category are as follows, the dates in parentheses being the latest previous dates of departure:

Least Flycatcher, June 2 (May 20, 1904); Gray-cheeked Thrush, June 3 (May 31, 1907); Chestnut-sided Warbler, June 2 (May 30, 1891); Bay-breasted Warbler, June 5 (May 27, 1888); Black-throated Green Warbler, June 10 (May 30, 1907); Magnolia Warbler, June 4

(May 31, 1909); Mourning Warbler, June 7 (May 30, 1907); and the Rose-breasted Grosbeak, June 3 (May 30, 1907).

A few of the other transients that remained into June, and much later than common, with, in parentheses, the dates on which they have been in previous years latest seen, are:

Blackburnian Warbler, June 2 (June 3, 1907); Black-poll Warbler, June 8 (June 16, 1907); Canadian Warbler, June 2 (June 2, 1907); and the Tennessee Warbler, June 3 (June 6, 1910).

Of our usual summer Heron visitors, the Little Blue Heron appeared on July 21, when Mr. Francis Harper saw four in the white plumage at Dyke, Va., which date is much earlier than ordinary, though the earliest is July 16, 1904. The American Egret and the Great Blue Heron were reported on July 29 from near Arlington, Va.

A few birds have been more than ordinarily numerous this summer, enough so to draw comment from local observers. This applies particularly to the Cedar Waxwing, the Bob-white, and the Purple Martin.

Early in August a large roost of Purple Martins was discovered in one of the parks in the city of Washington. At the present writing the birds are still here in large numbers, and, on account of the unusual interest of this occurrence, further details will appear in our next report.

As the writer was absent from Washington during practically all of the months of June and July, almost all of the notes above given have been furnished by Mr. and Mrs. L. D. Miner and Mr. Francis Harper.—HARRY C. OBERHOLSER, Biological Survey, *Washington, D. C.*



Book News and Reviews

A STUDY OF THE INCUBATION PERIODS OF BIRDS: WHAT DETERMINES THEIR LENGTHS? By W. H. BERGTOLD, M.D., M.Sc. The Kendrick-Bellamy Co., Denver, Colo. 8vo. 109 pages.

Dr. Bergtold bravely attacks a problem which has ever aroused the interest of ornithologists, by assembling all the available facts and theories relating to it. This evidence, with the many attempts which have been made to determine its significance, he weighs carefully, and finally presents his own conclusions.

The authentic incubation periods recorded vary from ten days in the Cowbirds, Bobolinks, certain Warblers and some others, to as many as fifty-six or fifty-eight days in the Emu and sixty days in the Black-eyebrowed Albatross.

To account for this wide difference in time is the object of Dr. Bergtold's studies. Lack of satisfactory data concerning many of the factors involved prevent him, he writes, from presenting other than tentative conclusions.

While admitting that the incubation period "is loosely related to the size of the species, and still more loosely to the size of the egg," Dr. Bergtold believes that this period is primarily determined by the *temperature of the bird*. The existing information in regard to the temperature of birds indicates that the 'lowest' forms (that is, those most nearly related to their reptilian ancestors) have the lowest temperatures (averaging 100°-104°) while the 'highest' birds have the highest temperatures (averaging 106°-110°). Here, apparently, we have a physiologically reasonable explanation of why the higher birds (Thrushes, Warblers, Finches, etc.) have the shortest incubation periods.

Dr. Bergtold has assembled more information concerning this fascinating and important subject than has before been available in a single volume, and his work marks the starting-place for all

future investigators of the phenomena he so ably discusses.—F. M. C.

THE WAY TO STUDY BIRDS. By JOHN DRYDEN KUSER. With nine colored plates by Louis Agassiz Fuertes. G. P. Putnam's Sons, New York and London. 16mo. xii + 85 pages.

Somewhat over thirty years ago there appeared a popular book entitled 'Our Birds in Their Haunts.' It was followed, a few years later, by such less ambitious but possibly more effective guides to bird-lore as 'Fifty Common Birds and How to Know Them,' 'Our Common Birds and How to Know Them,' 'Birds Through an Opera-Glass,' etc. From that day to this the subject of bird identification has claimed the attention of many authors, culminating (with discoveries in color printing) in inexpensive pocket keys and guides with excellent colored figures of every species of bird known to inhabit the area concerned. Nevertheless, with that fine enthusiasm for his method of presentation, without which most books would never have been born, Mr. Kuser tells us, "For the beginner to learn avian identification is at present hopelessly complicated and unnecessarily discouraging, because of the requirement to wade ignorantly through a heterogeneous mass of terms and descriptions, or to go bird-hunting without the remotest idea of what he may expect to find most common or most easily identifiable in the special locality in which he searches."

Mr. Kuser writes of fifty common land-birds from "New York City as a center." His method of arrangement is seasonal, "twelve abundant permanent residents" being first treated. Then follows a chapter on 'Note-keeping' and another on 'How to Use the Key' which is given at the back of the book. Chapter V includes "The fifteen most abundant Summer Residents," and Chapter VI "The Fifteen

next Common Summer Residents;" Chapter VII deals briefly with 'Nests;' Chapter VIII, with 'Transients;' Chapter IX, with 'Migration Data;' Chapter X, with 'Winter Residents;' Chapter XI, with 'Winter Feeding;' Chapter XII, with 'Books, Publications, Societies,' etc.; Chapter XIII with 'Protection, Preservation, and Propagation;' while Appendix A contains a 'Key' to apparently the commoner land- and water-birds of the Middle States and Appendix B is a glossary. There is no index.

Mr. Kuser has made good use of his eighty-five pages, and his cordial invitation to bird-study will, we hope, be accepted by the many persons who desire just such an introduction to the subject as he here presents.

Nine full-page colored plates by Fuertes add greatly to the beauty, value, and interest of the book. Our interest is especially aroused by the Frontispiece, of a House Wren which appears to have placed its nest in a gourd having a diameter no greater than the length of the bird!—F. M. C.

BIRDS OF THE CAMPUS [of the Western Illinois State Normal School, Macomb, Ill.]. By CHAS. W. FINLEY, S.M. *Normal School Quarterly*, No. 30, June, 1917. 28 pages; 12 half-tone plates.

This is an exceptionally interesting addition to the growing number of publications dealing intensively with the bird-life of a restricted area. Its value lies not alone in the original information which it contains, but in its usefulness as a guide to the students who, in the course of time, will live in the locality of which it treats. Furthermore, the method in which the author presents his data seems well designed to arouse interest in his subject and to stimulate further investigation.

An introductory paragraph sums up the results of the observations recorded. They were made between February 21 and July 22, 1916, on a tract of about 63 acres. During this period 110 species were observed, of which 24 were found nesting. "In all 208 nests were built in which were

deposited 467 eggs, 260 of which hatched. Sixty-three of the young birds were destroyed before they were old enough to leave the nest, which leaves 105 successfully reaching that age."

These facts are presented in detail in the body of the report, together with full data on the migration, and a number of photographs showing nesting-sites, nests, and birds.—F. M. C.

Ornithological Magazines

THE AUK.—The July issue chronicles the lifework of the late Prof. F. E. L. Beal in an opening article written by Mr. W. L. McAtee who has prepared a fitting tribute to one of the older generation of ornithologists. Professor Beal's contributions were mainly to economic ornithology, and he rounded out a quarter century in the U. S. Biological Survey.

Messrs. P. B. Philipp and B. S. Bowdish record their observations on the nesting of 'Some Summer Birds of Northern New Brunswick,' some of the rarer Warblers and the Philadelphia Vireo being among them, and Mr. V. Burtch records the 'Nesting of the Florida Gallinule' at Branchport, N. Y. Both articles are illustrated with half-tones, and the description of 'An Improvised Observation Tent' by Dr. R. M. Strong is also illustrated. A short paper 'Field Notes on the Seriema (*Chunga burmasteri*)' by Mr. H. S. Boyle throws light on this curious South American bird.

Many readers will be interested in 'Miss Lawson's Recollections of Ornithologists' by Mr. F. L. Burns. She tells us a little of Wilson, Ord, Bartram, Bonaparte, and others.

A valuable contribution is by Mr. F. S. Hersey on 'The Status of the Black-throated Loon (*Gavia arctica*) as a North American Bird.' In spite of this species being recorded in no less than sixteen states of the United States and in many parts of Canada, Mr. Hersey finds there are just three correctly identified specimens, all from Alaska. If so many mistaken identifications can occur in a well-

marked species, what hope is there for sub-specific records—'sight' or any other kind! We may well take the lesson to heart.

Mr. H. S. Swarth describes in 'A Revision of the Marsh Wrens of California' a new race, *Telmatoodytes palustris aestuarinus*, and Mr. H. C. Oberholser in 'Notes on North American Birds, II' reinstates several races that have not been recognized in the A. O. U. Check-List. Mr. Oberholser also presents 'A Synopsis of the Races of *Bombeylla garrula*' recognizing one for Europe, one for Asia, and one for North America. Mr. H. C. Brimley contributes his records of 'Thirty-two years of Bird Migration at Raleigh, North Carolina'—165 species with much information and exact dates.

One may browse with interest among the several departments that fill the closing pages of a remarkably varied issue, and we may well wonder if we really know anything about birds when we find questions as to how tree-nesting Ducks get their ducklings down to the water and as to what species regurgitate, and as to other matters equally important, all open to doubt.—J. D.

THE CONDOR.—In the opening article of the May number, Dixon gives an interesting account of 'The Home Life of the Baird Sandpiper (*Pisobia bairdi*),' a species which breeds north of the Arctic Circle and winters in Argentina and Patagonia. This paper, illustrated with figures of the nest and eggs and a map of the breeding-range of the bird, is based on observations made in 1913 and 1914 between the mouth of the Mackenzie River and Point Barrow. The abundance and tameness of wild Ducks in the refuge on Lake Merritt, Cal., in the heart of the city of Oakland, is brought out by W. W. Richards in a brief note accompanied by four striking photographs showing flocks of Canvasbacks, Baldpates, Sprig, and Coots in the immediate vicinity of city residences.

Kennedy discusses 'Some Factors Involved in the Nesting Habit of Birds,' and Oberholser reviews 'The Status of *Aphelo-*

coma cyanotis and its Allies', recognizing eleven forms of Jays in the *californica* group, all of which, except *A. cyanotis* and *A. insularis*, are subspecies of *A. californica*. Mrs. Bailey concludes her paper on 'Birds of the Humid Coast' with an account of the species in the bracken and notes on the Band-tails. A review of ornithological work in progress by various bird students is given by the editor, and the number closes with the annual 'Directory of the Cooper Ornithological Club.' The total membership of the club is now 601, including 7 honorary members.

'The Condor' for July contains five general articles, the first two of which are devoted to habits of birds, one on 'The Ospreys of the Yellowstone,' by M. P. Skinner, and the other on 'The Magpie in Southeastern Washington' by Lee R. Dice. J. H. Bowles describes 'The Winter Migration of 1916-17 in the Northwest' which was marked by unusual numbers of Great Horned Owls, Snowy Owls, Goshawks and Bohemian Waxwings.

The last two papers comprise local lists. Under the title 'Observations on Some Fresno County Birds,' Swarth contributes notes on sixteen species supplementary to Tyler's papers on the same region. This article is followed by an extended account of 'Some Birds of Central Oregon' by Alex Walker, containing notes on 139 species, the result of observations made in 1913, 1914, and 1915. Among the brief notes are records of nine Fork-tailed Petrels (*Oceanodroma furcata*) obtained at Sunset Beach, Orange County, in May and June 1916, and three Baird's Sandpipers collected at Del Rey, Los Angeles County, Cal., August 17, 1916.—T. S. P.

Book News

'THE Winnetaska Bird Charts' or rather bird-cards are designed to enable the field student readily to record all that he may observe about an unknown bird.

There are cards for water- as well as land-birds. They may be obtained from the publisher, Dr. John B. May, Cohasset, Mass.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE Editor desires gratefully to acknowledge the many cordial expressions of goodwill and appreciation which have come to him indirectly from contributors to BIRD-LORE'S 'Conference.' Our errors rarely pass unnoticed, but whatever may be especially worthy of commendation is usually taken for granted. Contact of Editor with reader is, therefore, apt to be of a somewhat discouraging nature, and it is consequently most reassuring to receive this unexpected outpouring of loyal support of the magazine and warm-hearted endorsement of its efforts to "promote the study and protection of birds."

A CIRCULAR letter recently issued by E. W. Nelson, Chief of the Biological Survey of the United States Department of Agriculture, to the field naturalists of the Survey, deserves far wider circulation than, as an official document, it is likely to receive. While it relates primarily to mammals, Mr. Nelson states that "as regards the desirability of giving more attention to studying the habits of the species" what he writes about mammals applies "with equal force to birds." Mr. Nelson calls attention to our ignorance of many important phases of the life-histories of even our commonest mammals and urges the field naturalists of the Survey to "make special efforts to obtain all the information possible concerning the habits of the species in the territory visited."

"The study collection of the Biological Survey," he writes, "has now become so well supplied with series of specimens representing the commoner species that a considerable part of the time of the field investigators will be more profitably spent in obtaining more detailed information on the life-habits of these species than in largely increasing the number of specimens."

This is an epoch-making sentence in the history of North American mammalogy and ornithology. Specimens, more specimens, and then more specimens has heretofore been the motto of museum expeditions, whether sent out by government or private institutions. That the collecting and classifying of specimens is the first step in the study of the species is beyond question. But the gratification of the collecting instinct, the fascination of the hunt, and the necessity of securing some tangible result in return for the time and money expended have all combined to turn the field naturalist into a collector rather than an observer.

The capture of the specimens left neither time nor opportunity for a study of the species; while their preparation often required the effort that might have been employed in recording the observations one had chanced to secure.

With the issuance of Mr. Nelson's letter we see the dawn of a new era in the study of the birds and mammals of regions which have been more or less thoroughly 'collected.'

Coming from the head of an important Government Bureau, where strict accounting must be made of funds appropriated by a none too generous Congress, it may be accepted by those responsible for allied institutions, as an authoritative statement that not only the 'skins' of birds and mammals, but also a knowledge of their habits, has an actual cash value.

Hereafter, let us hope, the success of the field naturalist, even in countries the fauna of which is still imperfectly known, will be measured, not by the size of his collections, but by the contents of his note-books.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

ON IMPROVING METHODS OF TEACHING BIRD- AND NATURE-STUDY

More and more deeply a feeling is coming to thoughtful educators, as the great war steadily takes its toll of men trained as teachers or scientists, that the ranks must be filled in the near future by members of a younger generation, by boys and girls now in high school or preparatory institutions. The question arises as to whether these youthful scholars will attain a broad and careful outlook upon the field before them, and become sufficiently well fitted for the tasks awaiting them to take up and carry through the work of men who have left the schoolroom or investigator's laboratory to aid their country in the world-wide struggle for liberty.

What can we do *now*, in the midst of so much outward strife, to improve methods of teaching and to bring the standard of scholarship in nature-study to a higher level? We can do *this*: actually exert ourselves to see and understand more of what goes on about us in the world of nature. The simple exercise, which follows, describing a sand spit, suggests some ways in which a more intimate acquaintance with the interrelationships of a very circumscribed area of plant and animal communities may be made. One serious trouble with present methods is the *detached* presentation of facts about nature. Bird-study has long been popularly taught by the simple method of identifying one bird after another, usually by plumage, less frequently by song or flight, and even more rarely by observation of habits.

This is a most inadequate method at best, since birds are so bound up in their life-histories with other forms of life, particularly with vegetation and insects that the detached method in reality fails to give the proper background for their activities or an adequate presentation of the part they play in the so-called balance of Nature. When high-school teachers are satisfied to lay aside a certain prejudice about college and university methods on the one hand, and grade-school methods on the other, the question of raising bird- and nature-study to its rightful place can be much more fairly met. One method should underlie all phases of this work; namely, the method of *getting at the truth*.

In the kindergarten and grades, children can learn to know animals and plants in communities just as well as in detached groups, or one by one without reference to relationship to their environment. It takes thought and time to see the world as it really is, but how much more, for example, a bird means to

the observer if he follows out its daily routine from feeding-area to nesting-area, and discovers where its associates are, what food it selects, what enemies it avoids, and what friends it makes! A diagram of the ordinary activities of animals found on the sand spit devised by an instructor in marine ecology is well termed 'The Whirlpool,' for the relationship of the plants and animals of the different zones found there is so intricate as to suggest not only a ceaseless intermingling of life, but also an interdependence beautifully adjusted to the requirements of each individual organism.

Make a beginning this school-year by calling for lectures of scholarly grade, bird- and nature-study books of wide and truthful outlook and, above all, help teachers in every possible way to attain the highest standards by the best means.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXV: Correlated with Etymology, Mechanical Drawing and Observation

THE SAND SPIT

[NOTE.—The data for this study have been taken in part from a paper, entitled 'The Animal Ecology of the Cold Spring Sand Spit,' by Dr. C. B. Davenport.]

"On a narrow *spit* of sand between the rocks a dozen little girls are laughing, romping, and pattering about."

—KINGSLEY: Two Years Ago. ii.

In studying geography, it is quite likely that you may have been told that "a small point of land running into the sea, or a long, narrow shoal extending from the shore into the sea" is called a *spit*, and, no doubt, the use of this common word in such a sense seemed strange to you. Had you taken pains to look up the etymology of *spit*, a much clearer idea of its meaning would have come to you. Spit is two words, in reality, of quite different origin, although both go back to Anglo-Saxon, old Dutch, German, Icelandic and early English, and not to Latin or Greek. With the word spit related to *spittle* and *spew*, and in the modern sense to *saliva*, we have nothing to do, for the word applied to a narrow point of land running out into the sea comes from a different source. Although this word spit, like the other, is of early Dutch and Anglo-Saxon origin and related French, Italian and Spanish sources, it comes from words originally meaning a roasting-spit, a deer's horn, or the branches of a deer's horn, a spear, pike, lance, a wooden peg, a tapering point. Remembering that the ancient roasting-spit was a slender, sharply pointed stick or bar, we see how apt the application of the word is to a long, narrow neck of land or sandy bar thrust into the sea.

In a modern poet's verse you will find the word used in connection with *beach*, a more common feature of shore landscape:

"But Hermod rode with Niord, whom he took
To show him *spits* and beaches of the sea."

—MATTHEW ARNOLD: Balder Dead. iii.

A year ago, you may remember that we had a picture of "the inner harbor." Beyond this nearly land-locked harbor extends the larger outer harbor, which joins the great Sound and through that the Atlantic Ocean some ninety miles from the point to be described. Between the inner and the outer harbor is a sand spit. In fact, the harbors would be one were it not for this narrow strip of sandy shore which so nearly separates them. It almost seems as if barely enough space was left open for the tide to run through or an occasional boat of small dimensions.

The spit at first sight looks commonplace and of little interest, a stretch of sand, some rather scanty beach-grass, and one or two wind-tossed shrubs to break its monotonous level. In length it is a little more than a third of a mile, and its varying width ("80 meters at its western end" and "15 meters at its eastern end"), which averages about 40 meters, or 131 feet, gives it the appearance of a tapering point. Along its center, lengthwise from west to east, the sandy soil is heaped up gradually by débris which eroding winds wear away from the bluffs on the western coast of the outer harbor, and south-bound currents carry as far as the protected area where the outer harbor joins the inner. Rising a little above the beach edge on the north side and the inner edge which is covered with marsh grass, thriving abundantly on the muddy shore-line of the inner harbor, this slightly higher crest of the spit has been called "the desert area" to distinguish it from the pebbly outer beach and the muddy, grassy inner shore-line. Upon looking more carefully at this surprising point of land, one finds that the sand on different parts of it is either finer or coarser, according to its location. In fact, one might spend much time studying the geological formation found here before being able to describe the spit accurately. The animals and plants too distributed over the sand spit vary much more than the casual observer would expect, and their number exceeds by far any hasty estimate.

At falling tide may be seen the *lower beach*, which remains covered at high tide. There are also at certain times unusually low tides, called "spring tides," when more of this part of the beach with its rich marine life is exposed for a brief period almost in plain view. A large annelid worm lives here, called *Nereis limbata*, which means daughter of the sea-god Nereus, having a frill of limblike appendages along its sides. More common worms are found in greater abundance. The primitive vertebrate *Balanoglossus* is occasionally met with here in the edge of the "shallow sea." There are, "*sessile*" forms of life, both plants and animals, as well as "*crawling*,"

"burrowing" and "swimming" animals living on the lowest tide-levels of the outer beach. Along the lower beach proper, plant and animal life must struggle hard with the constantly changing tides, and here, as one might judge, there are fewer forms existing. Many tiny insects (*Collembola*) of peculiar habits are found at this level while a little higher up the familiar horseshoe crab comes to nest.

There is much complication in the daily life of some of the animals living on the lower beach, for those which are air-breathers must move elsewhere when the tide is high. Many an hour may be profitably spent watching their movements.

Above the lower beach follows an *upper beach* strewn with débris from the incoming tides along its lower margin, and joining the "desert zone" of fine sand and stiff, sparse beach-grass along its upper edge. The *upper beach* might well be termed an old curiosity shop of Nature, for here are found the flotsam and jetsam of the sea. By one scientist it has been described as the "graveyard of the shallow sea," and by shallow sea we should remember, is meant the lowest low-tide area. Walking along any beach we have all wondered no doubt how the things which we picked up got there, smooth bits of wood or pebbles soft to the touch with constant wearing by the waves, old bottles, bits of boxes or lumber, sometimes parts of ships, seeds, pieces of sea-weed, flabby jelly-fishes, embryo-cases of skates, and certain dead insects which have been drowned, probably by being blown out of their course and cast into the sea. Most of these insects, we are told, that have been found on the sand spit are leaf-eating by habit, like the destructive Colorado potato-beetle and the beneficial ladybugs. Since much of this débris, both plant and animal matter, is edible, animals of scavenger habit are attracted thither, which accounts for the presence of herbivorous beach-fleas, rove-beetles, and a tiny white earthworm, as well as carnivorous ants, flesh flies and carrion beetles of various kinds, one of which is called *Necrophorus* from its habit of burying dead prey in which it lays its eggs. There also occur dermestids in larval form, those tiny "skin-eating" beetles, some kinds of which are so destructive in museums and elsewhere in carpets and sometimes even upon bacon.

Added to this strange assortment of creatures and things along the upper beach, are still other forms of life, predaceous by habit, that is, preying upon living animals. Such are the sand-white running spiders and robber flies, the tiger beetles, ant-lions and familiar Barn Swallows, which find a rich feeding-area along this narrow line of the spit.

Nearly up to the storm-bluff line of the upper beach, where beach-grass joins sand, may be found here and there a wandering grasshopper, almost white in this environment but capable of becoming much darker if removed from its sandy habitat, a few crickets, and sometimes an occasional song-bird in bits of jetsam lumber. Here on the outer beach, too, come the omnivorous Crows in some numbers, to glean morsels of sea-food for themselves and young.

Their sagacity is well illustrated by their actions on a summer's afternoon, when bathers pre-empted the beach, both at its eastern and western ends. Circling about, ready to alight at the tip of the spit, as is their wont, the presence of row-boats and people, supposedly enemies, caused them to turn, reconnoiter, and finally to select a space midway along the beach where, no doubt, continued observation on many other days, when bathers frequented only the ends of the beach, led them to feel free from attack. This same company of Crows, if ever so slightly aware of the approach of a human being when feeding on the inner harbor at low tide, take fright and depart long before their less suspicious companions, the Green and Black-crowned Night Herons, are disturbed.

Mussels and mud snails no doubt attract the Crows to their favorite feeding-ground near the *tip of the spit*, where the outer beach joins the inner mud-flats, held fast against the inrushing and outgoing tides by thick masses of tough marsh-grass (*Spartina glabra*).

Coming up now to the storm-bluff and "*desert zone*" of the spit, one finds vegetation and animal forms of life which are quite similar to those some distance inland. Only a few typical shore forms of plants and practically no marine animals are found, although scarcely half a stone's-throw brings one to the outer and inner tidal zones. Plant-lice, ants, various leaf-beetles, spiders, dragon-flies, crickets, and an occasional wasp or butterfly spend their life-cycle on this narrow line of vegetation. The Spotted Sandpiper comes here to nest in the fine sand, pulling a few strands of beach-grass over its simple home as shelter. This summer a large nest of dead beach-grass was discovered, which some larger bird had fashioned and used, a domestic Duck probably, or, possibly a wild bird whose identity may be proven by the fuzzy blackish feathers left in the nest with two barred rusty, white-and-black contour feathers. A delightful mystery this, because the location of the sand spit makes some inviting probabilities doubtful of acceptance without visible proof. Now and then a Kingbird finds its way to the stray clumps of stunted bushes on this tiny "*desert*," or a small company of Goldfinches race by in search of weed-seed and chicory which creep into byplaces on the western end of the spit. One day a Kingfisher sought a low, precarious perch on the tip of an old log, which successive tides and winds had pushed well up off the beach. Stranger yet, a Spotted Sandpiper, probably the mother bird, actually clung in a perching attitude to the top of a low mullein stalk from which available height she anxiously watched her single newly-fledged nestling, now hiding in the grass and calling piteously at every turn.

From the inner beach, where Sparrows of various species lurk, flies up now and then a weak-voiced sharp-tailed Finch, to a branch of one of the straggling shrubs on the "*desert*." Down in the muddy bottoms of the *Spartina*, where most of their time is spent, live communities of lively fiddler crabs and slow "plant-feeding" snails. Along this inner edge, too, where a half-dry beachlike

pathway runs inside the area of marsh-grass and mud, a pair of Mourning Doves are wont to feed, flying down from woodland pastures a hundred feet or more higher up. Song Sparrows, Catbirds and, more seldom, Purple Grackles visit the spit, the two latter usually along the beach. During the migration season, it is not uncommon to hear the Yellow-legs calling as they fly over, or to catch the sweet whist'le of the much rarer Upland Plover, or to see the white breasts of a flock of hurrying Tree Swallows. Among many delightful memories of the Sand Spit, one stands out never to be forgotten, the vision of a small White Heron, pausing in the early morning on the outer beach before seeking a more sheltered feeding-ground. Such stray visitors from the South are becoming more frequent. This season as well as last, a large American Egret spent some weeks in a neighboring harbor and the Little Blue Heron, also white or nearly so in the immature plumage in which it usually appears, has been recorded nearer by.

It is always with a feeling of regret that one leaves the sand spit, for life is so full of daily interest there, one can always learn something new. A glance over the outer harbor may reveal a stray Tern (*Sterna hirundo*) basking placidly on the stake of a buoy, or a flock of Laughing Gulls, mayhap, tossing up and down the windy waves, while inshore stalk the sober Herons, eagerly scanning the flats of the inner harbor for eels or other toothsome prey. A knot of Fish Crows sometimes finds its way hither, and when the Great Blue Heron flaps majestically over, a feeling of the endless charm of bird-study and the intimacy of Nature brings a keen joy not to be effaced by long wintry days to follow, for even then Great Black-backed Gulls come down from the North to join the Herring Gulls which throng the spit and inner harbor.

"A narrow neck of sandy bar running out into the sea"—I wonder what new discovery awaits me there when next I walk quietly along its yielding surface!

SUGGESTIVE QUESTIONS

How many feet make a meter?

Where is the meter used as a measure of length?

Why should we be familiar with it?

What does geology mean?

What is the story of Nereus and his daughters?

What is the difference between flotsam and jetsam?

Explain the meaning of etymology? omnivorous? eroding?

What other words can you think of which begin with omni—?

What is the meaning of reconnoitre? How is it used by soldiers?

Look up *Spartina glabra*.

Describe life on the different parts of the sand spit as follows:

- | | | |
|---------------|---|--|
| The Sand Spit | { | 1. The lowest low-tide line. |
| | | 2. The lower beach. |
| | | 3. The upper beach. |
| | | 4. The "desert area." |
| | | 5. The eastern tip of the spit. |
| | | 6. The inner shore along the muddy bottoms.—A. H. W. |

FOR AND FROM ADULT AND YOUNG OBSERVERS

THE BLACK-CAPPED CHICKADEE

By G. T. RICHARDS* (age 11 years)

"This scrap of valor just for play,
Fronts the north wind in waistcoat gray,
As if to shame my weak behavior.
Piping a tiny voice near by
Gay and polite, a cheerful cry,
Chick-chick-a-dee-dee—saucy note!

Out of sound heart and merry throat,
As if it said 'Good day good sir!
Fine afternoon old passenger!
Happy to meet you in these places,
Where January brings few faces.'"

—EMERSON.

The Chickadee's disposition is its great point, as its plumage is not brilliant while its song is merry, not beautiful. It is the tamest bird that we have and is very beneficial. It is fully as much of a snow-bird as the Snow Bunting and is out in all weather except during an ice-storm. "Follow the Chickadee and you will sooner or later see most of the woodland birds." It is very curious and often will alight on one's hand. It is the picture of gaiety, merry and unafraid, "chick-chick-a-deeing" encore after encore, day after day, until its first egg is laid, when it suddenly becomes silent and avails itself of every effort to draw you away from its precious offspring. It is properly a wood bird but will sometimes come to one's door to partake of a feast when food is scarce. "Its chief traits are courage, optimism, industry, activity, helpfulness, and joy in life." It seems to notice humans and does not regard us with indifference, but shows a decided interest in man-folk.

There are six to eight eggs a brood and sometimes two broods, provided that the nest is not robbed. The color of the eggs is white spotted with reddish brown. The time is eleven days to hatch and two weeks before the young birds can fly. The Chickadee nests in sassafras, birch, wild cherry, apple, plum, pine, and redbud trees, while it will use knot-holes, fence-posts and bird-boxes if there are any near. It cannot bore into solid wood, and when it makes its own hole uses dead trees or Woodpeckers' and Nuthatches' holes and any others that it can find. It deepens, enlarges, and smooths other birds' holes whenever possible. The Chickadee uses holes all the year round to live, breed, and sleep in, and seeks a hole when danger threatens.

It is very prudent and removes tell-tale chips to a distance. Its nest is nine inches deep, and in one instance a Chickadee had scooped clear to the bark of a three-inch tree. When resident (as it usually is) it uses its hole all

*Authorities consulted (but not quoted verbatim): John Burroughs' Works; Citizen Bird, by Mabel O. Wright and Elliott Coues, New International Encyclopedia; Bird Guide, by Chester A. Reed; Bird Neighbors, by Neltje Blanchan; Field Book of Wild Birds and Their Songs, by Schuyler Matthews; The Home Life of Wild Birds, by F. H. Herrick; BIRD-LORE; Educational Bird Leaflets.

the year round. Chickadees are very clean and push their young to one side when cleaning house. Their nest is made of cottony vegetable fibers, animal hair, wool, mosses, feathers, and insect cocoons. The pair take turns at sitting and, as they are the same color, one cannot tell the difference. The male feeds the female when she is sitting. When one peeps into the nest, the sitting bird makes a peculiar puffing sound which makes one draw back and shut one's eyes. Both birds sing, but the male's song is better. Their song is *chick-a-dee-dee-dee-dee* with an occasional *dee-dee* or *chee-dee*, while in spring they utter a call, *phæbe*. They have several other notes of minor importance. "Their call has a touch of unspeakable tenderness and fidelity."

Our friend eats larvæ and eggs which it gets from trees, and it has been figured that one of them destroys 138,750 cankerworms' eggs in twenty-five days. In winter the Chickadee welcomes food put out for it, such as crumbs, sunflower seed, fat pork, raw bone, suet, and corn, while a picture that I have seen shows one on a piece of cake.

To attract Chickadees, ordinary bird-boxes may be put up. The dimensions are 12 by 4 by 5 inches, and the hole should be $1\frac{1}{4}$ inches in diameter and should be near the top. No perch is needed. This house will do for Wrens also.

The Chickadee belongs to the Titmouse family, and its brothers (birds of the same genus) are the Carolina and Acadian Chickadees. Its cousins are Titmice, Nuthatches, and Verdin. Its other names are the Black-capped Titmouse or Tit. Its ornithological name is *Penthestes atricapillus*, Family *Paridæ*, Order *Passeres*.

It is a great acrobat and could turn Flycatcher if it chose. It has no harmful habits, few natural enemies, and is most often seen in dry country.

[Accompanying this unusually painstaking and interesting article is the following explanatory note from a "grown-up:" "The whole thing was entirely a labor of love, initiated and type-written by the boy because of his admiration of the Chickadee. The boy consulted, as he told me, 'everything he could lay his hands on.' If it would serve as an instructive example for other boys and girls to follow, its publication may be worth while." The kind of bird-study represented in the foregoing article is sometimes, but rarely, followed in schools where bird- and nature-study are allowed a fixed period a week. Correlated with drawing and reading, a class can, during a year's work, accomplish something very creditable in the way of compiling and putting together neatly and artistically a small booklet, illustrating birds and their habits. It seems very much worth while to give this method a trial in schools where opportunities for field-study are of necessity limited.—A. H. W.]

ANOTHER METHOD OF INDOOR STUDY

I have had BIRD-LORE for three years, and it is always welcome. I enjoy reading it very much.

I am in the sixth grade and have agriculture as one of my studies.

One day the class had a lesson on birds. We had to find who could get the

most birds and also an outline of the most important birds. I had the most birds and also the outline. Below is the outline:

Birds as:

Destroyers of Vermin	{ Jays Crows Owls Buzzard		
Scavengers	{ Gulls Buzzard Crows		
Consumers of Wild Weed-seed	{ Doves Sparrows Cuckoos	Blackbirds Larks Orioles	Cardinal Quail
Insect Destroyers	{ Wrens Orioles Quail Swallows Mockingbird Flycatchers Larks	Blackbirds Cardinal Whip-poor-will Jays Woodpeckers Doves Killdeer	Crows Owls Bluebird Sparrows Catbird Cuckoos

I have seen this spring the following birds: Redbird, Robin, Wrens, Bluebird, Catbird, Crows, Blackbirds, Sparrows, Swallows, Doves, Larks, Quail, Jays, Woodpeckers, and Hummingbird. These are most of the birds that frequent our village. Hummingbirds are not seen very often, but if you go on the bluff you will see their nests and the birds also.

I have seen quite a few nests in trees and other places. I have seen nests of the following birds: Robin, Wren, Blackbird, Sparrow, Mud Swallow, Bluebird, Mourning Dove, Blue Jay, Catbird and Woodpecker. I saw the Robin's young ones, also the Mourning Dove's young ones.—ALICE CRECELIUS (Age 10 years), *Jefferson Barracks, Mo.*

[This well-written outline suggests again the importance of *individual thinking and effort* in bird-study as opposed to the system of memorizing. A postscript added to the article contains the inquiry: "What kind of bird is very large and eats fish?" Perhaps some of our readers can answer this question. It is a good one to look up.—A. H. W.]

A JUNIOR AUDUBON SOCIETY IN AN HISTORIC SCHOOLHOUSE

By this mail I am sending you a picture of my Junior Audubon Society, also some letters written by my pupils who are members of the society. The picture was taken in our schoolyard, and I am sorry that the building does not show, for it is the oldest public school building in the United States, having been founded by George Washington, and named for him. In Alexandria

we have the boys and girls separated in the grades, and I have boys in the third grade.

This has been the most enthusiastic Audubon Society I have ever had, and I attribute it to the fact that our field secretary, Miss Katherine Stuart, lives in Alexandria, and she is always ready to help Junior Audubon Societies. We have enjoyed her visits so much, as well as the field trips she has taken with us.

Most of the members have made bird-boxes, and some of them were put up in the Soldiers' Cemetery. With a few exceptions, birds had built in all of the boxes a short while after they were put up. We have scattered a quantity of food this past winter, and while the English Sparrows have been the principal birds to feed near the building, the children have taken such delight in keeping the table supplied, I am sure they will continue the habit. Very near the school window there is an old cherry tree, which during the last few weeks of school was visited by many kinds of birds. It was a surprise to see how little the boys seemed to care for the cherries, for they preferred that the birds have them instead.

Our meetings are held twice each month, and we quite frequently have visitors. The boys make up the programs, and always preside at the meetings. Before school closed they elected officers for next year, intending to continue the work in the fourth grade.—MISS MARY DOUGLASS.

[No comment is necessary here, as the picture of the Alexandria Junior Audubon Society speaks for itself. It might be well, however, to point out that this Society intends to continue its organization and work in the fourth grade, which is what all Junior Audubon Societies really should do, instead of dropping their organization at the close of the school year in which it was formed. With a little more method and enthusiasm on the part of teachers and more initiative and loyalty on the part of pupils, Junior Audubon Societies might easily be kept up from grade to grade throughout the entire period of preparatory work.—A. H. W.]

MORE METHODS OF STUDYING BIRDS IN JUNIOR AUDUBON SOCIETIES

I

This year is the first year I have studied birds. I belong to the Junior Audubon Society. In this state of Virginia it is an offence with a fine to kill most of the birds.

Miss Stuart goes around talking to children in Virginia about birds. She has been to see us twice. Most of us have made bird-houses, and we put them up in different parts of the city.

I have an Uncle who lives in Canada, and I would like to know if there is a fine for killing birds there.—JAMES NOBLE (Age 9 years), Third Grade, *Alexandria, Va.*

II

We have an Audubon Society in my room at school, and we have thirty members. Miss Stuart came into my room and talked to us about birds. She says that the enemies of birds are the gun, the cat, and the dog. She showed us some nests that she had with her.

We built bird-houses and put them up. We put boards on the windows at school and fed the birds. The birds are beginning to get tame around my



JUNIOR AUDUBON SOCIETY, ALEXANDRIA, VA.

school now. We can look out of the window and see a lot of birds. We have studied eight birds this year.

Yesterday we had a bird contest against the fifth grade, to see who remembers the most about the birds we have studied.—JOHN McIVER JACKSON (Age 8 years), Third Grade, *Alexandria, Va.*

III

All of the boys in our society have built bird-boxes, and we had our pictures taken with the boxes. I took my box home, and in a few weeks a Sparrow started to build in it, but it did not finish. One week later a House Wren built in it. She took out all the grass that the Sparrow had put in. She tried to get a big stick inside, but she could not do it, so she went into the box and pulled on it. The stick broke and I heard her thump against the back of the house.

We enjoyed having Miss Stuart come to our meetings. She showed us a

stuffed Cardinal, a Flicker, a Cedar Waxwing, a Chimney Swift, and other birds.

On June 14, we had a bird contest against the fifth grade, and I won a book for standing up the longest in the contest. The book is about birds, and another boy in our room won a book for making the best bird-box.—LOUIS FINKS (Age 8 years), Third Grade, *Alexandria, Va.*

[These letters all suggest active, thinking pupils, who are learning at first-hand about bird-protection and bird-life in general. It might add much to the attractiveness of bird-study about the school if the English Sparrows were trapped in winter, and the lunch-counter made available for more useful species. In many places this Sparrow seems to be normal in number or decreasing, but as soon as it discovers bird-boxes and lunch-counters, it speedily preëmpts them, keeping away other birds of more desirable habits.—A. H. W.]

CHIMNEY SWIFTS GATHERED FOR THE FALL MIGRATION

I once saw in Atlanta a gathering of Chimney Swifts previous to their fall migration. I lived near some chimneys in a four-storied building that were used only for ventilation. There was a remarkable sight in early October. Scores and scores of Swifts circled around one of these tall chimneys as sunset approached. At first they flew in wide sweeps, then closer and closer, until there was an unbroken, moving, twittering ring. At every round a dozen or more would sink into the open mouth of the chimney, until all had vanished and stillness reigned. They always left so early in the morning that no one saw them depart. After October 12 they came no more.—LUCY H. UPTON.

[Readers of the School Department will welcome this brief chronicle of an incident of fall migration, from the pen of Miss Upton. The habits of the Chimney Swift are full of interest, and none possibly is more spectacular in operation than the descent of a large company of Swifts into a chimney. If you are fortunate enough ever to witness such a sight, take a watch and keep record of the number of Swifts going into the chimney each minute during the descent. Also watch the change in time evening by evening as long as the Swifts visit the chimney.—A. H. W.]

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
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FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

NOTICE OF ANNUAL MEETING

The Thirteenth Annual Meeting of the National Association of Audubon Societies will be held in the American Museum of Natural History, New York City, on October 30, 1917.

The first business session will be held at 10 o'clock A.M.

In the evening before, beginning at 8 o'clock, it is planned to give a public entertainment, including moving pictures,

in the main lecture-hall of the Museum. All members are urged to attend, and the public is cordially invited to all of the sessions.

It is believed that this will be an especially interesting meeting in view of the large volume of work carried forward the past year by the Association, its field workers, and its affiliated organizations throughout the country.

THE MIGRATORY BIRD LAW

The Enabling Act to give force and power to the treaty between the United States and Canada regarding the protection of migratory birds still hangs fire in Congress, although this Association and many other organizations and a great number of individuals have brought every possible pressure to bear to have the subject considered as a war measure. After intense work, the full measure of which will never be realized by any one man, the matter was finally brought to a vote in the Senate July 30, 1917. It was passed by a large majority, but thus far it has been found impossible to get action in the House on the measure. Let no one think

for a moment, however, that this bill will ever be lost sight of, as the Association and its friends are constantly in touch with the situation. Every member of the House has been canvassed and his point of view ascertained.

In the meantime, however, the Canadian Government has gone forward with its Enabling Act, and a letter recently received from Dr. C. Gordon Hewitt, of Ottawa, states that on August 29, 1917, final action was taken.

The whole fight for this treaty and its enforcement, therefore, has been won with the single exception of the final vote in our House of Representatives.

NATIONAL ADVISORY COMMITTEES

Shortly after the passage of the Federal Migratory Bird Law in 1913, the United States Secretary of Agriculture appointed an Advisory Committee to coöperate with the Department of Agriculture in the matter of preparing rules and regulations covering the killing of migratory birds. Recently this Committee was enlarged by the addition of five state game commissioners. The committee as at present constituted stands as follows: John B. Burnham, New York City, Chairman; William L. Finley, Portland, Ore.; E. H. Forbush, Boston, Mass.; Edward G. Bradford, Jr., Wilmington, Del.; Dr. William T. Hornaday, New York City; Marshall McLean, Albany, N. Y.; T. Gilbert Pearson, New York City; George Shiras, 3rd, Washington, D. C.; John C. Speaks, Columbus, Ohio; John H. Wallace, Jr., Montgomery, Ala.; Clinton M. Odell, Minneapolis, Minn.; Clark McAdams, St. Louis, Mo.; M. L. Alexander, New Orleans, La.; William R. Oates, Lansing, Mich.; W. E. Barber, Madison, Wis.; William C. Adams, Boston, Mass.; Carl Westerfeld, San Francisco, Cal.; George G. Koster, Lincoln, Neb.; E. C. Hinshaw, Spirit Lake, Iowa; Brooke Anderson, Chicago, Ill.; George Bird Grinnell, New York City.

This Advisory Committee has had various meetings, and many of their recommendations have been adopted by the

Department of Agriculture. The last meeting of the Committee was held at St. Paul, Minn., on August 29, 1917, and the Biological Survey, representing the Department of Agriculture, is now considering its recommendations. A new set of regulations are expected to be issued and signed by the President some time this fall.

After the ratification of the treaty between the United States and Canada in reference to migratory birds, the Canadian Government, by an order in Council, dated December 28, 1916, appointed an interdepartmental Advisory Board for the purpose of formulating plans regarding the protection and use of the wild bird and animal life of Canada. It is one of the duties of this Committee to advise on questions relating to the protection of birds under the treaty. This Board consists of: James White, Assistant to the Chairman of the Conservation Commission; D. C. Scott, Deputy Superintendent of Indian Affairs; Dr. C. G. Hewitt, Dominion Entomologist; Dr. R. M. Anderson, Geological Survey; J. B. Harkin, Commissioner of Dominion Forests.

It will be noted that the Advisory Committee of the United States is composed exclusively of men who have no position in connection with the Government, but the Advisory Board of Canada is composed entirely of officials.

VENEZUELA TO PROTECT EGRETS

Venezuela has recently passed a law governing the collection and exploitation of Heron aigrettes. The law provides that such feathers may not be collected except in the heronries at the time of moulting from July to November inclusive. The word "heronry" is defined as meaning one of those places near lakes, bayous, or rivers where Herons periodically come to nest. The killing or trapping of Herons is prohibited at all times and seasons.

Collectors of customs shall not permit the exportation of Heron feathers without having satisfied themselves by an examina-

tion in the presence of the exporter that such feathers are actually moulted feathers, and were not pulled from caught or slaughtered birds. As moulted feathers are easily distinguishable from pulled feathers, the Minister of Fomento is directed to furnish each custom-house with samples of feathers obtained by each process. These dropped feathers are known as "dead" aigrettes, and command a price of only about one-fifth the amount that milliners will pay for "live" feathers taken from the birds.

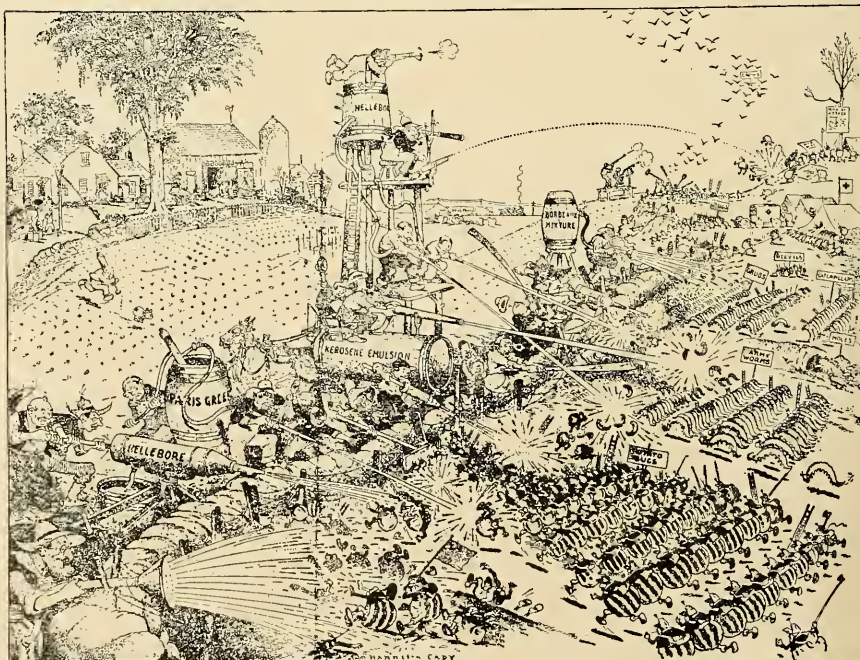
The exportation of Egret feathers, or

aigrettes, rose to be a considerable business in Venezuela. It was injured by legislation against the importation of plumage of wild birds, first in the United States and then in Great Britain, while the outbreak of war closed the Hamburg market and greatly decreased the demand in Paris. Venezuela's exports of Heron aigrettes in 1908 were valued at \$187,005; in 1909 at \$230,265; in 1910 at \$168,287; in 1911 at \$309,532; in 1912 at \$373,312; in 1913 at \$627,440; in 1914 at \$31,461; in 1915 at \$166,339; and in the first six months of 1916 at \$37,050.

These feathers come exclusively from the states of Bolivar and Apure, where

there are many bayous along the Orinoco, and many lakes remaining after the annual overflow of the plains, to which Herons and other birds resort in great numbers. The importance of the feather-trade to this district can be judged from the fact that the total population is only 100,000, and that the only other resource is the cattle business. A serious decline in the commercial prosperity of Ciudad, Bolivar, and San Fernando du Apure has come about since the practical extinction of this trade in 1914, and the people of the district have been urgent in their appeals to the Federal Government to do something to obtain the repeal of hostile foreign laws.

BATTLE FOR THE CROPS---FARMERS VS. INSECT PESTS



—Courtesy Country Gentleman

Note, that the farmers are shown also shooting the birds that are coming to help fight the insects

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Finley Coming East

Mr. William L. Finley, of Portland, Ore., the dean of American wild-life photographers, is planning to come east just after New Year's on a three-months' lecture-trip. He writes that already he has made a large number of engagements. Most bird-students are familiar with Mr. Finley's work, and tens of thousands have thrilled with pleasure in viewing the products of his marvelous exploits in securing moving pictures of western wild life.

The past summer Mr. Finley has spent much time in the deserts of southeastern Oregon, in the Stein Mountains, and in the Cascades, where he has secured an unusual number of new and interesting subjects. Bird clubs or others desiring to make appointments with Mr. Finley may address him at 651 East Madison Street, Portland,

Ore., or such communications may be sent directly to the New York Office of the National Association of Audubon Societies.

Nebraska Incorporates

The Nebraska Audubon Society was formally incorporated at a meeting held in Omaha, July 27, 1917. The present officers were reelected. These are President Solon R. Towne and Clerk Joy M. Higgins. The following were chosen trustees: Solon R. Towne, John R. Ringwait, Katherine M. Baxter, Joy M. Higgins, and Arthur L. Palmer. Omaha will be headquarters for the Society. There will be no capital stock and the corporate life of the Society will be for ninety-nine years. Preservation, propagation, and protection of native birds summarize the object and purpose of the organization.

THE FIGHT FOR SONGBIRDS

The movement so opportunely started by this Association against the killing of songbirds for food is meeting with most hearty response from many parts of the country, and calls for the cloth warning-notices referred to in the last *BIRD-LORE* are daily coming in from all parts of the country. Already more than 50,000 of these have been distributed. If further evidence is needed to show the urgent demand for a campaign of this sort, it can easily be furnished from the letters that are being received from various writers. One correspondent has written:

"Not so long ago I was riding in a lonely wilderness in the Guyandotte Mountains of West Virginia, and near the Paint Mountains, when I came across an Italian who had a gunnysack half filled with songbirds. I could not say anything much, because he had a gun and I was unarmed, but reported the same at the nearest point."

Another bird-lover writes:

"I would call your attention to the wholesale slaughter of songbirds here in our immediate vicinity: all foreigners being offenders. Can you not induce the county or town warden to act at once with our local police, who are ready to make arrests or coöperate to stop this dreadful economic waste?"

Another correspondent writes:

"I am doing all I can to protect the birds, but just this afternoon I saw several

boys with guns. They had a basket and were overheard to say they had a Robin. I called to them, but they went on. I saw one of them pick up a bird as it was trying to flutter away. This was in North Toledo."

A similar letter may be added:

"Yesterday my wife and I spent the day at Long Beach and came across two sets of hunters. The first set was of three men and three guns. They had shooting licenses and game-law books. They had one Lesser Yellowlegs and six or eight Sanderlings. They seemed to be decent men and were obliged when we told them the small birds came under the five-year clause of the Federal Law. Set number two were simple bird-butchers. We heard two reports and came upon them gathering up the birds. They were Sanderlings. They must have had at least twenty. One man had a bunch held between both hands, and the other the gun and three or four birds. They seemed uneasy when they saw us. My wife wanted to speak to them, but I was strongly against it since they were the kind that would probably answer roughly unless we had authority. I will gladly point out their house to a game-warden."

As long as the Association's supply of the cloth posters holds out we shall be able to distribute them gratuitously to every one who is willing to post them where they may be read by the public.

A DANGEROUS MOVE THWARTED

Among the groups of people who were requested by Mr. Hoover, United States Food Administrator, to make suggestions in reference to the conserving of food, the hotel and restaurant owners have recently distinguished themselves.

On the first of August, representatives of the hotels and restaurants formally met at Washington, D. C., and in due time produced a set of resolutions designed to represent their wisdom in the matter of conserving food. One of their resolutions

was to the effect that the Government should urge the various states to lengthen their open seasons on fish and game. That is, they recommended that the United States Government use its influence in the various states to break down the bars of the present seasons when game cannot be killed to the extent that the shooting should be lengthened over a greater period of the year.

In considering this resolution it is well to bear in mind that there are a goodly

number of prominent hotels in this country whose record for the illegal handling of game is not an enviable one. That much money is to be made by serving game to hotel guests will be ascertained by anyone who will take the trouble to read the menus of our larger hotels where game may be sold; and to anyone who is familiar with the history of game-protection in this country, and the record of certain hotel keepers in reference to the handling of game, the real scheme which these gentlemen may have had at heart is easily revealed.

It was the pleasure of the Secretary of this Association to be invited to address the annual meeting of the National Association of Game and Fish Commissioners in St. Paul, on August 27-29, 1917. This was a very representative gathering, and the heads of the State Game Protective Departments from a large number of the states were present. This afforded an unusual opportunity to bring to the attention of these officials the move which the hotel and restaurant men were seeking to induce the United States Government to make.

As a member of the Committee on Resolutions of this game-protective con-

gress, the Secretary had the pleasure of presenting the following resolutions which were unanimously adopted by the convention.

"WHEREAS, This Association has been informed that the Hotel and Restaurant Committee meeting in Washington City on August 1, 1917, passed a resolution recommending that the United States Government urge various states to lengthen their fish and game season, and that these seasons be made uniform throughout the country; therefore, be it

Resolved, That the existing supply of fish and game is now being drawn on to an extent which should not be exceeded, and that any further draft on the supply would be an irrevocable loss to the nation; and

Resolved, further, that a copy of this resolution be transmitted to the United States Food Administrator."

The State Game Officials thus being warned, and having taken concerted action to check any move which might unwittingly be made by the Food Administrator toward further jeopardizing the wild game, it is reasonable to assume that nothing further will come of the matter.

NEW YORK CONSERVATION COMMISSION

The New York State Conservation Commission, now so successfully presided over by one of the Life Members of this Association, Mr. George D. Pratt, has inaugurated during the present administration many helpful movements that have had much to do with keeping New York in the very forefront of the various state game-warden systems.

Last January the Commission began the

publication of a monthly magazine called *The Conservationist*. It is carefully edited, beautifully illustrated, and is, perhaps, the most attractive publication issued by any State Game Department in the Union. The subscription price is 50 cents per year, and it is issued from Albany. It is worthy of a place on the library-table of every bird-lover and sportsman in the state.



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T. Gilbert Pearson

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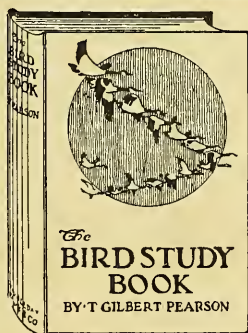
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CONTENTS

GENERAL ARTICLES

FRONTISPIECE IN COLOR—CLIFF, TREE, VIOLET-GREEN, BANK AND ROUGH-WINGED SWALLOWS.....	:Louis Agassiz Fuertes..	
WINTER VISITORS TO CITY PARK, DENVER, COLO. Illustrated.....	J. D. Figgins..	305
'ACADIAN' CHICKADEE. Illustration	Mannsell S. Crosby..	309
TAMING EVENING GROSBREASTS. Illustrated.....	Edith K. Dunton..	310
A REMARKABLE MARTIN ROOST.....	Harry C. Oberholser..	315
BIRD-LORE'S EIGHTEENTH CHRISTMAS BIRD CENSUS.....		317
PRAIRIE HORNED LARKS AND TREE SPARROWS. Illustration.....	Verdi Burtch..	318
RED-TAIL HAWK. Illustration	H. and E. Pittman..	319
THE MIGRATION OF NORTH AMERICAN BIRDS. FIVE SWALLOWS..	Harry C. Oberholser..	320
NOTES ON THE PLUMAGE OF NORTH AMERICAN BIRDS.....	Frank M. Chapman..	330

NOTES FROM FIELD AND STUDY.....

THE AMERICAN CROSSBILL (Illus.), H. H. Pittman; WINTER BOARDERS, Bert M. Moses; A BIRD EXHIBIT (Illus.), Helen M. Sellers; A SINGING BLUE JAY, Emily C. H. Armstrong; STRANGE BEHAVIOR OF A ROBIN, Herbert L. Cowing; CARDINAL CAPTURING A CICADA, Dayton Storer; EVENING GROSBREASTS AT CADILLAC, MICH., Ethan W. Thompson.		332
--	--	-----

THE SEASON. IV. August 15 to October 15.....

BOSTON REGION, Winsor M. Tyler; NEW YORK CITY REGION, C. H. Rogers; PHILADELPHIA REGION, Julian K. Potter; WASHINGTON REGION, Harry C. Oberholser; OBERLIN REGION, Lynds Jones; DENVER REGION, W. H. Bergtold.		338
DOWNY WOODPECKER AND TREE SPARROW. Illustration.....	Verdi Burtch..	341
THIRTY-FIFTH ANNUAL CONGRESS OF THE AMERICAN ORNITHOLOGISTS' UNION.....		342

BOOK NEWS AND REVIEWS.....

WAYNES' BIRDS DESCRIBED FROM SOUTH CAROLINA; PELLET'S 'BACK DOOR NEIGHBORS'; THE ORNITHOLOGICAL MAGAZINES.		343
--	--	-----

EDITORIAL.....

THE AUDUBON SOCIETIES—SCHOOL DEPARTMENT.....

MAKING THE WORLD SAFE, A. H. W.; JUNIOR AUDUBON WORK, CHRISTMAS IN 1917, A. H. W.; FOR ADULT AND YOUNG OBSERVERS. BOBBIE IN BIRD LAND (Illus.), Ella Florence Padon; NEAR A WOODPECKER, Albert B. Hemstreet; THE MULTNOMAH JUNIOR AUDUBON CLUB (Illus.).		346
--	--	-----

EDUCATIONAL LEAFLET No. 94. PILEATED WOODPECKER. With Colored Plate by Bruce Horsfall

T. Gilbert Pearson..	364
----------------------	-----

THE AUDUBON SOCIETIES—EXECUTIVE DEPARTMENT.....

THE THIRTEENTH ANNUAL MEETING; A NEW AUDUBON ACTIVITY; THE WORLD'S GREATEST GAME FARM (Illustrated); WILLIAM CULLEN BRYANT AND THE WATER FOWL (Illustration); ENFORCEMENT OF THE FEDERAL PLUMAGE LAW; KNOXVILLE AUDUBON EXHIBIT; SEEDS FREE; A FEEDING-DEVICE.		368
--	--	-----

ANNUAL REPORT OF THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES FOR 1917.....

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BIRD-LORE, Harrisburg, Pa.

The Bird-Lore Conference

EVEN up to the date of the going to press of this number of **BIRD-LORE** we have continued to receive gratifying evidences of the appreciation of **BIRD-LORE** from our readers; and again we give ourselves the pleasure of placing on record some of these cordial 'votes of confidence.' Again, too, we venture to ask that our enthusiastic supporters not only *vote*, but *work* for **BIRD-LORE**.

BIRD-LORE's price has been increased in order that the size of the magazine should not of necessity be decreased. But unless the increased price be paid, the very step we have taken to prevent the lowering of **BIRD-LORE's** standards will itself defeat our object. Let us, therefore, through the formation of **BIRD-LORE** subscription clubs and through the use of the magazine as a Christmas present, see that its subscription list, and thereby its standards, is maintained.

MORE OF THE 'VOTES'

I am in favor of the increased price. It's too good to be made smaller.—**LOTT VAN DE WATER, JR., Hempstead, N. Y.**

I am sure it would be the better plan to raise the price to \$1.50. It takes me about two hours to read each issue, and then my only consolation is to read back numbers, some of which have been re-read five or six times. Therefore I am against reducing the size of **BIRD-LORE**.—**C. A. BUTTERWICK, Telford, Pa.**

As to increasing the subscription price of **BIRD-LORE** to \$1.50 per year, I think that not only the present conditions but the actual value of the magazine justify raising the price.—**E. S. DANIELS, St. Louis, Mo.**

It seems to me that **BIRD-LORE** should be kept as good as it is to be worthy the task it aspires to perform, and that its price should be advanced to \$1.50 a year.—(**MRS. F. N.**) **N. DE G. DOUBLEDAY, Oyster Bay, N. Y.**

BIRD-LORE . . . forms the connecting link between a highly scattered and partially silent organization of people who have at heart the preservation of our wild bird life. . . . 'Make **BIRD-LORE** Bigger' is my slogan. The slight sacrifice necessitated by the increased cost of publication is as nothing when compared to the possibility of the magazine being decreased in size!—**H. I. HARTSHORN, Newark, N. J.**

Increase the cost rather than in any way curtail the usefulness of our magazine, is my vote.—**GEORGE F. HUBBARD, West Fitchburg, Mass.**

I think it would be most unfortunate if the size of **BIRD-LORE**, and hence much of its usefulness, were to be diminished. I should think all of your readers would gladly pay the increase in the subscription price.—**RICHARD GREENLEAF TURNER, Malden, Mass.**

*By no means, cut down the magazine. We can stand another fifty cents a year. **BIRD-LORE** is too good to risk spoiling for four bits per annum.*—**JOHN S. DEXTER, Saskatoon, Sask., Can.**

The only wonder to me is that, with the publication you are issuing, with the copious letter-press and splendid illustrations you have been able to do it at the price of one dollar. But we must have it at any price, and I for one will advocate that there be no curtailment in size, but an increase in price.—**WALTER DONAGH, Parkersburg, W. Va.**

My little boy and I feel that \$1.50 is a modest price per year for so charming and helpful a magazine as **BIRD-LORE**.—**KATHARINE UPHAM HUNTER, West Claremont, N. H.**

By all means, let us have the magazine in its present, or even larger form, and raise the price to meet conditions. Personally I would not be without it at three times the price.—**ANSEL B. MILLER, Springs, Pa.**

Raise the rate. Everyone knows that **BIRD-LORE** is small enough as it is, and I have always been at a loss to understand how the magazine could be produced for the price.—**MARY E. RAKER, Portland, Ore.**

I never find **BIRD-LORE** large enough. There is never too much of it. I would gladly pay more for it rather than have the size reduced.—**CORDELIA A. STANWOOD, Ellsworth, Me.**

As I have every number of **BIRD-LORE** from No. 1, I feel qualified to speak on 'the question before the house.' You have a magazine of convenient size. Let it continue! Your quality has constantly been improving. Let it continue! The price, under the existing conditions, must be raised. Raise it!—**FREDERICK J. DIXON, Hackensack, N. J.**



1. CLIFF SWALLOW, Adult
2. CLIFF SWALLOW, Young
3. VIOLET-GREEN SWALLOW, Adult
4. TREE SWALLOW, Adult

5. TREE SWALLOW, Young
6. ROUGH-WINGED SWALLOW
7. BANK SWALLOW

(About one-half natural size)

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XIX

NOVEMBER—DECEMBER, 1917

No. 6

Winter Visitors to City Park, Denver, Col.

By J. D. FIGGINS

With photographs by the Author

PRIOR to the completion of improvements at the eastern end of City Park, Denver, that area was locally famous for the variety and number of birds that wintered there. With the gradual extension of lawns and the consequent elimination of all seed-bearing weeds, birds were greatly reduced in numbers until many species are now rare, or have ceased visiting the park altogether, except for short periods.

During the fall of 1916, efforts were made to attract birds by feeding, but with indifferent success, owing to the abundance of natural food outside the city limits, and because of the activities of the English Sparrow.



BOHEMIAN WAXWINGS FEEDING ON RUSSIAN OLIVES



However, a liberal supply of beef suet, mixed with ground kernels of nuts, proved acceptable to seven Flickers that spent the winter about the Museum building.

Crested Jays, Rocky Mountain Chickadees, Solitaires, Rocky Mountain Nuthatches, Rocky Mountain Creepers, and Siskins were occasionally seen, but in far from the numbers observed in former years. Horned Larks were equally scarce, only a dozen birds being seen during the winter months, when, in previous years, there had been hundreds.



"THE WAXWINGS WOULD FLY TO THE TREES"

Owing to the mildness of the weather during the first half of February, 1917, Robins made their appearance earlier than usual and in enormous numbers. With them came many Solitaires, both feeding upon the fruit of the Russian olive and *Crataegus*; but this source of food was insufficient for more than a few days, and the first snowstorm drove them to the foothills, where they had wintered.

On February 27, a report reached the Museum of the presence of Bohemian Waxwings in the vicinity of Golden, 18 miles west of Denver. Investigation



DISTINGUISHED VISITORS

proved this to be correct, and more than 300 birds were found the following day, feeding upon decayed apples left in the orchards.

On February 22, Dr. W. H. Bergtold observed a large flock of unidentified birds which he now believes to have been Waxwings, because of their later



BOHEMIAN WAXWINGS VISITING THE DENVER MUSEUM

abundance in the city. On the morning of February 28, a flock of about 75 was seen feeding upon the fruit of the wild rose and the remnants of the Russian olives, near the Museum, and notwithstanding the 'high cost of living' it was determined to induce these birds to remain as long as possible. As canned peas and cranberries resembled the Russian olives and rose 'apples' in appearance, these were tried and proved highly successful in attracting the Waxwings' attention. In the meantime the original flock had been augmented by the arrival of additional birds until fully 300 were assembled. After gorging themselves, the Waxwings would fly to the trees and, after a short period, take quantities of wet snow. Within less than a half hour they would again feed, and the amount they consumed was astonishing.

Photographing the birds on the feeding-ground was a failure because of the continual movement and confusion. A few cranberries were therefore stuck on a twig near the blind, with more satisfactory results.

With a view of making a more intimate study of the Waxwings, a Sparrow-trap was set, and, by enlarging the opening, a number of specimens were soon obtained.

It was astonishing how quickly the birds became reconciled to captivity. Within a few hours they were seemingly content with their new environment, and the day after being captured were feeding from one's hand. Apples appeared to be favored in preference to all other foods offered them, and when the door of their cage was opened, they would alight upon the inserted arm and hand, and, in that position, they could be carried about the room, flying only when the last vestige of the apple had disappeared. When allowed their liberty in the room, it was only necessary to produce a piece of apple to again assemble them on the hand and transfer them to their cage.

From the many reliable reports received and the daily evidence of large flocks of Waxwings in every section of Denver and the vicinity, it is evident the birds were present in great numbers. Single flocks of more than 1,000 have been noted on several occasions, and the total number of these interesting visitors in all probability exceeded 10,000. This, however, must be considered purely a guess, as it would be quite impossible to estimate them because of the constant movements of flocks from one part of the city to another.



THE 'ACADIAN' CHICKADEE ARRIVES NEARLY ON TIME!

Photographed by Maunsell S. Crosby, Rhinebeck, N. Y., winter of 1916-17

Taming Evening Grosbeaks

By EDITH K. DUNTON, Rutland, Vt.

With photographs by Louis F. Brehmer

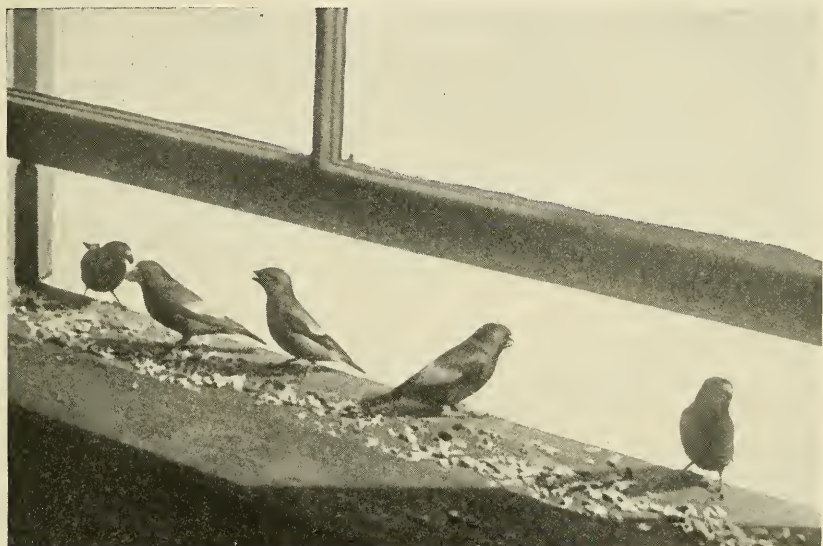
IT WAS a bitter disappointment to learn, from a note in BIRD-LORE for January, 1917, that my experience this past March and April in feeding Evening Grosbeaks out of my hand on my window-sills is not unique. I hope, however, that the accompanying photographs may be of sufficient interest to warrant comment. It is one thing to get the birds to the sill with the window closed, or open only enough to admit one's hand, and quite another to open it a foot or so, thus subjecting the birds to a draft, which they dislike, because it interferes with easy landing on the narrow sill. It gives them, too, a clear view of the room within and of the unfamiliar camera, a dark tower of terror, not 4 feet away from their feeding-ground, with the camera man sitting behind it. I am only an amateur bird-tamer, while Mr. L. F. Brehmer is a professional photographer, with birds for his favorite subjects. Thus was the feat accomplished.

As many as eleven Grosbeaks have been seen feeding together on one sill 3 feet long and 8 inches wide. The first 'sitting,' on March 1, resulted in getting four birds. Mr. Brehmer thought these looked rather a small number for the size of the window, and wished to try again. This time the photograph of six birds was secured, and we made an unsuccessful attempt to get them photographed while feeding from my hand. The third sitting, on March 6, was devoted entirely to this object. I had never had any trouble in getting certain birds, females and young ones, to eat in that way within a few minutes. But, for a successful photograph, the bird must feed from the side where it will be best seen. The hand must remain at the spot prearranged for a focus, instead of being moved temptingly toward a bird. The window must be open wider than usual, and camera and operator are also disturbing elements. However, within three-quarters of an hour we had secured three successful pictures of hand-fed birds.

"I am very glad we got those pictures," said Mr. Brehmer later. "You had told me that you fed the birds that way, and I knew it to be so, but I did not—realize it," he concluded, choosing his word politely.

Not only I, but two other members of the household and two friends have had the pleasure of feeling those big, efficient bills peck seed from their palms and crack off the shells above their fingers. I do not flatter myself that the birds recognize me as their 'provider.' Anyone who moves slowly and quietly can get as near to them as I can. Two of us have stroked their soft breasts. One day six birds quarreled to get to my hand; frequently two have fed together from opposite sides, and sometimes I have pushed the pair apart when they began to quarrel over their food-tray—which they evidently regard as a dish, not as a hand.

My flock of Grosbeaks, which has spent part of every morning but one, and all of most mornings, in my yard since the middle of February, has varied in size from three birds to over thirty. They came to the yard, a well-treed half-acre in the center of Rutland, Vt., attracted by a few buckthorn berries. This was in early February, after they had pretty well cleaned up the town's supply of box elder. About the middle of February, seeing that the berries would not long outlast their voracious appetites, I bought sunflower seed, nailed an open box to a fence-post under the buckthorn bush, and had to wait less than an hour to have it literally filled with Grosbeaks. The berries took second place thereafter.



"AS MANY AS ELEVEN GROSBEAKS HAVE BEEN SEEN FEEDING TOGETHER ON ONE SILL THREE FEET LONG AND EIGHT INCHES WIDE"

In a day or so, twenty Grosbeaks, all a flutter of black and yellow and white against the sunlit snow, perched on or in, or hovered closely about, the little improvised feeder. The box was about 30 feet from the nearest window, in a thicket that slightly obscured the view. I sprinkled seed on the ground under the box and so gradually trailed the birds on to the open lawn. Then a visitor to the house said scornfully, "Mr. Baynes has feeding-boxes in his windows." I got the birds close to the house, sprinkled seed up a sloping board to a cornice, and so led them on to the dining-room window-sill. A few days later they were also feeding from a second-story sill above the dining-room and from a roof and sill on the other side of the house. On February 27 they fed from my hands. On March 15, wishing to share my birds with a little neighbor who was quarantined, I made a sunflower trail from under a tree between our two houses, where the flock often perched between meals, to her piazza. Then she threw seed

lavishly on her piazza roof. It took the birds less than a day to discover the feast awaiting them. They spent one entire day feeding there; the next day they came back to me for a short time, and thereafter, while she fed them, divided their mornings between us. At this period the flock increased in size, to match the increased food-supply.



AN EXCHANGE OF COURTESIES

Certain birds we soon learned to recognize, and these we named. There was 'Crosspatch,' a lank, crotchety female with a marred bill and 'Ruffles,' female or immature, who holds his head in such a fashion that his feathers stand up in a sort of pompadour. 'Ruffles' and 'Crosspatch' are the tamest of the regular visitors. 'Ruffles' is very quarrelsome but very crafty, never failing to snatch a seed between battles. 'Tête Noir' is a male with barely a suggestion of gold on his head; the 'Crown Prince' has an extra gold band at the back of his head, joining the two lines over his eyes and making him a golden crown; 'Picot' has a deep scallop of gold on his forehead; the 'Daffodil' is the yellowest and proudest of all the adult males, and the tamest; 'Tiny Tim' is so little that he never gets much chance on the window.

At first the birds were very quiet, both in the trees and when feeding. Later they became quarrelsome, attacking one another with their beaks and fighting in the air, and sometimes on the snow, where their fluttering made beautiful wing-tracks. This fighting spirit was undoubtedly fostered by having to feed in cramped quarters. When seed is put in the box, on the ground, and in the windows, or on the ground alone, sprinkled abundantly, the Grosbeak colony is quite serene. On the ground they feed in amity with the Sparrows, but woe betide the luckless Sparrow that ventures on a window-sill, where space is precious.

When the birds come—about 6 o'clock each morning, and between feedings—they perch in the tallest tree-tops, fluffed out against the spring winds, and sit

perfectly motionless, balls of gray, or golden fruit. Snow or rain matter not to them. Except on one bitter, blizzard day, they have always perched against the sky-line. They chirp incessantly, like frogs or crickets—or perhaps they sound more like the jingle of small sleigh-bells going slowly over a rutty road. When feeding they give a less musical chirp. Once or twice we have heard their beautiful carolling song, and they have occasionally a soft, throaty trill, almost like a Bluebird's note. So noisy and so conspicuous have they been—particularly on two days, March 8 and 9, when they were joined by a flock of disdainful Cedar Waxwings, annoyed to find the buckthorn feast that they had enjoyed for two years gone—that chance passers-by frequently stop to watch them as they squeak in the tree-tops, fly showily from tree to window, and perch there, cracking the sunflower seeds with incredible ease and rapidity.

Dozens of people have observed them from the vantage-ground of the dining-room, often sitting within a yard or less of the window. The one day they failed to come the family fought against depression, though the phenomenon should have been staled by a month's daily repetition; and the day they came back we were overjoyed, all of us echoing the rapturous exclamation of one of us: "Seems to me they never looked so pretty before!" As a matter of fact, the springtime attrition of their feathers was then just beginning to be noticeable. Every day made the females a bit daintier, the males more brilliant.

Contrary to the experience of Mr. Allen, of Ithaca, N. Y., as related in BIRD-LORE for November, 1914, I do not find the Grosbeaks either stolid or stupid. They are surprisingly quick to discover new places where I scatter



GROSBEAK GUESTS

seed—the food is hardly put out before a bird is at it. The females and young are generally the first to come to a new feeding-spot, being tamer, more alert, and fully as greedy as the adult males, who can best defend their right to a place on a frequented window. But it was the males who discovered a pan of water, set out on March 30, not five minutes after its appearance. And there was nothing stolid about the eagerness with which they daily, as soon as fresh water was put in, surrounded and drank from it.

About March 12 they seemed tamer than at a later date. Possibly there were too many visitors after the fame of their performance spread. Certainly, an effort to catch and band one or two birds made them more wary, though they appeared in larger numbers than ever. On April 4, a bird, female or immature, was caught in an improvised trap made of a cucumber frame and was banded. He was not badly frightened, for in less than two hours he was feeding on the site of his capture; and his companions paid not the slightest attention to the affair, except to fly up for a few moments. The next morning we caught an adult male and banded him. He flew to the bush nearest the window where he was released and immediately joined the flock, which was then picking at a freshly uncovered flower-bed in the next yard. So little did the band disturb him that he apparently did not even pick at it, as we had seen the other bird do. At 1.30 that afternoon he was eating seed on the exact spot where he was caught in the morning—the trap had permanently vanished from the scene, as two birds were all we wished to band—and beside him, with two other birds, ate the banded gray bird.

If the banded birds come back next fall, or if any of their flock-mates do, we promise a table spread to repletion. No objection to any Grosbeak's bringing a large family of children, or friends; all Grosbeaks made welcome. Improvements to the premises will be undertaken in their interest, such as a sunflower plantation, mountain-ash, box elder, and more buckthorn—which last, Grosbeaks are respectfully requested to share with the Waxwings.



A Remarkable Martin Roost in the City of Washington

By HARRY C. OBERHOLSER

LATE summer roosts of the Purple Martin are by no means uncommon in the eastern United States. Little attention, however, seems to have been called to this interesting event in the life-history of one of our most familiar birds. Even so long ago as Audubon's time, small gatherings of this kind were noticed, and the circumstance has been mentioned briefly by a few subsequent authors. Mr. William Brewster, in his 'Birds of the Cambridge Region,' notes a small resort in a maple swamp near Cambridge, Mass., occupied in August, 1869. Dr. J. M. Wheaton, in his 'Birds of Ohio,' speaks of numbers of Martins that roosted under the cornices of buildings in the towns, and the present writer has more recently seen this same phenomenon in the city of Wooster, Ohio. Martin roosts seem to be more numerous in the southeastern states than elsewhere, and Mr. Arthur T. Wayne tells of one in the city of Charleston, S. C., occupied irregularly for several years by many thousand birds, so many, in fact, that their weight often broke limbs from the trees. By far the best account of this phase of Martin life has been given by Mr. Otto Widmann, who had, about the year 1884, exceptional opportunities for observing the Martins roosting in the swampy willow thickets along the Mississippi River, near St. Louis.

Although thus known in other localities, inquiry among local ornithologists has elicited no knowledge of a Martin roost in the District of Columbia prior to 1917. During the latter part of the summer of this year, however, great numbers of Martins gathered nightly in one of the city parks, almost within the shadow of the great Capitol building. This park is the more or less wooded tract called 'The Mall,' which, one block west of the Botanic Gardens, is crossed by Fourth Street, on which are the double tracks of a street-car line. This street is here lined on both sides at the curb by a row of elms, 30 to 50 feet in height, and beyond the sidewalk also by a row of European maples of somewhat smaller size; while oaks, horse-chestnuts, sophoras, and other shade trees are scattered about in adjacent parts of the park.

The Martins were first noticed at this roost on August 5, although for a week previous the birds had been seen in the evenings, flying in this direction. They were last observed here on September 9, a cool, cloudy day, and they all disappeared during the following twenty-four hours in the rapidly falling temperature, which, on the night of September 10, touched 40°, accompanied in places by a light frost. The number of Martins that frequented this roost fluctuated from time to time, ranging from about 2,500 on September 9 to about 12,000 at the height of activity on August 21; but it is safe to say that the usual number was between 7,000 and 8,000. This, of course, included a large proportion of birds from a distance, since it is far in excess of the summer Martin population of the region about Washington, there being but few breed-

ing colonies within a radius of 20 miles from the city. It is of interest to note that this great flock was not made up wholly, or even very largely, of females and young, but contained a large proportion of birds in adult male plumage.

Every day, for some time previous to the hour of rendezvous at the roost, Martins could be seen drifting slowly in this direction from various parts of the surrounding country, in ones, twos, threes, and small flocks. They seemed to have temporary gathering-places in the country, where a number, 40 or 50, possibly even 100 birds, assembled before beginning their flight to the roost. About twenty-five or thirty minutes before sunset, which during this period of the year changes from 7.10 P.M. to 6.20 P.M., Martins begin to appear over the park and rapidly increase in numbers until the air is full of birds. Those coming from a distance approach the roost chiefly high in air, and fly leisurely back and forth above the city with apparently no concerted movement. Soon they begin to descend and assemble into more compact bodies, which move more rapidly and more uniformly, while newcomers take their places in the space above; lower and lower they come, swirling about low down over the tops of the trees, not, however, in the circling manner of the Chimney Swift, but much like a flock of Starlings or similar birds. In this swift flight above and among the tops of the trees, they dash into the chosen spots among the branches, often without reduction of speed, until just at the point of alighting—generally a few birds at a time, sometimes a whole company. Strangely enough, they choose the line of trees along the street-car tracks, and even the very branches overhanging the street. Here they sit in close rows on all the small terminal branches of the treetops, but only a few are visible from the outside. They appear to be restless when first they enter the trees, and often rise in great numbers, fly about for a short time, then settle into their places again. At this time the passing of an electric car usually startles large numbers from the trees, but after a few evolutions they gladly return. A little later in the evening, however, none of the noises of the street seems to disturb them. During all their evolutions in the air the birds are rather remarkably quiet, although their notes are frequently heard, and once settled in the trees their voices soon drop to a low murmur, occasionally broken by a louder voice. The whole performance lasts somewhat less than an hour, and all the guests at this Martin hotel are in their beds by twelve to thirty minutes after sunset.

Such is the sight to be seen here on a clear evening, but during cloudy weather the exhibition is much less spectacular, though it presents some interesting features of difference. On very dark days with lowering clouds the birds seem to be decidedly less numerous. They begin to gather earlier than on clear days and spend little time flying about high in the air or about the tree-tops. They fly lower and faster and go almost directly to rest after reaching the roosting place. There are thus fewer in the air at any given time than on clear days, and the birds are even more silent. The clouds and low atmospheric pressure seem to dampen their ardor and to lessen their unnecessary activity.

In previous accounts of Martin-roosts no mention has been made of the presence of other birds, but this Washington gathering is remarkable among other things for the species associated with the Martins. During the period of Martin occupation, and for some time before and after as well, between 100 and 500 European Starlings and from 1,000 to 4,000 Purple Grackles were there also, using, to a certain extent, the same trees as the Martins, but chiefly other trees adjacent. Still more unusual was the presence on August 31, and probably on a few subsequent days, of about 200 Bank Swallows and 50 Rough-winged Swallows, which flocked with the Martins and roosted in the same trees!

It is to be hoped that so attractive a gathering will take place often in the waning summers of the years that are to come.

Bird-Lore's Eighteenth Christmas Bird Census

BIRD-LORE'S Annual Bird Census will be taken as usual on Christmas Day, or as near that date as circumstances will permit; *in no case should it be earlier than December 22 or later than the 28th*—in the Rocky Mountains and westward, December 20 to 26. Without wishing to appear ungrateful to those contributors who have assisted in making the Census so remarkably successful, lack of space compels us to ask each census taker to send only *one* census. Furthermore, much as we should like to print all the records sent, the number received has grown so large that we shall have to exclude those that do not appear to give a fair representation of the winter bird-life of the locality in which they were made. Lists of the comparatively few species that come to feeding-stations and those seen on walks of but an hour or two are usually very far from representative. A census-walk should last *four hours at the very least, and an all-day one is far preferable*, as one can then cover more of the different types of country in his vicinity, and thus secure a list more indicative of the birds present. A census covering several days would really be just that much more satisfactory, but, as few of our readers are in a position to take such, we think it better to rule that each report cover *one day only*, that all the censuses may be more comparable.

Bird clubs taking part are requested to compile the various lists obtained by their members and send the result as one census, with a statement of the number of separate ones it embraces. It should be signed by all the observers who have contributed to it. When two or more names are signed to a report, it should be stated whether the workers hunted together or separately. Only censuses that cover areas that are contiguous and with a total diameter not exceeding 15 miles should be combined into one census.

Each unusual record should be accompanied by a brief statement as to the identification. When such a record occurs in the combined list of parties that hunted separately, the names of those responsible for the record should be given.

Reference to the February numbers of BIRD-LORE, 1901-17, will acquaint one with the nature of the report that we desire, but to those to whom none of these issues is available, we may explain that such reports should be headed by the locality, *date*, hour of starting and of returning, a brief statement of the character of the weather, whether the ground be bare or snow-covered, the direction and force of the wind, the temperature and the distance or area covered. Then should be given, *in the order of the A. O. U. 'Check-List'* (which is followed by most standard bird-books), a list of the species noted, with, as exactly as practicable, the number of *individuals* of each species recorded. A record should read, therefore, somewhat as follows:

Yonkers, N. Y. (to Bronxville and Tuckahoe and back).—Dec. 25; 8 A.M. to 4:30 P.M. Clear; 5 in. of snow; wind west, light; temp. 38° at start, 42° at return. Eleven miles on foot. Observers together. Herring Gull, 75; Bob-white, 12 (one covey); (Sharp-shinned?) Hawk, 1; . . . Ruby-crowned Kinglet, 1. Total, 27 species, about 470 individuals. The Ruby-crown was studied with 8x glasses at 20 ft.; eye-ring, absence of head-stripes and other points noted.—JAMES GATES and JOHN RAND.

These records will be published in the February issue of BIRD-LORE, and it is *particularly requested* that they be sent to the Editor (at the *American Museum of Natural History, New York City*) by the *first possible mail*. It will save the Editor much clerical labor if the model here given and the order of the A. O. U. 'Check-List' be closely followed.—C. H. R.



A CHRISTMAS BREAKFAST
PRAIRIE HORNED LARKS AND TREE SPARROWS
Photographed by Verdi Burtch, Branchport, N. Y.



RED-TAIL HAWK ALIGHTING
Photograph by H. and E. Pittman, in Manitoba

The Migration of North American Birds

SECOND SERIES*

1. FIVE SWALLOWS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

(See frontispiece)

CLIFF SWALLOW

There are three subspecies of the Cliff Swallow (*Petrochelidon lunifrons*) in North America, all of which winter, probably, in South America. In migration, all Cliff Swallows of the United States and Canada, even those that breed in the eastern United States, journey both northward and southward apparently through Mexico and Central America, instead of crossing the Gulf of Mexico or passing through the West Indies.

The Eastern Cliff Swallow (*Petrochelidon lunifrons lunifrons*) breeds in North America, north to central Quebec, northern Ontario, Mackenzie, and central Alaska; and south to Lower California, Colorado, northern Texas, and Virginia.

The Lesser Cliff Swallow (*Petrochelidon lunifrons tachina*) breeds from Arizona (excepting the southern border), New Mexico, and south central Texas, south through eastern Mexico to Vera Cruz.

The Mexican Cliff Swallow (*Petrochelidon lunifrons melanogastis*) breeds from extreme southern Arizona south over the Mexican tableland to Guatemala.

The records marked with an asterisk in the following table of migration dates may refer to either the eastern Cliff Swallow or the Lesser Cliff Swallow. All the rest pertain exclusively to the eastern bird.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Orlando, Fla.....			February 2, 1910
Charleston, S. C.....			April 28, 1898
San Antonio, Tex.*.....			February 24, 1902
Austin, Tex.*.....	4	March 27	March 18, 1893
Kerrville, Tex.*.....	9	April 20	April 4, 1914
Chloride, N. M.*.....			April 3, 1914
Los Angeles, Calif.....	5	March 18	March 8, 1896
Santa Barbara, Calif.....	4	March 28	March 10, 1911
Fresno, Calif.....	5	March 20	March 13, 1913
Berkeley, Calif.....			March 5, 1913
Raleigh, N. C.....	5	April 25	April 20, 1911
Variety Mills, Va.....	2	April 24	April 11, 1887
Washington, D. C.....	13	April 27	April 10, 1908
Athens, Tenn.....	2	April 20	April 16, 1908
Versailles, Ky.....	2	April 26	April 23, 1909
Onaga, Kans.....	12	May 6	April 26, 1913
Boulder, Colo.....	5	May 15	May 5, 1912
Morristown, N. J.....			May 11, 1913
Beaver, Pa.....	8	April 20	April 11, 1891

*Continuing the Series begun by Wells W. Cooke.

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Renovo, Pa.	12	April 29	April 22, 1899
Oberlin, Ohio.	21	April 25	April 6, 1903
Waterloo, Ind.	10	April 29	April 17, 1894
Chicago, Ill.	19	April 26	April 11, 1887
St. Louis, Mo.	6	April 16	April 11, 1886
Keokuk, Iowa.	11	April 20	April 16, 1895
Grinnell, Iowa.	6	April 20	April 6, 1890
Valentine, Neb.	4	May 10	May 6, 1893
Hartford, Conn.	9	May 5	April 17, 1914
Woods Hole, Mass.	4	May 4	April 14, 1889
Boston, Mass.	19	May 6	April 23, 1897
Phillips, Maine.	12	May 7	April 30, 1908
Pittsfield, Maine.	5	April 27	April 21, 1899
Monadnock, N. H.	4	May 5	April 30, 1902
Rutland, Vt.	9	April 30	April 22, 1914
St. Johnsbury, Vt.	10	May 7	April 27, 1913
New York, N. Y.	8	May 10	April 21, 1904
Alfred, N. Y.	17	May 9	May 1, 1894
West Winfield, N. Y.	12	May 7	April 24, 1902
Ann Arbor, Mich.	22	April 26	April 11, 1889
Madison, Wis.	18	May 1	April 6, 1890
Lanesboro, Minn.	9	April 28	April 23, 1889
Vermilion, S. D.	5	May 8	May 3, 1884
Larimore, N. D.	4	May 16	April 30, 1886
Terry, Mont.	6	May 16	May 8, 1900
Big Sandy, Mont.	4	May 12	May 2, 1905
Meridian, Idaho.	6	April 27	April 10, 1914
Corvallis, Oregon.	2	April 10	April 7, 1906
Tacoma, Wash.	5	April 24	April 4, 1908
Halifax, N. S.			April 22, 1903
Pictou, N. S.	9	May 14	May 7, 1889
St. John, N. B.	6	May 8	April 30, 1893
Scotch Lake, N. B.	14	May 6	April 26, 1889
Montreal, Quebec.	3	May 11	April 19, 1890
Quebec, Quebec.	16	May 2	April 22, 1894
London, Ont.	11	May 1	April 19, 1900
Ottawa, Ont.	30	May 9	April 21, 1888
Aweme, Man.	9	May 14	April 28, 1899
Indian Head, Sask.	6	May 18	May 6, 1907
Stony Plain, Alta.	3	May 16	May 6, 1911
Edmonton, Alta.			May 3, 1887
Okanagan Landing, B. C.	10	May 6	April 23, 1911
Fort Chipewyan, Mack.			May 12, 1827
Nulato, Alaska.			May 10, 1868

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
DeFuniak Springs, Fla.			September 26, 1909
Charleston, S. C.			August 30, 1904
Athens, Tenn.			September 26, 1908
New Orleans, La.			November 1, 1895
Austin, Tex.*	2	September 17	October 1, 1893

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Caddo, Okla.....			October 9, 1883
Los Angeles, Calif.....			September 12, 1907
Berkeley, Calif.....			October 27, 1888
Fresno, Calif.....			October 21, 1915
Washington, D. C.....			August 11, 1888
Morristown, N. J.....	3	August 26	September 1, 1912
Renovo, Pa.....	10	August 26	September 18, 1908
Beaver, Pa.....	3	August 26	September 3, 1891
Oberlin, Ohio.....	4	August 28	September 23, 1907
Waterloo, Ind.....	4	September 8	October 8, 1906
Chicago, Ill.....	6	September 3	September 28, 1895
Concordia, Mo.....	7	September 22	October 6, 1911
Keokuk, Iowa.....	9	September 8	September 23, 1894
Grinnell, Iowa.....	5	September 9	September 25, 1886
Onaga, Kans.....	19	September 6	October 8, 1914
Valentine, Neb.....	3	September 6	October 4, 1893
Boulder, Colo.....	4	August 18	August 28, 1909
Hartford, Conn.....	8	September 11	October 3, 1902
Woods Hole, Mass.....	4	September 13	September 28, 1900
Harvard, Mass.....	3	August 13	August 30, 1913
Phillips, Maine.....	9	August 26	September 9, 1915
Pittsfield, Maine.....	5	August 23	September 5, 1896
Jefferson, N. H.....			September 17, 1904
St. Johnsbury, Vt.....			September 13, 1914
Rutland, Vt.....			September 8, 1915
West Winfield, N. Y.....	4	August 29	September 6, 1910
Ballston Spa, N. Y.....	3	August 6	August 10, 1892
Vicksburg, Mich.....	4	August 30	September 9, 1906
Madison, Wis.....	5	September 17	October 4, 1894
Lanesboro, Minn.....	2	September 8	September 12, 1887
Vermilion, S. D.....			September 15, 1889
Yellowstone Park, Wyo.....	2	August 16	August 23, 1915
Columbia Falls, Mont.....			September 4, 1895
Halifax, N. S.....			August 30, 1902
Scotch Lake, N. B.....	11	September 4	September 8, 1905
St. John, N. B.....	5	September 3	September 9, 1892
North River, P. E. I.....	4	August 23	September 4, 1888
Quebec, Quebec.....			August 23, 1894
Montreal, Quebec.....	3	September 10	September 25, 1897
Ottawa, Ont.....	25	September 6	September 30, 1908
Aweme, Man.....	10	August 29	September 24, 1897
Pelican Rapids, Athabaska River, Alta.			August 24, 1901
Okanagan Landing, B. C.....	7	September 11	November 1, 1911
Dawson, Yukon.....			August 1, 1899

TREE SWALLOW

The Tree Swallow (*Iridoprocne bicolor*) ranges over most of North America, Mexico, and Guatemala, together with parts of the West Indies; breeding north to northern Ungava (Quebec), Manitoba, Mackenzie, and northwestern Alaska, south to southern California, central western Texas, Kansas, Missouri, and Virginia; and wintering regularly north to central California, southern Texas, southern North Carolina, sometimes to New Jersey, and south to Guatemala and Cuba.

Although rather an early spring migrant, this Swallow is late in leaving its winter home, and stragglers linger in the southeastern United States long after the vanguard of its northern movement has penetrated far into Canada. The first list given below, under the head of spring migration, includes the dates of departure from the winter home of the species, and the second, the dates of arrival in its summer home. Conversely, under the fall migration, the first list gives the dates of departure from the summer range, and the second, of arrival in its place of winter sojourn.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Dry Tortugas, Fla.....			May 5, 1913
Tallahassee, Fla.....			May 5, 1900
Savannah, Ga.....	6	May 21	May 29, 1911
Biloxi, Miss.....	3	April 17	April 29, 1904
New Orleans, La.....	3	May 12	May 17, 1893
San Antonio, Tex.....			May 7, 1891
Charleston, S. C.....	4	May 15	May 24, 1912
Raleigh, N. C.....	14	April 29	May 22, 1909
Washington, D. C.....	14	May 13	May 26, 1889
St. Louis, Mo.....	4	May 2	May 9, 1888
Concordia, Mo.....	4	May 11	May 23, 1911

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Washington, D. C.....	23	April 12	March 28, 1912
Cambridge, Md.....	6	April 4	March 23, 1913
Englewood, N. J.....	16	April 9	March 24, 1905
Philadelphia, Pa.....	12	April 25	April 4, 1912
Oberlin, Ohio.....	18	April 14	March 31, 1910
Waterloo, Ind.....	9	April 24	April 3, 1906
Chicago, Ill.....	24	April 15	March 24, 1884
St. Louis, Mo.....	10	March 24	March 14, 1886
Onaga, Kans.....	3	May 1	April 25, 1893
Sioux City, Iowa.....	11	April 25	April 8, 1906
Badger, Neb.....	4	April 20	April 15, 1903
Durango, Colo.....	4	April 23	April 9, 1914
Carson City, Nev.....			March 25, 1868
Modesto, Calif.....	4	March 1	February 19, 1911
Hartford, Conn.....	17	April 15	March 29, 1914
Providence, R. I.....	19	April 6	February 25, 1897
Boston, Mass.....	28	April 4	March 15, 1902
Amherst, Mass.....	6	April 18	April 7, 1892
Phillips, Maine.....	12	April 23	April 9, 1909
Portland, Maine.....	13	April 18	April 2, 1905
Tilton, N. H.....	6	April 4	March 28, 1905
Bennington, Vt.....	13	May 1	April 16, 1909
St. Johnsbury, Vt.....	21	April 26	April 2, 1910
New York, N. Y.....	21	April 18	April 1, 1893
Orient Point, L. I., N. Y.....	5	March 25	March 15, 1908
Buffalo, N. Y.....	12	April 24	April 7, 1888
Madison, Wis.....	17	April 14	March 25, 1905

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Minneapolis, Minn.....	15	April 18	March 29, 1907
Ann Arbor, Mich.....	28	April 4	March 18, 1894
Vermilion, S. D.....	3	April 26	April 21, 1913
Yellowstone Park, Wyo.....			May 6, 1914
Missoula, Mont.....			March 26, 1916
Great Falls, Mont.....	4	April 29	April 28, 1891
Rathdrum, Idaho.....	4	March 24	March 10, 1908
Portland, Ore.....	3	March 21	February 27, 1900
Seattle, Wash.....	6	March 16	{ March 4, 1899 January 21, 1906
Halifax, N. S.....	8	April 20	April 13, 1902
Pictou, N. S.....	9	May 2	April 20, 1895
Scotch Lake, N. B.....	20	April 27	April 17, 1906
St. John, N. B.....	12	April 21	April 16, 1896
North River, P. E. I.....	5	May 4	April 29, 1887
Montreal, Quebec.....	16	April 17	April 7, 1912
Quebec, Quebec.....	18	April 23	April 14, 1889
Ottawa, Ont.....	33	April 10	March 28, 1897
Reaburn, Man.....	6	May 2	April 26, 1894
Aweme, Man.....	12	April 27	April 21, 1911
Indian Head, Sask.....	7	May 10	April 29, 1908
Sturgeon River, Alta.....			May 1, 1901
Edmonton, Alta.....	8	May 8	April 24, 1908
Okanagan Landing, B. C.....	9	March 20	March 13, 1910
Fort Simpson, Mack.....			May 19, 1904
Fort Resolution, Mack.....			May 12, 1860
Skagway, Alaska.....			May 31, 1899
St. Michaels, Alaska.....			May 24, 1880

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Norfolk, Va.....	2	November 4	November 7, 1911
Washington, D. C.....	5	September 22	October 17, 1911
Cambridge, Md.....			November 2, 1914
Morristown, N. J.....	15	October 12	October 30, 1915
Englewood, N. J.....	8	October 9	{ October 18, 1885 December 31, 1882
Philadelphia, Pa.....			September 9, 1890
Oberlin, Ohio.....	2	October 7	October 22, 1906
Waterloo, Ind.....	3	September 28	October 11, 1905
Chicago, Ill.....	6	September 17	October 16, 1896
Concordia, Mo.....	4	September 21	September 23, 1909
Grinnell, Iowa.....	3	September 13	September 16, 1885
Badger, Neb.....	3	September 11	September 18, 1903
Durango, Colo.....			September 26, 1914
Hartford, Conn.....	15	October 9	November 20, 1911
Providence, R. I.....	17	August 25	September 25, 1898
Boston, Mass.....	5	September 29	October 16, 1878
Phillips, Maine.....	8	August 19	September 8, 1909
Orono, Maine.....	3	September 1	September 11, 1915
Tilton, N. H.....	6	August 29	September 9, 1908
St. Johnsbury, Vt.....			August 27, 1914

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Orient Point, L. I., N. Y.....	4	November 2	December 16, 1908
New York, N. Y.....	13	September 25	October 18, 1904
Vicksburg, Mich.....	9	September 28	October 26, 1902
Madison, Wis.....	5	September 19	September 28, 1913
Minneapolis, Minn.....			September 14, 1913
Vermilion, S. D.....			September 13, 1889
Stump Lake, N. D.....			September 20, 1909
Yellowstone Park, Wyo.....	2	September 2	September 8, 1914
Missoula, Mont.....			August 8, 1915
Priest River, Idaho.....	2	August 2	August 24, 1913
Seattle, Wash.....	2	September 8	September 25, 1915
Halifax, N. S.....	3	August 25	September 3, 1893
St. John, N. B.....	9	September 9	October 2, 1892
Scotch Lake, Neb.....	9	July 20	August 5, 1907
North River, P. E. I.....	4	August 31	October 3, 1887
Quebec, Quebec.....	2	August 23	August 25, 1894
Montreal, Quebec.....	13	September 2	September 25, 1897
Ottawa, Ont.....	20	August 9	September 6, 1887
London, Ont.....			October 17, 1901
Aweme, Man.....	16	September 6	September 9, 1899
Banff, Alta.....			August 19, 1909
Okanagan Landing, B. C.....	9	August 26	September 25, 1912
Sitka, Alaska.....			August 22, 1912

LOCALITY	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Fernandina, Fla.....			August 15, 1906
Savannah, Ga.....			July 23, 1908
Biloxi, Miss.....	4	October 9	September 23, 1905
New Orleans, La.....	3	August 2	July 8, 1893
Frogmore, S. C.....	3	August 18	August 4, 1887
Norfolk, Va.....	2	August 17	August 16, 1911
Washington, D. C.....	10	July 29	July 3, 1912

VIOLET-GREEN SWALLOW

Two subspecies of the Violet-green Swallow are in summer confined to western North America. The third (*Tachycineta thalassina thalassina*) is found only in Mexico. The Northern Violet-green Swallow (*Tachycineta thalassina lepida*) breeds north to Alaska and Yukon; west to the Pacific Coast; south to northern Lower California and northern Durango, Mex.; and east to western Nebraska, western South Dakota, and southeastern Alberta. The San Lucas Swallow (*Tachycineta thalassina brachyptera*) is resident in the southern half of the peninsula of Lower California, and does not, so far as known, migrate to any extent. All of the following migration data pertain, therefore, to the northernmost form.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Chloride, N. M.....	2	April 1	March 30, 1915
Yuma, Ariz.....			March 11, 1902
Fort Verde, Ariz.....			March 26, 1887
Los Angeles, Calif.....			February 16, 1895
Santa Barbara, Calif.....	3	February 23	February 16, 1911
Fresno, Calif.....	4	March 14	March 6, 1914
Beulah, Colo.....	12	May 10	May 2, 1912
Boulder, Colo.....	5	May 7	April 22, 1916
Yellowstone Park, Wyo.....			May 11, 1914
Rathdrum, Idaho.....	3	April 5	March 24, 1901
Portland, Ore.....	6	March 22	March 7, 1915
Tacoma, Wash.....	6	March 18	March 14, 1905
Okanagan Landing, B. C.....	9	March 18	March 8, 1910
Red Deer, Alta.....			May 7, 1893
Stony Plain, Alta.....			April 26, 1911
Fort Hamlin, Alaska.....			May 27, 1898

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
San Angelo, Tex.....			October 1, 1886
Chloride, N. M.....			September 23, 1915
Fort Verde, Ariz.....			September 11, 1885
Los Angeles, Calif.....			October 20, 1894
Fresno, Calif.....			October 8, 1905
Beulah, Colo.....	8	August 23	September 7, 1915
Boulder, Colo.....	4	August 24	September 9, 1912
Yellowstone Park, Wyo.....	2	August 13	August 18, 1914
Corvallis, Ore.....			September 27, 1904
Okanagan Landing, B. C.....	7	September 12	October 5, 1905

BANK SWALLOW

The Bank Swallow (*Riparia riparia riparia*) breeds over most of North America, north to northern Alaska and northern Ungava (Quebec); south to southern California, Arizona, Texas, Louisiana, and North Carolina. It is, however, very local in summer throughout the southern part of its breeding range. Its migration route is chiefly through Mexico and Central America, as it is of scarcely more than casual occurrence in the West Indies. Its winter home is in South America.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Chipley, Fla.....	2	March 26	March 23, 1904
Biloxi, Miss.....	2	March 26	March 25, 1901
Santa Barbara, Calif.....			April 8, 1910
Hendersonville, N. C.....	4	April 16	April 2, 1912
Athens, Tenn.....	8	April 18	April 6, 1908
Helena, Ark.....	7	April 3	March 26, 1897
Variety Mills, Va.....	13	April 21	April 11, 1914
Washington, D. C.....	18	April 23	April 10, 1904
White Sulphur Springs, W. Va.....	8	April 11	April 6, 1895
St. Louis, Mo.....	8	April 23	April 21, 1910
Manhattan, Kans.....	5	April 22	April 12, 1883
Denver, Colo.....	4	May 7	April 27, 1907
Morristown, N. J.....	13	April 27	April 12, 1908
Philadelphia, Pa.....	9	April 24	April 8, 1888
Renovo, Pa.....	20	April 29	April 13, 1897
Oberlin, Ohio.....	20	April 22	April 6, 1902
Fort Wayne, Ind.....	10	May 5	April 18, 1916
Chicago, Ill.....	15	April 30	April 21, 1907
Sioux City, Iowa.....	13	May 8	April 25, 1899
Neligh, Neb.....	3	April 28	April 21, 1914
Phillips, Maine.....	11	May 11	May 6, 1913
Hanover, N. H.....	5	April 30	April 17, 1890
Bennington, Vt.....	10	May 13	May 1, 1915
St. Johnsbury, Vt.....	20	May 5	April 27, 1915
Boston, Mass.....	7	May 5	April 28, 1909
Block Island, R. I.....	5	May 3	April 24, 1915
Hartford, Conn.....	11	May 1	April 20, 1888
New York, N. Y.....	11	May 8	April 30, 1914
Shelter Island, N. Y.....	10	May 6	April 20, 1891
Buffalo, N. Y.....	7	May 4	April 16, 1916
Geneva, N. Y.....	10	May 1	April 19, 1908
Ann Arbor, Mich.....	16	April 22	April 11, 1889
Madison, Wis.....	17	April 25	April 12, 1901
Minneapolis, Minn.....	15	April 29	April 17, 1886
Springfield, S. D.....	2	May 12	May 6, 1909
Larimore, N. D.....	3	May 9	April 28, 1890
Bozeman, Mont.....	3	May 15	May 7, 1912
Rupert, Idaho.....	3	April 24	April 19, 1911
Narrows, Ore.....			May 5, 1914
Grand Manan, N. B.....	5	May 15	April 27, 1889
North River, P. E. I.....	4	May 20	May 12, 1889
Montreal, Quebec.....	2	May 9	May 6, 1912
Quebec, Quebec.....	2	May 13	May 6, 1889
Ottawa, Ont.....	31	May 11	August 29, 1912
Aweme, Man.....	11	May 14	April 28, 1911
Indian Head, Sask.....	4	May 5	April 27, 1913
Edmonton, Alta.....			May 8, 1903
Okanagan Landing, B. C.....	5	May 12	April 28, 1915
Fort Simpson, Mack.....			May 26, 1904
Kowak River, Alaska.....			May 25, 1899

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Hendersonville, N. C.....			September 4, 1912
Biloxi, Miss.....	2		September 24, 1900
Tivoli, Tex.....			October 3, 1915
Fort Verde, Ariz.....			September 7, 1886
Washington, D. C.....	4	September 14	September 19, 1886
Athens, Tenn.....	4	September 8	September 29, 1908
Morristown, N. J.....	7	August 21	September 6, 1912
Philadelphia, Pa.....			September 30, 1906
Renovo, Pa.....	16	August 17	August 30, 1903
Oberlin, Ohio.....	4	September 5	October 7, 1907
Chicago, Ill.....	3	September 1	September 16, 1896
Concordia, Mo.....	6	September 16	September 29, 1911
Boulder, Colo.....	3	August 10	August 21, 1910
Phillips, Maine.....	7	July 28	August 31, 1912
Jefferson, N. H.....			September 6, 1909
St. Johnsbury, Vt.....	2	August 10	August 15, 1914
Woods Hole, Mass.....			September 9, 1893
Block Island, R. I.....	3	August 24	September 2, 1912
Hartford, Conn.....	19	September 23	October 15, 1900
New York, N. Y.....	4	September 2	September 22, 1904
Ithaca, N. Y.....			September 26, 1908
Geneva, N. Y.....	2	August 22	August 22, 1914
Detroit, Mich.....			September 29, 1912
Ann Arbor, Mich.....			September 3, 1915
Madison, Wis.....	6	September 8	September 20, 1911
Sioux City, Iowa.....	2		September 3, 1917
Minneapolis, Minn.....			September 22, 1906
Yellowstone Park, Wyo.....			August 17, 1915
Bozeman, Mont.....			August 28, 1912
Rupert, Idaho.....			September 9, 1911
North River, P. E. I.....	3	August 18	August 25, 1888
Montreal, Quebec.....	5	August 28	September 9, 1891
Quebec, Quebec.....			August 25, 1894
Ottawa, Ont.....	24	August 26	September 15, 1911
Aweme, Man.....	19	August 21	August 31, 1900
Okanagan Landing, B. C.....	6	August 20	September 27, 1915
Kowak River, Alaska.....			August 19, 1898

ROUGH-WINGED SWALLOW

The Rough-winged Swallow (*Stelgidopteryx serripennis serripennis*) breeds in the United States, southern Canada, and Mexico; north to Massachusetts, New York, Ontario, Minnesota, Montana, and southern British Columbia; and south to the southern United States and central Mexico. It winters from central Mexico south to Central America and Costa Rica.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Amelia I., Fla.....			September 21, 1906
Savannah, Ga.....	9	April 2	March 10, 1912
Atlanta, Ga.....	8	April 8	March 28, 1917
Autaugaville, Ala.....	2	April 7	April 3, 1914
Biloxi, Miss.....			March 30, 1906
Baton Rouge, La.....			March 23, 1903
San Antonio, Tex.....	9	February 23	February 15, 1889
Yuma, Ariz.....			March 12, 1902
Adonde, Ariz.....			February 28, 1894
Tombstone, Ariz.....	3	March 28	February 25, 1912
Fort Verde, Ariz.....	4	April 6	March 21, 1887
Santa Barbara, Calif.....	3	March 19	March 11, 1911
Fresno, Calif.....	3	April 5	March 31, 1914
Frogmore, S. C.....	6	April 2	March 21, 1886
Raleigh, N. C.....	23	April 8	March 28, 1908
Variety Mills, Va.....	13	April 10	March 27, 1890
Washington, D. C.....	30	April 11	March 31, 1912
Bowling Green, Ky.....			April 6, 1902
Helena, Ark.....	18	March 24	March 21, 1897
Philadelphia, Pa.....	6	April 21	April 13, 1905
Beaver, Pa.....	4	April 21	April 14, 1891
Morristown, N. J.....	14	April 27	April 15, 1912
Oberlin, Ohio.....	20	April 26	April 16, 1902
Richmond, Ind.....	8	April 24	April 11, 1909
Chicago, Ill.....	6	May 7	April 27, 1895
St. Louis, Mo.....	8	April 15	April 5, 1888
Onaga, Kans.....	13	April 28	April 16, 1891
Colorado Springs, Colo.....	6	May 11	April 29, 1906
New Haven, Conn.....			April 30, 1907
Hartford, Conn.....	4	May 11	May 4, 1904
Boston, Mass.....	4	May 1	April 29, 1913
Western Mass.....	6	May 12	
Bennington, Vt.....	6	May 6	April 25, 1915
New York, N. Y.....			April 24, 1914
Ballston Spa, N. Y.....	9	May 4	April 21, 1900
Geneva, N. Y.....	10	April 26	April 16, 1916
Ann Arbor, Mich.....	10	April 28	April 17, 1910
Madison, Wis.....	8	April 27	April 17, 1914
Keokuk, Iowa.....	9	April 15	March 27, 1898
Sioux City, Iowa.....	7	May 3	April 22, 1916
Lanesboro, Minn.....	10	April 20	April 14, 1888
Red Cloud, Neb.....	11	April 29	April 18, 1911
Vermilion, S. D.....	3	April 28	April 19, 1913
Cheyenne, Wyo.....			May 24, 1888
Yellowstone Park, Wyo.....			May 27, 1914
Missoula, Mont.....	2	April 27	April 25, 1915
Newport, Oregon.....	2	May 2	April 20, 1901
Tacoma, Wash.....	6	April 12	April 3, 1905
London, Ont.....	10	April 25	April 17, 1914
Okanagan Landing, B. C.....	8	April 26	April 18, 1907

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Savannah, Ga.....			October 15, 1909
Biloxi, Miss.....	4	September 21	October 25, 1905
Raleigh, N. C.....	2	June 24	June 26, 1889
Helena, Ark.....			September 21, 1894
Washington, D. C.....			September 3, 1894
Morristown, N. J.....	3	August 15	September 6, 1914
Oberlin, Ohio.....	5	August 18	September 23, 1907
Richmond, Ind.....	2	September 10	September 15, 1908
Horseshoe Lake, Mo.....			October 13, 1905
Onaga, Kans.....	5	August 26	September 30, 1892
New Haven, Conn.....			August 13, 1903
Harvard, Mass.....	4	July 24	August 4, 1909
Lynn, Mass.....			September 3, 1911
New York, N. Y.....			October 4, 1914
Ballston Spa, N. Y.....	3	July 18	July 24, 1890
Geneva, N. Y.....	2	August 17	August 22, 1915
Ann Arbor, Mich.....			October 23, 1915
Madison, Wis.....			August 22, 1914
Lanesboro, Minn.....	3	August 24	August 26, 1888
Boulder, Colo.....			August 14, 1910
Yellowstone Park, Wyo.....			August 25, 1914
Missoula, Mont.....			August 28, 1915
Priest River, Idaho.....			July 24, 1914
Newport, Ore.....			September 15, 1900
London, Ont.....	2	August 7	August 12, 1902
Okanagan Landing, B. C.....	5	September 9	September 28, 1905

Notes on the Plumage of North American Birds

FORTY-FIFTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Cliff Swallow (*Petrochelidon lunifrons*, Figs. 1, 2).—The adults of this species are alike in color, but the young bird (juvenal or nestling plumage), as Fuertes' figure (Fig. 2) clearly shows, is quite unlike its parents in many particulars. The crown and back are brownish, instead of steel-blue, there is no white mark across the brow, etc.

In this plumage the young bird migrates, and, as with most of our Swallows, the postjuvenal molt does not occur until winter quarters are reached. For this reason specimens are lacking to show its exact nature, but it evidently is complete, since, when the Cliff Swallows return to us in the spring, young and old cannot be distinguished.

Violet-green Swallow (*Tachycineta thalassina*, Fig. 3).—The plumage changes of this species doubtless resemble those of its relation, the Tree Swallow. There is, however, a well-marked difference between the plumage of the male

and female of this species, that of the latter being considerably duller, with, the upper parts, especially the crown, washed with bronze or brownish.

The nestling plumage is much like that of the Tree Swallow and consequently is quite unlike that of the adult. From the young Tree Swallow the young Violet-green may be known chiefly by a patch of white on the flanks and by the less abrupt definition of the white of the underparts from the brownish of the upper parts on the sides of the head and neck. But these differences are not sufficiently pronounced to distinguish the two in life.

A specimen taken in New Mexico, October 11, is undergoing a complete molt which apparently would have brought it into the plumage of the adult in winter. This differs from that of the adult in summer (as does that of the Tree Swallow) in having the tertials tipped with white, a marking which disappears with wear.

Tree Swallow (*Iridoprocne bicolor*, Figs. 4, 5).—There is practically no sexual difference in color in the Tree Swallow, but the nestling plumage (Fig. 5) is strikingly unlike that of the adult. The upperparts and tail are dull sooty grayish brown, usually without a trace of the iridescent bluish green so conspicuous in the adult; the wings are of much the same color but show greenish reflections; the underparts are slightly duller, less silky white than in the adult.

The birds begin their migration in this plumage, but, as Dwight has shown, between the latter part of August and October a complete molt occurs in which the young bird assumes the plumage of its parents.

There is no spring molt, and the summer plumage differs from that of winter only in the absence of whitish tips to the tertials.

Rough-winged Swallow (*Stelgidopteryx serripennis*, Fig. 6).—There is no sexual difference in color in this species, but the young in juvenal plumage differ from their parents in being washed with rusty, this color being clearer on the wing-coverts and margins to the inner wing-feathers and pronounced on the throat and breast, which are almost cinnamon.

The post-juvenal molt doubtless occurs, as Dwight remarks, after the birds leave us and are traveling to their winter homes in Central America. It brings the bird into the plumage of the adult, which exhibits no seasonal variations.

The adult Rough-wing somewhat resembles a young Tree Swallow in general coloration but is duskier below, especially on the breast.

Bank Swallow (*Riparia riparia*, Fig. 7).—The Bank Swallow is found in both the New World and the Old. The sexes are alike, and there is but little variation with age. The nestling plumage differs from that of the adult in being slightly tipped with brownish or grayish above, in having the throat more or less spotted with dusky and the tail squarer.

This plumage is worn until after the bird leaves us for its winter quarters in the tropics, and is replaced, before the birds' return to us, by one resembling that of the adult. The adults also molt after leaving us, and the slight differences between winter and summer plumage are doubtless due to wear.

Notes from Field and Study

The American Crossbill

Although the American Crossbill may not be considered rare, it is one of our most remarkable and erratic birds, and there is a great deal of fascination in following it to its haunts. To be sure of seeing this strange bird at home, we must go to some of the wildest places, and even then, owing to its erratic and uncertain behavior, must be prepared for many disappointments, for the phrases 'rare intervals' and 'irregular' occur with annoying frequency in all our records of it which I have been able to examine. There are few places within its range with suitable trees where the bird has not been recorded at one time or another, for it is a great wanderer in winter. I have known of it nesting near Wolfville, Nova Scotia, in Manitoba, close to where I am writing, in the Cypress Hills, Saskatchewan, and in some parts of British Columbia.

I made an expedition to Red Deer,

Alberta, some years ago, hearing that Crossbills were frequenting the tree-covered slopes of the 'divides,' but, although I stayed well into the breeding-season, did not find a nest, and suddenly the birds disappeared. Wherever there are ever-green trees, the birds will appear sooner or later, but that is as definite as it is safe to be.

This bird, of course, takes its name from the crossing of its two strong, curved mandibles, which, combined with the brilliant scarlet, yellow, or green plumage, gives it a truly remarkable Parrot-like appearance. This resemblance is not confined to appearance alone, but extends to habits also, for the Crossbill uses both bill and feet when climbing and is as fully qualified an acrobat as any Parrot I ever saw. I used to think the Chickadee one of our most agile birds, but it must retire to second place when a Crossbill comes along.

The remarkable development of the



YOUNG RED CROSSBILLS
Photographed by H. and E. Pittman

bill is in reality a wonderful adaptation to the bird's mode of life, enabling it to extract the seeds from fir-cones with ease. The seeds of the cone-bearing trees are the principal food of this bird, but it also feeds to a certain extent upon weed-seeds and insects. As with most, if not all, of our Finches, it is very probable that the diet of the young is entirely insectivorous. Berries, including rose-berries, are also eaten. The Crossbill has a rather long tongue, and to watch one lick a hard piece of salt is a really interesting sight.

The Crossbill is a great conversation-alist, and, when feeding among the tree-tops, keeps up a continual soft twittering. It will probably surprise many people to know that this bird is a good singer, the song being as sweet as that of the Canary and without any of its harsh qualities. In addition to the sweet song, it has a clear call resembling the syllables 'pink, pink,' but this, like the song, is gently uttered.

The nest is built rather high up in an evergreen and is a fairly neat cup of twigs and moss or grass, lined with fur and feathers. The eggs are of the Finch type, about .75 x .58, greenish white marked with dark brown and gray. The breeding-season is long, extending from January to June.

One associates this bird with the deep and silent woods, to which, I may say, it lends a welcome touch of life, but, occasionally, it will appear in odd places. One morning last summer I noticed a pair of young Crossbills on the wire of my corral and later saw them feeding on some oats the horses had spilled. We promptly scattered more grain and had the satisfaction of tempting them to stay for a time and also that of getting a series of photographs. They appeared to be birds of the year and seemed very affectionate, the male feeding the female with true gallantry. They were, like many of our northern visitors, particularly tame, and one could see them shelling the oats quite plainly. The experience was unusual and made up for some of the numerous disappointments of the naturalist-photographer.

The 'points' of the Crossbill then may be summed up as follows: crossed mandibles, plumage of scarlet, green or yellow (according to sex and age), confiding disposition, gentle voice, and somewhat heavy build, which, in life give it a rather chubby appearance.—H. H. PITTMAN, *Hartney, Manitoba*.

Winter Boarders

Late last fall, when we started taking in regular winter bird-boarders, we had a pair of Downy Woodpeckers, a pair of White-breasted Nuthatches, four Blue Jays, a half-dozen Juncos, four or five Tree Sparrows, one lone Chickadee, and a lot of English Sparrows. All but a half-dozen of the latter have been trapped and chloroformed. In late November a few Purple Finches appeared, and soon more and more came along, until now (early in February) there are more than a hundred of them.

Early in December a pair of Red-breasted Nuthatches showed up, and the solitary Chickadee now has three companions. The Juncos have also increased to a dozen or fifteen. There are three or four Sparrows that I am unable to identify. Occasionally some Goldfinches visit us, but they are not regular at their meals.

We have four feeding places—two trays at windows, one covered tray on the side of a tree, and one weather-vane food-house—all home-made. We feed the birds hemp seed, sunflower seed, pumpkin seed, cracked nuts, and suet. The window trays are largely monopolized by the Purple Finches, as many as thirty sometimes crowding in and about one tray. They keep up a constant protesting chatter while feeding, and show a disposition to be very quarrelsome among themselves, driving one another off the feeding-place. An occasional English Sparrow edges in now and then, and the Finches do not seem to resent it. Once in a while, a Chickadee darts in quickly, grabs a sunflower seed, and 'beats it' before the Finches know it. The Finches are consummate gluttons for hemp seed, sun-

flower seed, and pumpkin seed. The latter seed, big and tough as they are, are easily crushed by the powerful bills of the Finches, who do most of their eating in the forenoon. About 2 or 3 o'clock in the afternoon they disappear, not to be seen again until the next day. When they have gone, chopped nuts are placed upon the window-trays, so that the Nuthatches and Chickadees may enjoy an undisturbed feast. The Blue Jays, of course, drive the Purple Finches away from the window-trays now and then, but their visits are short. The Finches have a fixed habit of gathering in the trees overlooking the trays and sitting there contemplating the coming feast, all the while uttering the short, sharp metallic chirp that is so characteristic of them. Finally one of them will drop down to the tray, and then the rest follow in crowds. When the tray is empty, they resume their perches in the trees and await the replenishing of the dining-table.

The food in the tray on the tree and in the weather-vane tray is largely patronized by the other birds while the Finches have possession of the window-trays. The Downy Woodpeckers, the Nuthatches and the Chickadees regularly visit the suet fastened against a tree near the kitchen door. I have not seen a Blue Jay eat suet this winter, although last summer they ate it early and often. A red squirrel sometimes helps himself to this piece of suet. A solitary Brown Creeper picks up the bits of suet dropped to the ground by the other birds, but I have yet to see him eat from the piece fastened to the tree, although he creeps all about it.

The Juncos and Tree Sparrows feed upon the ground, where we scatter hemp seed, seeming to prefer that place to the food-trays, although sometimes eating there. The Juncos and the unidentified Sparrows before mentioned appear at the first break of day. I have heard them 'cheeping' at their food before it was light enough to distinguish them clearly. The unidentified Sparrows remain eating until almost dark. The sun is well above the

horizon before the Downy Woodpeckers, the Nuthatches and the Chickadees show up, while the Finches come along between the early risers and the late.

In a tree near the house we have a box about eighteen inches square, with a hole at one end, in which we put nuts for two gray squirrels that are very tame and come regularly for their meals. In this box we also put sunflower seeds, and the Nuthatches go right in after them like the squirrels. In this way their food is protected from the greedy and bullying Blue Jays who reach in for the seeds but do not dare to venture back like the Nuthatches.

Near this tree we have a concrete bird-bath, home-made, which is filled in the morning with hot water, and when ice begins to form it is swept out and refilled with hot water several times a day. This is immensely enjoyed by both the birds and the squirrels. The latter seem greatly to appreciate the novelty of hot water in winter, drinking deeply and frequently—so do the Blue Jays. The smaller birds gather around the steaming drinking-place, sit in the rising steam, and take a regular Russian bath. Quite often, even in very cold weather, the Purple Finches and English Sparrows hop right into the warm water and take a regulation 'Palm Beach dip.' The birds sit around watching the change of cold water to warm, and the Red-breasted Nuthatches are sometimes so impatient that they flutter close by while the change is being made. In a close observation for two years, I have never seen the Downy Woodpeckers take a drink of water at this bath, although they are constant visitors and very tame.

Among the hundreds of Purple Finches, we see but three or four males in their raspberry-red plumage. Can the editor say why, in so large a number, there should be so few males who are under the two years required to grow such feathers?

The Chickadee who first made his appearance last fall is unusually tame, sometimes sitting on the window-tray while chopped nuts are being placed upon it. The Red-breasted Nuthatches are

just about as tame, while the White-breasted are a trifle more shy. The male Nuthatches appear to domineer over the females, not permitting them to visit the trays until the males have first taken a seed or nut and flown away with it. The male Downy will not allow his spouse to feed at the suet until his own appetite has been appeased. She sits near and keeps up her peculiar cry in the meantime. And yet I have seen a Downy, a Nuthatch, and a Chickadee all eating peacefully at the same piece of suet at one time. Possibly they were all males and were carrying out 'a gentlemen's agreement.'

The Chickadees and Nuthatches, after gorging themselves to satiety, carry away and hide sunflower seeds and bits of nuts, storing them in cracks of fences and in crevices in the bark of trees. Sometimes one bird will watch another do this, and then, when the coast is clear, proceed to appropriate for itself the hidden tit-bit. Blue Jays and squirrels do the same, and I have often observed them pilfering from each other. The Nuthatches sometimes hide morsels in the cracks of the very food-trays from which they get their regular meals, and when one discovers what another has hidden, it seems to relish that particular bite much more than the ample supply which is in plain sight.

We live in a neighborhood where there are many trees and many houses, but so far as I know we have all the birds with us, no one else seeming to be interested in these most wonderful and beautiful creatures. For our trouble we have been rewarded of late by the charming low song of the Purple Finches. They began singing late in January, which, from what I have read in bird literature, is rather early to hear music from the bird-choir in New Jersey. It surely is a sight, these wintry days, to see hundreds of birds so close to the house. They know their friends, and the only thing needed to get their confidence is to feed them regularly and move among them slowly and deliberately, avoiding any sudden motion or noise. We are only amateurs but are learning something new every day. Quite often our experience differs widely from what we read in the bird-books.—BERT M. MOSES, 422 Gregory Ave., West Orange, N. J.

A Bird Exhibit

The Bird Committee of the Civic Club of Chambersburg, Pa., held an exhibit in an empty storeroom, the week beginning Feb. 12, 1917.

One corner of the exhibit was given over to the winter foods of the birds. A very



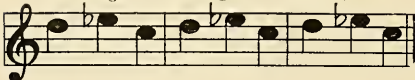
BIRD EXHIBIT AT CHAMBERSBURG, PA., FEBRUARY 12, 1917

attractive part of the exhibit was a collection of nests kindly loaned by Miss Adelaide Bird of Wilson College. More than a hundred nesting-boxes had been brought in by the school-children of town and also by children from the rural schools. The members of our Junior Audubon Societies were, of course, most interested. Prizes were awarded to those having made the best boxes. Hundreds and hundreds of people came in during the week and showed the greatest interest in the work of this Committee. We were especially pleased to have many visitors from distant parts of the county. It means so much to interest our rural friends, for they can do so much more than we can when they become fully alive to the importance of bird-protection.—HELEN M. SELLERS, *Chambersburg, Pa.*

A Singing Blue Jay

We have a Blue Jay in our neighborhood which has been singing the following 'song' all summer:

(Sung two octaves higher than written.)



He gives the exact pitch of these three notes, according to my piano, and apparently he is much pleased with his new composition, for he sings it over and over, very emphatically, day after day.

The Blue Jays have a great variety of notes, but I have never before heard these.—EMILY C. H. ARMSTRONG, *Hyde Park, Mass.*

Strange Behavior of a Robin

Very curious behavior on the part of a Robin was witnessed this past summer by various members of my family and myself. At the rear of our bungalow (near the north shore of Long Island) two electric light wires are stretched past the kitchen windows, about parallel with the wall of the house and with the ground. They are some $3\frac{1}{2}$ feet from the windows, and a foot or so below the top.

The Robin would perch on the nearer

wire, fly vigorously against one of the panes of glass, and then down to a small post, where the railing of the steps joins the horizontal railing of the landing. This post is almost directly under the wire and about on a level with the window-sill. Flying up from this post to the wire, he would repeat the 'stunt' indefinitely.

It appeared to be done simply for the fascination of dashing his breast (with wings spread) against the glass. There was no attempt to get through or past the glass, no fluttering against the pane as if trying to reach some object inside—simply the thump against the window and the quick slanting flight to the post (or, occasionally, directly back to the wire). This was repeated sometimes two or three times a minute and probably two or three hundred times a day. At first the presence of a person in the kitchen would frighten him away to a near-by tree; but soon he became quite indifferent to one moving about inside, and even vigorous measures to scare him away, such as shooing, clapping hands, and throwing water at him, served only to send him off for the moment.

At the end of five or six days we tied a strip of burlap across the upper portion of the window, against which he habitually flew. He then flew against the lower part of the window or against the other window, and even occasionally against the screen door. The whole performance lasted about two weeks, when he desisted and disappeared as suddenly as he came. The period was about the second and third weeks of July. There was never any sign that the bird was injuring himself or suffering any ill effects from his encounters with the window.

It is possible, of course, that the first time the Robin flew against the glass, he was seeking to get beyond it to some object in the kitchen, though no particular article seemed to us a likely objective. As stated above, there was no indication of such a purpose by the time his actions had come to our attention.

We should be very glad to hear whether similar actions have been observed before,

and, if so, what explanation of them is accepted.—HERBERT L. COWING, *Whitneyville, Conn.*

[Similar actions by several species of birds have, from time to time, been recorded in BIRD-LORE. In most instances the bird appears to mistake its own image, reflected in the glass, for that of an individual of its own species against which it vainly but persistently launches its attacks.—ED.]

Cardinal Capturing a Cicada

That the Cardinal is not averse to partaking of insect food, and will even make considerable effort to secure it, is borne out by the following little incident which I observed on my lawn in Iowa City, August 18, 1917.

My first intimation of the affair occurred when I heard the quickly repeated *chuck* of a Cardinal, accompanied by the notes of a cicada (*Cicada sp.*), sounded very rapidly, as if the insect were much disturbed or excited. Upon looking in the direction of the commotion, I saw, flying rapidly toward the ground, 30 feet away from me, a cicada attempting to escape from a closely pursuing male Cardinal. The insect swerved and twisted in its flight, circling through a small cedar tree in attempting to evade his pursuer, but the Cardinal was not to be denied, and finally captured the cicada on the wing, a few feet from the ground. All the time the cicada was giving forth its familiar singing note, though in a different tone than when undisturbed. The Cardinal alighted on the ground with his prey and began pecking the fluttering insect, apparently for the purpose of rendering it helpless.

At this stage of the proceedings, the Cardinal was attacked by a pair of House Sparrows, one of which attempted to steal the insect from its captor, but the Cardinal flew into a small bush, closely pursued by the female House Sparrow, which was unsuccessful in wresting the prize from its rightful possessor. The pursued Cardinal flew back again from

the bush to the ground near its original position when attacked by the Sparrows, and quickly proceeded to break off the wings of the cicada. The bird seemed rather to *cut* off the wings by sudden pressure of the mandibles, accompanied by a quick sidewise jerk of the head, and I was sufficiently close to the entire performance to hear distinctly the snap as the bird severed the insect's wings from its body. The Cardinal then pecked two or three holes in the cicada and flew away with the now helpless insect. The whole affair, as above described, occupied a period of not more than two minutes.—DAYTON STONER, *Iowa City, Iowa.*

Evening Grosbeaks at Cadillac, Mich.

I notice the report on Evening Grosbeaks often and wish to state that, a year ago last February, I had the pleasure of seeing a flock of fourteen of these beautiful birds at Cadillac, Mich., nine of them males and five females. They were feeding on box elder shade trees along the streets of the city in a much-used traffic portion.

They paid no attention to travel of man or beast. I observed them by standing directly in front of the short tree in which they were feeding and enjoyed to the fullest their chatter and lively feeding. I, again, this last March, in the same city, observed a flock of twenty-seven birds, of which I counted eighteen males and only nine females. I wonder if the males usually out-number the females among this species of winter migrants to these parts.

Winter birds seemed unusually plentiful the past year in Michigan. I noticed an abundance of Chickadees, while Snow-buntings and Purple Finches were more abundant than I have ever noticed them in this state, and more especially was this true of the northern part of the southern peninsula. I have also noticed the Black-billed Cuckoos as far north as Antrim County, near the Mackinaw Straits, an unusual occurrence.—ETHAN W. THOMPSON, 503 Fuller Ave., Grand Rapids, Mich.

THE SEASON

IV. August 15 to October 15

BOSTON REGION.—Autumn came early this year; summer, delayed by the late spring, was shortened by the frosts of September.

One would suppose that the birds which had postponed breeding so long would not be ready to migrate on their customary dates. However, this was not the case, even with the birds that leave this region in August. For example, Chimney Swifts, Least Flycatchers, and Bobolinks, although two weeks behind time in arriving on their breeding-grounds, left, as usual, late in August. During the latter half of this month there was a conspicuous Warbler migration, made up chiefly of Ovenbirds, and Black and White and Tennessee Warblers. There was practically no autumnal flight of Red-breasted Nuthatches.

During September, birds were scarce and no heavy flight was noted. Bay-breasted and Cape May Warblers were prominent during the month, but the Black-poll, usually our most abundant Warbler of the autumn, occurred rarely.

At present (October 15) Hermit Thrushes, White-throated Sparrows, Slate-colored Juncos, and Myrtle Warblers are in active migration, the last three in large numbers. The Myrtle Warbler, one of the most regular migrants, did not appear until the second week of October—two weeks late. Chipping Sparrows have gathered in flocks, often of fifty birds or more, in preparation for departure.—WINSOR M. TYLER, M.D., *Lexington, Mass.*

NEW YORK CITY REGION.—Our summer residents have been leaving us at about their regular times, notwithstanding the fact that caterpillars, in most remarkable variety of species and number of individuals, have been thronging the countryside. The shore-bird migration was, on the whole, normal in dates and numbers, though Mr. J. T. Nichols states

that departure dates were a little late at Mastic, L. I., and that he saw rather fewer Black-bellied Plover and more Western and Stilt Sandpipers than usual there. The autumn transients of the Warbler family were late in appearing, but have passed through in about their usual numbers, except that the Black-poll, normally one of the most abundant, has been scarce, and others possibly somewhat so. The winter residents also are somewhat behind their schedule; White-throated Sparrows and Juncos were rather late in reaching us at all, and while both should now (October 15) be abundant, the former is no more than fairly common, and but few of the latter have been seen. Of the Red-breasted Nuthatch, so common two years ago and still more so last year, only one individual has been reported to me (by Mr. G. E. Hix). (This species was noticeably scarce in the White Mountains this season; and Pine Siskins and White-winged and Red Crossbills were absent or nearly so there.) Black-cap Chickadees are not common.—CHARLES H. ROGERS, *American Museum of Natural History, New York City.*

PHILADELPHIA REGION.—August temperature averaged three degrees above normal. No unusual movement of birds was observed. A number of trips along the New Jersey coast showed shore-birds present in increased numbers; this was especially noticeable among the smaller species, particularly the Sanderling. The Federal Law, no doubt, has aided materially in bringing this about. Maimed birds, hopping about on one foot, plainly showed, however, that the law had been disregarded by some. Common Terns and Laughing Gulls were common at all points visited, perhaps more so than for a number of years. Ospreys, I think, were present in normal numbers, though they are thought by some to be less common than formerly.

A field-trip at Cape May, N. J., August 25, with David G. Baird, Dr. Witmer Stone, and J. Fletcher Street brought to light a Piping Plover, a Loggerhead Shrike, two small colonies of Short-billed Marsh Wrens, and a pair of Mockingbirds with a single young in juvenal plumage. Mr. Baird had noticed the adult Mockingbirds several times during the spring and summer. Mr. Street had previously located the Marsh Wrens on August 12. On August 26 the writer had the good fortune to see an Egret and two Little Blue Herons, no doubt part of a flock of these two species Mr. Stone had seen in the same locality about two weeks before. Probably there was an influx of Little Blue Herons into southern New Jersey during the late summer, as I have been informed that "White Herons" were observed at several different points.

September brought its usual quota of autumn transients. The weather averaged three degrees above normal, though especially cold from the 8th to the 12th. On the 10th large numbers of Redstarts were observed; apparently their presence was due to the sudden cold wave, but it may have been a perfectly normal movement, as no marked increase in any other species was observed.

The first Herring Gull was noticed September 7 flying over, with no apparent intention of staying about here for the winter; no others were seen until October 14. These were flying about over the Delaware River and were undoubtedly winter residents.—JULIAN K. POTTER, *Camden, N. J.*

THE WASHINGTON REGION.—The migratory movements of birds in the vicinity of Washington this fall have been, as they were during the spring, very irregular and somewhat out of the ordinary. Comparatively few of the Warblers and other earlier migrants made their appearance on time, and many of them not until considerably later than usual. The unprecedentedly cold weather of early September, however, had some effect on the later birds, for several species came in advance

of their regular arrival. Most interesting of these are the Hermit Thrush, which appeared on September 21, though its average date is October 17; the Purple Finch, September 9 (average, October 21); the Ruby-crowned Kinglet, September 23 (average, October 1); and the Lesser Scaup Duck, three individuals of which we saw on August 31, whereas the earliest previous date is September 25, 1903! The cool weather, however, did not prevent several species from considerably outstaying their usual time, most conspicuous among which are the Rough-winged Swallow, seen August 31; the Purple Martin, September 9 (average date of departure, August 24); Acadian Flycatcher, September 9 (average date of departure, September 1); and the Canadian Warbler, seen September 20 (average date of departure, September 8). One species, the Orchard Oriole, was noted by Mr. A. Wetmore on September 9, seven days beyond the latest previous record, which was September 2, 1912.

Of considerable interest in its effect on migratory birds is the Washington Monument. This is a tapering shaft of light-colored stone, 65 feet square at its base and 555 feet high, which stands in a large open space of the city near the Potomac River. Its summit is now, and has been for a number of years, ordinarily illuminated at night by the beam of a distant searchlight. Many migrating small birds, particularly Warblers, strike this monument at night and fall dead at its base; but it does not seem to cause generally so much destruction in recent years as formerly when the shaft was entirely in darkness, a result just the opposite of what we should expect. During the present autumn, however, considerable loss of bird-life has been reported here, and on the morning of September 21, after a night of great activity among migrating birds, the following were picked up at the base of the monument: Northern Yellow-throat, 2; Ovenbird, 1; Black-throated Green Warbler, 1; Chestnut-sided Warbler, 1; Canadian Warbler, 1; American Redstart, 1. Fortunately for

the birds, this great obelisk does not seem to be so dangerous as many lighthouses, which, by their brilliant lights, are much more seductive.

The Chimney Swifts are, as usual, roosting in large chimneys in the midst of the city of Washington. On two occasions, September 7 and 8, a flock of 300 to 400 was seen circling and entering a chimney from 10.30 to 11 o'clock, A.M. At that hour, on the first of these days, the weather was rainy, and on the other, damp and lowery.

An incident of bird-life, interesting from more than one standpoint, is a roost of European Starlings in one of the parks of the city, which was, throughout the months of August and September, occupied nightly by from 100 to 500 birds. The species has evidently come to Washington to stay, for there were several instances of its breeding in this vicinity during the past season. Occupying this same roost with the Starlings, and often associated with them in their flights to the place of rendezvous, were from 1,000 to 4,000 Purple Grackles. There were also, roosting with these, several thousand Purple Martins, an account of which appears in another article in the present number of BIRD-LORE.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN REGION.—The most notable thing about the birds during the summer was the late singing and the late nesting of most of them. This was due, no doubt, to the exceptionally cold summer. Most of the birds were in nearly full song, even as late as the first week of September.

The migrations of transient birds began early in July, as usual, but the numbers of individuals was considerably increased over what is regarded as the average. Semipalmated Plover, Semipalmated Sandpipers, and Caspian Terns were noted on July 6. Swallows, Swifts, and Martins had left the region by the last week of August, which is much earlier than normal. Swifts are usually found until the last week of September, and Tree

Swallows often linger into late October. On the other hand, transient Warblers are still present and seem to find abundant food among the leaves which still cling to the trees. The birds which feed almost exclusively upon flying insects which they catch in mid-air departed from two to four weeks early, while the seed-eaters and those which feed largely upon larvæ remained later than usual. This can be correlated with the available food-supply of each group.—LYNDS JONES, *Oberlin, Ohio.*

June 15—August 15

DENVER REGION.—The year 1917 has been of exceptional interest, ornithologically speaking, in this region, and while the period from June 15 to August 15 has exhibited no startling events, yet it has, in a measure, partaken of the unusual conditions characterizing 1917.

The Denver Region has been, and remains unusually verdant, and a much larger area than ordinary has been cultivated this season; whether or not these two conditions have lead to the *return* of several species and an increase in the frequency of others, the writer feels unable to decide. There is a much larger number of Bullock's Orioles in and about Denver than for several years past. The writer's records also seem to show a noticeable increase of Arkansas Goldfinches and a decidedly unusual number of Pale Goldfinches in Denver and its environs. Pine Siskins frequently linger about the city after the first brood is raised, until late in June, but all seemed to disappear this year from the Denver Region some time before June 15.

It is highly probable that the Western House Wren has nested successfully in Denver before, but such an occurrence has never, in twenty-three years' experience here, fallen to the writer's notice. This summer, however, a pair built a spurious nest in a nesting-box on the writer's premises, but placed their true nest in a neighboring yard; and it is highly probable that the Western Yellow-

throat nested in the outskirts, though no nest was detected. So far as the writer can recall, he never saw so many Mourning Doves, nor so few Hawks in any corresponding 'June 15 to August 15' in the past, notwithstanding that a good deal of time has been spent motoring in the suburbs and the outlying areas. On the other hand, it is a pleasure to know that the Golden Eagle, the Turkey Vulture, and the Black Swift are still with us, since all three species have been seen at different times within 25 miles of Denver, between the dates that this report covers.

Shore-birds were heard migrating southward first on the night of August 12; Robins and Chipping Sparrows were observed gathering in small flocks on this date also, a very early one, due, perhaps, to a temporary 'cold spell' or to the early onset of low temperatures in the near-by mountains.

The usual Flycatchers have been in evidence, also Kingbirds, Arkansas Kingbirds, and Wood Pewees; and twice Cassin's Kingbird has been seen within the city limits. The companionable Black-headed Grosbeak has been very

common; none of our summer birds is more of a lasting joy than this delightful singer, and his soft note of gentle encouragement to his mate or young would be missed sadly were this bird to disappear or leave us. The rank and file of our bird population did not fail us this summer; Robins, Chipping Sparrows, Yellow Warblers, Warbling Vireos, Bronzed Grackles, Brewer's Blackbirds, Say's Phœbes, Nighthawks, and a few Plumbeous Vireos helped to keep alive one's daily interest in his bird neighbors.

It is a renewed source of regret, disappointment, and resentment that our beautiful Mountain Bluebird has been almost completely frustrated in its attempt at nesting in Denver by the House Sparrow; the writer knows of no successful nesting within Denver during this past summer.—W. H. BERGTOLD, *Denver, Colo.*

[NOTE.—It gives us pleasure to add the name of Dr. Thomas S. Roberts, of Minneapolis, to the list of authorities on local bird-life who are now contributing to 'The Season.' We hope in time to have this bi-monthly record of events in the bird world cover most of the country.—ED.]



WINTER NEIGHBORS
TREE SPARROW AND DOWNY WOODPECKER
Photographed by Verdi Burch, Branchport, N. Y.

Thirty-fifth Congress of the American Ornithologists' Union

The thirty-fifth Congress of the American Ornithologists' Union was held in Cambridge, Mass., Nov. 12-14, 1917. At a meeting of the Fellows of the Union, which convened at the Colonial Club on the afternoon of the 14th, Mr. P. A. Taverner was elected to fill the one vacancy existing in the class of Fellows.

On the evening of the same day, at the same place, the Fellows and Members gathered to conduct the affairs of the annual business meeting of the Union.

At this meeting, Mr. Arthur Humble Evans, of Cambridge, England, and Mr. William Lutler Sclater, of London, were elected Honorary Fellows, and Mr. F. E. Beddard, of London, a Corresponding Fellow.

The following Associates were raised to the rank of Members: Rollo H. Beck, foremost collector of marine birds, leader of the Brewster-Sanford expedition to the coasts of southern South America; Winthrop S. Brooks, who has conducted important ornithological explorations for the Museum of Comparative Zoölogy; James P. Chapin, who for six years represented the American Museum in the upper Congo region of Africa; Francis H. Harper, now with the Biological Survey, who has investigated the bird-life of the great Slave Lake region for the Canadian Government; and Dr. Winsor M. Tyler, a leading authority on New England bird-life.

There were also elected 112 Associate Members.

The public sessions of the Union, for the presentation and discussion of scientific papers, were held at the museum of Comparative Zoölogy November 13-15.

Among the papers read were some of unusual interest, containing additions to our knowledge of birds as well as the country they inhabit. In addition to studies of North American birds, reports were presented on ornithological explorations in the West Indies, Nicaragua, Costa Rica, British Guiana, Peru, the coast of southern South America, and China and Africa.

The Union was entertained daily at luncheon by the Nuttall Club of Cambridge, and an evening at the Boston Society of Natural History and the annual subscription dinner gave additional opportunities for the social intercourse which always forms such a delightful and also important part of an A. O. U. Congress.

PROGRAM

- In Memoriam—Edgar Alexander Mearns. Dr. Charles W. Richmond, Washington, D. C.
- Cape May, New Jersey, and its Bird-life. Dr. Witmer Stone, Philadelphia, Pa.
- A Purple Martin-roost in the City of Washington. Harry C. Oberholser, Washington, D. C.
- Demonstration of a Feeding-slab. William E. Saunders, London, Ont.
- Notes on Guiana Birds. C. William Beebe, New York City. Illustrated with slides.
- The *Limicola* of the State of Washington. J. Hooper Bowles, Tacoma, Wash.
- Birds on Turrialba. Illustrated by lantern-slides. Charles H. Rogers, New York City.
- The Present Status of our Black-capped Petrel. With exhibition of skins and lantern-slides. G. Kinsley Noble, Cambridge, Mass.
- A Four-months' Collecting Trip in Nicaragua. W. DeWitt Miller, New York City.
- In Audubon's Labrador. Illustrated by lantern-slides. Dr. Charles W. Townsend, Boston, Mass.
- Notes on the Breeding Warblers of Central New York. Illustrated by lantern-slides. Prof. Arthur A. Allen, Ithaca, N. Y.
- The Discovery of the Breeding-ground of the Large-billed Sparrow, and its Consequences. Harry C. Oberholser, Washington, D. C.
- 'Sight Records'—a Problem of Present-day Ornithology. Dr. Witmer Stone, Philadelphia, Pa.
- Ornithological Work in 1917. Discussion by the members.
- Ferruginous Stains on Water-fowl. Frederic H. Kennard, Newton Centre, Mass.
- The Span of Life and Period of Activity of Ornithologists. Dr. T. S. Palmer, Washington, D. C.
- Notes on Shore-bird Migration. John Treadwell Nichols, New York City.
- A Review of the Work of the Asiatic Zoölogical Expedition of the American Museum of Natural History. Illustrated by lantern-slides. Roy C. Andrews, New York City.
- An Ornithological Journey from the Tableland to the Tropics in Peru. Illustrated by lantern-slides. Dr. Frank M. Chapman, New York City.
- The Explorations of Rollo H. Beck in South America and the West Indies for the Brewster-Sanford Collection. Illustrated by lantern-slides. Robert Cushman Murphy, Brooklyn, N. Y.
- Notes on *Oceanites oceanicus*. Robert Cushman Murphy, Brooklyn, N. Y.
- Vincent Barnard, an Early Pennsylvania Ornithologist. Dr. Witmer Stone, Philadelphia, Pa.
- Tail-feathers and Their Upper Coverts. Dr. Hubert Lyman Clark, Cambridge, Mass.
- Two Wounded Birds. Mrs. E. O. Marshall, New Salem, Mass.
- Responsive Notes of Some African Bush-Shrikes. Dr. Glover M. Allen, Boston, Mass.
- The Future of the Federal Bird Reservations. Illustrated by lantern-slides. Dr. George W. Field, Washington, D. C.
- Additional Studies of Some Eastern Birds in Motion Pictures. Howard H. Cleaves, New Brighton, N. Y.
- Exhibition of a Reel of Motion Pictures of a Loon, taken by the Hon. George D. Pratt. Robert Cushman Murphy, Brooklyn, N. Y.

Book News and Reviews

A LIST OF AVIAN SPECIES FOR WHICH THE TYPE LOCALITY IS SOUTH CAROLINA. By ARTHUR TIEZEVANT WAYNE. Contribution from Charleston Museum, III, 1917, pages 1-8.

To Mark Catesby properly belongs the title 'Father of American Ornithology.' He was the first naturalist to write a formal treatise on the birds of any part of North America and his great folio volume, published in London as a part of his *Natural History of Carolina, Florida, and the Bahama Islands (1731-48)*, was a remarkable production for that period.

Catesby, as Mr. Wayne tells us, arrived in South Carolina May 23, 1722, and passed the following year in the coast region. He then visited the upper, and as yet unsettled, parts of the state. Of the seventy-six birds which Mr. Wayne here includes as having been described from South Carolina, no less than fifty-seven were first formally presented to the world by Catesby.

Among these are the Wood Duck, Bob-white, Passenger Pigeon, Carolina Paroquet, Kingfisher, Ruby-throated Hummingbird, and others now so widely known that it carries the mind far back in the history of our country to think of a time when knowledge of their existence was not common property.

Obviously, many of the birds which Catesby described and figured (for example, the Paroquet and Passenger Pigeon) were familiar to the early settlers, not to mention the aboriginal inhabitants of the country in which they lived.

If by the discovery, then, we should mean when a certain animal first attracted the attention of man, we would never be able to name the actual date of discovery of most of our larger and more conspicuous or economically valuable forms of life.

To the ornithological mind, however, it is enough to know when a species of bird first came to the notice of a person sufficiently interested to publish his observations concerning it.

In this sense Catesby may be called the real discoverer of most of the birds he describes. Points of view are comparative, and, landing in a new world, he naturally expected to see new sights and new forms of life. No other ornithologist alas! will ever explore so virgin a field as South Carolina was to Catesby in 1722.

We are grateful to Mr. Wayne for a brochure, which aside from its technical value, makes a strong appeal to the imagination through the emphasis it places on the results of Catesby's labors.—F. M. C.

OUR BACK-DOOR NEIGHBORS. By FRANK C. PELLETT. The Abington Press, New York and Cincinnati. 12mo. 209 pages; numerous half-tones from photographs. Price, \$1.50.

Mr. Pellett is evidently a born naturalist with a keen and loving interest in the various forms of life which live about him, whether bird, mammal, or insect. He writes of Hawks, Owls, and Crows, bees, turtles, rabbits, skunks, and caterpillars with equal enthusiasm, adding to our knowledge of their habits and increasing our interest in them.

Mr. Pellett's style is pleasing, unaffected, and sympathetic. His photographs illustrate his text and both are well designed to arouse us to the world which lies at our back door.—F. M. C.

Ornithological Magazines

THE AUK.—The October issue closes the thirty-fourth year of the magazine and finds it even more vigorous than in its earlier days. It opens with 'A Study of Subsequent Nestings after the Loss of the First' by H. Mousley, who throws some light on a subject to which a host of egg-collectors might well devote attention. Some excellent half-tones of sets of Warblers' eggs accompany the article. The 'Nesting of the Cape May Warbler at Lake Edward, Quebec, is recorded by H. F. Merriam.

Alaska receives some attention at the hands of C. A. Gianini under title 'Some Alaska Peninsula Bird Notes' and of G. D. Hanna under title 'The Summer Birds of the St. Matthew Island Bird Reservation.'

The status of *Larus thayeri*, Thayer's Gull,' is discussed by J. Dwight, and a plate of wing-tips is shown.

'Notes on Long Island (N. Y.) Birds,' by J. T. Nichols, R. C. Murphy and L. Griscom, is of considerable local interest, and on similar lines may be cited 'Remarks on Colorado Birds' by W. P. Lowe; 'Further Notes on Alabama Birds' by L. S. Golsan and E. G. Holt, 'Ontario Bird-Notes' by H. Lloyd, and 'Some Notes on Connecticut Birds' by I. N. Gabrielson, all of these articles containing more items of value than their titles indicate. 'Notes on the Kennicott's Screech Owl (*Otus asio kennicottii*) in the Puget Sound Region,' by J. H. Bowles, is a contribution to the life-history of this bird.

A paper on a new topic, 'The Shedding of the Stomach Lining by Birds, Particularly as Exemplified by the Anatidæ' is the result of some careful work by W. L. McAtee in a field of research that promises more in the future. That extensive desquamation should take place in gizzards, the food-grinding organs of birds, is not surprising, but the writer's observations, illustrated with half-tones, present the subject in a new light.

'Notes on North American Birds, III' and 'Notes on the Genus *Puffinus* Brisson,' by H. C. Oberholser, are purely technical.

'Personalalia in Ornithology—Report of the Committee on Biography and Bibliography,' by T. S. Palmer, outlines work that may be accomplished through coöperation along these lines.

'The Niche Relationships of the California Thrasher' is discussed by J. Grinnell in language that at times may be understood only by the elect, but we read that "These various circumstances, which emphasise dependence upon cover and adaptation in physical structure and temperament thereto, go to demonstrate the

nature of the ultimate associational niche, occupied by the California Thrasher."

In binding the numbers of this volume, we must not forget to place the 'List of Members,' now located in the April issue, where it belongs.—J. D.

THE CONDOR.—The contents of 'The Condor' for September, 1917, include five general articles, one each on the birds of Colorado, Southern California, and Texas, one historical, and one containing a description of a new subspecies. Bradbury's 'Notes on the Nesting Habits of the Clarke Nutcracker in Colorado' are based on observations made by H. H. Sheldon in Saguache County in March and April, 1916, and are illustrated by four half-tones. 'Red Letter Days in Southern California,' by Mrs. Bailey, is an account of the birds, mainly Ibises, Herons, Avocets, Stilts, Yellow-legs, Gadwalls and Cinnamon Teal at Lake Elsinore and San Jacinto Lake in August, 1907. 'Some Birds of the Davis Mountains, Texas,' by A. P. Smith, contains notes on 45 of the hundred or more species observed during a six weeks' trip in September and October, 1916. Many of these birds are species of wide range in the Southwest, and some are more or less common in certain parts of California.

A brief account of 'Botta's Visit to California' in 1827-28 is given by Palmer, with the dates at which the various places were visited and the localities where the types of the Roadrunner and Anna's Hummingbird were probably collected. Under the name *Passerella iliaca monoensis* Grinnell and Storer have described 'A New Race of Fox Sparrow, from the Vicinity of Mono Lake, California.' This new Fox Sparrow "adds another race to the assemblage of pale-colored forms breeding in the western United States."

Among the short notes is an account by Tyler of the discovery on May 25, 1917, of the nest of Wilson's Phalarope, 12 miles southwest of Fresno. This note is especially interesting as it is the southernmost breeding record of this bird in California.—T. S. P.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

BEYOND question the most valuable and useful information which BIRD-LORE has ever been privileged to present to its readers is the series of papers on bird-migration contributed by the late Wells W. Cooke.

Based upon the hundreds of thousands of records made by volunteer observers throughout the country for the Biological Survey, these papers, in most instances, are essentially complete outlines of the routes and times of migration in North America of a large proportion of our passerine birds.

From them we may learn when to look for the birds in the spring, how long they will remain with us, and when the fall migrants and winter visitants will come in the autumn; and all this, not at one locality, but at a selected list of localities covering the birds' North American range.

These papers, therefore, tell us not only when a certain bird should reach our own vicinity, but give, as it were, a time-table of its journey, which enables us to determine its rate of speed. Surely no information could be of greater practical value to the field-student who would be on the alert to see every bird which visits his region than that which is contained in this unequalled series of papers.

For this reason we announce, with unusual satisfaction, that through the courtesy of Mr. E. W. Nelson, Chief of the Biological Survey, Dr. Harry C. Oberholser, who is continuing the studies of

bird-migration begun by the late Professor Cooke, will also continue the series of papers in BIRD-LORE interrupted by Professor Cooke's sad and untimely death.

The first paper in this second series appears in this number. It treats of the five species of Swallows figured in our frontispiece. We plan later to present the migration dates of the Martin and Barn Swallow figured in BIRD-LORE for September-October, in order that the migration records of all our species of the highly migratory, widely distributed, and easily observed birds of this family may be complete.

To this important announcement we add only the assurance that the contents of the twentieth volume of BIRD-LORE will depend closely upon the support which is accorded it. To the serial papers on migration, plumages, and season, and the standing departments, we hope to be in position to print all the interesting articles and notes contributed by our readers—contributions which have increased in number and value as the number and experience of our readers has grown.

REFERENCE to the frontispiece of this number should not be made without calling especial attention to it as, in our opinion, one of the most convincing expressions of Mr. Fuertes' rare gifts with which we are familiar. We do not refer to the accuracy of detail and color, which we expect in Fuertes' drawings, but to the exceptional success which has here attended his effort to portray Swallow character. Not only is each bird in the plate a Swallow in every outward essential, but also in those intangible qualities, so difficult to describe and still so obvious to the experienced, observant bird-student. Furthermore, the young Swallows, although they are fully feathered, have an unmistakably immature look, and finally, the birds are so skilfully grouped that the six figures do not appear to be unduly crowded. One rarely sees a more attractive bird plate.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

A CHRISTMAS GREETING

"Thoughts of peace and not of evil."—Jer. 29:11

" . . Joy and gladness, and cheerful feasts; therefore love the truth and peace."
—Zach. 8:19.

MAKING THE WORLD SAFE

Everywhere the word has gone forth that the world must be made a safer place to live in. This dictum is just as applicable to bird-life as to human life, if one stops to consider the consequences of existence in an unsafe world. How extremely dangerous a place for birds this country of ours has been for many years is indicated by the enormous annual toll wantonly taken of bird-life. Conditions have been quite as bad, and worse, in most other countries. Let us be awake now to the possibilities of educating public sentiment to a realization of what general good may accrue to all by safeguarding our birds.

It is earnestly hoped that Audubon Societies will make a particular effort to do three things now in order to advance, rather than retard, such wise measures of legislation as have already been passed in the interest of conserving bird-life and other resources:

1. Arrange some form of instruction whereby not only citizens but also students of every grade may be made acquainted with the general aim of the game-laws of the states in which they reside, emphasizing the basis of such laws and calling attention particularly to those species of birds which are in greatest danger of extermination.

2. Set about a quiet but convincing campaign to bring women to understand that the use of prohibited plumage on hats is just as criminal as many offenses which they would not hesitate to condemn. That wings, aigrettes, and even entire birds are still too frequently seen on women's hats is sufficient reason for undertaking such a campaign. In the October, 1917, number of the *American Museum Journal*, a most instructive article on Ostrich farming explains the situation of legitimate feather industry clearly and without prejudice. A wider distribution of this article is much to be desired.

3. Take up lines of work which will correlate food-conservation with bird- and nature-study. It is not well to sit back with folded hands and free conscience, thinking that everyone is informed about food-conservation. People need constant assistance and instruction in this matter. At the moment of writing, sugar is scarcely to be had, and many people are not only inconve-

nienched but troubled to know how to adjust their food-habits to such a shortage, which, though temporary, still has to be met wisely while it lasts. If Audubon Societies at this juncture were prepared to demonstrate the value of such a natural product as bees' honey, for instance, accompanying the demonstration with correlated talks on the vegetation which furnishes a food-supply to bees and is protected from insect depredations by birds, and also methods of bee-keeping, it would be a timely aid in a national emergency. Make the year that is to come one of very real value along educational lines.—A. H. W.

THE HARVEST

"Oh, 'tis sweet, when fields are ringing
With the merry crickets' singing,
Oft to mark with curious eye
If the vine-tree's time be nigh:
Here is now the fruit whose birth
Cost a throe to Mother Earth.
Sweet it is, too, to be telling,
How the luscious figs are swelling:
Then to riot without measure
In the rich, nectareous treasure,
While our grateful voices chime,—
Happy season! blessed time."

—From *The Peace*, by Aristophanes,
(who lived about 450–380 B.C.)

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXVI: Correlated with History, Nature-Study and Observation

CHRISTMAS IN 1917

While all the world strives daily to contrive some better way to live, some new device to save the precious resources upon which life depends, and to discover some means of knowledge of useful arts now unpractised by men, whereby the conditions of all may be uplifted, Christmas draws near, bringing a sadder yet more hopeful message than ever before in your lifetime or mine. This will be an anxious holiday season in many homes throughout the land, where empty places may not soon be filled by accustomed cheery faces. It will be a holiday season of *hope everywhere*, for those whose faith in happier days and nobler things is strong and serene.

It is well in all this tumult of strife and disaster to think calmly and to open the mind to new ideals of daily living.

There have been other times when the world was in commotion and people

were reaching out and up toward something higher. Aristophanes, a Greek poet who lived four centuries before Christ, pictures in lines of beautiful though quaint conceit, the world of his day, which was struggling for purer ideals of democracy. In Athens, where he lived, law and order not infrequently were upset by headstrong, ambitious men or enemies of a free government. Perhaps to point the way to a higher conception of the state, Aristophanes wrote a merry play entitled "The Birds," in which two citizens of Athens, by name Peisthetairus and Euelpides, engage the birds to build a new city in mid-air, called 'Cloud-Cuckoo-borough,' which shall enjoy the benefits of nearness to the gods and at the same time cut off quarreling communities below from those privileges which belong to those who observe order and right living.

This new city is described by the messenger who comes down to announce its completion to Peisthetairus as "a most amazing, astonishing work," with its surrounding wall so broad that two four-in-hand chariots might with ease be driven abreast upon it.

Peisthetairus exclaims: "You surprise me," and the narrative continues as follows:

MESS. And the height (for I made the measurement myself)
Is exactly a hundred fathoms.

PEIS. Heaven and earth!

MESS. How could it be? such a mass! who could have built it?

The Birds; no creature else, no foreigners,
Egyptians brick-layers, workmen or masons,
But they themselves, alone, by their own efforts,—
(Even to my surprise, as an eye-witness)

The Birds, I say, completed everything:

There came a body of thirty thousand cranes,

(I won't be positive, there might be more)

With stones from Africa in their craws and gizzards,

Which the stone-curlews and stone-chatterers

Worked into shape and finished. The sand-martens

And mud-larks, too, were busy in their department,

Mixing the mortar, while the water-birds,

As fast as it was wanted, brought the water

To temper and work it.

PEIS. (*In a fidget.*) But who served the masons?

Whom did you get to carry it?

MESS. To carry it?

Of course, the carrion crows and carrying pigeons.

PEIS. (*In a fuss, which he endeavors to conceal.*)

Yes! yes! but after all, to load your hods,

How did you manage that?

MESS. Oh, capitally,

I promise you. There were the geese, all barefoot

Trampling the mortar, and when all was ready

They handed it into the hods, so cleverly,

With their flat feet.

- PEIS. (A bad joke as a vent for irritation.) They footed it, you mean—
Come; it is handily done though, I confess.
- MESS. Indeed, I assure you it was a sight to see them;
And trains of ducks there were clambering the ladders
With their duck legs, like bricklayers' 'prentices,
All dapper and handy, with their little trowels.
- PEIS. In fact, then, it's no use engaging foreigners;
Mere folly and waste, we've all within ourselves.
Ah, well now, come! But about the woodwork? Heh!
Who were the carpenters? Answer me that!
- MESS. The woodpeckers, of course: and there they were,
Laboring upon the gates, driving and banging,
With their hard hatchet beaks, and such a din,
Such a clatter as they made, hammering and hacking,
In a perpetual peal, pelting away
Like shipwrights, hard at work in the arsenal,
And now their work is finished, gates and all,
Staples and bolts, and bars and everything;
The sentries at their posts; patrols appointed;
The watchman in the barbican; the beacons
Ready prepared for lighting; all their signals
Arranged— . . ."

—(Frere's Translation)

From this aërial city constructed by the birds, the poet skilfully paints things as he wishes they might be in his beloved Athens, showing for all time to come the strength and beauty of an ideal commonwealth.

Christmastide is the symbol to us of an ideal, of a brighter, better time. Our own part in bringing this ideal to pass we sometimes overlook, in our expectancy for gifts and good wishes. This season, let us put aside the desire for many gifts, being content with good wishes and the opportunity to make gifts to others in less favored lands, where there can be no old-time Christmas until peace returns. If we are doubtful as to what we can do to make the Christmas season a welcome one, let us turn to very practical ways of making it a time of cheer. Three things everyone can do with little effort:

1. Show people, especially sick and shut-in people, how to keep lunch-counters for birds about their homes.
2. Send cards or letters with a message of cheer from the birds to those who are sick in hospitals, or cut off from the life of towns and villages in asylums, or to those refugees and destitute ones abroad, who live in fear and silence, deprived of home and friends.
3. Study daily to improve your powers of observation, your knowledge of nature, and the benefits you may enjoy with others by conserving bird-life and all other natural resources.

A very practical suggestion for right living and the improvement of natural resources was made by a Greek named Athenæus, who lived about a century later than the poet Aristophanes. In discussing the subject of 'How to Pre-

serve the Health,' Athenæus said that honey was a pure food of great value, and that those who eat bread and honey for breakfast "were free from disease all their life," and, moreover, were very long-lived. He referred, of course, to bees' honey, a resource which we use but sparingly, owing to our lack of interest in learning how to keep bees. A study of the vegetation about us, with a few demonstrations about the proper care of a hive of bees, would put within the means of many a family a delicious and nourishing food. Let us study this subject during the winter, along with our study of birds, and next spring add a window-hive of bees to the school-room, as a means of becoming familiar with one of the most interesting and remarkable life-histories in Nature. Make this Christmas a time of new ideals, new hopes, and new enterprises.—A. H. W.

"Let us look on the tree-clad mountain-crest,
On the sacred earth where the fruits rejoice,
On the waters that murmur east and west,
On the tumbling sea with his moaning voice.

.
And the gifts of the gods that know not stain,
And a people of mortals that know not fear.

—From *The Clouds*, by Aristophanes.

(Andrew Lang's Translation)

SUGGESTIVE QUESTIONS

Where do figs grow? What is a *nectareous* treasure?

What is the meaning of "to mark with curious eye?"

Can you think of the reason that a Greek poet should refer to *Egyptian* brick-layers?

How were brick made by the Egyptians?

What fabled belief is alluded to in the line describing cranes "With stones from Africa in their craws and gizzards?"

Where are Stone-Curlews found? Stone-Chatterers? Why are they so called?

Why *Sand-Martins* and *Mud-Larks*?

Is the poet's description of the habits of Woodpeckers correct?

What kind of observation did this poet have?

What is a barbican?

What do you know about the habits of bees? about bee-keeping?

FOR AND FROM ADULT AND YOUNG OBSERVERS

BOBBIE IN BIRDLAND A BIRD MASQUE IN TWO ACTS

By ELLA FLORENCE PADON

Time: Present

CAST OF CHARACTERS

BOBBIE.....	A schoolboy
ARTHUR.....	Friend of Bobbie
KING EAGLE.....	} Birds
POLLY PARROT.....	
OWL.....	
BLUE JAY.....	
THRUSH.....	
JENNY WREN.....	
ROBIN REDBREAST.....	
DOVE.....	
WOODPECKER.....	
MARTIN.....	
HUMMINGBIRD.....	
BLACKBIRD.....	
RAVEN.....	
LARK.....	
REBDIRDS.....	
BLACKBIRDS.....	
ORIOLES.....	

Costumes: Bobbie and Arthur, modern. The rest resembling birds. Elizabeth Gorden's 'Bird Children' recommended.

ACT I

SCENE I. Forest. A pile of logs arranged like a throne at stage L. Enter birds, singing and dancing gayly, waving arms above head as if flying.

Air to Humoresque.—Dvorak.

- 1 We come, we come, from forest here, from fields and meadow far and near,
We come, we come with hearts so gay,
We have heard the Eagle's call, and hasten hither, one and all,
To welcome him, our king to-day.

Chorus.

Hear, O hear our happy song, singing, singing all day long,
Singing, singing, singing all day long,
Hear, O hear our happy song, singing, singing all day long,
Singing, singing, singing, singing all day long.

- 2 We are so happy blithe and gay, so busy, busy all the day
 From early Spring till time to fly away,
 Mating, nesting, then at last the little birds come so fast,
 We have to search for food alway.

Chorus.

- 3 At peep of dawn we ope our eyes and spread our wings and mount the skies,
 And view the earth so far below,
 Then down we come so hastily, to catch the early worm you see.
 And O, what bliss you do not know.

Chorus.

- 4 The woods are full of lovely things, limpid pools and bubbling springs
 While babbling brooks go rushing by,
 Shady dells and blossoms sweet and bright red berries ripe to eat
 And O, such wonders round us lie.

Chorus.

- 5 Merrily, right merrily, we flit about from tree to tree,
 Pouring forth our happy strain,
 Till man comes, and just for fun, he robs our nests, and fires his gun,
 And turns our joy to grief and pain.

Chorus.

(A gun is fired, and birds fly away.)

(Enter Bobbie, gun in hand, steps about cautiously, peering up into tree. Lifts gun, aims. Enter Arthur with camera in hand.)

ARTHUR.—Hello, Bobbie, that you? What are you doing out here? Stop! Bobbie, don't! *(Hurries forward with hand outstretched entreatingly.)*

BOBBIE *(lowers gun, looking around impatiently)*.—There, you scared him away! A Bluebird, too. There he goes, now! *(Lifts gun, takes aim. Arthur seizes his arm.)*

ARTHUR.—For shame, Bobbie; you wouldn't kill a Bluebird, would you?

BOBBIE *(surprised)*.—Why sure! Why not? What are birds for, if not to kill! Me and Jimmy Bean are trying to see which can kill the most. He's ahead now, but I'll have him beat all hollow before night.

ARTHUR.—Why, Bobbie, don't you know it is a shame and a disgrace to kill birds nowadays?

BOBBIE *(scornfully)*.—Aw, go long! What you talking about? They aren't anything but birds. Why what are birds, anyway? They're nothing but just—just—just—birds. That's all birds are.

ARTHUR.—That's because you don't know them. See what I've got?

BOBBIE *(examining camera curiously)*.—Why it's a camera, isn't it? What are you doing out here in the woods with a camera?

ARTHUR.—Taking the birds' pictures.

BOBBIE.—Taking the birds' pictures! Oh, my! *(Goes off into a fit of laughter.)*

ARTHUR.—Certainly! Making a study of the birds. You don't know how interesting it is. I have taken over thirty different kinds of birds in this very woods. You know I belong to the Audubon Society, and we are learning all about their ways and their habits, taking their pictures, and getting acquainted with them; and that's a great deal nicer than just killing them—don't you think so?

BOBBIE.—No, I'd rather go hunting. And when you go hunting you have to kill things. And all the men my age hunt (strikes his chest proudly).

ARTHUR.—No, they don't. That's where you are way off. Some do yet, maybe, but men hunt mostly with the camera nowadays. You come and join our Audubon Society, and you'll learn more interesting things about birds than you ever dreamed of.

BOBBIE.—No, I'm not going to join any Audubon Society. I'm no sissy. I'm going to hunt like the *men*.

ARTHUR.—All right, Bobbie. You go on and kill the birds if you want to. But—every time you kill a bird, remember (holds up finger warningly) you are breaking up some happy little family and bringing woe and misery among the most joyous little creatures in the world. And what's more, just put yourself in their place, and think how



you would like it yourself, if you were to have some one firing a gun at you, everywhere you went. And how would you like to have your nice little home torn to pieces, your father and mother and all your family killed before your very eyes?

BOBBIE.—Pooh! They don't care. Birds haven't any feelings. Birds don't know anything. Birds haven't any sense.

ARTHUR.—Oh, they haven't, have they! Well you should have been with me this morning and watched them building their nests, and feeding their little ones, and seen all their skilful ways, their clever devices, and their wise and sensible methods of doing things. You'd be surprised. In fact, if you only knew how much like folks they really were, you'd never want to kill another bird as long as you lived. Besides, we ought to feel grateful to them for all they do for us.

BOBBIE.—For what they do for us! Why, what do you mean?

ARTHUR.—Sure! Don't you know they eat up all the worms and insects that destroy our crops? I just don't know what we would do without them. Reckon we'd starve to death, with everything eaten up by the bugs. Oh, we'd be in a pretty fix, we would! So you see, Bobbie, you are killing off our best friends when you kill the birds. Come now, promise me you won't kill any more. Won't you?

BOBBIE (doubtfully).—I—I—don't know (frowns, shakes head). You see, Jimmie Bean and me—

ARTHUR (impatiently).—All right! Go on killing the birds if you want to, but every

time you do, just remember what I have told you. Well, I must be going now (turns away). Sorry I can't say 'good luck' to you. But—so long (walks off).

BOBBIE (stands looking thoughtfully—frowns).—Pooh! I don't believe it. All fool talk. Guess I can kill birds if I want to. And I do! There goes one now—a Red-bird (lifts gun, aims, lowers it, and lifts it again—lowers it—lifts it again, lets it slowly drop). I-I-c-c-can't. What's the matter with me anyway? (Rubs eyes with fist.) What did he tell me all that for any way? 'Tisn't so! I know it isn't. Birds haven't any feelings, of course they haven't. Don't I know? I'll try again. There goes a Woodpecker! I'll get him. (Lifts gun, lowers it, someone behind scene sings Nevin's Woodpecker song, suddenly grins.) It got away! Good enough! Glad it did! I'd get away, too, if I were a bird. I wouldn't want to be shot. No siree Bob! If I was a bird—well I don't know what I would do if I was a bird—having folks kill me like that (throws gun upon the ground indignantly). Don't believe I feel like killing any more birds to-day. Sort of tired; believe I'll lie down and rest awhile (thrusts hands in pockets and walks slowly away).

End of Act I.

ACT II

SCENE I. Same as Act I.

(Enter Eagle, accompanied by Blue Jay and Owl)

EAGLE (sternly looking around).—Where are the birds?

JAY.—They were here, Your Majesty, but a moment ago. I sent the message throughout Birdland calling all the birds to council. They came, but a wicked boy by the name of Bobbie appeared among them and fired his gun, whereupon they flew away. But they will return presently. (Spies gun upon the ground, stoops to pick it up and hands it to Eagle.) Behold, Your Majesty, a gun, the foul and wicked instrument for our destruction. The culprit must be near.

EAGLE.—'Tis well. Go and find the wretch, and bring him hither. It is the year, the night, the very hour, which gives mystic power over our enemy. He has fallen under the spell. 'Tis well. (Mounts throne, sits down. Enter birds, singing, waving wings.)

BIRDS (singing).—

Tune, 'Welcome Song' from Ira B. Wilson.

Welcome to our King to-day!
From mountain crags and far away,
He has come to counsel us,
To counsel and advise.
He is noble, fierce, and brave;
He swoops down from the skies,
Behold his mighty wings and claws,—
His flashing eyes!
Welcome, welcome, then,
Our mighty King so true.
Lord of air and sea and sky,
We welcome you.

EAGLE (addresses birds).—I have come, O birds of the forest, to preside over your council of war to-day—war against our enemy, man. Although I dwell apart, far from the haunts of men, among the rocks and distant mountain peaks, yet I know full well the measure of your wrongs. I know what benefits you have bestowed upon them. How you feed upon the worms and insects that destroy their crops whereby they live. All too trustingly you have built your nests about their homes and brightened their existence with [your songs. And what has been the reward? They have slain and

killed us without pity and without mercy. They have robbed our nests and shut us up in cages, stripped us of our feathers and now strut about in our borrowed plumage. They have even invaded our own dominion of the air and fancy they can fly, these insignificant creatures, born only to creep and crawl upon the earth. Shall we submit to such infamy? Shall we not put a stop to such invasion of our rights? What says the Owl, wisest of the birds? (Turns to Owl.)

OWL.—To-whit, to-whoo! To-whit, to-whoo! To-whit, to-whoo!

WREN (running up to throne).—What did he say?

EAGLE.—Silence! He is speaking words of wisdom.

WREN.—But what does it mean?

EAGLE.—Never mind. 'Tis too deep for you to understand.

WREN.—Pooh! I don't believe it means anything. (Flirts back to place.)

EAGLE.—Your words, Sir Owl, are wise and show great knowledge and wisdom. But perhaps it would be well to hold a council with your brother Owls. Call them hither.

OWL (bows, turns to stage R, calls loudly).—To-whit, to-whoo; to-whit, to-whoo; to-whit, to-whoo; to-whit, to-whoo.

ECHO (from distance).—To-whit, to-whoo; to-whit, to-whoo; to-whit, to-whoo.

OWL.—To-whit, to-whoo; to-whit, to-whoo; to-whit, to-whoo. (Enter stage to R, 10 to 20 Owls, march stiff and solemn down middle of stage, separate, half to right and half to left, round stage, meet at center back, advance to front of stage in row.)

BIRDS (sing to air of 'The Owl,' by Granville Bantock).—

- 1 They come, they come, the Owls so wise,
So sad and solemn, too.

They come to counsel and advise
And tell us what to do.

To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.
To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.

- 2 They sit and think, and nod and wink,
The night and all day through.
So deep their thoughts they can't express
Such words of wisdom true.

To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.
To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.

- 3 They look so wise, such great big eyes,
And such a stately tread.
They must know all there is to know,
With such enormous head.

To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.
To-whit, to-whoo; to-whit, to-whoo; and tell us what to do.

OWLS (gather in circle at center of stage, chanting dirgelike refrain).—To-whit, to-whoo; to-whit, to-whoo. (Put heads together, as in conference, chanting.) To-whit, to-whoo; to-whit, to-whoo. (March around the stage several times, still chanting. Exit Stage L.)

BIRDS (exclaim in wonder).—What wisdom! What knowledge! Oh! Oh! Oh!

WREN (running about the stage frantically).—O dear! O dear! I didn't understand a single word they said.

EAGLE (sternly).—Back to your place, foolish one. Do not expose your ignorance. (Wren goes back to her place, flirting her head and shoulders in disgust.)

EAGLE.—You have heard, O birds, the judgment of the Owls. It means war, war to our enemy—man. And to this we will abide. No more will your sweet songs gladden their hearts. No more will you build your nests about their doorways. No more will you feed upon the worms and insects which destroy their crops. Their fields and orchards will soon be overrun with the bugs, the beetles, the caterpillars, and all the creeping, crawling things of the earth, till every green and living thing is eaten up. Then comes ruin and desolation over all the land, and man will *die*! Tell me, birds, is it not so?

BIRDS.—Yes! Yes! Man will die, die, die!

(Commotion at stage L.)

EAGLE.—And now, behold! he comes! The greatest* of our enemies, the boy with a gun!

(Enter Blue Jay dragging Bobbie by the collar.)

BOBBIE (struggling).—Let me go! Let me go, I tell you! I want to go home. Let me go.

BLUE JAY.—No, you cannot go home (gives him shake). Behold, Your Majesty, he is here, one of our worst enemies. He has robbed more nests, stolen more eggs, killed more birds than any boy in Christendom.

BOBBIE.—No, no, that isn't so, Mr. Eagle; that isn't so. I haven't killed half as many as Jimmie Bean.

BLUE JAY.—Silence! (Hits Bobbie on the head.) Yes, Your Majesty, we have the birds here to prove it. He has been caught in the very act. Behold the gun!

BOBBIE.—O, I am so sorry. I never will again. I never will, honor bright, if you'll only let me go home.

BLUE JAY.—No, wicked one, you shall stay and hear your accusers.

EAGLE (sternly).—What were you doing out here in the forest this evening?

BOBBIE.—N-n-nothing! Just taking a-a-walk.

EAGLE.—What say the birds?

ROBIN.—I saw him shoot a Redbird as he was flying home with a worm in his bill to feed his little ones.

THRUSH.—And I saw him climb a tree and tear down an Oriole's nest.

MARTIN.—And I had five little birds I was teaching to fly, and he killed them all but one, and that one is lying now under the hedge with a broken wing.

BOBBIE (distressed).—Oh, dear! How dreadful! Poor little thing! Can't something be done?

MARTIN.—No, it can never fly again.

BOBBIE (horrified).—But something ought to be done. Something must be done. I tell you, let me go for the Doctor! (Eagerly.) We've got a grand one. He can do anything with bones. Let me go and—

BLUE JAY (holds him fast).—No, you don't. You stay here and hear what the birds have to say.

EAGLE.—And what says the Blackbird, the noble Blackbird? What did he see?

BLACKBIRD.—There were six of us sitting on the fence, all in a row, when he shot into our midst and I, only I, escaped.

WOODPECKER.—And I had a whole nestful of eggs, when he came and smashed them all. Oh, the wretch! I'd like to peck his eyes out, that I would.

BLUE JAY.—So would I. He deserves it! Thief! Robber!

WOODPECKER.—Come, let's give it to him!

BIRDS (gather about Bobbie and wave wings at him violently).—Che, che, che, che, che, kee, kee, kee, ka, ka, ka, ka, che, che, kee, kee, ka, ka, ka.

BOBBIE (dodging this way and that, frightened and bewildered).—Oh, dear! Oh, dear! I wish I was home! I wish I was! When will I ever see my dear parents again?

RAVEN.—Nevermore! Nevermore! Nevermore!

BOBBIE.—What! nevermore! O, you horrid bird! Never see my dear parents again! Boo-oo-oo! (sobs.)

(Enter Poll Parrot.)

POLLY (frisking about among the birds).—Pretty Polly! Pretty Polly! Want a cracker! cracker! Want a cracker! cracker!

BOBBIE (surprised).—Why, Polly! How did you get out here? I thought you—

POLLY.—Hello, Bobbie! You out here, too? Why, I came out here to get away from you. You are so mean to me. I have come out here to live with the birds and be a real bird again (frisks about among the birds). Pretty Polly! Pretty Polly! Pretty Polly!

WREN.—Go 'way! Go 'way! (Shooing Polly away.) You don't belong to us. You belong to humans.

POLLY.—No, I don't any more. I've had enough of humans. That Bobbie there—

BOBBIE.—O, hush, Polly, don't tell them any more. They're down on me now. I'm in an awful fix, Polly; do come and help me out. I'll be good to you always, Polly, if you will. Pretty Polly, O pretty, pretty, Polly!

POLLY.—You pulled out all my tail-feathers!

BOBBIE.—Forgive me, Polly! I'm awful sorry, indeed I am.

POLLY.—You threw me into the rain-barrel.

BOBBIE.—I didn't mean to. Polly, indeed I didn't. I won't do it again, sure I won't. But don't let's talk about that now. Come, let's go home. You don't belong out here, you know you don't. You're not a regular bird anyway. You are just a sort of betwixt and between.

POLLY.—No I am not! I am a bird, a real bird, I'll have you to understand. I am—I am—I am! Pretty Polly! Pretty Polly! (Frisks about among the birds.)

BIRDS (drawing away).—Go 'way—go 'way—go 'way. Che-che-che-che-kee-kee-kee-ka-ka-ka. Che-che-che-kee-kee-kee-ka-ka-ka.

POLLY (goes up to the Eagle).—Pretty Polly. Pretty Polly! Want a head scratched (ducks head).

EAGLE. Begone, infamous bird! We do not want you here with your foolish human chatter (strikes Polly on the head with wand).

BOBBIE.—There, Polly, you see, you talk too much. I always said you did. But you come here, and I'll be your friend, and always will be after this. Come Polly, pretty Polly! Pretty, pretty Polly! That's right! I'll scratch your head for you. (Polly ducks head, Bobbie scratches.)

BIRDS (angrily).—Look! Look! Let's peck them! Scratch their eyes out! Che, che, che, che.

(Birds cluster about Bobbie, waving wings furiously.)

EAGLE (rising, waves wand).—Do your duty birds! So let him perish, the enemy to our kind.

(Stage scene of wild confusion. Birds chase Bobbie and Polly around the stage.)

POLLY (screaming loud above the rest).—Cracker! Cracker! Want a cracker! Want a cracker! Cracker!

BOBBIE.—Oh, hush up, Polly! Don't talk about crackers now! Let's get out of this!

(Enter Dove at Stage L. Birds stop fighting, fall back to right and left. Dove advances, holding up an olive branch in hand high over head.)

DOVE (*Sings to air of 'Waltz Song' from 'Pink Lady'—McClellan and Caryl*).—

Peace, peace, peace to you,
Birds of the forest, peace.
Let this strife and contention
Among you cease.

From the children of men, I bring tidings today,
 Harken now, to me, I pray,
 'Tis a message of love and
 A promise true—
 They will harm us no more
 And protect us, too.
 So rejoice and be gay,
 Throw all anger away.
 Come, come, come, let us dwell now
 In peace alway.

Peace, peace, peace to the birds of the forest here,
 Peace, peace, peace to the human kind far and near,
 And may the dark clouds of war hanging low,
 Vanish soon, forever away.
 List, list, list to the message of peace I bear.
 Let all hearts join together in this my prayer,
 O, come, Spirit of love
 Down from the Father of Love
 Bring peace, peace to the heart
 Of the world today.

EAGLE.—Who is it that talks of peace now? We have come to talk of war—war against our enemy, man.

DOVE (addressing throne).—'Tis I, Your Majesty, the Dove of Peace. I have come with a message from the children of men, bearing in my hand the olive branch of peace. I have come to tell you that they are no longer enemies, but our friends. A new spirit has been born into the hearts of men. A spirit of love and kindness to all living things, such as has never been known before. They offer us now their friendship. Shall we not accept?

EAGLE.—Friendship! Friendship, indeed! Behold, here (pointing to Bobbie), a human, caught this very day in the act of killing the birds in the most heartless manner.

BOBBIE.—Oh, please, Mr. Eagle, I never will again! You see I didn't know you were so much like humans; I didn't, honor bright! I never thought about it. But now I wouldn't kill a bird for anything. Sure, I wouldn't.

DOVE.—You see, Bobbie did not know, that was all. He was just a little behind the times. He had not heard about the great peace movement between man and the birds. For man is waking up. He is learning more about us every day. They are taking notes, these humans, studying about us in their schools and colleges, passing laws, and forming great societies for our protection. Sanctuaries are being set apart where we can live in peace and security, without fear of dogs and cats, or the wild creatures of the woods. And beautiful bird-houses are being built, and fountains provided, and food put out for our own particular use. Tell me birds, is it not so?

ROBIN.—Yes, yes! That is so. Where I live, the people are very kind. They throw out whole basketfuls of crumbs every day. And they hang up lovely big chunks of suet all winter, so we can have plenty to eat.

MARTIN.—And they have built the finest bird-houses at our place, regular apartment houses, lots of rooms, with all the modern improvements.

THRUSH.—And they have planted all kinds of berries we like at our place, and talk to us real friendly, as if they liked us.

BOBBIE.—Of course they do! And so do I, now I know you. And when I go back, I'm going to be your friend. I'm going to join that Bird Club, and get all the boys I can to join. And I'll never kill another bird, never, never any more.

RAVEN.—Nevermore! Nevermore! Nevermore!

BOBBIE.—Yes, that's right, Mr. Raven, never, nevermore!

DOVE.—And so, Your Majesty, you see, the birds make common cause with man. It is peace, good-will between us.

EAGLE (haughtily).—Not so! Never do I enter into peace with man. Too often has he tricked, deceived, beguiled us. I trust him not. Be friends with him if you will, but as for me, I wing my flight back to the distant mountain peaks, among the rocks and crags, where the sound of gun and voice of man is never heard, there to live in peace and solitude. But, ye birds of the fields and forest, it is for you to decide for yourselves. What says the Owl, wisest of the birds?

OWL.—To-whit, to-whoo; to-whit, to-whoo; to-whit, to-whoo-oo-oo-oo!

WREN (distressed, runs out to middle of stage).—Oh, dear! O, dear! I can't understand a single word he says.

JAY.—Be still, foolish one!

WREN (saucily).—I don't care. I want to know. Che, che, che, che. (Jay forces Wren back to place.)

BOBBIE.—O, I'll tell you what he says. I understand him perfectly. He says, 'Bobbie is all right! Bobbie is your friend. You let Bobbie go, and he will prove his friendship always.'

ROBIN.—Yes, of course. Just what I thought. I understood him all the time.

MARTIN.—So did I.

BIRDS.—So did I! So did I! So did I!

DOVE (bowing before throne).—You see, Your Majesty, the birds are all for peace. They entreat you, everyone. Behold the Bluebirds, they come to plead for peace.

(Enter from 10 to 20 Bluebirds in drill, or dance, before throne.)

DOVE.—Behold the Redbirds; they, too, ask for peace.

(Enter from 10 to 20 Redbirds in drill, or dance, before throne.)

DOVE.—Behold the Orioles; they, too, ask for peace.

(Enter Orioles, dance or drill.)

(Other songs, dances, or drills may be here introduced.)

DOVE (approaches throne, addresses Eagle).—And so you see, O King, the birds are all for peace. Then let us make a compact of friendship that shall endure forever. A compact of love and confidence 'twixt birds and man.

(Turns to audience, recites.)

Since time began, 'tis our mission here,
To give pleasure to man, to gladden and cheer,
To comfort, inspire, and ever bless,
And give to him the highest of happiness;
To lure him away from the haunts of care,
To God's own Temple of the Woods, and there
Whilst all in Nature so joyous sings,
To lift his thoughts to higher things,
To birds and flowers and starry skies,
And all the mystery that round him lies;
To hear the music of rustling leaves,
The vague wind sighing among the trees,
The plaintive notes of the Mourning Dove,
The Cardinal's song to his lady-love,
The evening chant of the Whip-poor-will,
And all birds' songs that to rapture thrill.
And so, with Nature's balm refreshed,
He will find at last, that perfect rest.

And Peace, that peace the world denies,
 Which at the heart of Nature lies.
 Then wake, O, man! Awake and hear
 The message of the birds we bring you here.
 Love, protect us, and we'll repay
 In a thousand ways from day to day.
 Together our voices will rise in praise
 To Him who guideth all our ways.
 For there is no great, there is no small,
 To Him who made and loveth all.
 (Turns to Eagle.)
 This, then, O King, is the compact true,
 'Twixt bird and man. We wait on you.
 (Bows before throne.)

EAGLE.—Your words are fair, O Dove, but I comprehend them not. I see only the wrath and the whirlwind, the war and bloodshed, the strife and the struggle of unhappy man. No! No! I trust him not. Never will I be his friend, but hie me back to my distant eyrie, among rocky peaks, there to dwell, solitary and alone, lord of the air, monarch of the sky, the symbol of liberty and freedom forever. As for you, O birds, I warn you. Remember the fate of the Tern, the Egret, and the Osprey. May it not be yours! But you have chosen. You are now man's friend, and I am no longer yours. (Descends from throne. Makes fervent gesture.) Farewell! Farewell! (Exit.)

BIRDS (*Sing to the air of Lohengrin's 'Swan Song'.*—Wagner.)—

Farewell, farewell, O king most dear,
 Our hearts are still quite true.
 They beat with love for all mankind
 And still with love for you.
 Farewell! Farewell! Farewell! Farewell!

BOBBIE.—Say, he's awfully down on us humans, isn't he? But I don't blame him, the way we have acted. But we won't any more. No, siree! Now I understand. Those Audubon folks are all right, and I'm going to join a Bird Club quick as I can. And that Jimmie Bean—if I catch him killing another bird, I am going to just—just—(makes a fierce gesture) *lamm* him! (Stops and thinks a moment, lifts hand to head.) No, I won't, either. I'll just get him to join a Bird Club, and then he won't want to. And I'll get all the boys I can to join. I tell you, folks, I'm for the birds now and forever (swings cap above his head, puts it on again). And now, birds, I must be off. Can't you all sing a song before I go?

POLLY.—Yes, yes! Let's all sing! (Squawks, makes harsh, absurd sounds. Birds all laugh.)

BLUE JAY.—O, shut up, Polly! You can't sing any more than I can. Why even the little Hummingbird could do better than that.

BOBBIE.—O, can the Hummingbird sing? (Turns to littlest bird.) Say, little Hummingbird, won't you sing a song for me? (Takes her by the hand and leads her forward.)

HUMMINGBIRD (*Sings to air of 'Little Birdie in the Tree.'*—From "The Charm." P. P. Bliss.)—

I'm just a little Hummingbird, Hummingbird, Hummingbird,
 I'm just a little Hummingbird, but I can sing a song for you,
 All about the roses, wet with morning dew,
 And the sky above us, so lovely and so blue.

I'm just a little Hummingbird, Hummingbird, Hummingbird,
I'm just a little Hummingbird, but I can sing for you,
All about the sunshine, so cheerful and so bright,
All about the moonbeams, and the stars that shine all night.

I'm just a little Hummingbird, Hummingbird, Hummingbird,
I'm just a little Hummingbird but I can sing for you.

BOBBIE.—That's fine, splendid! Thank you, little Hummingbird (leads her back to place). Now, birds, all sing. Give us a grand big chorus.

(Birds gather around Bobbie, waving wings and singing gaily. Bobbie, smiling, keeps time with hands and feet.)

CHORUS.—*To air from 'Martha' ('When far from the town,' etc.—Flotow).—*

1. Come, then, let us sing,
So joyous, happy, blithe and gay.
'Tis time to say farewell
And fly away, away, away.
O, Bobbie, Bobbie, Bobbie dear,
We'll never more have cause to fear.
He'll never lift his gun again
To shoot and kill his little friend.
 2. Come, then, let us sing,
So joyous, happy, blithe and gay.
'Tis time to say farewell
And fly away, away, away.
We'll build our nests about his door
And sing to him as ne'er before,
And we can now in safety rear
Our little birdlings without fear.
 3. Come, then, let us sing,
So joyous, happy, blithe and gay.
'Tis time to say farewell
And fly away, away, away,
Let children all remember this—
That joy and love and happiness
Will come to those who kindness show
To every living thing below.
- Come, then, let us sing,
So joyous, happy, blithe and gay.
'Tis time to say farewell
And fly away, away, away.

THE END

[One hundred children took part in this Bird Masque, which was very successfully given, the author writes. She adds: "I find a deep and growing interest in birds, in this part of the country, and I am doing what I can to increase it." In view of the importance of preserving bird-life in the state of Arkansas, this report from Fort Smith, Ark.,

is most encouraging. Other teachers will find this little play one that can be simply staged and given with effect, if the parts are thoroughly learned and the costumes appropriate. The Woodpecker Song by Nevin may also be used.—A. H. W.]

NEAR A WOODPECKER

One Sunday, as I was up in a tree on which I had put a ladder, a Woodpecker came and started to hunt for insects. I came down to get a view of him and he went up; then I went up. I watched him for about five minutes, and he came down. I came down, too. When I was on a level with him I looked around the tree, and he hopped to the other side. This we did eight or ten times, and then he flew away to another tree. Not caring to watch him any more, I came into the house.—ALBERT B. HEMSTREET (age 10 years) *Canton, N. Y.*

[The illustration, done in pencil, by the boy who wrote this article about being near a Woodpecker, is so realistic that it is unfortunate it cannot be reproduced here.

On one side of the curved trunk of a crab-apple tree clings the boy, while on the other side a Woodpecker comes tapping around beneath the remains of chunks of suet nailed to the tree, where birds have fed during the winter. The boy's mother writes an interesting word about Chimney Swifts: "I wonder if you have had reported the fatality among Chimney Swifts? We have found at least thirty and *possibly more*, as I told the children not to bring me any more. We think it may be due to cold, damp weather, requiring hot furnace fires. Other Swallows (NOTE.—The Swift is not a Swallow.—EDITOR) have been found in unusual numbers." Will readers of this article send word to the School Department of any similar observations of the death of Chimney Swifts?—A. H. W.]



MULTNOMAH BIRD CLUB
Photograph by A. L. Campbell

THREE-YEAR-OLD JUNIOR AUDUBON CLASS

The Multnomah Junior Audubon Club

This Club was organized April 26, 1915, with thirty-three members. We have our meetings in the school grove during the good weather, and all of the children take some part in the program. During the winter we have illustrated lectures by W. L. Finley, Dr. Hodge, and others.

Many unfortunate birds that have met with accident have been cared for by the members, and although this is the third year since our organization, the children are still interested and did good work at our meetings this summer.

The children are very fond of going on observation trips, so we usually take a short walk after our weekly meetings. Fifty of our common Oregon birds have been observed by most of the members.



DR. C. F. HODGE HELPING SOME OF THE BOYS OF THE MULTNOMAH CLUB BUILD A CEMENT BIRD-BATH IN A STUMP.

Photographed by A. L. Campbell

I saw an article, asking "What becomes of the Junior Clubs after the first year?" I suppose a great many of them last only one year, so I thought it would be interesting to report a wide-awake three-year-old class.—MAMIE E. CAMPBELL.

[Miss Campbell is the enthusiastic leader of this active Junior Audubon Society. It is pleasant to receive such an encouraging report, for many Junior Societies disband after a year's organization. If more could keep up club-work together, it would be a great advantage to any school or community in which such societies are located.—A. H. W.]

PILEATED WOODPECKER

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 94

While lying abed late one morning in camp listening to the lusty shouts of a Florida Wren, I became aware of a muffled knocking sound often repeated. It was the time of day when a field naturalist should be up and abroad, but we had gone into camp late the evening before, after a hard day's trip, so I was trying to get a little beauty sleep while the guide was away on the lake seeking fish for breakfast. But the Wren would not permit slumber, so, with mixed feelings of admiration and annoyance, I lay and listened to its wild expressions of merriment. The mysterious pounding finally caused me to get up and go out of the tent to discover its source. In a little while I found, about 60 yards away, a tall dead tree, old and greatly decayed. Perhaps 50 feet from the ground was a fresh round hole, while numerous fragments of wood were scattered on the carpet of dry forest leaves beneath. It was clear that the pounding was going on inside this tree and at some distance from the ground.

Bringing an axe from the camp, I gave the tree several vigorous strokes. Soon there emerged from the entrance-hole a Pileated Woodpecker. After bounding away a few yards, it returned and alighted just above its nesting-hole. It surveyed me in a startled manner for a few seconds and then flew to a near-by tree. Its shouts soon brought its mate, but the wary birds did not tarry long. In a few minutes the forest had swallowed them. For five days we lay in camp at this spot, and while we rarely saw the Pileated Woodpeckers, it was only necessary to remain in the tent a short time at almost any period of the day in order to hear again that muffled knocking sound, made by one of the birds as it chiseled away at its work.

The birds were not sufficiently frightened or annoyed by our presence to desert the nest they probably were building, but it was evident that they wished to take no chances by allowing themselves to be seen.

There possibly may have been eggs in the nest at the time, for these Woodpeckers are known to dig away at the walls of their nesting-cavity with their bills after the eggs have been laid.

With what fortunes the birds met in their attempt to rear a brood that year I did not learn, but doubtless they had a successful season. Eight months later, when passing through the same territory, I visited the spot and found that the old tree had fallen. Cutting away the wood I discovered that the cavity made by the Woodpecker had extended downward for a little more than 3 feet, turning slightly to the right as it descended. Why the hole had not been



PILEATED WOODPECKER

Order—PICI

Genus—*PHLGEOTOMUS*

Family—*PICIDÆ*

Species—*PILEATUS*

National Association of Audubon Societies

dug straight downward I could not discover, as there was no knot nor other indication of especially hard wood that would seem to turn the builders aside. Nevertheless, the bottom of the hole, where, on a layer of fine chips, the eggs and young must have rested, was at least 4 inches to the right of the entrance.

This nest was found in one of the innumerable hammocks which surround many of the lakes in central Florida. Here the heavy growths of oak, magnolias, hickory, and gum make an ideal home for these timid Woodpeckers. The birds are still abundant in suitable regions of that state, but one should go to the primeval forests to find them, for they do not like woodlands that have been cut over, and it is very rare to see one in the open pine-barrens of the sandy country.

Next to the giant Ivory-billed, which is now almost extinct in the United States, the Pileated is the largest of the Woodpecker family found in this country. In order to get a somewhat accurate impression of its size, one may think of it in comparison to a Crow. From tip of bill to tip of tail the Common Crow is about 18 inches, and when the wings are spread to their greatest extent, the distance from tip to tip is about 27 inches. The same measurements for the Woodpecker under discussion are 17 inches in length and $27\frac{1}{2}$ inches across when the wings are expanded. There is, however, much individual variation in the length of both birds. For example, the Woodpecker ranges in size from 15 inches to 19 inches and the expanse of wings varies in different individual birds from 25 to 30 inches, so it is a perfectly truthful statement to say that the Pileated Woodpecker is as large as a Crow.

The eggs of this species, like those of all other Woodpeckers, are glossy white. They range in number from four to six, and in size measure about $1\frac{1}{4}$ inches in length and a little less than an inch in width. The period of incubation is eighteen days. The young are hatched naked and are extremely helpless. They do not leave the nesting-cavity until the wing-quills are well grown and the birds are quite able to fly. The parents take turns incubating the eggs, and it is said that if the one on the nest desires to leave, it will call its mate and remain in the hole until the other comes.

The food of the Pileated Woodpecker is composed largely of insect life. It is very fond of grubs, wood-boring beetles and ants, especially those species that make their homes in dead wood. To procure this food the Woodpecker has developed remarkable skill as a woodcutter. It will attack a dead tree or log and in half an hour will leave a pile of chips of which a less ardent worker might well be proud. Often fragments of wood as large as one's hand may be seen where the bird has been at work, and I once measured a combination chip and splinter more than 14 inches in length. While engaged in this carpenter work, the Pileated Woodpecker is not always the shy bird we sometimes think it to be. One frequently may approach in the open woods to within a few rods of a feeding bird, and often, when startled, its flight may

be of short duration. In some of the southern towns, where heavy forests are adjacent, this species will sometimes come into the groves about dwellings.

While a student at the University of North Carolina, I remember seeing three on the University campus at one time. Three pairs of the birds constantly inhabited the college woods, a tract of perhaps 100 acres, which adjoined the campus. Although the nests are often built a considerable distance from the ground, I have found them in Guilford County, N. C., at a height not greater than 12 feet, but this was probably exceptional.

Mr. Arthur T. Wayne, of Mt. Pleasant, S. C., who has spent much time studying the habits of this bird, in his 'Birds of South Carolina,' says:

"This species uses a certain hole, which it excavates in a living black gum or a living sweet gum tree, in which to sleep, and it is so attached to it that I have known one of these birds to resort for years to the same hole to spend the night. This sleeping-hole is almost always excavated in a tree which is hollow from the base to within a foot of the first limb. Sometimes two holes are bored in the same tree, and if an attempt is made to catch the bird, it can escape by going through either of the holes or else make its exit at the base.

"If the season is a forward one the birds mate early in February and towards the latter part of the month they begin to excavate their hole, which requires exactly a month for completion. During the month of March, 1904, I made observations on a pair which excavated their hole in a dead pine. On March 21, the opening was commenced by the female, who drilled a small hole, and by degrees enlarged it to the size of a silver dollar. The male assisted in the excavation, but the female did by far the larger part of the work. The size of the aperture was not increased until necessary to admit the shoulders of the bird. I visited these birds every day in order to note the progress of their work, and, being so accustomed to seeing me, they were utterly fearless and I could, at any time, approach within twenty feet without hindering the work, although the hole was only about thirty feet from the ground. This hole was completed on April 21, and the first egg was laid the following morning. As incubation commences upon the advent of the first egg, and as the eggs are not laid consecutively, I did not again examine the contents of the nest until April 26, when three eggs were found. Upon investigating the cavity on April 28, and finding but three eggs, I concluded that the set was complete. In this case the excavation was made under a dead limb, and was about eighteen inches deep, being hollowed out more on one side than the other. This Woodpecker is so attached to the tree in which it has first made its nest that it continues to cling to it as long as it can find a suitable spot at which to excavate a new hole. It never uses the same hole a second time. I know of a pair of these birds which resorted to the same tree for four consecutive years, and each year they excavated a new hole.

"Another pair of these Woodpeckers bred in a gigantic dead pine for three years, and as an illustration that their large holes are in great demand by other

birds, and even mammals, for breeding purposes, I will state that on April 16, 1903, there were three species breeding in the same tree, namely—Pileated Woodpecker, four eggs, at a height of 54 feet; Fox Squirrel, at 70 feet; and Sparrow Hawk, at approximately 90 feet from the ground—all living together in perfect harmony!

"If this bird is deprived of its first set of eggs, it at once excavates a new hole, and the length of time consumed in its construction is about twenty-five days."

The Pileated Woodpecker is one of the noisiest tenants of the heavy forests and wooded swamps which it inhabits. Particularly is this true during the mating-season and after the young have left the nest. They have a long rolling cry which strongly suggests similar notes produced by the Flicker, except that they are louder and the intervals between the calls are slightly longer. At times they become extremely animated, and two or three will gather on the trunk of some tree or the larger limbs and engage in querulous, conversational, *wick-y-up* notes which again suggest the actions and calls of the Flicker.

In flight the bird does not proceed with the undulating movements common to many Woodpeckers. The flight is more or less directed in a straight line. The white underparts and the large white blotches on the wings contrast strongly with the black back. The white wing-area shows so plainly that one may often discover the bird flying at a distance by the heliostatic flashes of white.

Although, as already indicated, the food consists largely of an animal diet, the bird also is fond of certain forms of wild berries, and it presents an awkward and ungainly appearance as, in an uncertain and more or less laborious manner, it seeks to retain its perch and gather berries among the small twigs.

The Pileated Woodpecker is found over a wide range of North America. From southern Florida, middle Texas and California it is distributed in suitable localities as far north as British Columbia, central Quebec and Newfoundland.

Of recent years, ornithologists have regarded the species as being composed of two varieties, the Northern Pileated Woodpecker, embracing those individuals found along the Alleghany Mountains and northward throughout its Canadian range.

The bird has a variety of local names such as 'Cock-of-the-Woods,' and 'Log-Cock.' One of the most popular in the South is 'Good-God.'



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

THE THIRTEENTH ANNUAL MEETING

The Thirteenth Annual Meeting of the National Association of Audubon Societies was held in the American Museum of Natural History, New York City, on October 29 and 30, 1917.

The first evening, a large audience gathered in the main lecture hall, where Dr. Frank M. Chapman presented Rollo H. Beck, who spoke on 'Oceanic Bird Life,' illustrating his address with a large series of splendid slides from his photographs made of water-birds taken in the Cape Horn region. Norman H. McClintock followed with 5,000 feet of magnificent moving pictures.

The business meeting of the Association, which was held on the morning of October 30, was also well attended. The Secretary reported on the work of the Association the past year. This was followed by the report of the Treasurer, who showed that during the year the income of the Association amounted to over \$144,000, which is about \$30,000 more than the income the year previous. Reports of field workers followed, addresses being made by E. H. Forbush, H. K. Job, Winthrop Packard, Dr. Eugene Swope, and Mrs. Henry F. Cone, of Hartford, Conn.

Dr. Frank M. Chapman and William P. Wharton were reflected members of the Board of Directors.

After luncheon an Educational Conference was held, which was presided over by E. H. Forbush. Here interest ran high, and the exchange of experiences continued until night. Among those who spoke were Mrs. Mary S. Sage, School Lecturer for the Association in New York state; Prof. Madison, of Providence; Bradford A. Scudder, of Greenwich, Conn.; Walt F. McMahon, of the home office; and Dr. Swope, of Cincinnati.

One of the most enthusiastic addresses we have had the privilege of hearing was that given by Mrs. Cone, Secretary of the Hartford Bird-Study Club. Mr. Baynes spoke of the Meriden Bird Club and the formation of various bird clubs which he asked to join the National Association.

Interesting talks also were made by Winthrop Packard, Field Agent for the National Association and Secretary of the Massachusetts Audubon Society. Remarks by Frank O. Pillsbury of Walpole, Mass., and others followed.



A BIRD-WALK IN CENTRAL PARK, NEW YORK CITY, UNDER THE LEADERSHIP OF WALT F. McMAHON.

A NEW AUDUBON ACTIVITY

The National Association has established another public educational feature that is welcomed by bird-lovers in New York City. Realizing the great need of local bird-walks, such outings have been arranged, with Walt F. McMahon, of the home office, as leader. Every Saturday morning, weather permitting, the party meets at 8 o'clock at the Band Stand on the Mall in Central Park. For two hours the wooded paths are explored, and the edges of the lakes and the open lawns are examined for migrant bird-life.

Under the protection of the City Department of Parks, the birds are remarkably tame and allow intimate inspection by the enthusiastic observers. On one trip an interesting game of tag between a Sharp-shinned Hawk and a group of Flickers offered exciting entertainment. A pair of Black-crowned Night Herons, in immature plumage, was contributed to the check-list by one of the Park workmen who,

noting the group scanning the tree-tops with bird-glasses, offered the suggestion that there were "some kind of Night-Owls" in a tree near-by. Many interesting little glimpses of wild bird-life have added much pleasure to these excursions. Opportunities are offered to observe the commoner birds of the region, and there is also that ever-present charm of a bird-walk—the exciting possibility of finding some unexpected species. At the end of the trip check-lists are compared and the leader gives a short informal bird-talk, commenting briefly on the characteristics of the species recorded.

These outings are public, and all who are interested in bird-study are cordially invited. Those who have attended have expressed their pleasure and, judging by their prompt appearance week after week, this new activity of the National Association is received with appreciation and approval.



ONE OF THE MANY INTERESTING VIEWS ON THE WALLACE EVANS GAME FARM,
ST. CHARLES, ILLINOIS.

THE WORLD'S GREATEST GAME FARM

The Wallace Evans Game Farm, situated at St. Charles, Ill., is undoubtedly the largest enterprise of this kind in the world. Here are propagated various forms of wild birds suitable for food. There are also extensive deer parks. Recently some of us visited this extremely interesting nursery of wild birds. Many species of Ducks and Geese were seen at close quarters, as well as Pheasants and Swans. One of the most interesting of these is the Wood Duck which, over wide areas of

America, has become extinct, but here large numbers are raised annually. Few of these birds are ever killed for food. They are, in the main, used for breeding stock.

Tens of thousands of various game-birds are sent out from here every year to restock depleted coveys throughout the length and breadth of the land. This farm is a vast enterprise of conservation and is helping fight the battle for an increased food-supply. Many persons with large estates might well do likewise.



WILD-LIFE CONSERVATORS AT THE WALLACE EVANS GAME FARM.

Left to right:—Graham, Mass.; Burnham, N. Y.; Forbush, Mass.; Bradford, Del.; Ward, Ky.; Pearson, N. Y.; Adams, Mass.; Crampton, Conn.; Strell, Ill.; Millett, Mass.; and Leavens, of Vermont.



MALLARD DUCKS ON THE WALLACE EVANS GAME FARM AT ST. CHARLES, ILLINOIS.



WILLIAM CULLEN BRYANT AND THE WATER-FOWL.
From a drawing by A. G. Learned.

Enforcement of the Federal Plumage Law

In November, 1916, Angelo Tartaglino, cook on the steamship 'Kroonland,' was arrested at the gate as he landed with a bag of contraband plumes concealed under his clothes. He was charged with violating Section 3082 of the Revised Statutes and paragraph 347 of the Tariff Act. The case was tried by Judge Manton of the District Court. Judge Manton found Tartaglino guilty and sentenced him to eleven months and fifteen days imprisonment on Blackwells Island and \$500 fine.

Upon examination it was found that other plumes were concealed upon the ship, and these also were seized. When arrested, Tartaglino was making his second trip, having bought the business from Luigi Strada for \$200. Strada had made four trips before selling out. The feathers were provided by Giuseppe Arbib, of London, who smuggled them on shipboard at Liverpool. Tartaglino took them ashore and delivered them to John Ruscetta on 34th Street. Arthur Arbib called there for the plumes and paid the men for their work. Government agents seized forty-three boxes of plumes stored in his apartments. Arbib was found guilty, but because of his physical condition, which requires constant medical attention, his prison term was changed to \$5,000 fine.

Knoxville Audubon Exhibit

The East Tennessee Audubon Society had at the recent East Tennessee Division Fair one of the best exhibits of bird-life that has ever been displayed in that region. It consisted mainly of sixty-two mounted specimens of birds common to that locality and numerous colored plates illustrating those of other parts of the country.

These materials were loaned to the Audubon Society through the courtesy of Dr. George Clyde Fisher, of the American Museum of Natural History, who had lectured to the Society during his stay in Knoxville, as one of the professors at the

Summer School of the South, where he lectured for the National Association of Audubon Societies. The specimens are all correctly labeled and are identified by Mrs. Karl E. Steinmetz, one of the most active members of the local Society, who for several years has taken an active part in the promotion of bird-study.

The main object of the exhibit was to impress upon the people of the city and the surrounding country the economic importance of birds and to encourage their proper protection.

Seeds Free

Mr. D. C. Peacock, of Atlanta, Ga., an employee of the Government and an enthusiastic Audubon Society man, has written as follows:

"I have found quite a large tree bearing millions of black berries $\frac{1}{2}$ by $\frac{3}{8}$ inch. This tree has, for three weeks, been swarming with migrating Thrushes. They are so eager for these berries that they fly in when I am under it. I will have a quantity of these seeds gathered, and for three cents in stamps I will send a few of these seeds to any address. The tree makes a beautiful shade tree.

"If you care to insert the above in BIRD-LORE, I will take pleasure in having small boys gather the seeds and send them to anyone who may care to write for them."

Dr. Harry C. Oberholser, to whom some of these seeds were sent, says that the tree is a species of *Rhamnus*, probably *Rhamnus caroliniana*. Bailey's "Standard Cyclopedia of Horticulture" gives "Indian Cherry" as the common name for this tree. It is also known as "Yellow Buckthorn."

The distribution of this tree extends from Long Island, where it grows as a shrub, to Florida, and westward to Nebraska and Texas. It is very attractive as an ornamental tree, as well as being an annual source of food for the birds. We are very glad to print Mr. Peacock's kind offer, knowing it will be gratefully received.



BIRD-FEEDING DEVICE MADE AND OPERATED BY J. P. POLAND, SPRINGFIELD, MASS.

A FEEDING-DEVICE

Mr. J. P. Poland, of Springfield, Mass., writes that he has had very great success with the specially constructed feeding-device for birds which he has now had in operation for over a year. He says that it is built around a chestnut log 8 inches in diameter, and 18 inches long. A hole goes through the log lengthwise, large enough for a $\frac{1}{2}$ -inch eye-bolt, the eye upon the upper or roof end and a nut and washer upon the lower end. A long hook passes through the eye on the roof and hooks into a wire ring which encircles the limb of a

large white ash tree above. There are twenty-eight holes in the log, $1\frac{3}{4}$ inches in diameter by $1\frac{1}{2}$ inches deep, into which melted suet has been poured. Upon the floor of the booth various kinds of seed and grain are scattered. The booth is 36 inches long, 36 inches wide, 16 inches high at the eaves, and 22 inches at the peak. The two sides and one end are covered with a double thickness of burlap. The front is left open and can be slatted to keep out Crows.



CHARLES B. HORTON
President of the Western Pennsylvania Audubon Society

Annual Report of the National Association of Audubon Societies for 1917

CONTENTS

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION.—AFFILIATED SOCIETIES AND BIRD CLUBS.—JUNIOR AUDUBON SOCIETIES.—SUMMER SCHOOLS.—LEGISLATION.—FIELD AGENTS.—AUDUBON WARDEN WORK.—MISCELLANEOUS FACTS.—FINANCES.—NEED OF A BUILDING.

REPORTS OF FIELD AGENTS

EDWARD HOWE FORBUSH.—WINTHROP PACKARD.—DR. EUGENE SWOPE.—ARTHUR H. NORTON.—WILLIAM L. FINLEY.—HENRY OLDYS.—HERBERT K. JOB.—MRS. MARY S. SAGE.—MRS. GRANVILLE ROSS PIKE.—DR. WITMER STONE.—CHARLES CRAWFORD GORST.

REPORTS OF STATE AUDUBON SOCIETIES

ARIZONA, CALIFORNIA, COLORADO, CONNECTICUT, DISTRICT OF COLUMBIA, EAST TENNESSEE, FLORIDA, ILLINOIS, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEBRASKA, NEW HAMPSHIRE, NEW JERSEY, NORTH CAROLINA, OHIO, OREGON, RHODE ISLAND, WEST VIRGINIA.

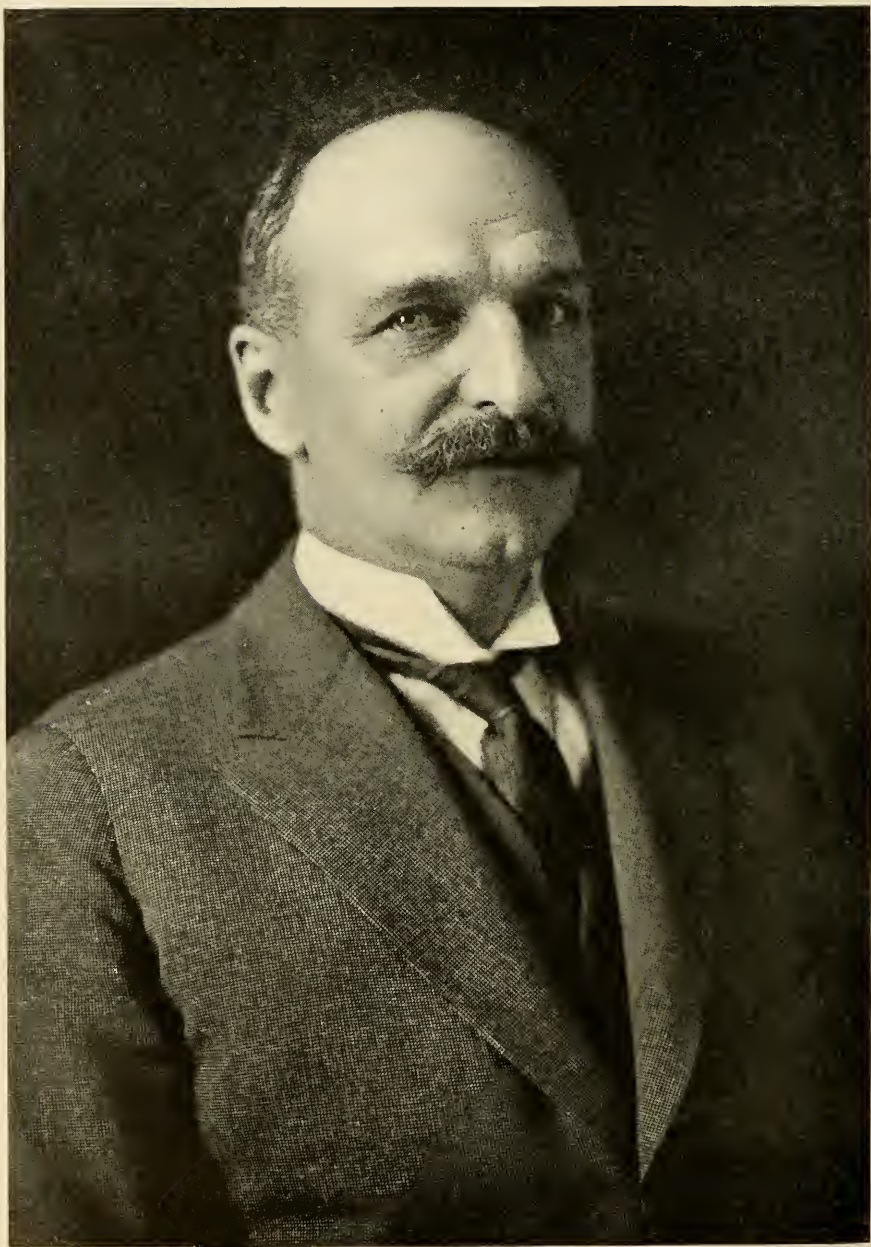
REPORTS OF AFFILIATED ORGANIZATIONS

AUDUBON SOCIETY OF SEWICKLEY VALLEY (PA.).—AUDUBON SOCIETY OF THE PACIFIC (SAN FRANCISCO, CAL.).—BIRD CLUB OF LONG ISLAND (N. Y.).—BIRD CONSERVATION CLUB (BANGOR, ME.).—BIRDLIVERS' CLUB OF BROOKLYN (N. Y.).—BLAIR COUNTY (PA.) GAME, FISH AND FORESTRY ASSOCIATION.—BROOKLINE (MASS.) BIRD CLUB.—BRUSH HILL BIRD CLUB (MILTON, MASS.).—BUFFALO (N. Y.) AUDUBON SOCIETY.—BURROUGHS JUNIOR AUDUBON SOCIETY (KINGSTON, N. Y.).—CAYUGA BIRD CLUB (ITHACA, N. Y.).—COLUMBUS (OHIO) AUDUBON SOCIETY.—CUMBERLAND COUNTY (ME.) AUDUBON SOCIETY.—DETROIT (MICH.) AUDUBON SOCIETY.—DOYLESTOWN (PA.) NATURE CLUB.—ENGLEWOOD (N. J.) BIRD CLUB.—FOREST HILLS GARDENS (N. Y.) AUDUBON SOCIETY.—FRANKFORT (KY.) BIRD CLUB.—GLENVILLE (W. VA.) NORMAL BIRD CLUB.—HARTFORD (CONN.) BIRD STUDY CLUB.—LOS ANGELES (CAL.) AUDUBON SOCIETY.—MAYWOOD (ILL.) BIRD CLUB.—MERIDEN (N. H.) BIRD CLUB.—MINNEAPOLIS BRANCH OF THE MINNESOTA GAME PROTECTIVE LEAGUE.—NEWBURYPORT (MASS.) BIRD CLUB.—NORTH EAST (PA.) NATURE STUDY CLUB.—PASADENA (CAL.) AUDUBON SOCIETY.—PORT HURON (MICH.) BIRD CLUB.—RHINEBECK (N. Y.) BIRD CLUB.—ROCKAWAY BIRD CLUB (FAR ROCKAWAY, N. Y.).—RUMSON (N. J.) BIRD CLUB.—SARATOGA (N. Y.) BIRD CLUB.—SEATTLE (WASH.) AUDUBON SOCIETY.—SOUTH BEND (IND.) HUMANE SOCIETY.—SOUTH HAVEN (MICH.) BIRD CLUB.—SPOKANE (WASH.) BIRD CLUB.—SUSSEX COUNTY (N. J.) NATURE STUDY CLUB.—VASSAR COLLEGE WAKE ROBIN CLUB (POUGHKEEPSIE, N. Y.).—VICTORIA (B. C.) NATURAL HISTORY SOCIETY.—VIGO COUNTY (IND.) BIRD CLUB.—WELLESLEY COLLEGE (MASS.) BIRD CLUB.—WESTERN PENNSYLVANIA AUDUBON SOCIETY (PITTSBURGH, PA.).—WILD LIFE PROTECTIVE SOCIETY OF MILWAUKEE (WIS.).—WILLIAMSTOWN (MASS.) BIRD CLUB.—WINSTON-SALEM (N. C.) AUDUBON SOCIETY.—WYNCOTE (PA.) BIRD CLUB.

REPORT OF THE TREASURER

LISTS OF MEMBERS AND CONTRIBUTORS

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GENERAL COLEMAN DU PONT
Patron of the National Association of Audubon Societies.

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION

A most striking evidence of the esteem in which the public holds the work of the National Association of Audubon Societies and the principles for which it stands has been manifested during the past year.

The entrance of our nation into the world war has called for public service and financial support to an extent never even approached in this country before. Innumerable war charities of the most worthy character have made constant appeals for funds, and huge sums of money have gone into war relief. As a direct result, many institutions supported by the general public have suffered severely. Some have closed their doors, and others have curtailed their activities. Forty-six hospitals in New York City alone are behind in their budgets, and numerous worthy institutions are on the verge of collapse. With this Association it has been different. True, some of our good workers marched away to the war, and some hitherto large supporters have dropped their contributions, but others have come forward to take their places. Now, at the close of our year, it is with much pleasure we announce that in not a single line of our endeavor has it been necessary for us to curtail during the past year, and in most lines of activity we have been able to expand, because of the magnificent support the Association has received, for we have not only held our own, but the sustaining membership has grown $33\frac{1}{3}$ per cent during the past twelve months.

This fact demonstrates clearly the seriousness with which the supporters of the Audubon movement regard the value of saving the wild life of the country, and we may take it further as an expression of public confidence in the manner in which the Board of Directors conduct the Association's affairs.

AFFILIATED SOCIETIES AND BIRD CLUBS

All the active State Audubon Societies and the larger per cent of the active local Bird Clubs under various titles are affiliated by membership with the National Association. These affiliations during the past year have grown in number from 114 to 134. About 65 of these Societies and Bird Clubs have submitted reports of their work the past year, and it is planned to publish these in connection with the Annual Report of the National Association. A perusal of these pages will astonish anyone not familiar with the vast amount of local effort being put forth for bird-study and bird-protection in this country. The harmonious coöperation between the National work on the one hand, and the state and local work on the other, is bringing forth many splendid results.

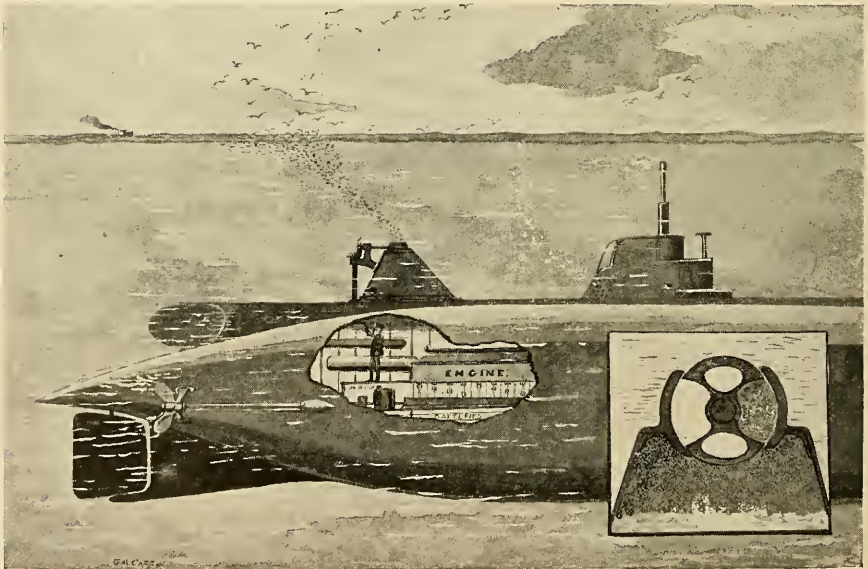
If space permitted, it would be interesting to give here a complete list of the work done by these affiliated organizations, which in the aggregate would

cover approximately the entire field of bird-conservation activities. In reading these reports, the interest that has developed in the establishment of bird-sanctuaries is especially noteworthy. A few of these recently set aside may be mentioned: In Florida there is, at Fort Myers, the Julia Hanson Bird Reservation. Recently the entire community of Winter Park, Fla., was made a bird sanctuary. Indiana reports a sanctuary established near Muncie and also the creation of a new State Park known as McCormick's Creek Canyon Bird Reservation. Then there is the 25 acre sanctuary at Beaver, Pa., established in March by the efforts of the Beaver Field and Audubon Club. The Rockaway Branch of the National Association has access to the Sosiego Bird Sanctuary near that place.

Every little while we are hearing of new bird-havens, and we hope that as others are established they may be reported promptly, in order that the entire list may be prepared for publication.

In our legislative work and in all educational efforts we have found the affiliated organizations ever ready, with rare enthusiasm and intelligence, to carry the battle in their respective regions.

We have been much interested in an ingenious device invented by Dr. A. D. Pentz to train Sea Gulls to indicate the presence of enemy submarines and thus aid in the national defense.



FEEDING GULLS FROM A SUBMARINE.
Diagram showing interesting invention by Dr. A. D. Pentz

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President, Clarence J. Allen, 1210 Second St., Milwaukee, Wis.
Secretary, Adolph Biersach, Milwaukee, Wis.

WILLIAMSON (W. VA.) AUDUBON SOCIETY:

President,

Treasurer, Miss M. B. Culross, Williamson, W. Va.

WILLIAMSTOWN (MASS.) BIRD CLUB:

President, Prof. S. F. Clarke, Williamstown, Mass.

Secretary, Mrs. O. M. Fernald, Williamstown, Mass.

WINSTON-SALEM (N. C.) AUDUBON SOCIETY:

President, Col. W. A. Blair, Peoples Bank, Winston-Salem, N. C.

Secretary, Miss Helen Keith, 32 Brookstown Ave., Winston-Salem, N. C.

WOBBURN (MASS.) WOMEN'S CLUB:

President, Miss Gertrude B. Hutchins, 62 Mt. Pleasant St., Woburn, Mass.

Secretary, Mrs. Blanche L. Dorr, 756 Main St., Woburn, Mass.

WOMEN'S CLUB OF SEYMOUR (CONN.):

President, Mrs. E. B. Hobart, 40 Maple St., Seymour, Conn.

Secretary, Mrs. L. C. McEwen, 106 West St., Seymour, Conn.

WOMEN'S CLUB OF SUNNYSIDE (WASH.):

President,

Treasurer, Mrs. H. N. Dryer, Sunnyside, Wash.

WOMEN'S EDUCATIONAL CLUB OF WALLA WALLA (WASH.):

President, Mrs. Fredk. B. Merry, 418 Bellevue Ave., Walla Walla, Wash.

Secretary,

WYNCOTE (PA.) BIRD CLUB:

President, Ernest Corts, Wyncote, Pa.

Secretary, Miss Esther Heacock, Wyncote, Pa.

JUNIOR AUDUBON SOCIETIES

No phase of the Audubon work has interested so many people during the year as the activities connected with the Junior Audubon Societies. All over the United States, and in thousands of homes in Canada, little children have been wearing their Audubon Buttons and talking of the Audubon Society work.

There are few things that reach the average parent so closely as the instruction his children are receiving in school. Many a man has given up shooting because of the love for birds developed by his child, and many a mother has taken the feathers from her hat because her little daughter told her it was wrong to wear them. People who would never think for a moment of going to a meeting of adults and listening to a program regarding birds, will, with the greatest eagerness, hitch the horse to the old surrey or crank up the Ford and drive 10 miles to attend a Junior Audubon Society entertainment at which one of their own children is to stand on the rostrum for two minutes and recite:

"A birdie with a yellow bill
Hopped upon the window sill,
Cocked his shining eye and said:
'Aint you 'shamed, you sleepy-head!'"

As an indication of how popular this department has grown, I may mention that the past year over 50,000 more Junior Audubon members were enrolled than during the entire period covered by the first four years of our

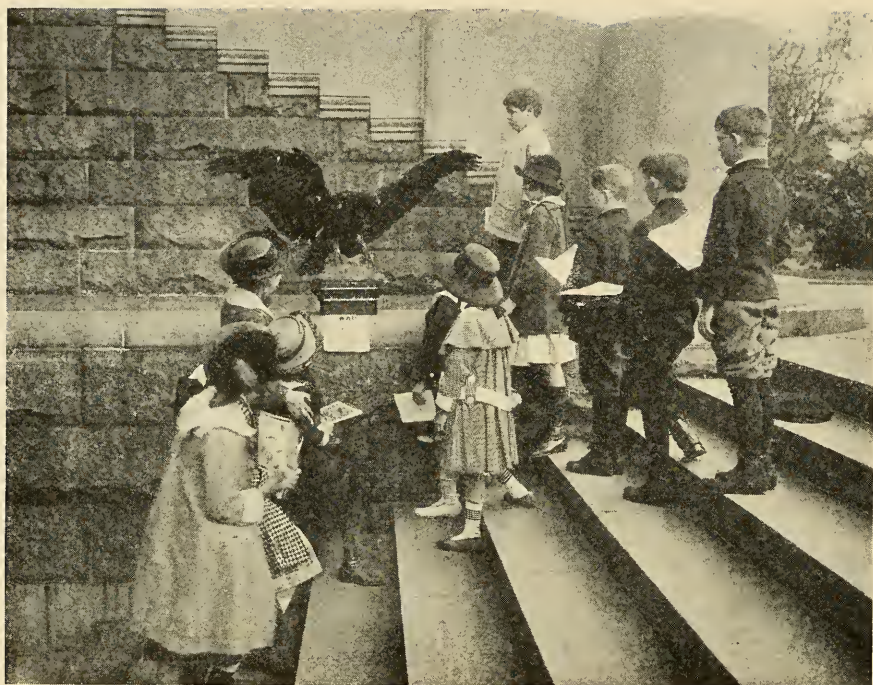
Junior work, which began in the fall of 1910. Clouds of witnesses have risen in all parts of the country to show us that the Junior Audubon work is the most far-reaching effort ever made in America, or on any other continent, for interesting both children and parents in the subject of the beauty and value of bird-study.

During the year, 11,935 Junior Audubon Clubs were formed, with a total membership of 261,654 paid members.

This work, as heretofore, was financed to the extent of \$5,000 by Mrs. Russell Sage and by \$20,000 from a benefactor of the birds whose identity, so far as I am aware, has never been discovered by anyone save the gentleman who annually sends us the checks. After five years, during which \$94,000 have been received from this source, the only knowledge that the Secretary has regarding it is that it probably comes from a man.

STATISTICAL SUMMARY OF JUNIOR AUDUBON CLASSES ORGANIZED
DURING THE YEAR ENDING JUNE 1, 1917

STATES	CLASSES	MEMBERS
Alabama.....	32	530
Arizona.....	8	176
Arkansas.....	28	643
California.....	348	8,431
Colorado.....	70	1,771
Connecticut.....	611	12,546
Delaware.....	7	109
District of Columbia.....	3	77
Florida.....	216	4,049
Georgia.....	131	2,578
Idaho.....	24	364
Illinois.....	433	11,722
Indiana.....	359	6,490
Iowa.....	279	5,832
Kansas.....	114	2,447
Kentucky.....	114	2,391
Louisiana.....	30	542
Maine.....	79	1,585
Maryland.....	150	3,360
Massachusetts.....	519	10,802
Michigan.....	542	10,855
Minnesota.....	427	9,541
Mississippi.....	38	991
Missouri.....	115	2,999
Montana.....	41	1,063
Nebraska.....	127	3,080
Nevada.....	22	474
New Hampshire.....	317	6,165
New Jersey.....	579	14,382
New Mexico.....	10	165
New York.....	1,841	41,514



MISS RICHARDSON OF NEW YORK CITY, AND JUNIOR AUDUBON CLASS STUDYING A MOUNTED SPECIMEN OF THE BALD EAGLE AT THE AMERICAN MUSEUM OF NATURAL HISTORY.

STATES	CLASSES	MEMBERS
North Carolina.....	134	2,925
North Dakota.....	90	1,888
Ohio.....	1,121	22,249
Oklahoma.....	55	1,149
Oregon.....	190	4,100
Pennsylvania.....	732	17,464
Rhode Island.....	44	1,215
South Carolina.....	61	1,600
South Dakota.....	43	785
Tennessee.....	101	2,541
Texas.....	150	3,960
Utah.....	33	738
Vermont.....	48	873
Virginia.....	120	2,356
Washington.....	604	14,696
West Virginia.....	106	4,130
Wisconsin.....	139	3,070
Wyoming.....	11	193
(Foreign) Canada.....	449	8,048
Totals.....	11,935	261,654

SUMMER SCHOOLS

The Association's experiment in conducting courses in bird-study in summer schools for teachers has proven a success. The past summer, for the third time, we arranged with the directors of a number of summer schools for giving instruction in bird-study and bird-protection, the expense being borne jointly by the Association and the colleges where the work was done. The past season the following instruction was given:

Prof. J. Bowie Ferneyhough gave the bird-work at the University of Virginia this summer, consisting of a six-weeks' course of lectures, laboratory work, and field excursions. Eighteen pupils took the course; fifteen passed final examinations satisfactorily and obtained credit on the primary and grammar grade professional certificate.

Prof. Ralph Hubbard, of Cornell University, presented a course in bird-study at the University of Colorado, at Boulder. This consisted of classroom work, laboratory periods, and field-trips. Two public lectures were given. The course was six weeks in length. Sixteen students took the course as regular college work, fourteen of them receiving credit.

Dr. G. Clyde Fisher, of the American Museum of Natural History, New York City, taught bird-study for four weeks at the Summer School of the South, Knoxville, Tenn. Twenty-six students took the course. Four public lectures were given before the University and one before the Audubon Society of West Tennessee.

Dr. Eugene Swope worked for four weeks at the State University of Florida, at Gainesville. Fifty-four pupils registered. He was able to arrange to have his bird-students receive the same credit as in such regular college courses in history, English, physiology, etc. Dr. Swope seems to have been rather severe in his final examinations, for he passed only nine for full credit. Some of his field-walks were given at 4.30 A.M., and the attendance on these occasions varied from eight to sixteen.

Miss Lillian Finnell, of Tuscaloosa, Ala., arranged to give one lecture at seven summer schools in Alabama and Mississippi, and by visiting classrooms and otherwise meeting teachers, presented the subject in detail. She did this work at the following places: University of Alabama; Agricultural and Mechanical College; Mississippi College; University of Mississippi; Mississippi Industrial Institute; Alabama Agricultural and Mechanical Institute; and Howard College, at Birmingham, Ala.

Prof. Charles S. Brumbaugh, of Cornell University, gave a course in bird-study at the Maryland Agricultural College. Thirty took the course, and five secured college credit marks. The course given was closely modeled after that regularly given by Prof. A. A. Allen at Cornell. Slides, lectures, and field-walks were used for demonstration purposes.

Dr. Clifton Hodge, probably the most popular nature lecturer in this



DR. SWOPE'S SUMMER SCHOOL CLASS AT THE UNIVERSITY OF FLORIDA, JUST IN FROM A BIRD-WALK. NOTE THE WATERMELONS!

country, gave a course of four weeks in bird-study at the University of Georgia. Several hundred attended these classes. A number of public lectures were given to the entire Summer School of 1,300 members.

Prof. H. G. McGowan conducted a four-weeks' course in bird-study at the University of Mississippi, with worth-while results.

Dr. H. F. Perkins, of the University of Vermont, continued his bird-teaching efforts again this summer. Fifteen pupils took the course. He also gave public lectures to the entire Summer School.

Miss Belle Williams, of Columbia, S. C., taught a month's course in bird-study at the State Normal College at Winthrop, S. C. The students did not work for credit. Her classes numbered from twenty to fifty.

Dr. Witmer Stone, of the Academy of Natural Sciences, Philadelphia, gave more than a month's lecture-work in South Carolina, lecturing to students of the State University at Columbia, to members of the Charleston Museum, to the people of Manning, and at a number of teachers' gatherings.

The most striking development of our summer-school work this year has been the readiness with which some of the college authorities have been persuaded to give college credit to students who successfully completed the course provided by our instructors. Such a thing as giving credit for a summer-school course in bird-study was unheard of not many years ago.

Again we would urge that members who are interested in the educational phase of the Association's work should consider the possibility of helping to support this field of activity. A moment's reflection will readily convince one of the importance of thus reaching these thousands of teachers gathered in

strategic centers during the summer. As heretofore, almost the entire cost of this work the past summer was borne by one of our life members, Miss Heloise Meyer.

LEGISLATION

Forty-three state legislatures convened during the year. In these we have been, in many cases, active in wild-life legislation. Some of the more important ones may be mentioned:

In California the usual flood of game bills was introduced, many of which were of an adverse character to wild-bird protection. For the sixth consecutive session, attempts were made to take protection from the Meadowlark, and this year the Flicker came in for condemnation. Mrs. Myers tells us that the chief complaint against this bird was that it makes holes in buildings.

Through the strenuous activities of our California friends, practically all harmful bills were killed, although protection was taken from Blackbirds in three of the northern counties.

The Florida Audubon Society was very active in endeavoring to secure the establishment of a state game commission. Your Secretary visited Tallahassee in the interest of the measure and, with Dr. Blackman, President of the Florida Audubon Society, stood in the lobby of the Senate when that body passed the bill, after it had passed the lower House. The Governor, however, being of different political faith from that of the Legislature, vetoed the bill.

In New York State we were much interested in the passage of the bill to establish a rural state police, which was advocated by one of our members, Miss Katherine Mayo, of Bedford Hills. This bill became a law.

Another splendid measure enacted was a law requiring nature-study and humane education in the schools of the state. This was a great compliment to Mrs. H. Clay Preston, of Buffalo, who for so many years worked for this measure.

We were glad to support a bill appropriating \$15,000 and providing for the establishment of a course in wild-life conservation at Cornell University. The fight for this was led by the American Game Protective Association.

In Ohio, bills to continue the protection of Quail for one, two, and five years were introduced. This met with our hearty support, and Dr. Swope was very active in working for them. In the end, a bill was introduced by the farming element of the Legislature to put the Quail on the song-bird list and give it protection at all times. This bill became a law.

In North Carolina, a bill to establish a state game commission was introduced by the State Audubon Society, but failed of passage by a narrow margin.

In Oregon there was established, by legislative enactment, a wild-game refuge which includes the greater part of the counties of Multnomah and Clackamas.

In Connecticut, three cat license bills were introduced. None of them passed. A bill passed providing a closed season on Golden and Black-bellied Plover, Greater and Lesser Yellow-Legs, and Wilson's Snipe, from December 31 to August 31, inclusive. Other small shore-birds are protected, and for those that may be shot a bag limit of ten was established.

A cat license bill was also introduced in the Legislature of New Hampshire, but did not become a law.

In the New Jersey Legislature, a bill providing for a bounty on Hawks and Crows was again introduced. The New Jersey Audubon Society opposed this, and the bill died.

By far the most important pending legislation of the year has been the Enabling Act in Congress. This is a bill to provide authority for enforcing the Migratory Bird Treaty between the United States and Canada.

Early in the year the bill was reported in the Senate by the Senate Committee having the matter in charge. During the months of January and February the Secretary spent most of the time in Washington, directing a lobby in the interest of this matter. Special workers were brought, at the expense of the Association, from Kansas and Alabama, and much publicity was given to the entire subject. The members of the Association, as well as the officers and members of affiliated societies and clubs throughout the country, were appealed to and responded nobly by bringing to the attention of their Senators the expression of local sentiment. The Massachusetts Audubon Society was especially helpful and was very liberal in its contributions. The bill would doubtless have passed at that time but for the fact that it was regarded as an administrative bill, and was therefore one of the measures doomed to defeat by the "little group of twelve wilful Senators."

When the new session of Congress convened in the summer, the bill was reintroduced. It was reported favorably by the Senate Committee that had it in charge, and on July 29 passed the Senate by a large majority. The measure has not yet been brought up for consideration in the House. The second gathering of the present session of Congress will probably take place in December. Every effort must be made at that time by the friends of the birds to bring the bill up for a vote and thus end this fight for which conservationists have been working for many years.

FIELD AGENTS

During the past year, in addition to our regularly employed field staff, we have financially coöperated with several other forceful workers who have represented the Audubon cause in their respective fields of endeavor.

Ten of these are mentioned under the head of 'Summer Schools.' Others are: Mrs. Granville R. Pike, of Washington, who lectured in the schools of her home state for three months, where she organized large numbers of Junior

Audubon Clubs. Mrs. Pike also went to California and for a month preached the gospel of bird-protection under the auspices of the State Federation of Women's Clubs. Ernest Harold Baynes continued his well-known work of general lecturing and formed a number of bird clubs. Charles Crawford Gorst continued his Chautauqua bird-work. On the Redpath-Homer Chautauqua's circuit he lectured for three months in Texas, Kansas, and Oklahoma, and during the past summer he was on the Coit-Alber Chautauqua circuit for eleven weeks. Under the auspices of the National Association he organized thirty-nine new bird clubs.

Of our regular field staff, E. H. Forbush, General Supervising Agent for the New England states, lectured constantly and did an immense volume of other work, as Massachusetts State Ornithologist, much of which is known to all bird-students. He probably accomplished more for the McLean Migratory Bird Treaty Bill than any one man outside of Congress. Winthrop Packard, of Massachusetts, directed the Junior Audubon work for his state, lectured before numerous audiences, and carried on a vast amount of detailed executive effort. William L. Finley, Agent for the Pacific Coast states, lectured all over Oregon and had a most successful lecture tour through the East, addressing twice the National Geographic Society in Washington, D. C., Columbia University in New York, and many other large gatherings. His excursions in the western wilds for moving pictures the past summer were accompanied with many thrills.

Mrs. Mary S. Sage continued her work in the schools of New York state. During the year she spoke to audiences 143 times and thus reached more than 25,000 teachers and pupils.

Dr. Eugene Swope, Ohio Field Agent, gave numerous lectures and surpassed even his former brilliant record in the matter of organizing Junior Audubon Clubs. Arthur H. Norton, Agent for Maine, now has a new active Bird Protective Society, making headquarters in the Museum of Natural History at Portland.

Herbert K. Job, working in 'Applied Ornithology,' found time to do much lecturing and take many moving pictures of birds in addition to supervising the extensive expansion work of the Association's Bird Sanctuary and Experiment Station at Amston, Conn.

More detailed reports of the activities of these effective workers will be published in connection with this report.

AUDUBON WARDEN WORK

One positive and important phase of the Association's work for many years has been the guarding of colonies of water-birds by means of agents employed for the purpose.

With the exception of the Egret colonies, few of these have been destroyed

by hunters of recent years. Nearly every season, however, storms cause the loss of many young birds and eggs, especially on the low-lying islands of the South.

The past summer was an exceptionally good one for the birds, as no severe storms occurred during the critical period of the colonies. Thus, at Gardiner's Island, N. Y., at least 2,000 Terns reared their young, while, on the neighboring shores, probably 500 Fish Hawks returned to their accustomed summer home. At the end of the season the warden wrote: "Terns and Fish Hawks all left during an easterly storm September 19."

On the Louisiana coast there was some disturbance by fishermen robbing the nests of Gulls and Terns. As the birds again laid eggs no very great damage resulted.

The warden at Dry Tortugas, Fla., states that 400 Sooty Terns, mostly young, lost their lives by the attacks of Man-o'-war Birds and as the result of accidents. When we consider that there were probably 80,000 of these birds nesting on the Island, the mortality may be considered small.

The warden at Gott's Island, Maine, states that many young Herring Gulls died because of cold, rainy weather at hatching-time.

Last year, mention was made that a fish factory had been erected on No-Man's Land, Maine, with the result that the birds were greatly disturbed by the presence of men working at the factory, and by foxes that had been liberated on the island. A representative of the Association who visited the place this year reports, "I found only one Gull egg." Thus by human activity was the largest bird colony on the coast north of South Florida entirely dispersed.



LEVY LAKE, FLORIDA, IN THE HEART OF THE EGRET COUNTRY.

Photograph by T. Gilbert Pearson.

Many of these birds, however, gathered this year to breed on Ten-Pound Island and Two-Bush Island in the immediate neighborhood. On Metinic Green Island, Maine, there was, formerly, a large colony of Wilson's and Arctic Terns, with a few Herring Gulls. The Gulls have greatly increased in numbers, and the warden reports that the past year they drove away practically all the Terns.

The above are simply a few notes culled from the many reports of the wardens and bird-students who, during the season, have visited the islands. However, these statements cover practically all accounts of unhappy occurrences regarding the birds in question.

One or two of our Egret colonies in Florida were shot into before our wardens went into camp, and some damage was done. It should be borne in mind that many of these rookeries are in very isolated regions, and that some seasons the birds return to their breeding-grounds much earlier than others. It is often difficult to be informed of their arrival sufficiently in advance to give protection as early as it is needed. Otherwise our Egret and Heron colonies seem to have had a good season.

In May the Secretary visited Craney Island in Core Sound, N. C., and here, in a Heron rookery, discovered about 60 Snowy Egrets nesting. Special mention of this is made because of the fact that this colony is located about 90 miles in a straight line farther up the coast than Snowy Egrets have been known to breed for many years. It is clear that this group of birds is an overflow from the protected rookeries farther south. Who knows but what, with continued guardianship, these birds may some spring be seen carrying sticks over the swamps of New Jersey, as they did a century ago!

Reports of the wardens of the various protected rookeries show that in the aggregate something over 1,043,000 water-birds bred in our various protected sanctuaries. This estimate covers 40 species, including Gulls, Skimmers, Terns, Egrets, Herons, Ibises, Pelicans, and a few Guillemots, Eider Ducks, Florida Ducks, Limpkins, and Puffins. Innumerable small birds and various migratory shore-birds also found protection in these guarded areas.

In all, forty-six wardens were employed during the year, and patrol-boats were provided for three additional Government wardens to whom no salaries were paid from the Association's funds. During the year, we placed in commission a new warden patrol-boat on Klamath Lake, Ore. Another patrol-boat, to be paid for by the income from the Mary Dutcher Memorial Fund, is being built for work on the Pelican Island Reservation, Fla.

LIST OF WARDENS ON GOVERNMENT RESERVATIONS SUPPORTED IN PART BY THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

T. J. Ashe, Key West and Tortugas Reservations, Florida.

Wm. E. Lowe (Assistant), Tortugas Reservation, Florida.

J. J. Furber, Klamath Lake Reservation, Oregon.

We furnish a patrol-boat and pay for repairs.

Paul Kroegel, Pelican Island Reservation, Florida.

We provide a patrol-boat.

B. J. Pacettie, Mosquito Inlet Reservation, Florida.

We provide engine for patrol-boat and keep up repairs.

Alexander McLean, East Huron Islands Reservation, Michigan.

Albert Matulich, Pass a Loutre West Mud Lumps, Louisiana.

Capt. Wm. M. Sprinkle, Breton Island Reservation, Louisiana.

We furnish and maintain a large patrol-boat and a small gasoline launch

W. Levi Sprinkle (Assistant), Breton Island Reservation, Louisiana.

GENERAL WARDENS

MAINE. Austin B. Beal.....Freeman's Rock.

Edwin B. Bailey.....East and West Egg Rocks, Shark Rock, New
Harbor Dry Ledges.

George E. Cushman.....Stratton and Bluff Islands.

Dennis Driscoll.....Little Duck Island.

Frank O. Hilt.....Matinicus Rock.

A. T. Faulkingham.....Forster, Brothers, and Libby Islands.

Joseph M. Gray.....Great Duck Island.

Edgar E. Harlow.....Moosehead Lake.

John E. Purlington.....Cone Island.

Fred E. Small.....Old Man's and Double Shot Islands.

Ernest A. Young.....No-Man's Land, Two-Bush and Ten-Pound
Islands, and Matinicus.

Elisha G. Bunker.....Cranberry, Duck, Baker's and Bare Islands.

Willis E. Snow.....Metinic Green Island.

MASSACHUSETTS. Capt. G. B. McRae...Woecket Island.

MICHIGAN. Oliver St. Andre.....Passage Island, Gull Rock.

NEW JERSEY. Jarvis B. Rider.....Sandy Beach.

NEW YORK. Irving L. Edwards.....South end of Gardiner's Island.

Henry O. Rackett.....North end of Gardiner's Island.

NORTH CAROLINA. H. A. Bragg.....Glands, Royal Shoal, Leggett Lump.

VIRGINIA. J. R. Andrews.....Cobb's Island, Big and Little Easters.

EGRET WARDENS

FLORIDA. Oscar E. Baynard, Supervising Warden.

Walter Thomas.....Corkscrew Rookery.

J. M. Jackson.....Spruce Creek Swamp.

J. W. Malphurs.....Orange Creek, Fowler's Prairie, Brean Lake.

M. N. Gist.....Orange Lake Rookery.

D. M. Brooker.....Bird Pond.

S. Elliott Bouknight.....Black Gum Swamp.

R. M. Hunter.....Staggers Prairie Rookery.

J. W. Wallace.....Wallace Bay Rookery.

M. J. Boyd.....River Styx Rookery.

J. T. Shaw.....Waldo and Gainesville Rookeries.

A. L. Jackson.....Perhaps Bay Rookery and Tamaka Swamp.

Frederick H. Ford.....Montgomery's Prairies, Guthrie's Prairie,
and Bundy's Lake.

L. Ashburner.....San Sebastian River Islands.



JULIAN BROWN, WARDEN OF CRANEY ISLAND ROOKERY, NORTH CAROLINA.

An officer of intelligence and rare devotion to his duties.

Photograph by, T. Gilbert Pearson

GEORGIA.	Henry W. Manning.....	Big Buffalo Swamp-Rookery.
MISSOURI.	R. L. Hall.....	Red Sea Overflow.
NORTH CAROLINA.	Julian Brown.....	Crane Island.
SOUTH CAROLINA.	R. F. Grimball.....	Buzzard's Island.
	William Elliott.....	Beaufort and vicinity.
	Sandiford Bee.....	Buzzard's Island.

MISCELLANEOUS FACTS

During the fiscal year we have published five new Educational Leaflets, written by the Secretary. These first appeared in BIRD-LORE and later were issued separately. They are: Leaflet No. 89, Black-necked Stilt; No. 90, English Sparrow; No. 91, Sage Grouse; No. 92, White-throated Sparrow; and No. 93, Phœbe. Our Department in BIRD-LORE occupied 173 pages. A new circular, No. 5, on 'The Department of Applied Ornithology,' was added to our list. Among the miscellaneous publications issued during the year were: Circular No. 1, 20,240; No. 2, 20,000; No. 3, 20,390; No. 4, 15,300; No. 5, 5,500; a four-page announcement to teachers, 85,050; and Audubon Educational Leaflets (four pages of descriptive text, a colored plate, and an outline drawing), 2,741,000. Of office supplies, such as letterheads, record cards, order blanks, etc., and various publications for circularizing, 829,000 were used. Printed envelopes of various sizes to the number of 361,000 were required. Large quantities of wrapping-paper and twine were needed, also 8,634 cartons and many wooden boxes.

The Association also published linen posters calling attention to the value of birds in wartime and urging the public to report violations of the bird-protective laws. Of these 'war' notices 50,000 copies were issued in English and Italian and 25,000 copies in English alone.

The motion-picture films rented by the home office have been in constant demand and have been shipped to many parts of the country. The nominal rental charges provided an income amounting to \$117, and orders are now on file for future reservations.

In addition to the seven reels already on hand, Mr. Job has secured another thousand feet of film this season. This includes many interesting subjects, such as Geese, Swans, Ducks, Terns, Martins, Duck Hawks, etc. It also shows the work at the Association's Bird Experiment Station, at Amston, Conn., with pictures of Tree Swallows, Wrens, and other birds, and the propagation of Quail and water-fowl. Our entire set of films probably will be rearranged, including these new sections, thus making each reel more interesting and complete. The revised list will be printed in BIRD-LORE. We have also received as a gift 700 feet of splendid film from one of our esteemed members, Dr. Thomas S. Roberts, of Minneapolis.

The lantern-slides made and colored by the Association are very popular with bird-lecturers. During the past fiscal year the sale of slides amounted

Shooting on this Property is Prohibited

WAR

PROTECT THE BIRDS AS A WAR MEASURE!

The food destroyed in America by insects and small rodents would feed the people of Belgium! Birds are the great natural enemies of these pests. The laws of this State and of the Nation protect insect-eating birds, but many are being shot wantonly and for food. Report violations to the nearest game warden or to the address given below.

PROTEGGETE GLI UCCELLI COME MISURA DI SICUREZZA PER LA GUERRA!

Il cibo distrutto in America dagli insetti e dai piccoli animali rosicanti basterebbe per nutrire il popolo Belga! Gli uccelli sono i nemici naturali più accaniti di questa peste d'insetti. Le leggi di questo Stato e della Nazione proteggono gli uccelli insettivori, ma disgraziatamente molti vengono uccisi maliziosamente o per cibo. Notificate queste violazioni al guardia-caccia più vicino oppure all'indirizzo dato qui sotto.

National Association of Audubon Societies

1974 BROADWAY :: :: NEW YORK CITY

THE ASSOCIATION'S LINEN "WAR" POSTER SIZE 9 x 15 INCHES.
These are posted in great numbers in every state in the Union.

to about \$500. We now have 1,086 slides on hand, ready for delivery, and 393 unfinished ones in stock, ready for coloring.

Bird-protective exhibitions have been numerous this season and have been very successful in arousing local interest in bird-study. The office of this Association responded to many requests for help. We were able to assist bird clubs, public libraries, schools, and other organizations. Loan exhibits, consisting of charts, bird-boxes, feeding-devices, etc., and great quantities of printed matter for distribution, were sent to the following places: New York City; Brooklyn, N. Y.; Forest Hills Gardens, L. I., N. Y.; Ridgewood, N. J.; Newton Centre, Mass.; Pittsburgh, Pa.; Cuyahoga Falls, Ohio; Fort Wayne, Ind.; Holland, Mich.; Durham, N. C.; and Montgomery, Ala.

The home office of the Association, and also our branch offices in Boston and Cincinnati, continue to be extensive information bureaus. The questions received are of great variety, most frequent inquiries including such subjects as identifications of birds seen; construction of bird-boxes, feeding-devices, and bird-baths; how to form bird clubs and to establish sanctuaries; how to combat bird-enemies, such as cats, English Sparrows and Starlings; what bird-books to buy; what shrubs to plant to attract birds; information on game-laws; whom to engage as an interesting lecturer; and how to get a position as bird-lecturer. More than forty people applied to us for positions as field agents during the year. Other questions often received pertain to bird-protective exhibits, bird-day programs, bird-house contests and bird-plays for children. Other correspondents ask advice on the selection of cameras for nature photography, stereopticons, bird-glasses, and other such apparatus. Many violations of game-laws are reported, and the number has much increased since the 'war' posters were distributed. Occasionally we receive an appeal that requires particular consideration. Often we are asked to prescribe for sick Canaries. One letter asks us to locate the owner of a stray Carrier Pigeon that had been found in an exhausted condition. Some wanted to know where good shooting-grounds in the South could be found, and one asked us to recommend a good collecting-gun! One lady 'phoned the office to send people at once to remove a large mantelpiece in her flat and release an English Sparrow that had fallen behind it. She warned us that the mantel must carefully be replaced and without injury.

FINANCES

During the year the Association enrolled one Patron (\$1,000) and 111 Life Members at \$100 each. The funds thus received, with \$325 in gifts, makes a total of \$12,425 added to the permanent Endowment Fund of the Association.

Within the past few days the Finance Committee has invested \$10,000 of this amount in a subscription for Second Liberty Loan Bonds.

The sustaining membership, the fee for which is \$5 annually, has increased

during the year from 3,024 to 4,022. The total income of the Association for the year amounted to \$144,089.21, which is something more than \$30,000 greater than the income for the previous year.

NEED OF A BUILDING

And now, in concluding this report, I want to lay strongly on the minds of the members and supporters of this Association the very great need of a suitable home and headquarters for our National work, for if ever a Society needed a comfortable building of its own it is this one. At the present time we are cramped into six offices of a regular office building on Broadway. As every effort is made to carry forward the Association's work as inexpensively as is consistent with getting good results, the Board has not felt justified in paying the high rents necessary to secure sufficient space to be suitably housed.

Furthermore, there is little chance for expansion and no opportunity for developing and maintaining attractive exhibition rooms, which we should by all means possess.

The development of our organization has now reached such a phase that our activities should be focused in a national headquarters—a great clearing-house for the exchange of ideas. Our present facilities provide only for our office-work. We should have a commodious building in which those interested in the protection of the wild life could meet face to face at all times and discuss the great problems on conservation which daily confront us.

There is an imperative need for a building where the workers in our field may gather for counsel and inspiration, a social center, if you please, from which our efforts may radiate to all parts of the world. We have not at present even an adequate room for the reception of members, friends, and visitors.

Such a building as some of us have longed for and dreamed of for years should contain abundant office space and storage rooms—should have rooms for permanent exhibits of bird-houses, feeding-devices, and bird-attracting apparatus. Samples of all types should be on permanent exhibition. Here we should have exhibitions of shrubs and trees that produce fruit and berries that people may plant in sanctuaries or about their homes to provide food for birds. We should have a display of pictures, transparencies, and other illustrations that might be studied by people desiring further information on the subject of our wild life.

The modest library on conservation and natural history which we have been building the past few years should vastly be expanded. There is no such thing as a conservation library in America, and this Association is the logical force that should acquire and maintain such a library for the rapidly increasing army of bird-students. It would be of great help today, and the material that could now be gathered and preserved would be of vast interest to those who follow us in the generations to come.

We should have a museum where all the birds of the world used for millinery trade could be exhibited and the trade product displayed and the trade name attached. We should have comfortable quarters and a rest-room for members and friends who visit the city, with an assembly hall where we could arrange for lectures and to which we could invite representatives of wild-life protective associations to hold their conventions.

In many other ways such a building would be of inestimable value to the cause and would greatly tend to strengthen our efforts by bringing us in closer touch with the public.

Enrolled among our members are hundreds of people, any one of whom could easily provide the funds for building and equipping such a home, and there is no doubt but that there are thousands of members who would be glad to contribute something toward such an enterprise. An attractive, commodious home containing provisions for the opportunities for service outlined above would immeasurably increase the influence of the Association and the cause we represent. With most profound earnestness, therefore, do I wish to lay this matter before you in the hope that it may reach the attention of some one or more people who may before long make possible the realization of this cherished hope.



CANADA GEESE AT BELLPORT, LONG ISLAND, NEW YORK.
Photographed April 1, 1917, by Dr. Frank Overton.

REPORTS OF FIELD AGENTS

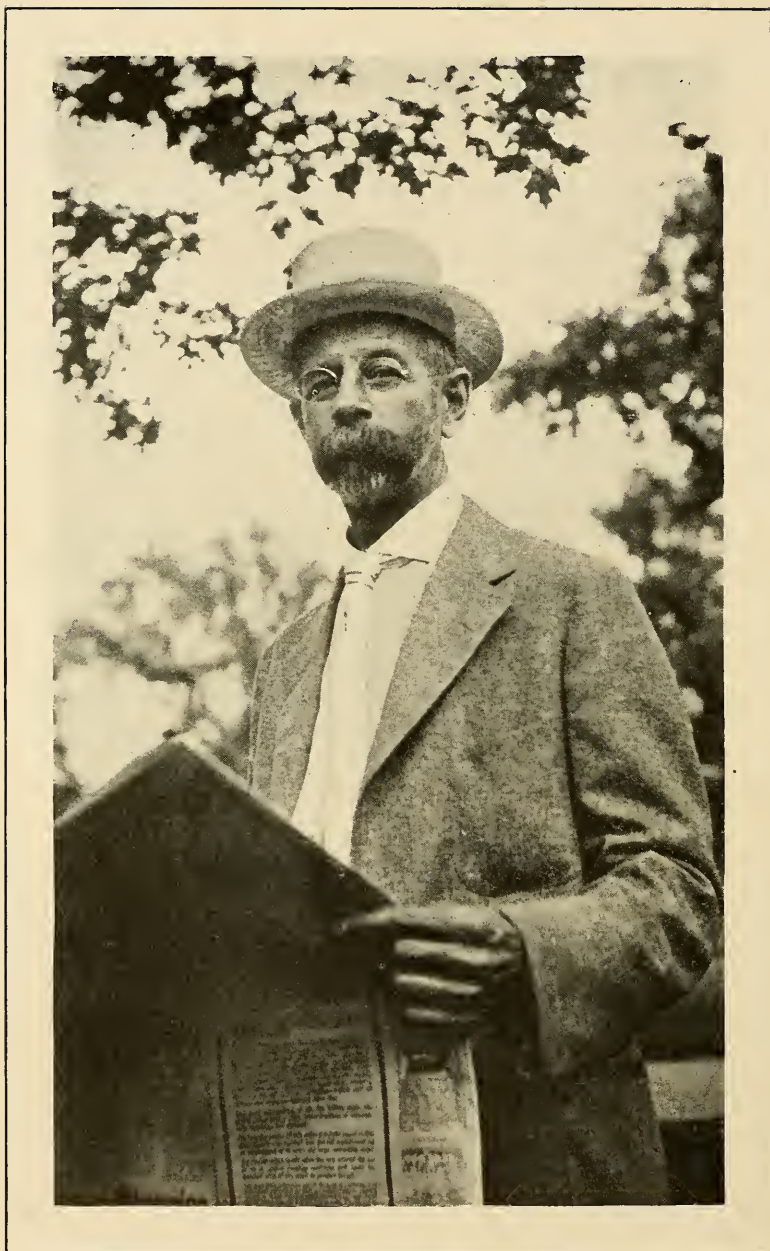
REPORT OF EDWARD HOWE FORBUSH, FIELD AGENT
FOR NEW ENGLAND

The interest in legislation for the protection of birds in New England has been largely transferred to Washington, in the hope that through the treaty with Great Britain, under which migratory birds of the United States and Canada are protected, we might get efficient federal protection of migratory species. Your agent has done what he could toward the passage of an enabling act, under which the provisions of the treaty might be enforced. It is now well known that thus far this act has passed the United States Senate only and has failed in the House. Let us hope that it may be passed by the House at the next session.

During the year your agent has delivered about fifty lectures. At a meeting of the Massachusetts State Board of Agriculture at Springfield, Mass., a lecture was given in the auditorium to over 3,000 people, at which motion-pictures furnished by the National Association, and taken by Herbert K. Job, were exhibited, to the delight of the audience.

In April, 1917, an investigation of the present condition of the Heath Hen was instituted. On my inspection of the reservation on Martha's Vineyard in 1916, fully 800 birds were accounted for, and the superintendent of the reservation believed there were 2,000 on the island, but on May 12 of that year a very destructive fire swept that part of the island devoted to the birds, and in April, 1917, less than 50 pairs of birds could be accounted for. The fire of 1916 occurred just as the birds were beginning to nest. Probably very few Heath Hens bred that year, and many of them may have been destroyed by the fire, although few remains were found; but the fire swept away the cover so that they were exposed on the burned and blackened ground to the attacks of their enemies. It destroyed a large part of their food and ruined the prospect of an acorn crop for the winter, and then in the autumn an unprecedented flight of Goshawks came to the island from the North and undoubtedly destroyed a large share of the remaining birds during the winter.

The superintendent, being required to patrol the entire island to enforce the game laws, could spend only a part of his time in the actual protection of the Heath Hen. During a visit to the island in October, 1917, very little evidence was found of the rearing of young birds this year, and from all appearances the Heath Hen now is rapidly moving toward extinction. A few birds have been sent to Long Island, and some to Wenham, Mass., but in neither of these localities have they reared any young. Nevertheless, if the few remaining birds survive, the winter conditions will be better for them on the island than for several years. The fire has killed most of the large trees about the reservation, and the resulting low growth is exactly what the birds seem to



EDWARD HOWE FORBUSH.
State Ornithologist of Massachusetts, and New England Agent for the National Association.

thrive in. The new sprouts have grown up so as to form sufficient cover; there is a good coating of dry leaves on the ground; and probably there will be a plentiful supply of food for the few birds that are left. Just now, if a first-class man can be placed in charge of the reservation and can give his entire time to the protection and propagation of the Heath Hen, and if any birds survive the winter, the chances are that next summer will see a substantial increase.

Much time was spent during the summer in an examination of the Massachusetts colonies of sea-birds. The colonies of Terns are doing well, with the exception of those which are particularly exposed to the attacks of cats and skunks. The Least Tern, apparently, is in danger of extirpation from New England. The colony formerly established on Katama Beach, near Chappaquiddick, was fairly safe so long as it was protected by a deputy commissioner of the Fish and Game Commission, who took a special interest in it, and so long as the inlet through the beach remained open, but when the inlet closed, the cats from Chappaquiddick made those colonies their hunting-ground. Later, the warden, who had trapped the cats, left the service of the Commission. Now this colony is practically extinct, or has moved farther up the beach where there is still a small colony.

A few years ago the Least Terns on Martha's Vineyard probably numbered about 400 birds. All the colonies on the west end of the island this year seem to be extinct, and probably there were less than fifty pairs of birds left on the island at the end of the breeding-season. There are a few still remaining on Cape Cod, but your agent was unable to visit their breeding-place this year. The Fish and Game Commissioners propose now to place deputies on several of the principal breeding-grounds of the Terns during the nesting-season, that they may be protected, not only from summer visitors, but from their natural enemies. Possibly, in this way the Least Tern may be saved.

Late in the summer a visit was made to Mr. Job at Amston, Conn., for consultation in regard to the details of his work. A report of the interesting and useful work done at this station appears elsewhere.

In closing this brief report your agent, as an unsalaried officer, cannot refrain from calling attention to the remarkable success of the Association in its chosen field and the magnificent support it has received during the year just passed in the midst of the excitement and distractions of the entrance of our country into the world-war. This success is due in part to the recognized value of the work in which the Association is engaged, but mainly to its excellent management. The directing board of the Association is to be felicitated on having chosen the right man as secretary and executive officer, and on having given him wise counsel and consistent support. His absolute loyalty to the cause and his ability in management have never produced greater results than in this year, which, because of the demands of the war, has been one of discouragement to many worthy organizations. Under the most trying and de-

pressing conditions, Secretary T. Gilbert Pearson has again vindicated the judgment of the Directors by securing the sinews of war and bringing the work of the Association up to its highest point of efficiency under trying circumstances. It is only fair to say, however, that the Association's opportunities for exceeding usefulness in this field continually outrun its resources.

REPORT OF WINTHROP PACKARD, FIELD AGENT FOR MASSACHUSETTS

During the past the Massachusetts agency has found a new field for activity in the Junior Class work. This work, hitherto carried on by the State Society, has been increased. In all, 519 classes, with 10,802 members, were the result. The campaign for the coming year has already started, and we are looking forward confidently to a still further increase of junior membership. Working persistently throughout New England, your agent has been able to add 161 new sustaining members to the Association's list, 55 more new members than were thus obtained last year. The office, which is recognized as headquarters for the bird-protection movement throughout New England, has been able to give advice and assistance in very many ways. Some fifty lectures were given by your agent before schools and societies. At the State Bird Day held at Amherst in conjunction with the State Society, the State Board of Agriculture, the State Grange, and the Agricultural College, an exhibition was made of the Association's literature and bird-protection material, and your agent lectured on the needs of bird-protection and the work of the Association. The Association was also represented at a number of local Bird Days throughout the state.

A good deal of the work has consisted in giving definite advice and assistance in regard to bird-protection, both at the office and in the field. The Association has thus been of service to large estates, to communities, sanctuaries, and to very many people who protect the birds in an effective if less extensive manner.

At the coming of the cold weather the usual request that the birds be fed was sent broadcast throughout New England and received an earnest response. Your agent has done what he could to promote the cause of bird-protection in legislation and has been of assistance wherever he felt there was need. He wishes to express his appreciation of the vital assistance and encouragement of the New York office, without which he feels his efforts would have been far less effective.

REPORT OF EUGENE SWOPE, FIELD AGENT FOR OHIO

One proof that the National Association has succeeded in awakening a wide and permanent public interest in the cause for which it has so faithfully worked is found in the ever-increasing number of high-school compositions, graduation essays, club papers, and the like that are nowadays based upon bird-protection and the Audubon movement.

This fact also points to the growing need for a book or pamphlet which should contain the essence of all Secretary Pearson's annual reports and Mr. Ingersoll's sketch of the origin, progress, and accomplishments of the Association, together with other material.

The facts contained in such a book would become the basis of many a club

CAN OHIO AFFORD TO BREAK FAITH WITH ITS CHILDREN?

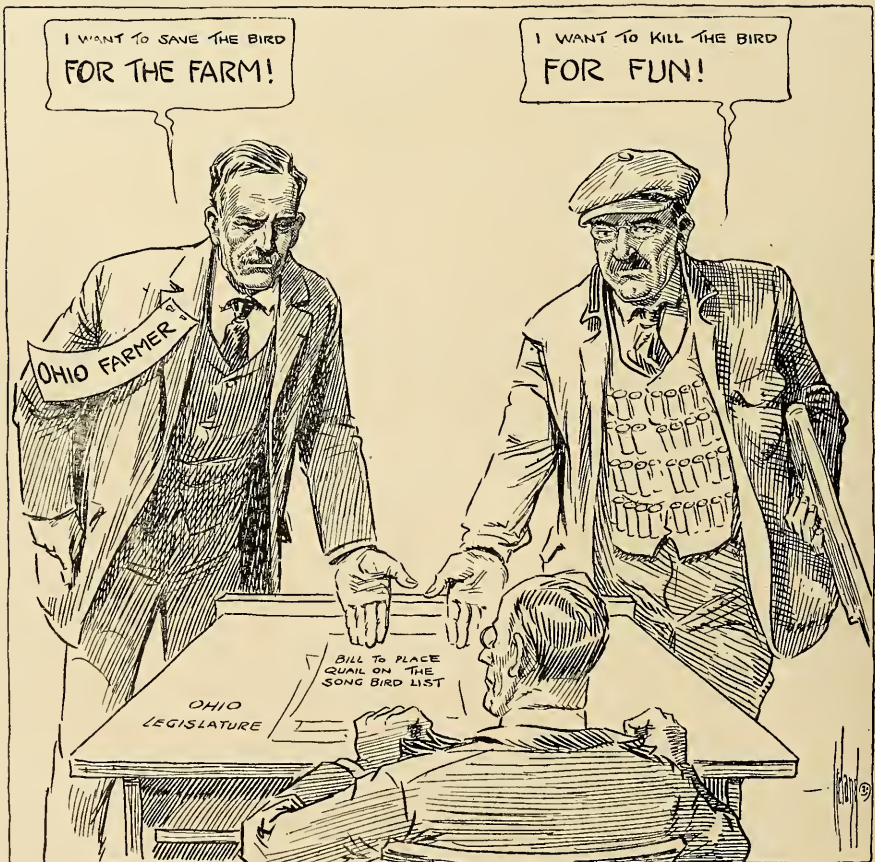


A LARGE SERIES OF EFFECTIVE CARTOONS BY IRELAND WAS USED IN THE COLUMBUS EVENING DISPATCH TO AID IN THE FIGHT FOR QUAIL PROTECTION IN OHIO.

paper and graduation essay and thus aid in further impressing upon the public mind the value of bird-study and protection. Your agent has been forced to this conclusion through the great number of requests for just such information. This new and growing interest in the Middle West is in no way peculiar to this section.

This year the most striking legislative act favoring bird-protection was that of placing Bob-white on the song-bird list. All Audubon and conservation interests of the state favored giving continued protection to the introduced birds as well as to the diminishing native ones. The Grange interests of the state, feeling that they had suffered too long at the hands of trespassing hunters, and being wholly out of sympathy with the Fish and Game Commission, but having Governor Cox on their side as well as holding the balance of legislative

THE LEGISLATURE IS THE JURY



ONE OF THE IRELAND CARTOONS USED IN THE OHIO QUAIL FIGHT.



DR. EUGENE SWOPE,
Field agent for Ohio, in his garden watching a Chipping Sparrow feed her young.

power, decided to make a clean sweep this time instead of temporizing as formerly. They passed the bill in both Houses all but unanimously. Sportsmen's leagues and the Fish and Game Commission officially fought the bill, but many sportsmen individually worked for it, as well as a few state wardens. The economic value of the Bob-white was the strongest argument in its favor and was generously used by the protectionists. This plainly showed that Ohio farmers now realized the worth of the living bird over that of the dead one.

Many of the leading Ohio papers were strongly in favor of giving the Bob-white permanent protection. These and numerous other papers of the state have been liberal in space devoted to the Audubon cause and have freely published all reports and news items sent them by your Field Agent. Their help in the cause of bird-protection is highly appreciated in the state.

The Cleveland Bird Lovers' Association, the Columbus Audubon Society, and the Ohio Audubon Society are the progressive organizations of the state and are constantly widening their sphere of influence. The Ohio Society proposes, the coming season, to specialize in a fight against the cat.

Conducting the Summer School Bird Study Class at the Florida State University during July was one of the most interesting features of the year's work. The class membership consisted of teachers who were taking extension work for professional credits. They applied themselves as diligently to bird-study, both afield and in classroom, as to any other subject of mental training and pedagogical equipment. They were as ready at 4 A. M. for a scouting trip as at 7 P. M. for a lantern lecture. It was the unanimous opinion of the class that one month is too short a time to do justice to the subject. No doubt the Summer School will in the near future have to provide for a full term course for this new item of education.

The records in Ohio, June 1, show that 1,121 Junior Classes had been formed during the year, with a membership of 22,249. This is mentioned as evidence that your agent increased his activities along all lines, since this record surpasses all former ones.

REPORT OF ARTHUR H. NORTON, FIELD AGENT FOR MAINE

The Legislature was in session from the first of January well into April, requiring a long period of vigilance; many measures were introduced to secure longer open seasons and spring shooting, together with two separate bills to secure bounties on Crows. It is most gratifying, and significant of good results of past efforts, to be able to report that the defeat of these measures was easy, owing to popular opposition and to the fact that legislators of leading influence promptly appeared in defence of the birds. A well-supported bill to require a resident hunters' license again was overwhelmed by popular opposition. The law prohibiting the hunting of water-fowl with motor-boats on the tidal waters

of the state was made general. Protection for Eagles (which had been inadvertently dropped during a revision of the laws) was restored. The laws relating to the taking of migratory game-birds was made to conform to the revised Federal law, thus placing Maine in the ranks of the states upholding that law.

During the month of February a pair or more of Bald Eagles resorted to the Back Cover in Portland, at the mouth of the Presumpscot River, between Portland and Falmouth, feeding on the dead and sickly, and possibly some healthy, Black Ducks, which bed in these places through the winter to the extent of thousands. All the birds were near and in plain view of the numerous trolley cars which traverse these sections. Many sportsmen, bird-students, and interested persons resorted daily to the two bridges to enjoy the privilege of observing these magnificent birds at close range, as well as the great congregation of Black Ducks and Whistlers. Some viewing the Ducks that were being eaten, which might afford a few extra targets another open season, complained to the Commissioners of Inland Fisheries and Game that the Eagles were doing large damage. Sensational reports under such captions as "Eagles Eating the Back Bay Ducks" and "Battles in the Air" had appeared in the local papers. The Commissioners issued permission to have the Eagles destroyed and notified Warden Cushman of this action. Mr. Cushman, who is also an Audubon warden as well as a state warden, reported to your agent, who immediately communicated with the Chairman of the Commission, presenting the facts in the case, and the Chairman, Mr. Harry B. Austin, at once withdrew the permission. Careful watch of the Eagles was kept by your agent and Warden Cushman until the ice broke up, allowing the Ducks to scatter widely, but neither of us was able to witness the capture of a Duck or the attempt of the Eagles to capture one. A few sickly Ducks, unable to fly, were detected in the flock.

No inspection of the large colonies of birds which breed in the state was called for this year, and very little field-work was done. It was observed that a large colony of Terns returned to the Outer Green Island, in Casco Bay, to breed. A large colony of Black-crowned Night Herons, among which a few Great Blue Herons were breeding, was visited in Casco Bay. This is a colony not previously reported.

Early in the winter a local Audubon Society, The "Cumberland County Audubon Society," was organized in Portland with a gratifying membership. This resulted in uniting the general interest in feeding and otherwise attracting birds, and in bringing together a large number of bird-lovers for mutual consideration of birds and their needs.



WILLIAM L. FINLEY,
The National Association's agent for the Pacific Coast, taking moving pictures on
the verge of Crater Lake.

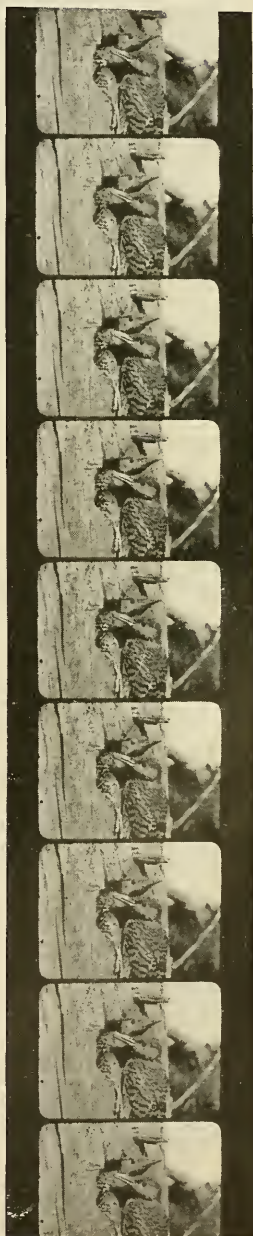
REPORT OF WILLIAM L. FINLEY, FIELD AGENT FOR
THE PACIFIC COAST STATES

DURING the early part of May, in company of R. B. Horsfall and Stanley Jewett, I inspected the bird colonies on Klamath Lake Reservation and spent four days getting moving-pictures of Sage Grouse during the strutting season. We discovered a place at the lower end of the lake where the Sage Cocks were accustomed to come very early in the morning and late in the afternoon to perform their interesting dance. This place was an open wash of 10 to 12 acres between the sagebrush and the edge of the lake.

By building a sagebrush blind and entering with the moving-picture camera before daylight, we succeeded in getting good pictures of the performances of these birds. During the spring season, while the females are on the nest, it is the custom of the males to come in for miles around to an open place that might be called an outdoor dance-hall. At first the birds were very wary about coming anywhere near the blind, but after the third day they became accustomed to it, and we had one bird as near as 25 feet from the camera. These pictures furnish a very important record of the life history of this rapidly disappearing bird.

Field-work has been carried on during the past year in conjunction with Stanley Jewett of the Biological Survey with the idea of completing a coöperative state and federal report on the birds and animals of Oregon.

During the months of June and July an extensive trip was made throughout eastern Oregon. Nearly a month was spent in the Malheur Lake country and in the Steins Mountains to the south. Far out in the wide, sagebrush country, about 50 miles from the nearest town, we came to an old deserted homesteader's cabin. From a general view of the surroundings, this was the last place in the



FINLEY'S FLICKERS.



BOBCAT AT BAY ON THE LEDGE OF A CLIFF IN SOUTHEASTERN OREGON.
 Photograph by H. T. Bohlman.



PHOEBE KATHERINE FINLEY, TAMING TWO BABY AVOCETS.
 Photograph by Irene Finley.



TRANSPORTING FINLEY'S MOVING-PICTURE OUTFIT IN THE DESERT OF SOUTHEAST OREGON.

Photograph by H. T. Bohlman.



FINLEY WATCHING JEWETT PLAY WITH YOUNG SWAINSON'S HAWKS.

Photograph by H. T. Bohlman.

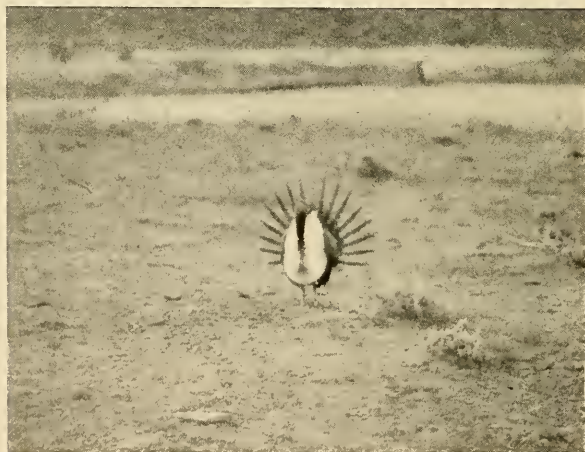
world I would expect to find any interest in birds, yet here was a striking example of how widespread bird-protection has become. On one end of the old shack were two bird-houses and several others nearby, one on the top of the gate-post.

Among the interesting wild animals and birds which we had an opportunity to get moving-pictures of on this trip were Porcupines, Badgers, Skunks, Bobcats, Ravens, Hawks, as well as wading birds and other water-fowl about Malheur Lake Reservation.

A little over a year ago, some promoters set on foot a plan to drain Malheur Lake and do away with our greatest wild bird reservation. Similar plans have also been proposed concerning Klamath Lake Reservation. During the past summer, Dr. George W. Field, of the Biological Survey of the Department of Agriculture, made a careful study of conditions in and about these great reservations and collected valuable data to be used in thwarting these promoting schemes.

The new Audubon patrol boat, "Grebe," which was purchased by the National Association from the income of the Mary Dutcher Memorial Fund, was completed during the past summer and has been in use on Klamath Lake Reservation under the direction of the warden, J. J. Furber. This boat was specially built for speed and light draught, so it can be used in different parts of the lake, even when the water is low.

During the past year, 103 lectures, illustrated, as a rule, with moving-picture reels, have been given by your agent in various parts of Oregon, Washington, and through the East. Two of these lectures were given by special request at the sessions of the Oregon and Washington Legislature and another at the meeting of the National Education Association held in Portland in July.



SAGE COCK DANCING. AN EXTREMELY RARE AND INTERESTING SIGHT.

Photographed by Finley after waiting four days in a blind for the purpose.

REPORT OF HENRY OLDYS, SPECIAL FIELD AGENT

During the period of February 25 to March 19, I was engaged for the National Association in the work of forming Junior Audubon Classes in Maryland and West Virginia. Twenty-one towns were visited and 84 talks were given, 4 of which were addressed to the general public, 56 formal talks to gatherings of pupils and teachers in schools, and 24 ten-minute informal talks to different classes. The number of schools visited was 40, and the total number of persons (mostly pupils) addressed was 10,525.

In several towns I found much preëxisting interest, due to previous visits of representatives of the Association. This interest was occasionally manifest in the formation of 1917 classes prior to my visit, usually owing to the presence of one or more energetic and enthusiastic teachers. More often, however, there was a diminishing interest, showing clearly the necessity for covering the same ground year after year in order to keep the work up to the desired standard, unless, indeed, some such annual stimulant as is here recommended be used. The response was very satisfactory. The new feature, the "Audubon Pocket Bird Collection," proved very attractive.

REPORT OF HERBERT K. JOB, DEPARTMENT OF
APPLIED ORNITHOLOGY

URING the past year, work has been continued along the lines previously instituted. Personal inspections of various estates have been made and assistance given in carrying out measures to attract or propagate wild birds. Adopting plans suggested by this Department, Winthrop Cowdin has made his large property at Mt. Kisco, N. Y., a bird sanctuary. The same has been done with the extensive Pagenstacher estates at Cornwall-on-the-Hudson, N. Y., on the slopes of the famous moun-

tain, Storm King. On the Harriman estates, Arden, N. Y., the experiments initiated last year in conjunction with this Department have had excellent initial results in the breeding and rearing of Bob-whites, Ruffed Grouse, and wild Ducks. The grounds of the Castle School, Tarrytown, N. Y., have been visited and made a bird sanctuary. Plans were also carried out on the estate of Tracy Dows, Rhinebeck, N. Y., following an inspection. Bird-attracting work was instituted at Roslyn, L. I., on the estate of S. G. Rosenbaum.

Extensive correspondence has been carried on throughout the year with many inquirers after practical information. In many cases the Bulletins of the Association have also been sent, and practical work for bird-increase has thereby been undertaken in many quarters. Public lectures also have frequently



HERBERT K. JOB IN THE LOUISIANA MARSHES.
Photograph by T. Gilbert Pearson.



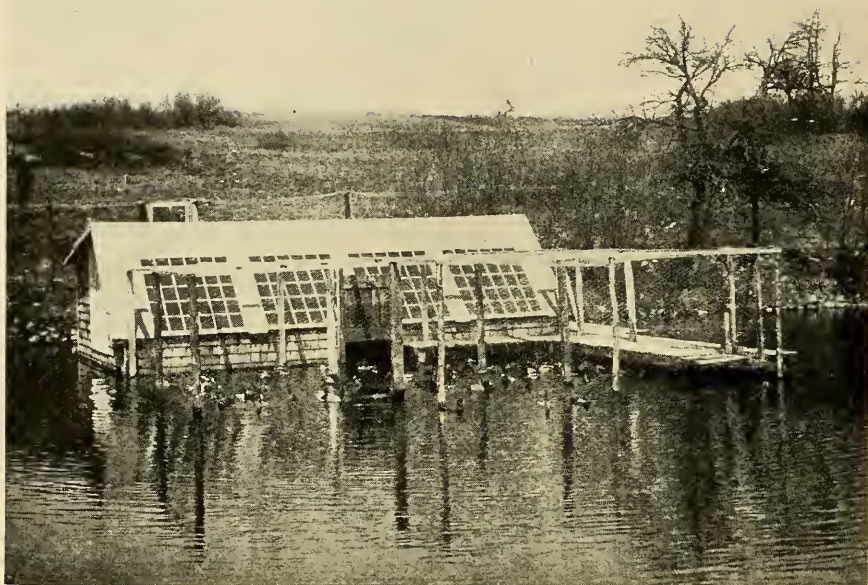
ENTRANCE TO THE AMSTON EXPERIMENT STATION.

Photograph by H. K. Job.

been given, both with lantern-slides and with motion-pictures. A new illustrated lecture circular has been published and is being sent out.

A considerable number of new bird photographs have been made for the Association, and also a number of new film subjects. Among the latter are the following: Large concourses of wild Geese and Swans on the coast of Virginia, taken on a trip for the U. S. Bureau of Biological Survey, in March, 1917; a large Tern colony on an island off the coast of Connecticut; a Duck Hawk feeding its young on a precipice; also a considerable series showing work with wild Ducks, Quail, and small birds using nesting-boxes at Amston.

Considerable time and hard work have been given to the establishment and development of the new Bird Experiment Station of the Association at Amston, Conn., mentioned in the last report. The fencing in of the water-fowl pond and swamp and the building of the aquatic house, under supervision of this Department, were completed late last autumn. During the ensuing winter and spring careful search resulted in the acquisition of breeding-stocks of fifteen species of water-fowl, namely, Canvasback, Redhead, Ring-necked Duck, Greater and Lesser Scaups, Black Duck, Wood Duck, wild Mallard, Pintail, Baldpate, Gadwall, Blue-winged and Green-winged Teals, Mandarin Duck,



WILD DUCKS AT AQUATIC WINTERING-HOUSE, AMSTON BIRD SANCTUARY AND EXPERIMENT FARM.

and Coot. The aquatic house proved ideal for the wintering of all Ducks, even the most susceptible to cold, such as the Blue-winged Teal. With outside temperature down to 15 degrees below zero, and with no artificial heat, the water of the swimming-pool never even skimmed over, and the Ducks came through the winter in fine condition. Newly captured wild Ducks, as most of these were, do not breed the first season under restraint. Ours had a good summer in the pond and swamp, and are now in good shape for the progress of the experiment. The Wood Ducks, however, reared in captivity, all laid eggs, and some young were raised.

Experimental work on a small initial scale was carried out with three kinds of Quail. The eggs of the Scaled or 'Blue' Quail proved infertile, but broods of Bob-whites and of California Quail were reared to maturity. Late in September these began to leave the rearing-field, and are now, in October, ranging by day over the adjacent grainfields and farmland, but at a regular time each night they fly back over the high wire fence, are fed by the keeper, and roost with the bantam foster-mothers in the accustomed place, the California Quail up in a clump of alders. These latter are said to have been acclimated to severe cold on mountains in Nevada, and also, being quite docile, to locate and stay about shrubbery in gardens and estates, even in the heart of towns and cities. Experi-

ments will be continued to see if they cannot be utilized for ornamental and other purposes on farms and estates in the East.

Extensive experiments were also begun with nesting-box work to attract small birds. Bird life is abundant at Amston, and the boxes were well used by Bluebirds, Wrens and Tree Swallows on the farming land, but in the immediate village all too much by English Sparrows. For the useful species, boxes nailed at the top of 2 x 4-inch timbers 6 feet long, these spiked or screwed to fence-posts bordering fields, entirely in the open, were decidedly the favorite locations. Moreover, all these species seemed to prefer boxes with larger entrance-holes than they are supposed to need. Bluebirds chose Flicker-size boxes in preference to those with the 'proper' apertures nearby. This winter certain changes will be made to suit the birds, and many more boxes will be placed on fences, as above, in an effort to see if considerable numbers cannot be attracted, especially the Swallows.

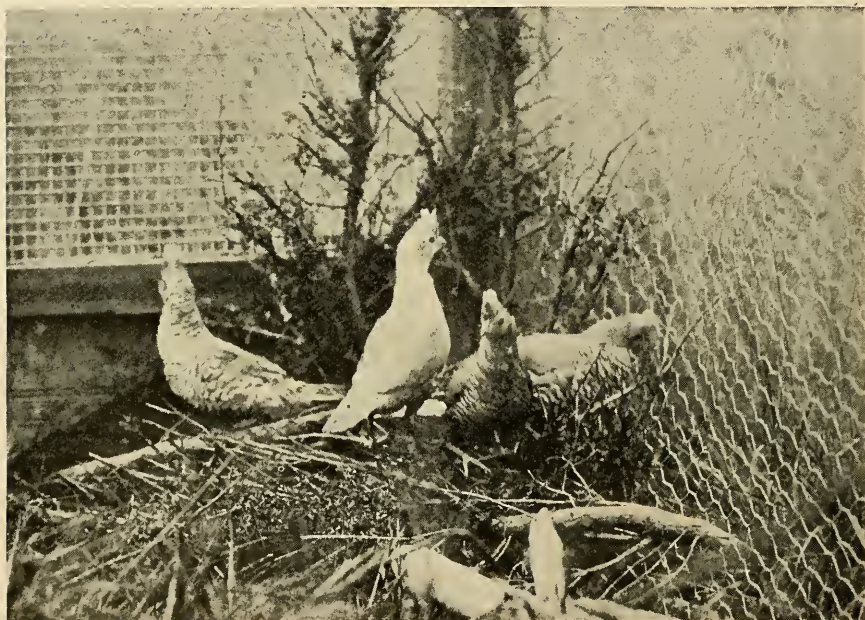
Experiments are also being started in attracting birds by the planting of natural foods. For land-birds, various trees and shrubs have been set out. In our large lake on the tract, plantings have been made of various Duck-food plants, such as wild celery, wapato, blue duck millet, potamogetons, and other kinds.



AUDUBON HOUSE, ON THE ASSOCIATION'S BIRD SANCTUARY AT AMSTON, CONNECTICUT.

Further to promote the new Experiment Station work, Mr. Charles M. Ams, the owner of the tract, has generously put at the disposal of the Association a comfortable two-story residence, furnished throughout, now known as the 'Audubon House.' Collections of birds and of ornithological literature, including the publications of this Association, have been installed, and the house has been kept open the past summer as headquarters of the National Association, where visitors have been welcomed, given opportunity for study, and thence shown the practical work carried out on the 3-square-mile tract.

In order to make it possible for visitors to remain at Amston to study and



SCALED QUAIL IN BREEDING-PEN ON NATIONAL ASSOCIATION'S BIRD SANCTUARY
AND EXPERIMENT STATION, AMSTON, CONN.

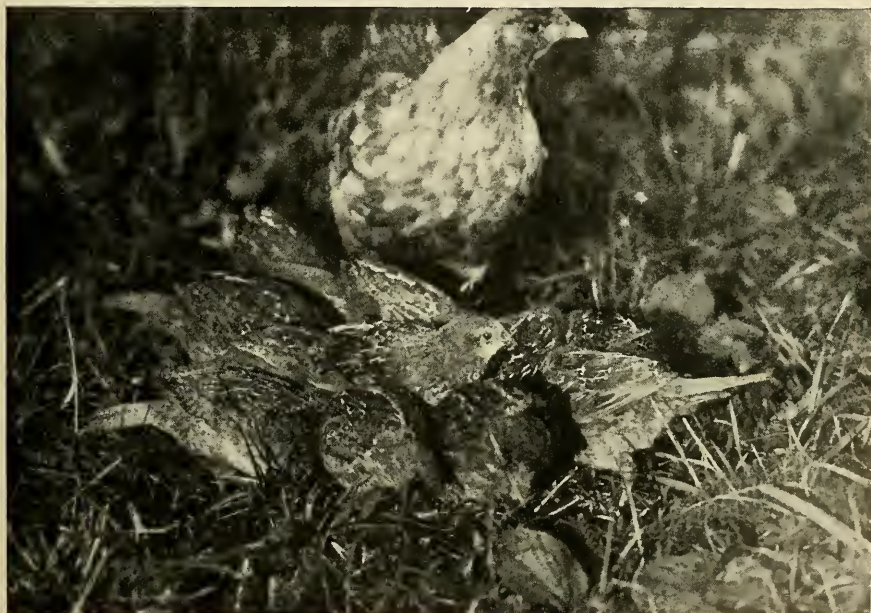
Photograph by H. K. Job.

enjoy the bird-life, there having been no local hostelry, Mr. Ams has enlarged and renovated a former boarding-house, at a cost of \$7,000, and had the new enterprise opened last August as Amston Inn, with plain furnishings, good food, and moderate prices. Bird-loving visitors and excursions of Bird Clubs have already utilized it.

From this Experiment Station, as well as from other sources, a large amount of valuable data is being gathered for use in demonstration work, in correspondence with inquirers, and for publications of the Association or through other channels. Much of this is given out through various magazine and newspaper articles, which helps to reach and interest a larger public. During the

year 'Circular No. 5' has been published, summarizing the work of this Department, which proves useful in answering inquiries, thus saving much writing.

Thus far the Department of Applied Ornithology has been maintained by a small number of generous friends of wild birds. As many people have availed themselves of its services, it has seemed both fair and timely to try to have the work supported by a much larger constituency, including donors of small amounts. To arrange this a plan is being carried out which it is hoped will put the Department on a permanent self-sustaining basis and make possible further enlargement of the work.



YOUNG CALIFORNIA QUAIL, BROODED BY A HEN AT THE AUDUBON SANCTUARY
AMSTON, CONNECTICUT.

Photograph by Herbert K. Job.

REPORT OF MARY S. SAGE, ORGANIZER IN SCHOOLS

There seems to be a greater demand than ever before for the Junior work in the public schools, judging from the calls for my services during the past year. After the annual meeting I returned to Albany, where I had promised to make some addresses, and would have been kept there to make a second tour through the city schools had I not felt I must go on to Syracuse. I worked in Syracuse and vicinity until the Easter holidays, making one trip to the northern part of the state.

Since the last annual meeting, talks and lectures have been given in the following places: House of Refuge (Randall's Island), Menands, Hudson Falls,

Albany, Rotterdam, Mechanicsville, Alplaus, Round Lake, Niskayuna, Troy Boys' Club, Carman, Oneonta, Schuylerville, Berkshire Industrial School, Solvay, Syracuse, Plattsburg, West Chazy, Rouse's Point, Peru, Clyde, Corona, South Ozone, and many schools in the Bronx, New York City.

On October 15, 1917, I began the season's work by speaking at Public School No. 44, Bronx, and since that date have given seventeen illustrated lectures in the Bronx schools. One day, at the request of the Principal, I gave four talks and had an audience totaling 1,800 pupils. I have been asked to return to speak to some of the lower grades, as all the children cannot be in the Assembly Room at one time, some of the schools having over 3,000 pupils. I have a number of appointments to speak in the Bronx schools, also in Brooklyn and other places on Long Island.

I gave three talks to the Nature Class at the Normal School, Oneonta, the nature-study teacher being desirous that her teachers learn all they could so as to be able to present it properly when given schools. When I went to Plattsburg and Rouse's Point it was very cold, snow lying deep everywhere, trains late and appointments hard to keep on time, but the people were always there and waited patiently for trains and the speaker. It certainly paid, although it was a most strenuous trip. One cannot help but feel encouraged the way the work is welcomed. The schools of Greater New York seem to feel as enthusiastic as the smaller places where the birds can be seen and studied first-hand.

During the year I have given 143 public talks and lectures and reached in this way over 25,000 teachers and pupils.

REPORT OF MRS. GRANVILLE PIKE, SPECIAL AGENT FOR WASHINGTON

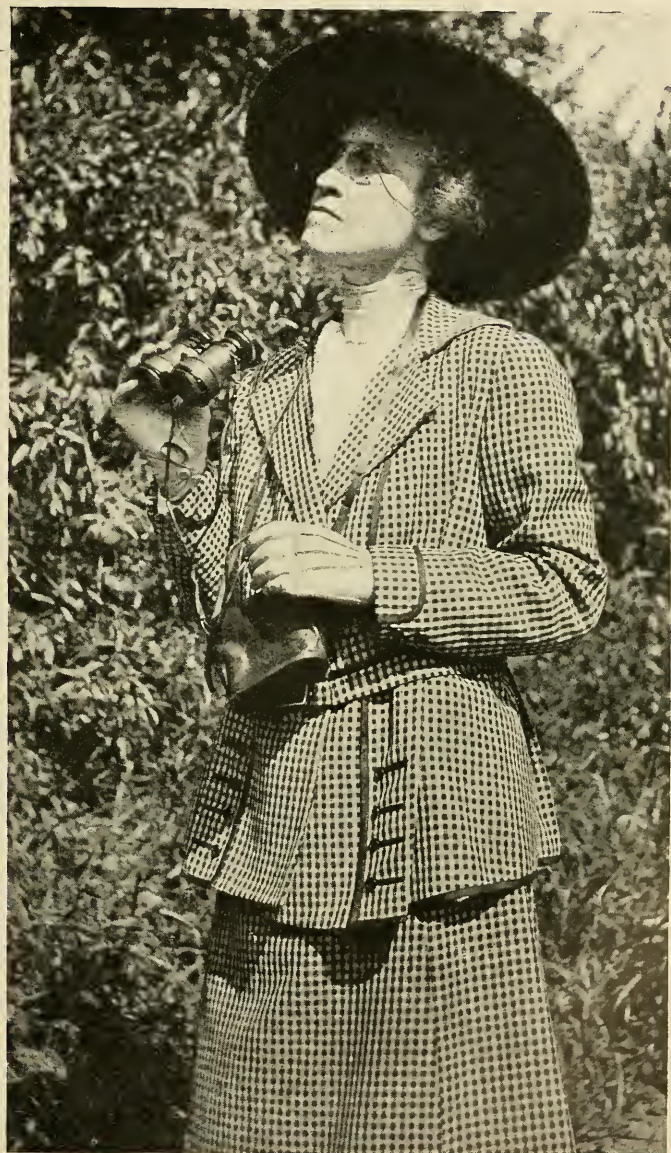
In the matter of bird-conservation Washington is no longer in the race for lowest place. Busied she still is with the foundation tasks of empire building, but she is rapidly coming to realize that the saving of natural assets is quite as important as accomplishments in production and construction.

A large proportion of any credit claimed may justly be given to the State Federation of Women's Clubs which, in the absence of a State Audubon Society, has for two years fostered this movement.

Early and full recognition should be given to the stimulating effect of assistance from the National Association of Audubon Societies which supplied the services of a field worker for three months and made possible the enrollment of 14,696 Junior Audubon members.

If the eastern givers, who generously finance such campaigns, could have followed the course of this—one day in the tense, alert, crowded auditorum of the city, the next in the isolated appreciative one- or two-room rural school—they would realize with joy that they have made a worth-while investment.

One day there was, outstanding and distinct in its experiences, when a



MRS. MARY S. SAGE, SCHOOL LECTURER FOR THE NATIONAL ASSOCIATION

group of the state's best women took the organizer through the driving rain of an equinoctial storm, over slippery unsteady plank roads, to the schools in the logging-camps of the Gray's Harbor region. When the schools of Moclips and Pacific, on the very western rim of the continent, pledged themselves to work for bird welfare, it seemed somehow a sacred, sacrificial thing that these boys and girls, so remote from Audubon headquarters, should unite themselves as a final link in one of its chains for the protection of wild life.



FEEDING FRIENDLY FINCHES.

Photographed at Aberdeen, Washington, by Mrs. Granville R. Pike.

Prominently among our bird mercies we reckon the fact that our Governor, our State Superintendent of Schools, and our State Game Warden have each given their personal and official encouragement to the cause of the birds and have aided in the making of bird-exhibits which have formed an important part of our educational activity this year.

In addition, all the educational forces of the state are turning their attention, in increased measure, to bird-conservation. Our higher institutions of learning are putting considerable emphasis on bird-study, and our public schools are giving more time to this phase of nature instruction than formerly. Seattle had a notable Bird Day this year, and many other schools observed the day worthily.

Where, heretofore, the solitary bird-student pursued his lonely way, there

are indications of developing community interest in birds. The remarkable growth of the Spokane Bird Club, the formation of a large Audubon Society in Seattle, and the beginnings of study clubs in Tacoma and elsewhere are all encouraging signs of the times.

No single recognition of bird-needs has given more encouragement than a recent decision of the State Game Farm management to include provision for non-game birds in the planting plans of the game farm at Walla Walla. This



A JUNIOR AUDUBON CLUB IN THE MAKING.

Mrs. Granville R. Pike organizing a Junior Class in a school-room at Tacoma, Washington.

will eventually mean a sanctuary for all land- and water-birds that can be attracted to the region.

Another significant departure is a movement to bring about a better understanding of conditions and needs of wild life by some innovations on the annual program of State Game Wardens and Commissions and by the attendance, on this occasion, of fraternal delegations from women's clubs.

In spite of all this self-gratulation, we are far from satisfied with our progress. Among other things, we badly need an organ for regular, systematic publicity and educational propaganda concerning birds and their welfare. Aside from an Arbor and Bird Day Bulletin for the public schools and a pamphlet on bird-study just issued by the Normal School at Cheney, nothing has been published recently except occasionally some local material.

Another lack is that of an educational assistant to our Game Commission, one who could coördinate and direct all the sympathetic, friendly bird forces in the state.

We propose that the coming year shall see no slackening in the task of enlisting and instructing the children and youth of our state in the knowledge and care of birds. We will also endeavor to acquaint adults with the recreational joy and profit of bird-study. We will continue to proclaim the inestimable value of birds to garden, farm and forest. All this we will do in order that the conservation of our feathered helpers may become more complete, and that, in these troublous times, all our homes may come under that saving, kindly, humanizing influence which is the sure reward of unselfish service to gentle life.

REPORT OF DR. WITMER STONE, SPECIAL FIELD AGENT FOR SOUTH CAROLINA

Last May I had the pleasure of engaging in interesting work in South Carolina, where, in the interests of bird conservation, I was operating under the auspices of the National Association of Audubon Societies.

Some of the special points visited were Charleston, Columbia, and Rock Hill; all centers of interest in bird and Audubon work. Through the cordial coöperation of Paul Rae, an illustrated lecture was given to a large audience in the Charleston Museum before the Charleston Natural History Society.

In Columbia I gave illustrated lectures before the Bird Club and the Science Club of the State University. Arrangements for these were made by Miss Belle Williams, who, for the past fifteen years, has been a faithful worker in South Carolina in the cause of bird-protection. The authorities of the University also invited me to address the entire student body in the chapel. On this and other occasions, where I had the pleasure of bringing the subject of bird-study and bird-protection before the people, it was gratifying to find how many people are becoming thorough, reliable, local ornithologists.

While visiting in Manning I found a desire on the part of many people to hear a lecture on birds. I therefore arranged for a public meeting in a moving-picture theater which was generously offered by the managment for the purpose. This is in the center of an important agricultural and truck-growing region. The large audience that gathered was composed of both adults and school children.

The Manning *Times*, the leading paper of Clarendon County, kindly offered to publish a series of articles on the local birds and their economic value. I have prepared a number of these, and they were published from time to time, carrying the message of bird-protection to a large part of the rural population of the central part of the state.

REPORT OF CHARLES CRAWFORD GORST, CHAUTAUQUA AND LYCEUM LECTURER

It is now commonly recognized that as an inspirational force and moulder of public opinion the Chautauqua platform has few equals. But the enthusiasm generated by it, like that of its kinsman the evangelistic campaign, should be more and more directed toward and conserved in visible community works.

Each summer, on the Chautauqua platform, I have tried harder to conserve the interest aroused by my lecture-entertainment on birds by attempting to organize bird clubs. Four years ago, during a three-months Chautauqua circuit with the Redpath-Horner Chautauquas in Texas, Kansas, and Oklahoma, the audiences, with increasing frequency, suggested that their interest in birds should be saved and developed by bird clubs. The following summer, the management established bird-study as an activity of its junior or children's Chautauquas on its three circuits. It was my privilege to tour one of these circuits and coöperate with the junior Chautauqua supervisors in interesting children in birds and organizing Junior Audubon Societies. This campaign meant that during three months the children of about 225 towns of Texas, Oklahoma, Kansas, Missouri, and Nebraska were interested, for at least a week, in birds; and in at least 70 per cent of those towns we organized Junior Audubon Societies.

Late last spring I decided that during eleven weeks of Chautauqua appearances for the Coit-Alber Chautauqua Company, I would attempt the organization of bird clubs for adults. This decision was made too late to do desirable preliminary work in each community by correspondence. But each day, for two or three days before the bird-program, the platform manager announced that after the program a meeting would be held to organize a bird club.

During an hour's program, my purpose was to interest the audience in both the beauty and the usefulness of birds. To do this, I opened with a whistling solo and a novelty number, then imitated the songs of birds during forty-five minutes, accompanying the bird-music with observations on the beauty and meaning of bird-songs and with paintings of the birds about four times life size. During the last fifteen minutes I attempted by word pictures to impress the audience with the astonishing usefulness of birds, and concluded the program with an exhortation to observe and learn to love the wonder and beauty of nature.

Usually, the after-meeting was well attended. I first described the useful and interesting things that the community should do to encourage the birds. I also emphasized the personal refinement and social pleasure that a bird club would bring. Then, if a good majority of those present voted to organize, nominations were in order by any above fourteen years of age for a board of club directors. I urged that the club affiliate with the National Association of Audubon Societies and rely on it for help. It was pleasing to see how quickly



CHARLES CRAWFORD GORST.
Chautauqua and Lyceum Lecturer.

the nominations were made and how those most interested in birds were chosen. To the chairman of the Directors I gave Audubon Society literature and urged him to write immediately for more and for suggestions concerning special local needs. The Directors (who I advised should be composed about equally of men and women) then appointed a date, time, and place for a Directors' Meeting about a week ahead, giving the Chairman time to write or inquire concerning available bird-lecturers, literature, etc. I advised that the Directors elect their officers at that meeting, from their own number, and plan for a public meeting which would consist of an address or other program on birds, followed by an explanation of the bird club's origin and purpose and by an exhortation to the public to join.

I urged each Board of Directors to establish some bird-work among the children of the town, and especially to keep them interested in birds during the summer vacation when the schools' activities cease.

These meetings were usually followed by many questions about desirable bird literature and about the common and interesting things of bird-life. I was much interested to see how often both men and women who had paid little attention to birds declared themselves back to childhood, the time when nearly all of us are somewhat interested in them; and how some people who respond little to the presentation of the economic value of birds, will become enthusiastic when the poetry and sentiment connected with birds is emphasized.

During June and July the lecture-entertainment was given in forty-six circuit towns of Pennsylvania, Ohio, Michigan, and New York. Five of these already had bird clubs; four failed to organize; in thirty-seven it was voted to organize and committees of directors were elected. During August I filled independent Chautauqua engagements. This necessitated so much more railroad travel and so much less time in each town that I did not attempt to organize clubs. Two towns, however, early in August, voted for clubs and elected directors. During two months of lyceum engagements this fall I shall continue the organization of clubs in coöperation with the National Association wherever possible.

Bird clubs were formed, at the conclusion of my lectures, at Niles, East Liverpool, Lima, Martin's Ferry, New Philadelphia, Coshocton, Chillicothe, Crestline, Washington, Middletown, Versailles, Sidney, East Cleveland, Akron, Ravenna, Tiffin, and Dormont—all Ohio towns. Also at Coraopolis, New Brighton, Coudersport, Ridgway, Du Bois, Vandergrift, Blairsville, Varnesboro, Ligonier, Irwin, Washington, Somerset, and McDonald, in Pennsylvania; at Wyandotte, Pontiac, Bay City, Owosso, Jackson, and Adrian, Michigan; at Elkhart, Indiana; and at Hornell, New York.

REPORTS OF AFFILIATED STATE SOCIETIES AND OF BIRD CLUBS

REPORTS OF STATE SOCIETIES

Arizona Audubon Society.—Our Society did less educational work the past year than usual. One public illustrated lecture was given on 'Birds and Their Habits,' by Dr. C. T. Vorhees, Professor of Zoölogy at the University of Arizona.

Along constructive work we did more this year than ever was done since the organization of the Society. Our efficient President, Thomas K. Marshall, made it possible financially to incorporate the Arizona Audubon Society. The heat of summer retarded this work somewhat, but with cooler weather this will soon be accomplished. Mrs. Marshall, who is an artist, kindly drew designs and presented them to the Audubon Society members, from which they chose for our 'State Seal' the Cactus Wren.

The Arizona Audubon Society is affiliated with the National Association of Audubon Societies, and we have received their 'war' posters, but as we have to deal with the Mexican foreign element, we have not been able to use many of them.—HARRIET B. THORNER, *Secretary*.

California Audubon Society.—This being legislative year in California, we were again called upon to defend certain non-game-birds. For the sixth consecutive session, the Meadowlark was attacked, all Blackbirds and the Red-shafted Flicker being also included.

The complaint against the Flicker was that it made holes in buildings, thus destroying them. In the rice-growing sections of the north, where there are miles of water and tule-bordered sloughs, vast numbers of Blackbirds congregate and do harm in the neighborhood. Because of this there was a sentiment against them in particular and all birds in general, and we were obliged to keep representatives at the Legislature six weeks. John V. Frederick, our Treasurer, and Mrs. Adele Lewis Grant, lecturer and bird student, did valiant work, and, although there were several hundred game bills put in, many of which were adverse, all were killed in committee except that against the Blackbirds, which were taken from the protected list in the three northern fish and game districts. However, because of their abundance, and the friendly attitude of most people, we do not feel that there is any danger of their being exterminated.

A leaflet setting forth the value of Meadowlarks, Flickers, Blackbirds and Robins was sent to all legislators, leading newspapers, and club women—the latter organizations giving splendid help. We are now helping distribute a new war bulletin, 'Birds and Food Conservation,' which is being sent out by the Bird

Chairman of the General Federation. These leaflets will be sent to anyone wishing them.

Two new adult Audubon Societies have been formed, one being in San Francisco, the other in San Diego. A good many Junior Societies have been formed, one of the largest having over 700 members (Pomona). In Santa Barbara, where Miss Gretchen Libby is in charge of nature-study, the large Junior Audubon Society has had a lake and surrounding acreage set aside as a bird sanctuary and are feeding and protecting the birds.

Though many cases of bird-killing have recently been reported, I believe that we have no reason to feel that our work is not bearing fruit. On the whole, the bird educational work in this state is progressing.—(Mrs.) HARRIET WILLIAMS MYERS, *Secretary*.

Colorado Audubon Society.—Our Society sustained a great loss early in January, 1917, in the death of its Secretary-Treasurer, Miss Leona Robbins. Miss Robbins' whole heart was in the Audubon work, and she gave freely and willingly much of her time to it, often speaking to the children at the schools and elsewhere, beside feeding and caring for the birds about her home at Ivywild, a suburb of Colorado Springs.

At the annual meeting of the Society, held shortly after her death, her place on the Board of Trustees was left vacant, and the President was authorized to appoint her successor, which, however, has not yet been done. For various reasons, the Society has not been quite as active in its work as in past years, but something has been done, however. Dr. W. W. Arnold has given bird-talks in some of the schools of Colorado Springs and the neighboring region. The Doctor illustrates his talks with living birds from his Bird Hospital, to which children and others bring many an injured bird which is cared for and set free when cured, if able to care for itself. The Cheyenne Bird Club, organized a year ago in Ivywild under the leadership of Lloyd Shaw, has awakened much interest in bird-life.

Reports are lacking from other parts of the state, though I understand work has been done in Denver and Pueblo.

The Society is in good condition financially, and has held its membership well, though not greatly increased, but that is hardly to be expected in these times when there are so many calls upon the people because of the war.—EDWARD R. WARREN, *President*.

Connecticut Audubon Society.—The work of the Connecticut Society has, in the main, followed the usual educational lines. The material handled for us by the State Board of Education has been circulated as follows: Traveling libraries to 52 schools (3 months each); lectures, 32 different towns; charts, 191 schools; portfolios of postcards and 23 portfolios of 'Birds of New York' in circulation.

We are about to send out a new lecture entitled 'The Museum Man in the Country,' text by Mrs. Wright, illustrated by 75 slides made and colored by Wilbur F. Smith.

The work of the Junior Audubon Societies in connection with the National Association has been carried on as heretofore by Miss Hurd, our School Secretary, who has visited 35 cities and villages in the state, giving some 200 talks, and showing specimens of mounted birds to 25,000 children. As a direct result, 523 Junior Audubon Societies were formed, with a membership of 10,523.

Our Society presented a cat license bill to the Legislature last winter and sent a strong delegation to the hearing in committee. Two other bills of like nature were introduced by other bodies, but they were all killed. However, the whole matter was treated seriously, and we have great hopes that this work was-



SUPERINTENDENT NOVAK OF THE BIRDCRAFT SANCTUARY TAMING A CHICKADEE
Photograph by Wilbur F. Smith

an opening wedge, and we shall work without ceasing until the bill is presented two years hence.

Milton S. Lacey, one of our Executive Board, framed a bill of great importance for the protection of shore-birds that was successfully put through the Legislature, entitled 'An Act Concerning the Snipe, Plover, and other Shore-birds,' by which there is a closed season for Golden and Black-bellied Plover,



ROBIN AT BATH, BIRDCRAFT SANCTUARY, FAIRFIELD, CONN.

Photograph by Wilbur F. Smith.

Greater and Lesser Yellow-legs, and Wilson's Snipe, from December 31 to August 31, inclusive, while but ten of any or all of these species may be taken in one day. Semipalmated and Piping Plovers, Spotted, Least and Semipalmated Sandpipers may not be taken at all. All other shore-birds may not be taken until September 1, 1922, unless a change in the Federal Law shall require a modification.

At our Annual Meeting held in October, 1916, H. H. Cleaves gave a lecture on 'Bird-Study and Bird-Attraction.' On May 26, under the auspices of the National Association and the Connecticut Society, a Conference of the Bird and Nature Clubs of Connecticut was held at Fairfield. The Clubs assembled at Birdcraft Sanctuary in the morning, and a reception was held at 'Oakhaven,' the home of Mrs. Wright. A visit to the Sanctuary and Museum followed; also a meeting to organize a permanent Federation of Nature Clubs. After a basket luncheon, during which coffee was served both at 'Birdcraft' and in Mrs. Wright's garden, the Clubs adjourned to Sherman Hall in the village, where an open meeting was held and addresses were made by T. Gilbert Pearson; Winthrop Packard, Secretary of the Massachusetts Audubon Society; Mr. Ripley of the Hartford Bird Study Club; Rev. Coe and others. This Conference was of incalculable value, both to the cause of bird-protection and as a stimulus to bird-study, bringing together, as it did, people of widely different views from all parts of the state.

A new venture was sending, the past week, an educational exhibit to the Danbury Fair, one of the chief expositions held annually in the state.

We were allotted a table in the tent of the Fairfield County Farm Bureau, where special attention was paid to food conservation, and a presentation of the economic value of bird-life was particularly appropriate. A little panorama of bird-life in natural settings showed the shore-birds that may and may not be shot, the upland game-birds, useful Hawks and Owls, predaceous Hawks, and a group of song and insect-eating birds that are most frequently shot by foreign-born poachers. Each group was clearly labeled. There was also an exhibit of bird-houses that have been used in the Sanctuary, together with birds of the species that occupied them, and specimens of the berries to be found in the Sanctuary, fastened to large cards, and plainly named. Beside this table, Miss Hurd had an exhibit of the leaflets of the National Association, which she distributed, samples of the lantern-slides which she used in our free lectures, copies of BIRD-LORE, and 3,000 circulars describing the work of the Connecticut Audubon Society, the National Association, and the work of the Junior Audubon Societies and the manner of forming these groups. This idea proved very successful, a constant stream of visitors being about the exhibit, which introduced the work to many thousands of people otherwise unreachable.—HELEN W. GLOVER, *Secretary*.

District of Columbia Audubon Society.—At our annual meeting held on January 19, we had the pleasure of listening to a delightful, illustrated lecture by Dr. Arthur A. Allen, his subject being 'Studies of Common Birds.'

On March 28, a most enthusiastic audience greeted Ernest Harold Baynes, when he told us some of his own charming experiences in attracting the wild birds and made us all feel that we wanted to do the same thing.

Mrs. Florence Merriam Bailey led five most interesting and well-attended Bird-Study Classes. These were followed by our usual 'outings,' six in number this year, and with a larger attendance and greater variety of birds being observed than ever before. For a number of years we have had what we call our Honor Roll, composed of those who go on all the walks. It was Prof. Wells W. Cooke's kindly custom to invite the members of the Honor Roll on an extra trip, ending at the 'Wick-i-up,' his cabin at Viresco, a few miles out of Washington. For the past two years his sister and daughter have continued this generous hospitality, and the accompanying photograph shows some of us who were fortunate enough to be there this spring.

May 18 was the twentieth anniversary of the founding of our Society, it being the eighth to be formed in the United States. This year we celebrated our birthday by giving a reception to the founder of our Society, John Dewhurst Patten, at the residence of the Secretary, which everyone seemed to enjoy, and where we had the privilege and pleasure of hearing Miss Grace D. Litchfield read her own lovely poem, 'The Hermit Thrush.'

Considering the changeable character of the population of Washington, we think it rather remarkable that sixteen of our original members still hold office, either as Honorary Vice-Presidents or members of the Executive Committee.

—HELEN P. CHILDS, *Secretary*.

East Tennessee Audubon Society.—Our Society is progressing slowly, but surely. We know this because of the steadily increasing number of birds; and of the many adults, as well as children, who are interested and eager for information on the subject.



'HONOR ROLL' MEMBERS OF THE DISTRICT OF COLUMBIA AUDUBON SOCIETY
HAVING AN OUTING AT THE COOKE 'WICK-I-UP.'

We had one very interesting and instructive lecture by Dr. G. Clyde Fisher, Associate Curator of the American Museum of Natural History, who, during the Summer School at the State University, was lecturing for the National Association of Audubon Societies. Like Oliver Twist, we wanted more. Hon. W. D. Howser, our State Warden, always responds to any appeal for help we make to him. He lectured for us at the Farmers' Convention in May. Always a busy man, he found time to spend one day at the East Tennessee Division Fair, where he held the crowd entranced by his display of knowledge of the

habits of some sixty-odd mounted specimens of our common birds, which had been loaned by Dr. Fisher. Thanks to these two gentlemen and the energy and executive ability of two ladies, our exhibit at the fair was a complete success.

We put out the Association's 'war' posters in large numbers, instructed Boy Scouts, ran down offenders of the bird-law, visited schools, and talked 'birds' on all occasions.—MAGNOLIA WOODWARD, *Corresponding Secretary*.

Florida Audubon Society.—The sixteenth annual meeting of the Florida Audubon Society, held at Winter Park on March 15, brought together a large number of men and women who, in various ways, have indicated their deep and continued interest in the preservation of the feathered wild-life of Florida, where ruthless ignorance has caused more pitiful destruction, I am inclined to say, than has occurred in any other state of the Union.

The opening address of the President, Dr. W. F. Blackman, and the several reports of other officers and the secretaries of affiliated organizations, especially those of the local societies at St. Petersburg and Cocoanut Grove, were very encouraging, both as to work accomplished and prospective effort. During six months, closing May 1, the Florida Society kept on the job as Field Agent, Miss Isabel Goodhue, who visited 67 cities, towns and villages in the state, addressing during her itinerary 70 schools and colleges, 50 women's clubs or other adult audiences, and creating an interest that has resulted in a considerable increase in our active membership. During the year new Junior Classes were formed in the schools, increasing the number of these classes to 216, with a total membership of over 4,000, an increase of 67 classes and 1,200 members. We much regret that the Society is unable to retain the services of Miss Goodhue during the present year, so that this splendid work in the schools and the increasing interest of those just beginning to be persuaded to consider the value of the wild birds and to comprehend the need of their better protection might not be permitted to die out.

Aside from the distribution of leaflets to the Junior Classes, furnished by the National Association, we circulated 5,000 Florida bird-law leaflets, warning cards, and other printed literature intended to bring the protective laws of the state to the notice of both adults and children.

During the year, 95 new members were added to our list, the greatest number in a like period since the organization of the Society.

Following the business session of the annual meeting, Dr. H. R. Mills gave a talk on our passing plumage birds and their nesting habits, illustrating his remarks with photographic slides and touching vividly on some of the recent slaughter by inhuman hunters of plumes.

Our efforts at the recent session of the Legislature for more effective protective laws were not fruitful of the results hoped for. A carefully prepared bill, considerably curtailing the open seasons for hunting feathered game and providing for a state warden system, was presented and urged. Dr. Blackman spent



W. SCOTT WAY, SECRETARY OF THE FLORIDA AUDUBON SOCIETY.

several weeks at Tallahassee; Dr. Mills helped personally and by correspondence, and several members of the Legislature worked faithfully for the bill. It finally was passed in the last days of the session, but for some reason not clear to those interested in the saving of our passing wild life, the Governor vetoed it. Therefore, the enforcement of the bird and game laws remains with the several counties, with practically no funds provided for the payment of wardens. Our bird laws as they stand are comparatively good, but the machinery provided for their enforcement is antiquated and inadequate.

Though the war may, in a measure, divide the interest of some of our more faithful workers, we shall continue our efforts along former lines, increasing our output of printed matter, and making a special effort, through our affiliated organizations and interested members, for the establishment of bird-sanctuaries throughout the state, believing this to be, under present conditions, the most promising means of saving our wild bird life until the needed legislation can be obtained. Two such sanctuaries—one of several thousand acres near Fort Myers, known as the Julia Hanson Reservation, and the other embracing all lands within the limits of the town of Winter Park—already are established.—
W. SCOTT WAY, *Secretary*.

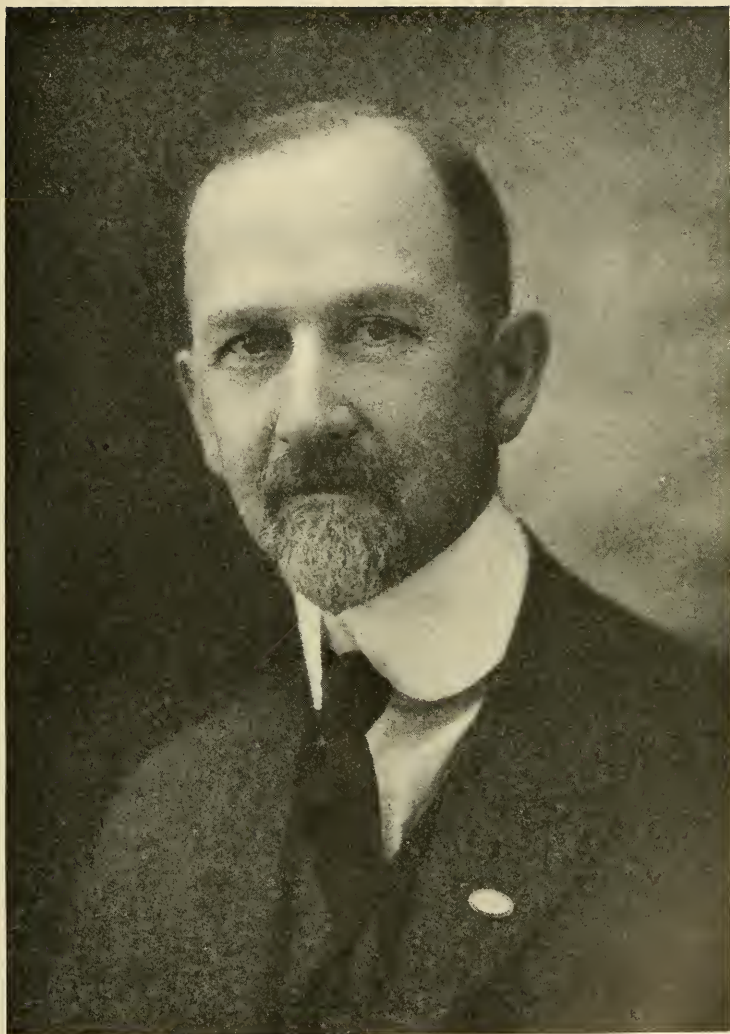
Illinois Audubon Society.—The Annual Meeting of the Illinois Audubon Society, held in Fullerton Hall, Chicago, May, 1917, marked the close of the twentieth year of continuous activity on the part of this organization.

The work of the past year has been unusually satisfactory, and we are glad to report a notable increase in membership. The routine educational work of the Society, which consists in distributing literature, loaning traveling libraries and sets of stereopticon slides, arranging lecture dates, etc., has progressed in much the same way as formerly. Our three sets of lantern-slides from photographic subjects, artistically colored, are particularly well liked and are in continuous demand by schools, churches, Boy Scouts and other clubs.

An important new enterprise has been the publication of a 'house organ,' so to speak—the *Audubon Bulletin*. This began with the Spring Bulletin 1916, and has been followed by two other issues, one for the winter 1916-17, and the other for spring 1917. The object of this publication is not only to create a wider interest in birds and their protection throughout the state, but to give publicity to the activities of our Society. The directors feel that the Bulletin meets a long-felt need, and they have been much gratified at the favorable comment evoked by the makeup and contents of the magazine.

Our most notable undertaking in 1917 was the launching of a spring lecture-course in Chicago, a cherished project which we had never before had the courage to attempt. To our surprise and pleasure this proved most successful, even from a financial standpoint. The lectures were given in Central Music Hall on Saturday mornings at 11 o'clock, March 3 and 24, and April 14. William L. Finley, of Oregon, gave the initial lecture, with his remarkable moving picture of the West, its animals and birds. On the second date, Mr. Baynes, of Meriden, N. H., gave his charming lecture on 'How to Attract the Birds,' illustrated by fine stereopticon pictures. April 14, Norman McClintock, of Pittsburgh, again fascinated a Chicago audience with his wonderful moving pictures of birds of the East and South. At each of these lectures the house was filled to capacity. The audiences were made up largely of adults, and one noteworthy fact was the presence of a goodly number of men, despite the morning hour, which had been considered a possible handicap for business people.

One practical accomplishment has been the ending of the aigrette traffic in Chicago. There is no statute in Illinois specifically forbidding the sale of aigrettes. The State Game Law, however, contains a clause making it illegal to sell any bird or part of wild bird, which some of the Directors believed was in itself a prohibition of the aigrette trade. Our attorney brought the matter to the attention of the State Game and Fish Commission, who referred it to the Attorney General. He rendered an opinion, holding that the clause in question made the aigrette trade illegal. When this was brought to the attention of the State Street stores, the managers promptly agreed to discontinue



C. M. Schantz

President of the Illinois Audubon Society.

the sale of aigrettes and to coöperate with our representatives in suppressing the trade throughout the city.—BERTHA TRAER PATTEE, *Secretary*.

Indiana Audubon Society.—In view of the fact that no general report of Audubon work was made last year, the present report will include that.

Last year the annual convention was held at Rushville, Ind., with a three-day program. The evening meetings were given over to lectures showing the close relationship of birds to the life of man, and stimulating more study and protection of the birds. All the schools were visited, and short bird-talks given by the Audubon members. Two lectures were given before the high school, entitled 'Our Summer Residents,' and 'Nature Study and Farm Life.' A bird exhibit of mounted specimens and bird-boxes was held in the annex high school. Only birds that could be seen at that time were shown. Longfellow's 'Birds of Killingworth,' was dramatized most effectively by second- and third-grade children. Following this was the field-trip to Flat Rock River by a large crowd of little folks and big folks. Saturday morning, children and grown-ups gathered at the annex high school yard to raise a Martin-house. This was the prize won by this school for the longest list of birds observed within a certain time. W. T. Wilson, who made and gave the prize, was present at the raising.

The 1917 convention was held at Michigan City in May. The children sang songs at the evening meetings and had charge of the programs at the door. Bird-lovers of Michigan and Illinois were invited to attend this convention. Invitations were sent to the Indiana colleges, universities and high schools, inviting them to send a representative to the Michigan City convention. The Secretary of the Illinois Audubon Society was present and told of its work for the birds. Prof. Eifrig, of Oak Park, gave a short talk on 'The Birds of the Sand-dunes.' This was given on one of the dunes near the lake, in front of the Prairie Club House. A Virginia Rail was seen leaving her nest, which she had placed under the step of the club-house.

A member of the National Dune Park Association was present, who briefly told of the dunes, urging our support toward purchasing them, and thus saving them for a state park. Mr. Redpath spoke of the great destruction of song-birds by hunters.

Over 100 of the National Association's 'war' posters have been placed in parks, reservations and farms. Several hundred acres near Muncie, Ind., have been given to the state as a reservation for wild life. The new State Park, 'McCormick's Creek Canyon,' is also a bird reservation.

An Environment Exhibit at Fort Wayne, supervised by Margaret M. Hanna, was most successful. Hundreds of birds were used from the Charles Stockbridge Collection and arranged in trees, shrubs, vines and bushes. Twenty thousand people visited this exhibit during the six days' centennial.

The Society now owns two sets of bird slides: one set of 50 has recently been purchased to be used by teachers and others interested in giving bird lectures;

the other set is to be used by the Field Secretary only. Bird-talks have been given before schools, churches, county and farmers' institutes, women's clubs, etc. Ernest Harold Baynes, in his Chautauqua work in Indiana, has been organizing bird clubs.

The Indiana Audubon Society has lost two good friends and helpers: One, Jane L. Hine, was a lover of birds, a helper in every bird organization, and a writer of bird-poems of unusual charm; the other, Dr. David Worth Dennis, who for so many years was the biologist of Earlham College. Dr. Dennis was a charter member of the Society. He was always present at its conventions and was president for three successive years. The memorial prepared by Alden H. Hadley will be published in the proceedings of the Academy of Science, of which Dr. Dennis was also a charter member.—ELIZABETH H. DOWNHOUR, *Secretary*.

Kentucky Audubon Society.—During the past year the Kentucky Audubon Society has put out no legislative propaganda nor employed any public speakers. Its activities have been limited to indulging in its customary series of bird-walks during the spring migratory period and to fathering certain educational works in the public schools, including a number of prizes awarded to manual training classes for the construction and maintenance of bird-nesting and -feeding-houses. The membership has increased slightly the past year.—EUGENE SIMPSON, *Assistant Secretary*.

Massachusetts Audubon Society.—The Society feels that one important work done by it since September, 1916, has been its help toward the passage of the Enabling Act which is needed to make the Migratory Bird Treaty with Great Britain and Canada vital. Its officers and many of its members worked ceaselessly to arouse public sentiment in favor of this act, and it brought all possible legitimate influence to bear on its Senators and Congressmen at Washington. Realizing the value of the efforts to this same end being put forth by the National Association of Audubon Societies of New York, under the able leadership of its Secretary, T. Gilbert Pearson, it contributed \$1,500 to the campaign, which has since proved so effective.

During the year the Society added 417 sustaining members to its list and increased its life membership by 39, making its total of sustaining members listed since its organization 3,188, its life members being now 441. For many years, through the courtesy of the National Association, the Junior Classes in bird-study have been conducted in this state by the Massachusetts Society. This work, during the past year, has been taken over by the National Association but has been conducted by the same staff, from its headquarters at the same address, and with the same excellent results. In relinquishing the work the Massachusetts Society wishes to express its appreciation of the courtesy extended by the National Association in this, as in so many other ways, and its

heartly good will toward the Junior Class work which it believes to be one of very great importance in the educational field.

During March the annual course of lectures by the most distinguished authorities on bird-life was held in Tremont Temple, with an attendance at each lecture of about 1,500. The speakers were Clinton G. Abbott, of New York; Dr. Arthur A. Allen, of Cornell University; T. Gilbert Pearson, Secretary of the National Association of Audubon Societies; William L. Finley, of Oregon; and Charles C. Gorst, of Cambridge, Mass. At the Society's Annual Mass Meeting in Tremont Temple, Ernest Harold Baynes and Mr. Gorst addressed an audience of some 2,500.

The Secretary has lectured as usual during the year throughout the state, doing his best to interest clubs, schools, granges and other societies in the cause. Unable to attend fully to the increasing demands, he has been ably assisted in this work by Miss Ruth E. Rouillard, of the office staff; Mrs. F. B. Goode, Local Secretary for Sharon; Rev. Henry Sartorio, of Boston, who appeared before various Italian societies of Greater Boston, speaking in Italian; and Charles B. Floyd, President of the Brookline Bird Club.

Through traveling lectures, traveling libraries, bird-charts, bird-calendars, bird-houses and supplies of all kinds, advice and assistance at the office, correspondence and personal inspection, in a hundred other ways too numerous to mention, the Society has, during the past year, labored faithfully, and, it feels, with a modest measure of success for the better protection of birds.—WINTHROP PACKARD, *Secretary*.

Michigan Audubon Society.—Our Society records about 100 lectures given by its officers to more than 15,000 individuals, chiefly school-children; the placing of 200 Audubon charts in schools, with helps for the teachers; a splendid exhibit (see the photograph) at Mid-winter Rally and the Oceana County Fair; the usual amount of literature distributed and letters written; and much publicity for the cause through the newspapers and the *Michigan Sportsman*.

At the annual meeting in February at Battle Creek, instructive addresses were given by representatives of the State Game Warden Department and the Public Domain Commission, and the local Audubon school clubs reported an outside feeding-station maintained by each school in the city. In the evening 'The Spirit of Audubon' film was presented to a large and delighted audience.

Through the efforts of the local Society, a cat license ordinance was passed in Grand Rapids, requiring a tax of 50 cents on male and \$1.00 on female cats in that city. At the last state legislative session, a law, which we helped agitate for, was passed giving the right to owners of property and officers to kill all cats destroying game, birds, or poultry. Thus is the anti-cat sentiment growing.

Around the state, Audubon Societies at Greenville, Ann Arbor, Portland,



MRS. EDITH C. MUNGER.
President of the Michigan State Audubon Society.

Three Rivers, Ypsilanti and Holland report bird-walks, exhibits, bird-house building contests, Audubon Day programs and other activities. The Bird Conservation Week at Holland was the most educational of all, since a splendid exhibit of mounted birds (grouped according to their uses), pictures, books,



VIEW OF PORTION OF EXHIBIT AT MID-WINTER BIRD RALLY HELD IN THE HOME TOWN OF THE PRESIDENT OF THE MICHIGAN AUDUBON SOCIETY. DISPLAY ARRANGED BY THE SCHOOL CHILDREN.

magazines, charts, houses, cat-guards, and feeding and bathing devices, in a downtown store building, was open the entire week, with efficient guides in charge. E. H. Sargent and Mrs. Edith C. Munger visited every school, giving talks on bird-protection and stereopticon lectures in the evenings.

Since Michigan was the first state to form a Wild Life Conservation Department in its Women's Committee, Council of National Defense organization, and our President was made its Chairman, much publicity is afforded the Audubon work through this channel.

What the next year may demand of us we know not, but we do know that our part in helping to add to the food-supply of the world will be through conserving bird-life as we have never done before.—(Miss) GERTRUDE READING, *Secretary*.

Nebraska Audubon Society.—The Society has had a most satisfactory year, with several achievements to our credit. We were successful in getting

some legislation passed. Our bill, introduced and warmly sponsored by State Senator A. J. Sawyer, of Lincoln, providing for a closed season on Doves, successfully passed and became a law. However, a provision for the setting apart of certain designated areas, both wooded lands and some lake regions in the sand-hill country, failed of passage.

Our members have been most keenly interested in the efforts of the National Association to preserve the Migratory Bird Law and the Treaty with Great Britain. Numerous telegrams and letters were sent to Washington to our Senators and Representatives and to committees in behalf of these measures.

The 200 suet-holders which were purchased early last fall by the Society and placed in the parks and along the boulevards, were certainly a delight to our winter visitants and sojourners. The suet was provided by the Society, and the Committee, aided by the Boy Scouts, kept the holders replenished.

The Society purchased, through the National Geographic Society, a set of fifty slides of Nebraska birds, painted by Louis Agassiz Fuertes. These beauti-



ON THE SHORE, CHILD'S POINT BIRD SANCTUARY, OMAHA, NEBRASKA.

ful slides have been of tremendous value to our work. Requests for the use of them have come to us from all over the state, and they have made a dozen journeys to different towns in Nebraska and Iowa. The slides have been shown a score of times in Omaha at churches, settlement and civic centers, with lectures by our President, Dr. Towne, and others. Enos Mills' lecture on



MISS JOY MONTGOMERY HIGGINS.
Secretary of the Nebraska Audubon Society.

the evening of February 24 was as delightful as it was instructive. Mr. Mills has many friends in Omaha, and he spoke to a capacity audience, numbering not a few Juniors in response to whose request he told in closing his ever-charming story of 'Little Blue.' It was at this lecture that the Fuertes slides were first presented.

Regular monthly meetings have been held throughout the year, always with an interested attendance. Lectures by members of the State University faculty and local ornithologists have been features of our meetings.

One hundred 'war' posters, from the National Association of Audubon Societies, printed on linen, are now being posted in the outlying woods and in



ONE OF THE WOODED SLOPES IN CHILD'S POINT BIRD SANCTUARY AT OMAHA.

Childs' Point, the beautiful 500-acre bird sanctuary which was preserved to posterity through the generosity of Dr. Harold Gifford. Dr. Gifford has had posted in the sanctuary other warnings and educational signs. The Society has offered a reward for testimony leading to the arrest and conviction of any one breaking the bird laws.

For the purpose and with the hope of acquiring and holding property, the Society was last July incorporated under the laws of the State of Nebraska.

Every year the interest in bird-life becomes more widespread. The extension work of the Department of Agriculture of the State University, the work in the public schools, the far-reaching work of the National Association, and other influences all do their big bit, but too much thanks cannot be given the

press, especially the newspapers of Omaha, in spreading the propaganda. For over two years and a half, the Omaha *World Herald*, aside from feature stories on the subject, has carried an editorial every Sunday, touching in the most interesting and intimate way some phase of bird-life. These editorials are from the gifted pen of Miles Greenleaf. Mr. Greenleaf is the most earnest and conservative bird-student, concerned in, and never failing to present, the economic value of our birds, but he presents his subject in a manner to attract the attention and bring the message home. He gives one the flash of color, the note of melody, and the fresh atmosphere of God's good out-of-doors. The following editorial of his, printed in the early summer, called forth scores of inquiries from potato-growers about their unknown friend, the Rose-breasted Grosbeak.

"THE DISAPPOINTED GROSBEEK

"He came one morning, with the glorious rose of his breast fairly sparkling in the sunshine and the black and white of his fashionable raiment setting off this adornment as a priceless ruby, perfectly mounted.

"It was a modest city garden that he chose for his hunting grounds this day, and there were potatoes in it, which he noted with approval, being of a Hooversque turn of mind and in favor of conservation. The potatoes themselves did not interest him gastronomically, but he doubtless reasoned that office gardeners in palm-beaches were not likely to seriously impair their health in modern methods of cultivation, and that his old friend, the potato bug, would be there in force.

"After surveying the promising prospect in something the manner that we inspect a comprehensive menu, this Rose-breasted Grosbeak swooped daintily down and began his foray. Diligently he prowled that potato patch—diligently and painstakingly and with unswerving attention to business. Up one row and down another he hopped and flew, and finally swooped to a fence-post and swore. If ever so beautiful a bird creature swore, this one did—and vehemently.

"'Well, may I be blistered if this don't beat all—get out!' he fumed, partly to himself. 'Not a single, bloody, yellow-backed striped son of a sea cook in sight? What do you know about that?'

"He had something to blaspheme about, too, for potato bugs are strangely scarce game in these parts this year, and potato bugs are the Grosbeak's favorite dish. Many a crop of spuds have been saved from these pests by this splendid bird, a fact which should interest Nebraskans, now that this has blossomed out as a potato state.

"But this particular Grosbeak ripped around awhile and then decided that if he couldn't have potato bugs he would try some other delicacy in season, and all day long he worked in that garden; he only knows how many thousand insects he removed from this citizen's ripening crop, if he kept count, which is doubtful. And in the evening he offered thanks with deep-throated melodious warble which completely defies all human instruments, and flew away, his gun over his shoulder, so to speak.

"Anyone who hasn't the proper appreciation of birds' service to mankind would do well to spend a few hours in a garden at this season. He should count the number of bugs and worms and things that these feathered foragers consume in a brief space of time, and then wish he had that many dollars so he could retire and have a private car and a winter home in southern California and live happily ever after."

—(Miss) JOY MONTGOMERY HIGGINS, *Secretary*.

New Hampshire Audubon Society.—The Audubon Society of New Hampshire reports a year of successful achievement. The membership has increased until it totals 885. Life memberships have increased from 37 to 56.

The Junior Audubon work has been pushed with vigor. More than 6,000 school-children were organized into Bird Classes, a very large percentage of the state's population. No work for bird conservation can be more promising for future results.

The secretary has given 69 lectures and addresses, many of them illustrated, before all sorts of gatherings—schools, churches, granges, women's clubs, summer hotels, teachers' clubs, young people's societies, private schools, etc.

A strong effort was made to get through the Legislature 'A Bill for the Better Protection of Birds by the Licensing of Cats.' The House Committee, originally hostile, was converted and favorably reported the bill, but it was killed in the House, principally through the hostility of the farmers, the very ones who would have most profited by its passage. A fine beginning was made, however, paving the way to ultimate victory.

From all over the state come to us inquiries of all sorts. People are learning to turn to us for help and information.

A bulletin 'Feed the Birds in Winter,' has been issued, and a large number of copies of this and other literature distributed. It is planned to issue at least one new bulletin every year.

Satisfactory reports have been received of a considerable increase in the numbers of the song-birds all over the state. This holds true also of game-birds. The Federal Migratory Bird Law is bearing its expected fruit. The Prairie Horned Lark is now a permanent resident. House Wrens, which have grown scarce of recent years, are coming back. Mockingbirds are working this way and



MANLEY B. TOWNSEND, PRESIDENT
OF THE NEW HAMPSHIRE AUDUBON
SOCIETY, VISITED BY SEVEN LIVE
FLICKERS.

are occasionally reported. Evening Grosbeaks are regular winter visitors all over the state. There is good circumstantial evidence that they may breed within our borders. Large numbers of Black Ducks have bred within the state. Robins and Warblers are particularly abundant. Tennessee, Bay-breasted and Cape May Warblers, once rare, are now common in migration.—MANLEY B. TOWNSEND, *Secretary*.

New Jersey Audubon Society.—During its seventh year, the New Jersey Audubon Society established an office and its headquarters at 164 Market Street, Newark, and secured the aid of an assistant.

The total receipts for the year amounted to \$5,612.46 and the total expenditures to \$4,193.93, leaving a balance on hand at the close of the fiscal year of \$1,418.53.

Abnormal conditions, due to the world war, were seriously felt in the campaign for increased membership, so that the net gain in this respect was only 16 sustaining members, 57 members, and 13 associate members, but several substantial contributions were received—one of \$1,000, one of \$300, and one of \$100.

In legislative effort, attempts to secure a cat license law and a law affording permanent protection to the Bobolink were of no avail. The annual bounty bill, a measure providing bounties on Hawks and Crows, introduced by the enemies of bird-life were once more defeated. The Society took its usual part in Federal legislative effort.

Publicity work continues to increase as a field of activity, with steadily developing coöperation on the part of the press of the state. The Newark *Evening News* greeted the advent of the Society in Newark with a well-written and finely illustrated article, and on September 22 published a similar one, calling attention to the Society's work. Several other important news articles have been published, in addition to the regular news articles that go to the general press of the state.

The Society organ, the *New Jersey Audubon Bulletin*, has been published regularly throughout the year at two-month intervals, each issue containing a halftone illustration.

Ten lectures have been given by the Secretary during the year in various parts of the state, with several minor talks.

Two of the members of the Society have established bird sanctuaries on their estates.

The Society devoted an even greater amount of time and attention than heretofore to Junior Audubon Class work in the schools, in coöperation with that field of activity of the National Association. A total of 579 Junior Audubon Classes, with a membership of 14,382, were organized in New Jersey.

The seventh annual meeting was held at the Free Public Library, Tuesday, Oct. 2; business session at 4 P. M., followed immediately by the meeting of

the Board of Trustees; public session at 8 p. m. Col. A. R. Kuser gave up the presidency on account of ill health. Officers elected were: President, Clarence B. Riker; Vice-President, W. DeW. Miller; Secretary-Treasurer, Beecher S. Bowdish; Board of Trustees—Clarence B. Riker, W. DeW. Miller, Beecher S. Bowdish, Anthony R. Kuser, George Batten, Henry van Dyke, Frank M. Chap-



B. S. BOWDISH,

Secretary of the New Jersey Audubon Society. He is one of the Audubon Societies' most active field men.

man, Edwin S. Lines, John K. Gore, Alexander H. Phillips, Philip B. Philipp, John T. Nichols, Mrs. Walter D. Ferres, John Dryden Kuser, Ira Barrows, Samuel N. Rhoads, Miss Mary Pierson Allen.

At the evening session, Mr. Henry Oldys, as accredited representative of the Hoover Food Administration, gave a free illustrated lecture on 'Birds and Food Shortage' to a good and appreciative audience.—BEECHER S. BOWDISH, *Secretary*.

Audubon Society of North Carolina.—The past year has been full of activity for the Audubon Society of North Carolina. Although we have state jurisdiction in the matter of enforcing the game laws in only about one-third of the state, we find a large field in which to carry on our work. Our wardens have done good work; they secured the conviction of 161 violators of the game laws during the past year. We believe our game laws are being better observed each year.

One of the most important branches of our work during the past year has been the organization of Junior Audubon Societies in the schools and among the Boy Scouts of the state. There were 132 of these societies organized last year, with a total membership of 2,925. A number of these schools held special Bird Day exercises, thereby interesting the entire community in the importance of the preservation of bird-life. We are always glad to coöperate with the National Association in this work.

The Secretary has been active in giving lectures on bird-life all over the state. During the last year 134 such lectures were given, most of them being illustrated with charts, pictures, or stereopticon views. Not less than 10,000 people heard these lectures, and we believe many of them are now ready to give us their hearty coöperation.



A SAMPLE OF BIRD-BOXES MADE FROM CYPRESS KNEES. THIS EFFORT IS FOSTERED BY THE NORTH CAROLINA AUDUBON SOCIETY.

In all our talks we emphasize the urgent need of uniform game laws for our state and condemn the method of allowing each county to have its own laws. Every two years, when our Legislature meets, we work to secure the passage of uniform game laws and for the establishment of a Fish and Game Commission for our state. At the recent meeting of our Legislature we came near getting such a Commission established. So far, however, we have not succeeded, but we are determined to make another desperate effort in 1919.—G. A. MARTIN, *Secretary*.

Ohio Audubon Society.—The Society has just closed a very prosperous year. Both in point of membership, as well as financially, we can report great progress. The present year is the twentieth year of existence as a state organization. A vast amount of good has been accomplished during these twenty years. We feel, however, that much remains to be done, and to this work we dedicate ourselves more earnestly than ever before.

Our monthly meetings are always times of great enjoyment for our members. Many interesting lectures on practical topics are delivered on these occasions. So-called 'Experience Meetings' are held from time to time. The May meeting is our 'Outdoor Meeting,' at which all bird-lovers are welcome. Besides this, we have weekly 'hikes' on which bird-life at all seasons of the year is studied at first-hand.

The interest in bird-life throughout this entire region is very keen. This is evidenced on every hand. Bird-shelters, feeding-devices, baths, nesting-boxes, etc., may be seen everywhere, in yards and along streets, throughout the city. Our City Park Department has put up hundreds of nesting-boxes and feeding-devices in the various parks and boulevards in and about the city.

Unfortunately, cats still run at large in Cincinnati and surrounding territory in vast numbers. Their depredations upon our bird-life are very great. We have been, and still are trying, to educate the public to come to a realization of the great harm done by the stray cat. We hope to induce our City Council to pass an ordinance requiring the licensing of all cats and the destruction of all unlicensed cats. The excellent publication, 'The Domestic Cat,' by E. H. Forbush, is being distributed by our Society to great advantage.

The work of providing lecturers for gatherings at schools, churches, etc., is vigorously carried on, and a great many people are reached in this way each year. The many letters of inquiry, as well as complaints, that come to the President and Secretary of this Society are an indication of the public interest. All complaints are carefully investigated and offenders against the law are reported to the game-wardens.

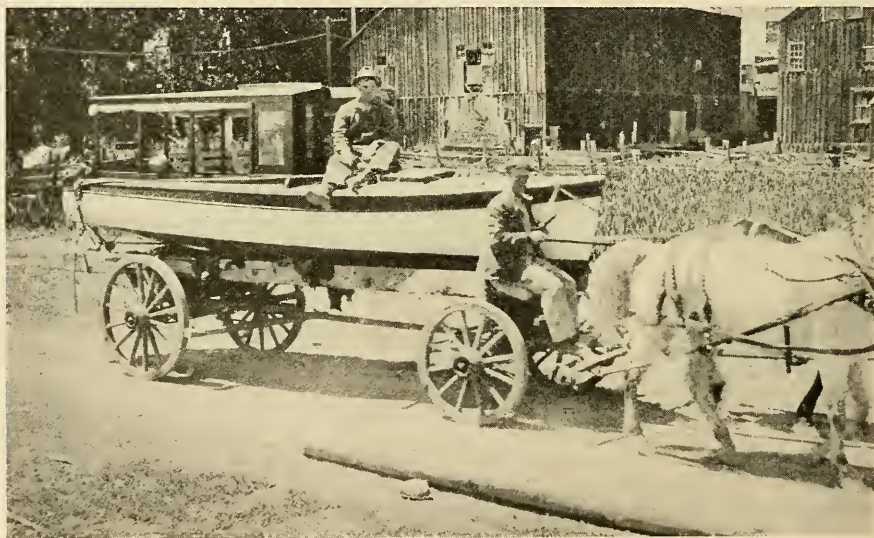
Our Society published a 'Year Booklet' which has proved a valuable aid in our work. This booklet contains, besides a variety of interesting articles on bird subjects, the lecture topics for the regular meetings of the ensuing year. All members, as well as many friends, are provided with copies. We have

changed our meeting-place during the year. We now hold our gatherings in a beautiful room which the Ohio Mechanics' Institute has put at our disposal for that purpose.

With every encouragement and hope of greater success, we enter upon the work of the new year.—WILLIAM G. CRAMER, *Secretary*.

Oregon Audubon Society.—Interest in bird-protection throughout the state has not only continued, but increased, during the past year. More teachers and children are taking part in Audubon work by building bird-houses and feeding birds in winter. The plan of the Society for holding weekly meetings during the past year has been a very successful one.

Illustrated talks have been given by A. L. Campbell, William L. Finley, R. B. Horsfall and others. The idea of this course of talks through the year has been arranged largely for beginners in bird-study. The meetings have been under the direction of W. A. Eliot.



THE NEW AUDUBON PATROL BOAT "GREBE II" ON HER WAY TO KLAMATH LAKE, OREGON, FOR HER MAIDEN CRUISE.

At the legislative sessions held during the past year, no bills were introduced that were detrimental to the protection of wild birds. On the other hand, a bill was presented setting aside a large area, including the greater part of Multnomah County and part of Clackamas County, as a wild-game refuge. This bill passed without opposition and is now in effect. It is an important addition to the other state and Federal wild-bird reservations previously established.—Dr. EMMA J. WELTY, *Secretary*.

Rhode Island Audubon Society.—The Audubon Society of Rhode Island has made no unusual effort in its bird-work during 1917. The following records for the year, however, show a steady and consistent effort to keep the cause of the birds before the minds of the people of Rhode Island, even in the midst of the added labors which the war is placing upon everyone.

The books of the circulating library of the Society have been used by 1,142 different individuals and have had a circulation of 6,003.

In coöperation with the National Association, 45 classes of Juniors, with a membership of 1,200, have been formed and renewed.

The Society has placed in the schools of the state 37 Audubon Bird-Charts, 10 Bird-Guides, 2 Flower-Guides, 1 Butterfly-Guide, 2 Tree-Guides, 1 Bird-House Guide, all of which become the property of the school-room and should continue to do good service in these rooms until worn out.

The Secretary and Librarian have given 59 bird-lectures during the year to a total of 12,034 individuals. This large record is due to the fact that the Secretary, as Curator of the Park Museum, gave a bird-talk to every grammar school in the city of Providence during the spring of 1917.

The Society conducted 12 field-trips for bird-study during the spring months.

A summary of the work of the Society over a period of years should be of interest to members of the Association:

For a period of six years, the books of the library have had a circulation of 36,176 among 7,834 persons.

In six years, the Secretary and Librarian have given 286 bird-lectures to 37,085 persons.

In six years, 298 Audubon Bird-Charts have been placed in the school-rooms of the state, and during the past three years, 49 volumes of Nature-Guides have been similarly placed.

During the past spring, the Park Museum, in coöperation with members of the Society, conducted a Bird-Migration Record for the state for the months of March, April, and May. Fourteen bird-observers from all sections of the state sent to the Museum a weekly record of their observations. The Museum expects to continue this work in succeeding years, so that the accumulated data received from these observers will eventually result in valuable state records. Already, some members of the Society have records of some years' standing. This is particularly true of Mr. Harry S. Hathaway, whose record covers a period of twenty-five years.—H. L. MADISON, *Secretary*.

West Virginia Audubon Society.—During the past year our Society has not accomplished so much for the good of the cause as could be desired, as general apathy has been prevalent for the past several months, and if we are to make good during the coming year it behooves us to engage in propaganda work as well as personal solicitation.

The red-letter days for our Society during the year 1917 were marked by the entrance of Henry Oldys into our little mountain state last March as a lecturer for the National Association of Audubon Societies. Mr. Oldys lectured in the public schools of several cities throughout the state, and the results of his work were very gratifying. In Parkersburg, the home of our Society, 41 Junior Audubon Classes were organized, with an aggregate membership of 1,112 pupils.

During the early spring months we had several field excursions for the observation and identification of the spring migrants, which were very pleasant and profitable. Our most notable excursion was made on the afternoon of May 14, when 44 species of birds were identified, including several of the rare Warblers.

Our Society has consistently and persistently advocated a closed season for the Bob-white, to last for several years, in this state, but we have not yet succeeded in convincing our worthy legislators that such a course would be expedient or wise. But we have not lost hope that the worthy measure will finally be enacted.—(Miss) BERTHA E. WHITE, *Secretary*.

REPORTS OF AFFILIATED ORGANIZATIONS

The length of the reports of the National and State Audubon Societies necessitates deferring publication of the reports of our affiliated organizations until the January-February, 1918, issue of BIRD-LORE.

Reports from the following organizations will appear in that number:

Audubon Society of Sewickley Valley (Pa.); Audubon Society of the Pacific; The Bird Club of Long Island; Bird Conservation Club (Maine); Birdlovers' Club of Brooklyn (New York); Blair County (Pa.) Game, Fish and Forestry Association; Brookline (Mass.) Bird Club; Brush Hill (Mass.) Bird Club; Buffalo (N. Y.) Audubon Society; Burroughs Junior Audubon Society (Kingston, N. Y.); Cayuga (N. Y.) Bird Club; Columbus (Ohio) Audubon Society; Cumberland County (Maine) Audubon Society; Doylestown (Pa.) Nature Club; Englewood (New Jersey) Bird Club; Forest Hills Gardens (N. Y.) Audubon Society; Frankfort (Ky.) Bird Club; Glenville (W. Va.) Normal Bird Club; Hartford (Conn.) Bird-Study Club; Los Angeles (Cal.) Audubon Society; Maywood (Ill.) Bird Club; Meriden (N. H.) Bird Club; Minneapolis Branch, Minnesota Game-Protective League; Natural History Society of British Columbia (Victoria, B. C., Canada); Newburyport (Mass.) Bird Club; The North East (Pa.) Nature-Study Club; Pasadena (Cal.) Audubon Society; Port Huron (Mich.) Bird Club; Rhinebeck (N. Y.) Bird Club; Rockaway (N. Y.) Bird Club; Rumson (N. J.) Bird Club; Saratoga (N. Y.) Bird Club; Seattle (Wash.) Audubon Society; South Bend (Ind.) Humane Society; South Haven (Mich.) Bird Club; Spokane (Wash.) Bird Club; Vassar College (N. Y.) Wake-Robin Club; Vigo County (Ind.) Bird Club; Wellesley College (Mass.) Bird Club; Western Pennsylvania Audubon Society; Wild Life Protective Society of Milwaukee; Williamstown (Mass.) Bird Club; Winston-Salem (N. C.) Audubon Society; Wyncote (Pa.) Bird Club.

JOHN H. KOCH & COMPANY, Certified Public Accountants
Liberty Tower, 55 Liberty Street, New York

NEW YORK, October 29, 1917.

THE AUDIT COMMITTEE,
National Association of Audubon Societies,
1974 Broadway, New York, N. Y.

Gentlemen:—In pursuance with engagement, we have made our customary examination of the books, accounts and records of the National Association of Audubon Societies for the year ended October 19, 1917, and present herewith the following Exhibits with Comments:

EXHIBIT A—BALANCE SHEET AS AT OCTOBER 19, 1917.

EXHIBIT B—INCOME AND EXPENSE ACCOUNT, GENERAL FUND.

EXHIBIT C—INCOME AND EXPENSE ACCOUNT, SAGE FUND.

EXHIBIT D—INCOME AND EXPENSE ACCOUNT, EGRET FUND.

EXHIBIT E—INCOME AND EXPENSE ACCOUNT, CHILDREN'S EDUCATIONAL FUND.

EXHIBIT F—INCOME AND EXPENSE ACCOUNT, DEPARTMENT OF APPLIED ORNITHOLOGY.

EXHIBIT G—STATEMENT OF RECEIPTS AND DISBURSEMENTS.

Submitting the foregoing, we are

Very truly yours,

JOHN H. KOCH & CO.,
Certified Public Accountants.

The Report of the Treasurer of the National Association of Audubon Societies, for Year Ending October 19, 1917

Exhibit A

ASSETS

<i>Cash in Banks and Office</i>		\$27,843 94
<i>Furniture and Fixtures—</i>		
Balance, October 19, 1916.....	\$1,731 05	
Purchased this year.....	518 30	
	<hr/>	
	\$2,249 35	
<i>Less—Depreciation</i>	224 93	
	<hr/>	2,024 42
<i>Inventory of Plates, etc. (Nominal Value)</i>		500 00
<i>Bird Island Purchase, Orange Lake, Fla.</i>		250 20
<i>Buzzard Island, S. C.</i>		300 00
<i>Audubon Boats—</i>		
Balance, October 19, 1916.....	\$3,098 10	
Additions this year.....	0	
	<hr/>	
	\$3,098 10	
<i>Less—Depreciation</i>	309 80	
	<hr/>	2,788 30
Amount carried forward.....		\$33,706 86

ASSETS, continued

Amount brought forward		\$33,706 86
<i>Investments, Endowment Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....	\$387,100 00	
U. S. Mortgage & Trust Co. Bonds.....	3,000 00	
Manhattan Beach Securities Co.....	1,000 00	
	<hr/>	391,100 00
<i>Investments, Mary Dutcher Memorial Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....		7,100 00
		<hr/>
		\$431,906 86

LIABILITIES

<i>Endowment Fund—</i>		
Balance, October 19, 1916.....	\$387,259 89	
Received from Patron.....	1,000 00	
Received from Life Members.....	11,125 00	
Received from Gifts.....	300 00	
	<hr/>	\$399,684 89
<i>Mary Dutcher Memorial Fund—</i>		
Balance, October 19, 1916.....		7,737 70
<i>Special Funds—</i>		
Mrs. Russel Sage Fund, Exhibit C.....	\$852 53	
Egret Protection Fund, Exhibit D.....	870 15	
Children's Educational Fund, Northern States, Exhibit E.....	16,541 69	
Department of Applied Ornithology, Exhibit F.....	118 99	
	<hr/>	16,440 32
<i>Surplus—</i>		
Surplus beginning of year.....	\$5,996 85	
Balance from Income Account.....	2,047 10	
	<hr/>	8,043 95
		<hr/>
		\$431,906 86

INCOME AND EXPENSE ACCOUNT—General Fund

EXPENSE

Exhibit B

Warden Services and Reservations—

Salaries.....	\$1,415 20
Launch Expense.....	780 50
Reservation Expenses.....	8 70

 \$2,204 49
Legislation—

New York.....	\$50 00
Florida.....	65 48
U. S. Migratory Bird Law.....	2,487 11
California.....	200 00
Massachusetts.....	1,050 00

 3,852 59
Educational Effort—

Administrative expenses.....	\$7,340 00
Field Agents, salaries and expenses.....	6,413 92
Press information.....	50 22
Bird-Lore, extra pages and Annual Report.....	1,927 99
Printing, office and Field Agents.....	1,008 15
Traveling local workers.....	83 10
Electros and half-tones.....	607 92
Library.....	101 17
Slides and drawings.....	724 95
Educational Leaflets.....	712 30
Bird-Lore to members.....	3,225 52
Bird Books.....	1,980 97
Colored plates in Bird-Lore.....	1,553 75
Outlines.....	545 25
Field glasses.....	1,204 30
Contribution to Florida Audubon Society.....	225 00
Song-Bird Campaign, Posters, Circulars and Publicity..	8,734 36
Summer-school work.....	1,065 00
Publicity.....	1,370 06
Feeding birds during snowstorms.....	100 00

 38,973 93
General Expenses—

Office Assistants.....	\$9,713 97
Telegraph and telephone.....	236 22
Postage.....	1,845 27
Office and storeroom rents.....	1,945 00
Motion pictures.....	151 38
Legal services.....	215 00
Auditing.....	125 00
Envelopes and supplies.....	687 12
Miscellaneous.....	814 37

 \$15,733 33

Amount carried forward.....

 \$45,031 01

INCOME AND EXPENSE ACCOUNT—General Fund, continued

Amount brought forward.....		\$45,031 01
Expenses brought forward.....	\$15,733 33	
<i>General Expenses, continued—</i>		
Cartage and expressage.....	333 35	
Insurance.....	130 30	
Electric light.....	78 85	
Sales Department expense.....	687 24	
Depreciation on boats.....	309 80	
Depreciation on office furniture.....	224 93	
Exchange on checks.....	43 15	
Annual Meeting expense.....	350 75	
Stencils, addressograph machine.....	75 78	
New Members Expense.....	6,999 93	
	<hr/>	24,967 41
<i>Total Expenses.....</i>		\$69,998 42
<i>Balance, Surplus for year (Exhibit A).....</i>		2,047 10
		<hr/>
		\$72,045 52

INCOME

<i>Members' Dues.....</i>		\$20,110 00
<i>Contributions.....</i>		21,486 76
<i>Interest from Investments.....</i>		19,823 88
<i>Sales—</i>		
Educational Leaflets Sales.....	\$5,149 96	
Field-Glasses.....	1,513 40	
Sale of Slides.....	494 82	
Bird-Lore Subscriptions.....	1,057 22	
Bird-book Sales.....	2,409 48	
	<hr/>	10,624 88
		<hr/>
		\$72,045 52

MRS. RUSSELL SAGE FUND

INCOME AND EXPENSE ACCOUNT

Exhibit C

INCOME—

Balance unexpended October 19, 1916.....	\$4,123 87
Junior Members' Fees.....	2,957 55

\$7,081 42

EXPENSES—

Administrative expenses.....	\$600 00
Printing leaflet units for Junior Members.....	2,181 56
Field Agents, salaries and expenses.....	208 96
Expressage.....	227 02
Printing circulars.....	336 34
Printing envelopes.....	186 14
Postage on circulars and literature.....	1,850 00
Bird-Lore, subscriptions for Junior Classes.....	689 08
Stenographic and clerical work.....	845 39
Office supplies.....	81 46
Buttons for Junior Members.....	188 15
Half-tones for publication.....	17 46
Report and publicity.....	414 49
Colored plates in Bird-Lore.....	106 96
Miscellaneous.....	94

\$7,933 95

Deficit, October 19, 1917.....

852 53

\$7,933 95

\$7,933 95

EGRET PROTECTION FUND

INCOME AND EXPENSE ACCOUNT

Exhibit D

INCOME—

Balance unexpended October 19, 1916.....	\$331 91
Contributions.....	2,992 06

\$3,323 97

EXPENSES—

Egret Wardens and inspections.....	\$2,442 81
Miscellaneous.....	11 01

\$2,453 82

Balance unexpended October 19, 1917.....

870 15

\$3,323 97

\$3,323 97

CHILDREN'S EDUCATIONAL FUND

INCOME AND EXPENSE ACCOUNT

Exhibit E

INCOME—

Balance unexpended October 19, 1916.....	\$9,274 25
Contributions.....	30,000 00
Junior Members' Fees.....	20,538 50
Gift.....	10 00

\$59,822 75

EXPENSES—

Administrative expenses.....	\$1,400 00
Field Agents, salaries and expenses.....	3,566 68
Stenographic and clerical work.....	3,933 74
Office supplies.....	510 96
Furniture and fixtures, purchase.....	58 00
Expressage on literature.....	1,765 22
Postage on circulars and literature.....	4,050 00
Printing leaflet units for Junior Members.....	17,229 44
Printed circulars to teachers.....	940 54
Bird-Lore for Junior Classes.....	5,052 11
Half-tones for publication.....	17 47
Reports and publicity.....	1,410 83
Buttons for Junior Members.....	1,104 15
Colored plates in Bird-Lore.....	574 80
Printed envelopes.....	424 62
Office rent.....	975 00
Miscellaneous.....	267 50

\$43,281 06

Balance unexpended October 19, 1917.....	16,541 69
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\$59,822 75

\$59,822 75

DEPARTMENT OF APPLIED ORNITHOLOGY

INCOME AND EXPENSE ACCOUNT

Exhibit F

INCOME—

Balance unexpended October 19, 1916.....	\$423 98
Contributions.....	2,450 00
Earnings by H. K. Job from public lectures.....	550 58

\$3,424 56

EXPENSES—

Agent's salary and expenses.....	\$3,418 58
Motion-picture films.....	122 82
Miscellaneous.....	2 15

Deficit, October 19, 1917.....	
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118 99

\$3,543 55

\$3,543 55

STATEMENT OF RECEIPTS AND DISBURSEMENTS

YEAR ENDING OCTOBER 19, 1917

Exhibit G

RECEIPTS—

Income on General Fund.....	\$72,045 52
Endowment Fund.....	12,425 00
Sage Fund.....	2,957 55
Egret Fund.....	2,992 06
Children's Educational Fund.....	50,548 50
Department of Applied Ornithology.....	3,000 58
Interest due October 19, 1916.....	120 00

Total Receipts year ending October 19, 1917.....	\$144,089 21
Cash Balance October 19, 1916.....	19,649 10
	<hr/>
	\$163,738 31

DISBURSEMENTS—

Expenses on General Fund.....	\$69,463 69
Investment on Endowment Fund.....	\$31,700 00
Less—Amount received on account of	
Mortgages.....	23,000 00 8,700 00
Expenses on Sage Fund.....	7,933 95
Egret Fund.....	2,453 82
Children's Educational Fund, Northern...	43,281 06
Department of Applied Ornithology.....	3,543 55
Furniture Account.....	518 30

Total Disbursements for year ending Oct. 19, 1917.....	\$135,894 37
Cash Balance October 19, 1917.....	27,843 94
	<hr/>
	\$163,738 31

NEW YORK, October 29, 1917.

DR. F. A. LUCAS,
Acting President,
National Association of Audubon Societies,
New York City.

Dear Sir:—We have examined reports submitted by John H. Koch & Company, certified public accountants, on the accounts of the National Association of Audubon Societies for the year ending October 20, 1917. The accounts show balance sheets of October 20, 1917, and income and expense account for the year ending the same date. Vouchers and paid checks have been examined by them in connection with all disbursements, and also the securities in the Safe Deposit Company.

Yours very truly,

J. A. ALLEN,
T. GILBERT PEARSON,
Auditing Committee.

LISTS OF MEMBERS OF AND CONTRIBUTORS TO THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

BENEFACTOR

*Albert Wilcox.....1906

FOUNDER

Mrs. Russell Sage.....1910

PATRONS

William P. Wharton1909
Miss Heloise Meyer.....1912
Anonymous1915
Gen. Coleman du Pont.....1917

LIFE MEMBERS

Abbott, Clinton G.....	1910	Blake, Mrs. Francis.....	1916
Adams, Edward D.....	1916	Blanding, Gordon.....	1917
Adams, Mrs. George E.....	1912	*Bliss, Miss Catharine A.....	1911
Adams, Thomas M.....	1916	Bliss, Robert Woods.....	1915
Agnew, Miss Alice G.....	1916	Bliss, Mrs. Wm. H.....	1912
Ahl, Mrs. Leonard.....	1915	Boardman, Miss Rosina C.....	1916
Alms, Mrs. Frederick H.....	1913	Boettger, Robert.....	1916
Ames, Miss Mary S.....	1916	Bolling, Mrs. Raynal C.....	1909
Ams, Charles M.....	1916	Borden, Miss Emma L.....	1914
Andrews, Mrs. E. B.....	1914	Borden, Mrs. William.....	1917
Andrews, J. Sherlock.....	1916	Bowdoin, Miss Edith G.....	1911
Armstrong, Dr. S. T.....	1913	Bowdoin, Mrs. Temple.....	1911
Arnold, Benjamin Walworth.....	1914	Bowles, H. L.....	1917
Arnold, Edward W. C.....	1916	*Bowman, Miss Sarah R.....	1905
Ash, Mrs. Charles G.....	1913	Brackenridge, George W.....	1916
Auchmuty, Mrs. R. T.....	1913	Brewster, Frederick F.....	1916
Ault, L. A.....	1917	Brewster, William.....	1905
Austen, Mrs. Isabel Valle.....	1914	Bridge, Mrs. Lidian E.....	1907
Ayres, Miss Mary A.....	1915	Brooker, Charles F.....	1917
Babcock, Mrs. Perry H.....	1912	Brooks, A. L.....	1906
Bacon, Mrs. Robert.....	1912	Brooks, Mrs. Everett W.....	1907
Bancroft, Wm. P.....	1906	Brooks, Miss Fanny.....	1913
Barbey, Henry G.....	1914	Brooks, Gorham.....	1911
*Barnes, Miss Cora F.....	1908	Brooks, Peter C.....	1911
Barr, Mrs. Cornelia Basset.....	1917	Brooks, Shepherd.....	1907
Barr, James H.....	1916	Brooks, Mrs. Shepherd.....	1906
Barrows, Ira.....	1917	Brown, Mrs. Addison.....	1917
Bartlett, Miss Florence.....	1916	Brown, Miss Annie H.....	1914
Bartol, Mrs. J. W.....	1915	Brown, T. Hassall.....	1913
Bates, Mrs. Ella M.....	1914	Browning, J. Hull.....	1905
*Bates, Isaac C.....	1910	Burnham, William.....	1916
Battelle, J. G.....	1917	Burr, I. Tucker.....	1915
Batten, George.....	1911	Butler, Mrs. Paul.....	1916
Baylies, Mrs. N. E.....	1912	Butterworth, Frank S., Jr.....	1915
Beebe, Mrs. J. Arthur.....	1907	Butterworth, Mrs. William.....	1916
Beech, Mrs. Herbert.....	1914	Cabot, Mrs. A. T.....	1913
Bell, Louis V.....	1917	Camden, J. N.....	1914
Bennett, Mrs. Alice H.....	1914	Camden, Mrs. J. N.....	1914
Berwind, John L.....	1915	Campbell, Miss Helen Gordon.....	1909
Bigelow, Dr. Wm. Sturgis.....	1912	Campbell, John Boylston.....	1916
Bingham, Miss Harriet.....	1907	Carew, Mrs. Lucie B.....	1917
Black, R. Clifford.....	1916	Carhartt, Hamilton.....	1916

*Deceased

LIFE MEMBERS, continued

Carr, Gen. Julian S.....	1907	Draper, Mrs. Henry.....	1913
Cary, Miss Kate.....	1916	Drummond, Miss Mary.....	1915
Case, Miss Louise W.....	1914	Ducharme, William H.....	1917
Chahoon, Mrs. George, Jr.....	1917	Duer, Mrs. Denning.....	1915
Chapin, Chester W.....	1910	duPont, Alexis I.....	1917
Chapman, Clarence E.....	1908	duPont, H. A.....	1917
Chase, Mrs. Philip A.....	1913	duPont, P. S.....	1917
C——, E. S.....	1913	Earle, Carlos Y. Poitevent.....	1905
Childs, Eversley.....	1916	Earle, Miss E. Poitevent.....	1905
Childs, John Lewis.....	1905	Eastman, George.....	1906
Clark, George H.....	1916	Eddison, Charles.....	1916
Clark, Hopewell.....	1917	Edgar, Daniel.....	1908
Clarke, Mrs. W. N.....	1912	Elliot, Mrs. J. W.....	1912
Clementson, Mrs. Sidney.....	1916	Ellis, Ralph.....	1917
Clow, William E.....	1917	Ellsworth, James W.....	1915
Clyde, William P.....	1905	Emmons, Mrs. R. W., 2nd.....	1908
Cockcroft, Miss Elizabeth V.....	1917	Endicott, H. B.....	1908
Colburn, Miss Nancy E.....	1915	Erbe, Gustav.....	1917
Colgate, Henry A.....	1917	Everett, Miss Dorothy B.....	1916
Colgate, Richard M.....	1916	Falk, Herman W.....	1917
Colgate, William.....	1917	Farrel, Mrs. Franklin.....	1913
Collins, Thomas H.....	1916	F——, E. D., In Memoriam.....	1914
Comstock, Miss Clara E.....	1914	Farwell, John V.....	1917
Converse, Mrs. Costello C.....	1915	*Farwell, Mrs. John V., Jr.....	1909
Converse, E. C.....	1916	Fay, Dudley B.....	1913
Coolidge, J. Randolph.....	1913	Fay, Mrs. Flora Ward.....	1905
Coolidge, Oliver H.....	1912	Fenno, Mrs. L. Carteret.....	1913
Coolidge, T. Jefferson.....	1907	Field, Cortlandt deP.....	1915
Cotton, Miss Elizabeth A.....	1915	Fincke, William Mann, Jr.....	1916
Covell, Dr. H. H.....	1916	Flattery, Miss Anne L.....	1917
Cowl, Mrs. Clarkson.....	1916	Fleischmann, Julius.....	1913
Crabtree, Miss Lotta M.....	1912	Flint, Mrs. Jessie S. P.....	1913
Crocker, Mrs. Emmons.....	1912	Follansbee, B. G.....	1917
Crosby, Maunsell S.....	1905	Foot, James D.....	1907
Cross, Mrs. R. J.....	1915	Forbes, Mrs. William H.....	1914
Crozier, Mrs. J. Lewis.....	1908	Forbush, Edward Howe.....	1910
Cudworth, Mrs. F. B.....	1911	Ford, Mrs. Bruce.....	1917
Curtis, Mrs. Anna Shaw.....	1907	Ford, James B.....	1913
Cutting, Mrs. W. Bayard.....	1913	Frackelton, Mrs. R. J.....	1917
Cuyler, Miss Eleanor deGraff.....	1917	Freeman, C. H.....	1917
Dahlstrom, Mrs. C. A.....	1916	Freeman, Mrs. James G.....	1915
Dane, Edward.....	1912	French, Miss Caroline L. W.....	1911
Dane, Ernest Blaney.....	1913	*Frothingham, Howard P.....	1905
Dane, Ernest Blaney, Jr.....	1912	Frothingham, John W.....	1913
Dane, Mrs. E. B.....	1913	Gallatin, F., Jr.....	1908
Daniell, J. T.....	1917	Gardner, Mrs. John Lowell.....	1917
Davis, David D.....	1911	Garneau, Joseph.....	1913
Davis, William T.....	1910	Gavit, E. Palmer.....	1917
Davol, Miss Florence W.....	1916	Gazzam, Mrs. Antoinette E.....	1908
Day, Mrs. Frank A.....	1915	Gifford, Dr. Harold.....	1917
Dean, Charles A.....	1916	Gifford, Mrs. Robert L.....	1908
Deering, Charles.....	1913	Gladding, Mrs. John Russell.....	1914
Deering, James.....	1917	Glazier, Henry S.....	1916
Dewep, Chauncey M., Jr.....	1915	Godfrey, Mrs. Abbie P.....	1917
DeWolf, Wallace L.....	1917	Goodwin, Walter L., Jr.....	1914
Dick, Albert B.....	1917	Gould, George H.....	1917
Dietz, Charles N.....	1917	Grant, W. W.....	1910
District of Columbia Audubon Society.....	1915	Gray, Miss Elizabeth F.....	1915
Dodge, Cleveland H.....	1916	Graydon, Mrs. Clendeny.....	1913
Doepke, Mrs. William F.....	1916	Greene, Stephen, 2nd.....	1917
Dommerich, Otto L.....	1917	Greenway, Mrs. James C.....	1912
Dows, Tracy.....	1914	Grew, Mrs. H. S.....	1913

*Deceased

LIFE MEMBERS, continued

Griswold, Mrs. William E. S.....	1915	Lang, Albion E.....	1916
Guggenheim, Hon. Simon.....	1917	Langdon, Woodbury G.....	1916
Hähnle, Reinhold.....	1912	Lansing, Mrs. G. Y.....	1916
Haggin, Mrs. J. B.....	1917	Lawrence, Emben.....	1916
Haggin, L. T.....	1917	Lawrence, Rosewell B.....	1916
Hamlin, Mrs. Eva S.....	1916	*Lawrence, Samuel C.....	1905
Hancock, Mrs. James Denton.....	1916	Lawson, Victor F.....	1917
Hanna, Mrs. H. M., Jr.....	1916	Lefferts, M. C.....	1914
Harbeck, Mrs. Emma Grey.....	1916	Logan, Stuart.....	1917
Harrah, Mrs. Charles J.....	1913	Loring, Mrs. W. Caleb.....	1913
Harral, Mrs. Ellen W.....	1914	Low, Miss Nathalie F.....	1916
Harrison, Alfred C.....	1914	Loyd, Miss Sarah A. C.....	1914
Hasbrouck, H. C.....	1915	McClymonds, Mrs. A. R.....	1914
Haskell, J. Amory.....	1916	McConnell, Mrs. Annie B.....	1908
Havemeyer, Mrs. H. O., Jr.....	1907	McGraw, Mrs. Thomas S.....	1908
Hawkins, Rush C.....	1913	McKim, Mrs. Haslett.....	1917
Hayes, Edmund.....	1917	McLane, Guy R.....	1916
Hazard, Mrs. J. N.....	1916	Mackey, Clarence H.....	1908
Hearst, Mrs. P. A.....	1909	MacLean, Mrs. Charles F.....	1916
Hemenway, Augustus.....	1915	Mallery, Mrs. Jane M.....	1914
Hemenway, Mrs. Augustus.....	1905	Markle, John.....	1917
Hentz, Leonard L.....	1914	Marmon, Mrs. Elizabeth C.....	1916
Higginson, Mrs. James J.....	1916	Marshall, Louis.....	1916
Hill, Miss Clara A.....	1917	Marshall, Thomas K.....	1915
Hill, Hugh.....	1915	Mason, Miss Ellen F.....	1913
Hill, Mrs. Susie R.....	1917	Mason, Miss Fanny P.....	1912
Hitch, Mrs. Frederic Delano.....	1915	Mason, George Grant.....	1914
Hoe, Richard M.....	1917	Massachusetts Audubon Society.....	1915
Hoff, Mrs. Grace Whitney.....	1915	Mead, Mrs. Charles Marsh.....	1915
Hoffman, Samuel V.....	1907	Meloy, Andrew D.....	1910
Hopewell, Frank.....	1911	Merrill, Miss F. E.....	1913
Hornbrooke, Mrs. Frances B.....	1913	Merrill, Mrs. Mary E.....	1917
Hostetter, D. Herbert.....	1907	Merriman, Mrs. Daniel.....	1915
Houghton, Miss Elizabeth G.....	1914	Mershon, Hon. W. B.....	1914
Howard, Miss Edith M.....	1915	Meyer, Mrs. August R.....	1917
Hubbard, Joshua C., Jr.....	1915	Meyer, Charles F.....	1917
Hubbard, Richard.....	1915	Meyer, Miss Heloise.....	1910
Hunnewell, H. S.....	1905	Miles, Mrs. Flora E.....	1916
Hunnewell, Walter.....	1915	Miller, Mrs. E. C. T.....	1916
Hunter, Anna F.....	1917	Mitchell, Mrs. John G.....	1916
Huntington, Archer M.....	1905	Mitchell, Miss Mary.....	1916
Jackman, Edwin S.....	1916	Moore, Clarence B.....	1909
Jackson, Mrs. James.....	1908	Moore, Mrs. William H.....	1916
Jamison, Margaret A.....	1914	Morgan, Miss Caroline L.....	1917
Jenkins, Mrs. Joseph W.....	1916	Morison, Robert S.....	1916
Jennings, Oliver G.....	1917	Morton, Miss Mary.....	1906
Jones, Jerome.....	1915	Mulliken, Alfred H.....	1917
Jones, Mrs. Lawrence.....	1917	Murphy, Franklin.....	1909
Joslyn, Mrs. George A.....	1916	Neave, Miss Jane C.....	1916
Keen, Miss Florence.....	1916	Nevins, Mrs. Davis.....	1916
Keith, Mrs. D. M.....	1916	Newberry, W. F.....	1916
Kent, Sherman.....	1917	Newcomer, Waldo.....	1917
Kettle, Mrs. L. N.....	1913	New Jersey Audubon Society.....	1913
Kidder, Nathaniel T.....	1905	Newman, Mrs. R. A.....	1914
Kilmer, Willis Sharpe.....	1907	Nichols, Mrs. William G.....	1915
King, Miss Ellen.....	1915	North Carolina Audubon Society.....	1905
Kingsbury, Miss Alice E.....	1916	Noyes, Mrs. David A.....	1916
Kinney, Morris.....	1913	O'Brien, Mrs. Michael W.....	1917
Kittredge, Miss Sarah N.....	1914	Oliver, Mrs. James B.....	1916
Knight, Miss A. C.....	1913	*Osborn, Mrs. Eliza W.....	1906
Kuser, John Dryden.....	1911	Osborn, Prof. Henry Fairfield.....	1917
Lane, Benjamin C.....	1909	Osborn, Mrs. William C.....	1916

*Deceased

LIFE MEMBERS, continued

Paine, F. W.....	1917	Sibley, Hiram W.....	1915
*Palmer, Mrs. William H.....	1912	Simpson, Alexander, Jr.....	1917
*Palmer, William J.....	1906	Slattery, John R.....	1916
Parker, A. H.....	1908	*Smith, Miss Alice Weston.....	1911
Parker, Edward L.....	1909	Smith, Mrs. Heber.....	1917
Parsons, Miss Mary W.....	1913	Spalding, Mrs. Amanda M.....	1912
Peabody, George A.....	1914	Spaulding, S. S.....	1917
Pearson, T. Gilbert.....	1905	Speed, William S.....	1917
Peck, Mrs. Walter L.....	1909	"Iowa Friend".....	1916
Perkins, Miss Ellen G.....	1914	Stahl, Adolph.....	1917
Perkins, Mrs. George C.....	1913	Stambaugh, H. H.....	1917
Peterson, Arthur.....	1916	Stetson, Francis Lynde.....	1916
Phelps, Mrs. J. W.....	1914	Stewart, Mrs. Edith A.....	1913
Phillips, Mrs. Eleanor H.....	1908	*Stickney, Charles D.....	1910
Phillips, John C.....	1905	Stillman, B. G.....	1916
Phillips, Mrs. John C.....	1905	Stillman, Chauncey D.....	1916
Pickman, Mrs. Dudley L.....	1907	*Stokes, Caroline Phelps.....	1908
Pierrepont, Anna J.....	1905	Stone, Miss Ellen J.....	1914
Pierrepont, John J.....	1905	Strong, Charles Hamot.....	1917
Pierrepont, Mrs. R. Stuyvesant.....	1914	Stuart, F. A.....	1916
*Pinchot, Mrs. J. W.....	1906	Sturgis, Mrs. F. K.....	1917
Poland, James P.....	1909	Swift, Charles H.....	1917
Pomeroy, Mrs. Nelson.....	1915	Swift, Louis F.....	1917
*Potts, Thomas.....	1905	Taft, Elihu B.....	1911
Pratt, George D.....	1911	Talbott, H. E.....	1917
Prentiss, F. F.....	1916	Taylor, Charles H., Jr.....	1908
Prime, Miss Cornelia.....	1909	Thaw, J. C.....	1916
Quier, Mrs. Edwin A.....	1917	Thayer, Mrs. Edward D.....	1917
Quincy, Mrs. H. P.....	1915	Thayer, Mrs. Ezra R.....	1909
Rainsford, Dr. W. S.....	1913	Thayer, John E.....	1909
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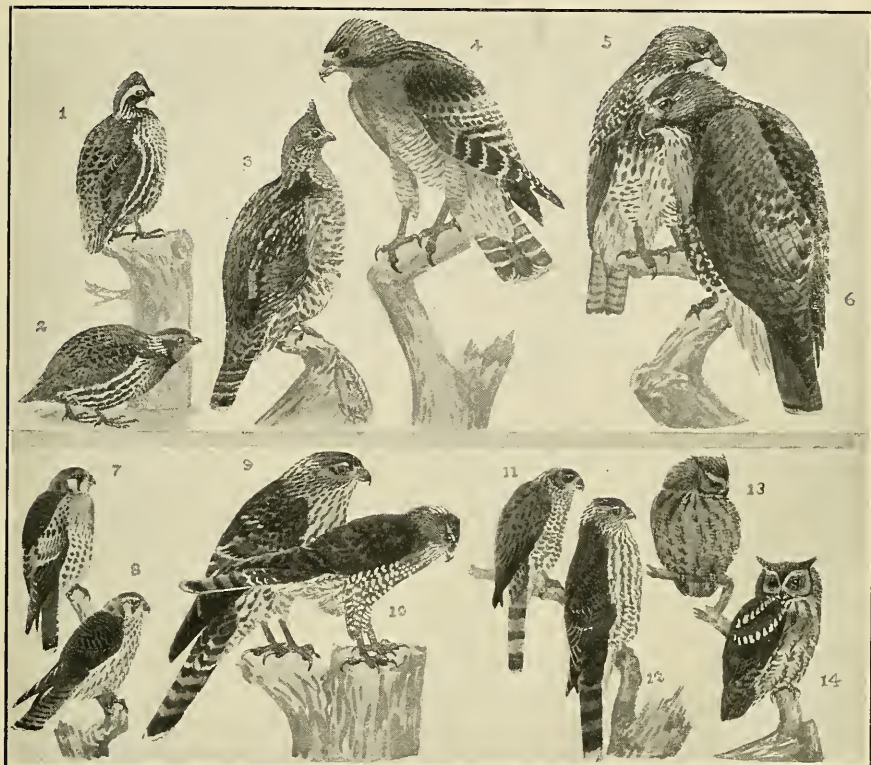
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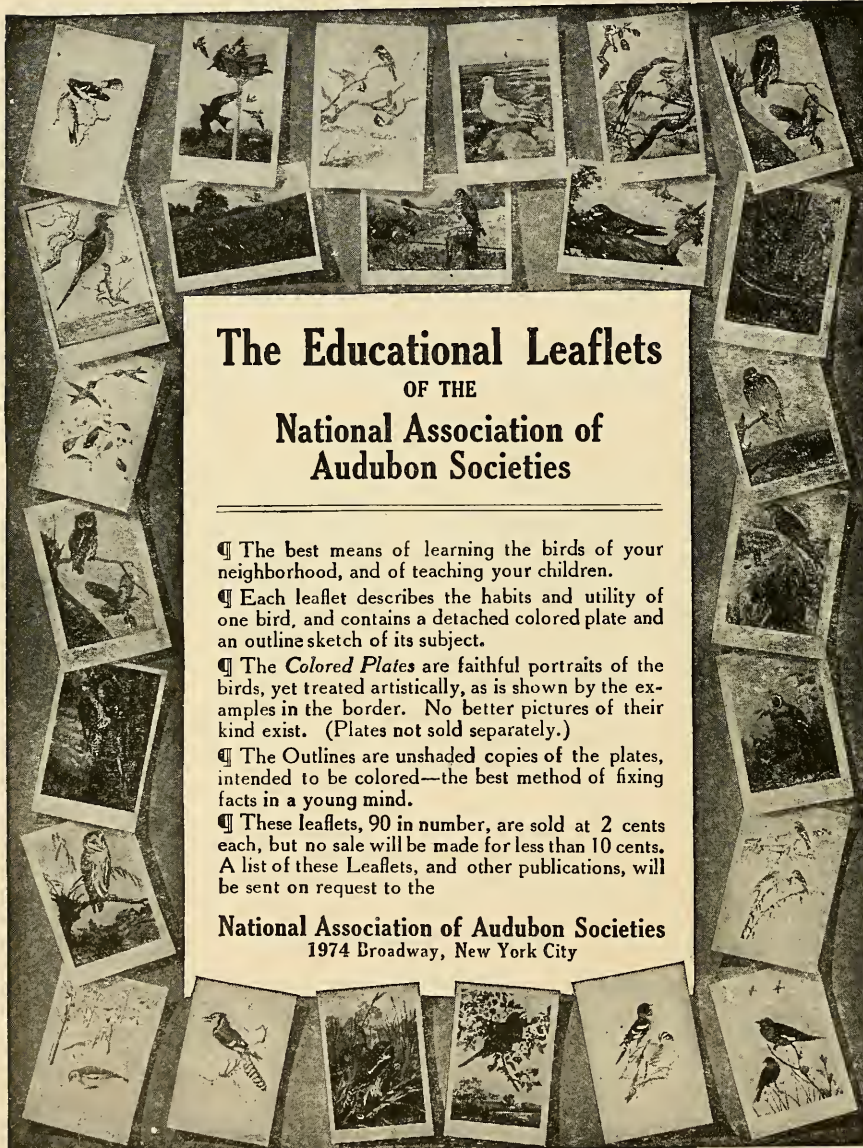
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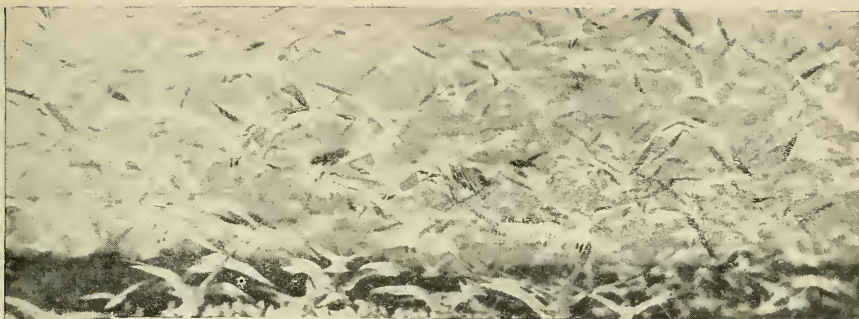
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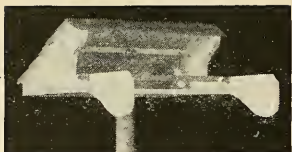
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