



Digitized by the Internet Archive
in 2009 with funding from
University of Toronto

2
Bird-Lore

*AN ILLUSTRATED BI-MONTHLY MAGAZINE DEVOTED TO
THE STUDY AND PROTECTION OF BIRDS*

EDITED BY

FRANK M. CHAPMAN

CONTRIBUTING EDITOR

MABEL OSGOOD WRIGHT

Official Organ of the Audubon Societies

AUDUBON DEPARTMENT EDITED BY

ALICE HALL WALTER

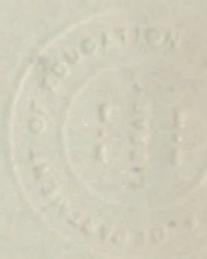
AND

T. GILBERT PEARSON

VOLUME XX—1918

D. APPLETON & COMPANY

HARRISBURG, PA., AND NEW YORK CITY



24547 -

COPYRIGHT, 1918

By FRANK M. CHAPMAN

QL

671

A82

v.20



INDEX TO ARTICLES IN VOLUME XX BY AUTHORS

- Abbott, Clinton G., Photograph by, 107; Secretary's Reports, 106, 502.
- Allen, Arthur A., Photographs by, 86, 87, 321; Secretary's Reports, 85, 488; When the North Wind Blows, 300.
- Allen, A. F., see Stephens, Dr. T. C.
- Allen, Clarence J., Acting Secretary, Report of, 509.
- Allen, Glover M., Boston Region, 358, 427.
- Allen, Mary Pierson, Christmas Census, 35.
- Almy, Madeline E., Secretary, Reports of, 117, 509.
- Andrews, Theodore, Christmas Census, 40.
- Androbette, Norman, The Crow, 448.
- Anthony, Mrs. Joseph, see Bicknell, Mrs. F. T.
- Arnold, Dr. W. W., A Bird Hospital, 259.
- Arnold, W. D. I., President, Report of, 490.
- Bagg, John S. and Aaron C., Christmas Census, 28.
- Bailey, Henry Turner, The 'Stake-Driver' Again, 295.
- Baldwin, Lizzie Thomas, Poem by, 172.
- Bay, H. W., Paul Bittenbender, and Alvan Wagner, Christmas Census, 37.
- Beaumont, Wilfred, Bird-Houses, 315.
- Beck, Herbert H., Elmer E. Kautz, and Abraham Beck Miller, Christmas Census, 37.
- Beck, H. H., Wild-Fowl of the Susquehanna Flats, 357.
- Beck, Rollo H., Photographs of Falkland Island Bird-Life, 1.
- Beckwith, Helen, Corresponding Secretary, Report of, 493.
- Beebe, Ralph, Summer Records of Winter Birds in the Upper Peninsula of Michigan, 291.
- Beers, Mrs. H. F., Secretary-Treasurer, Report of, 500.
- Benefiel, Dr. A. H., and Walter Bruce, Christmas Census, 48.
- Bennett, Elizabeth, Secretary, Reports of, 100, 497.
- Berger, Mrs. C. L., Report of, 492.
- Bergtold, Dr. W. H., Christmas Census, 47; Denver Region, 24, 233, 306, 432.
- Berlin, Mrs. D., A True Bluebird Story, 318.
- Betts, Mary, The Tanagers, 449.
- Bicknell, E. P., Christmas Census, 31.
- Bicknell, Mrs. F. T., Photograph by, 97.
- Bicknell, Mrs. F. T., Mrs. Robert Fargo, Dr. E. A. Dial, Mrs. W. H. Martz, Helen S. Pratt, Mrs. Joseph Anthony, L. E. Wyman, Mrs. C. H. Hall, and Alfred Cookman, Christmas Census, 49.
- Biersach, Adolph, Secretary, Report of, 118.
- Bittenbender, Paul, see Bay, H. W.
- Blackinton, Katrine, Our Winter Bird Neighbors, 422.
- Blair, Frank D., Secretary, Reports of, 102, 497.
- Blanchard, George C., Christmas Census, 26.
- Blincoe, Ben J., Christmas Census, 41.
- Blodget, George L., Christmas Census, 26.
- Bohlman, H. T., Photograph by, 468.
- Bomburger, A., Secretary, Report of, 485.
- Bonnig, C., The Banlit: A Street Scene from Birddom, 298.
- Boulton, R. W., Jr., Christmas Census, 36.
- Bourne, Thomas L., Christmas Census, 32.
- Bowditch, Beecher S., Secretary, Report of, 482.
- Bowen, Alice B., Secretary, Report of, 77.
- Bowers, John H., See Townsend, Manley B.
- Brainerd, Barron, and Haskell B. Curry, Christmas Census, 27; see Talbot, L. R.
- Breder, C., Photography at Feeding-Stations, 140.
- Brewster, William, A Blameless Cat, 207.
- Bridge, Edmund and Lidian E., Christmas Census, 28.
- Bridge, Lidian E., and Annie M. Cobb, Christmas Census, 27.
- Briggs, Lawrence P., Birds I Have Seen, 189.
- Bright, Harry G., Secretary, Report of, 94.
- Brintnaill, Mrs. A. W., Our Summer Boarders, 421.
- Brown, Elizabeth G., Report of, 501.
- Brown, Roy M., Christmas Census, 40.
- Bruce, Walter, President, Report of, 506; see Benefiel, Dr. A. H.
- Bruen, Frank, see Smith, Elbert E.
- Bryant, Harold C., Bird Horizons in the San Francisco Bay Region, 420.
- Burnham, Stewart H., Are Starlings as Hardy as English Sparrows? 354.
- Burns, Mary, Our Birds, 448.
- Burtch, Verdi, A Day's Sport with the Red-backs and Greater Yellow-legs, 335; A Wild Duck Trap, 410; Notes on the Tree Swallows, 133; The Warbler Wave of the Spring of 1917, at Branchport, N. Y., 154.
- Butler, Mrs. Jefferson, President, Report of, 89.
- Butterwick, Claude A., Christmas Census, 38.
- Button, Lily Ruegg, Christmas Census, 47.
- Calvert, E. W., A Census from France—An Addition to the Eighteenth Christmas Census, 154.
- Campbell, Mamie L., A. L. Campbell, and O. I. Gale, Christmas Census, 48.
- Carlson, Fred C., Sidney E. Ekblaw, and Ed. L. Ekblaw, Christmas Census, 41.
- Carpenter, Jessie I., A Blackbird Chorus, 160.
- Carter, Alice M., see Linton, M. Albert.
- Carter, John D., see Linton, M. Albert.
- Cartledge, P. Gregory, How I Mothered A Pair of Hummingbirds, 273.
- Case, Clifford M., Christmas Census, 29.
- Caskey, R. C., see Fairbank, Edward.
- Chapman, Frank M., Editorials by, 56, 160, 238, 309, 363, 415; Notes on the Plumage of North American Birds, 19, 153, 222, 290, 349, 410; Notes from a Traveler in the Tropics: Down the Coastline to Cuba, 393; Reviews by, 53, 54, 167, 168, 235, 307.
- Chase, Richard M., and George P. Freeland, Christmas Census, 34.
- Cherrie, George K., Christmas Census, 27.
- Childs, Helen P., Secretary, Report of, 474.
- Chute, Miss Eleanor, see Woodbury, Mrs. Roland.
- Cleaves, Howard H., Christmas Census, 33.
- Clise, James W., Nesting Records, 376.
- Coast, Oscar R., A Santa Barbara Hummer, 291.
- Coates, Chas. P., Bird-Houses for a City Park, 184.

- Compton, M. I., Red Crossbills in Seattle, 418.
 Congdon, Frances, and Mabel L. Potter, Christmas Census, 28.
 Cookman, Alfred, see Bicknell, Mrs. F. T.
 Cox, Elizabeth, Christmas Census, 37.
 Cox, Richard, Christmas Census, 40.
 Cramer, William G., Secretary, Report of, 482.
 Crane, Mrs. G. H., Corresponding Secretary, Reports of, 96, 403.
 Curry, Haskell B., see Brainerd, Barron.
- Dadisman, A. J., Christmas Census, 39; Feeding the Blue Jays, 352.
 Dana, Elizabeth A., Secretary, Report of, 92.
 Danforth, Ralph E. and Stuart E., Christmas Census, 36.
 Daniels, Edward S., and Geo. F. Tatum, Yellow Warbler vs. Cowbird, 226.
 Daniels, Edward S., Photograph by, 128.
 Danner, May S., and Mary King, Christmas Census, 42.
 Davis, Dorcas, Birds, 378.
 Dawson, Giles E., and William Leon Dawson, Christmas Census, 50.
 Deeter, Anna P., and Mary E., Christmas Census, 38.
 Denny, Mary C., Birds of the Far West, 376.
 Dent, Paul, and Dent Jokerst, Christmas Census, 45.
 Den Brisay, Mrs. M. B., Our Summer Visitors—A True Story of Some Nova Scotian Birds, 301.
 Dial, Dr. E. A., see Bicknell, Mrs. F. T.
 Dimock, Leila Allen, A Junior Class in the Mountains, 323.
 Doll, Caroline O., Secretary, Report of, 485.
 Donaghho, Walter, Secretary, Report of, 484.
 Dougherty, Margaret, Nature-Study and Audubon Society, 186.
 Dowd, Susan C., Means of Securing Interest in Bird-Study, 313.
 Downhour, Elizabeth, Secretary, Report of, 477.
 Dreier, Theodore, Christmas Census, 30.
 DuBois, A. D., Christmas Census, 47.
 DuBois, Gerard, A Feathered Patient, 317.
 DuFour, see Van Arsdale, Mrs. Wm.
 Dunbar, Lula, Mildred Elizabeth Lean, and Robert Dunbar, Jr., Christmas Census, 43.
 Dunham, Lieut. Carroll R., and Lieut. Ludlow Griscom, U. S. R., Christmas Census, 46.
 Dury, Francis, The Signal, 449.
 Dwight, Dr. Jonathan, Reviews by, 235, 362, 433.
- Eaton, E. E., see Eddy, William H.
 Eaton, Warren F., Christmas Census, 27.
 Eddy, William H., and E. E. Eaton, Christmas Census, 32.
 Edson, Wm. L. G., and R. E. Horsey, Christmas Census, 34.
 Egbert, Rose M., The Language of Robins, 300.
 Ehinger, C. E., Christmas Census, 38.
 Ekblaw, Ed. L., see Carlson, Fred C.
 Ekblaw, Private George E., Christmas Census, 45.
 Ekblaw, Sidney E., A Record of the Bald Eagle from Champaign Co., Illinois, 421; The Blue Grosbeak in Illinois, 421.
 Elitharp, Nina Ballard, Secretary, Report of, 508.
 Evans, Wm. Bacon, see Linton, M. Albert.
 Evans, W. Conroy, A Winter House Wren, 159; From Sunset to Sunrise with the Martins During the Flocking-Time, 296.
 Ewing, Gifford, My First Bird Tenants, 316.
- Fairbank, Edward, and R. C. Caskey, Christmas Census, 35.
 Fargo, Mrs. Robert, see Bicknell, Mrs. F. T.
 Farquhar, Arthur, and Charles Weiser, Christmas Census, 38.
 Farrar, Mayme, Corresponding Secretary, Report of, 505.
 Fearing, Albert S., How I First Got BIRD-LORE, 183.
 Ferguson, Walker, Christmas Census, 44.
 Ferman, R. H., see LaDue, H. J.
 Finley, William L., Field Agent, Annual Report, 467.
 Fisher, M. L., Christmas Census, 42.
 Fisher, Mr. and Mrs. G. Clyde, and Ruth Anna, Christmas Census, 30.
 Floyd, Charles B., President, Reports of, 81, 486; Bird-Walks, 279.
 Flynn, Agnes, The Story of a Rose, 449.
 Fogg, Ada Odiorne, President, Report of, 80.
 Foltz, H. W., Secretary, Report of, 119.
 Foot, Nathan Chandler, President, Report of, 81.
 Forbush, Edward H., General Agent, Annual Report, 469. Photograph by, 380.
 Ford, Royal W., see Smith, Elbert E.
 Fordyce, George L., C. A. Leedy, Willis H. Warner, and Volney Rogers, Christmas Census, 43.
 Foust, Elizabeth, Attracting Birds to My Home, 372.
 Freeland, George P., see Chase, Richard M.
 Freeman, Mrs. John, Mockingbird in Iowa, 352.
 Furies, Louis Agassiz, Colored Plates by, facing 1, 125, 201, 260, 329, 393; Drawings by, 395, 396.
- Gabrielson, I. N., and Kalmbach, E. R., Christmas Census, 39.
 Gaines, Mrs. John, Secretary, Report of, 106.
 Gale, O. I., see Campbell, Mamie L.
 Galloway, Mary, A Family of Brown Thrashers, 299.
 Ganier, A. F., Christmas Census, 40.
 Gardner, Georgia B., Notes from Canandaigua, N. Y., 351.
 Gardner, Mrs. Arthur F., The Wren, A House-breaker, 299.
 Gavit, Joseph, Poem by, 234.
 Getchell, Ella, An Oregon Oriole, 354; The Black-chinned Hummingbird, 292.
 Gibson, Dallas Vernet, Old Mother Robin and Her Babes, 188.
 Gibson Hamilton, see Van Dyke, Tertius.
 Glover, Mrs. W. B., Secretary, Report of, 472.
 Gloyd, Howard K., Memories of a Rainy Day, 356.
 Goellitz, Walter A., A Unique Wren Nest, 295.
 Gooch, John H., Christmas Census, 41.
 Goold, Hattie, Secretary, Report of, 501.
 Gorham, Mrs. D. W., The Birds I Watch from My Window, 419.
 Gormley, Liguori, see Macnamara, Charles, 25.
 Graves, Frances Miner, Christmas Census, 29.
 Green, Margaret S., Secretary, Reports of, 108, 502.
 Greenleaf, Miles, L. O. Horsky, W. W. Marsh, and S. R. Towns, Christmas Census, 47.
 Gregory, Florence L., Secretary, Report of, 113.
 Grew, Helen, Nestling Chipping Sparrows, 250.
 Grey, Clifford R., References of Cliff Swallows in Nesting, 447.
 Griswold, George T., Christmas Census, 29.
 Groneman, Henry, Photographs by, 325.
- Falz, Wm. W., Christmas Census, 36.

- Hall, Mrs. C. H., see Beckwith, Mrs. F. T.
 Hall, W. W., Jr., Interesting Experiments, 290.
 Hallett, George H., Jr., see Linton, M. Albert.
 Hamilton, Harry and Chase O., Christmas Census, 40.
 Hamilton, W. F., Christmas Census, 40.
 Hanson, Harold E., see Scudder, W. A.
 Hanson, Harry, Kansas City Edition, 193, 441.
 Harshbarger, H. L., Sparrows Hawk and Starling, 215.
 Harshbarger, Edgar I., President, Report of, 95.
 Harshbarger, Harry S., Christmas Census, 42.
 Harwood, George D., and H. N. Henderson, Christmas Census, 43.
 Hay, Helen J., Woodcock Sanctuaries, 34.
 Hayes, Emma M. F., Winter Mockingbirds, 159.
 Hayes, Esther, Corresponding Secretary, Report of, 171; Secretary, Report of, 319.
 Haywood, H. N., see Hayworth, George D.
 Hill, F. Beecher, Secretary, Report of, 115, 507.
 Hill, Leonard, An Observation at First Hand, 66.
 Hines, G., A Colaptes Martin House, 111.
 Hines, Marcus B., Secretary, Report of, 492.
 Hinson, Emily, The Cardinal, 428.
 Hix, George E., Christmas Census, 34.
 Hogg, Milton H., Christmas Census, 35.
 Holmsted, N., A Sanctuary within a Sanctuary, 128.
 Hooker, Bruce, see Van Arsdale, Mrs. Wm.
 Hoover, Charles, School Letters from Lawndale, Pa., 45.
 Howard, R. E., see Edison, Wm. L. G.
 Howard, R. Bruce, Colored Plates by, facing 190, 222, 250.
 Huxley, L. O., see Greenleaf, Miles.
 Houghton, Clarence, see Lovett, Joseph S.
 Howe, H. M., An Inclusive Awdits & Captain, 150.
 Houston, Mehmet Hank, The Whip-poor-Will, 134.
 Hunter, Katherine Upham, Spring Notes from a New Hampshire Farm, 134.
 Hoyt, Cameron, Corresponding Secretary, Report of, 108.
 James, Elizabeth F., Secretary, Report of, 92.
 Jones, Hubbard J., Memorials of the Passenger Pigeon, 141.
 Job, Herbert K., Annual Report, 469.
 Johnson, Donat, see Donat, Paul.
 Jones, Lydia, Orange Egrets, 13, 173, 431.
 Jones, Hiram O., Corresponding Secretary, Report of, 108.
 Kahlbach, E. R., see Gabelbach, I. N.
 Kane, Edgar E., see Beck, Herbert H.
 Kankow, Charles E., Secretary-Treasurer, Report of, 95.
 Kern, H. M., Photograph by, 182.
 Kenna, Edward D., Christmas Census, 42.
 King, Anne Woodford, and Beth Rankin, A Southern Christmas Census, 77.
 King, Mary, see Linton, M. Albert.
 Kirtland, Mary Eastwood, Secretary, Reports of, 80, 99.
 Kiser, John Dresden, Christmas Census, 34.
 Ladd, H. J., and R. H. Forman, Christmas Census, 32.
 Langdon, Roy M., Secretary, Reports of, 101, 401.
 Lange, L., The Evening Grosbeak in Minnesota & Massachusetts, 107.
 Latham, C. B., President, Report of, 94.
 Latham, John, John Townsend Nichols, and Robert Collins, Michigan Christmas Census, 75.
 Latham, Ray, Night Hawk at New York City, 20.
 Lathrop, Mrs. John T., Secretary, Report of, 507.
 Laughlin, J. A., Christmas Census, 41.
 Lawrence, Joseph S., M. D., and Clarence Hough, 100, Christmas Census, 32.
 Leach, Mildred Elizabeth, see Fischer, Lydia.
 Lear, Amelia, Communication from Census, 249.
 Lear, George, Christmas Census, 36.
 Leonard, Agnes M., A Rural Junior Audubon Society, 89.
 Lewis, C. A., see Forlyce, George L.
 Lester, C. W., A Scene from the House-Life of the Chestnut-sided Warbler, 297; The Black-billed Cuckoo, 277.
 Leyster, Henry W., see Stockbridge, Charles A.
 Lewis, Clark Lee, Jr., and Edward G. Nichols, Christmas Census, 35.
 Lewis, Norman, A Word of Appreciation and a Testimony to the Value of Bird-Study, 64; A Three-toed Woodpecker, 131.
 Lindsay, Mrs. Eugene D., Pine Siskins near Edinburg, Wash., 217.
 Linton, M. Albert, Anna A. Mickle, John D. Carter, Alice M. Carter, Wm. Bruce Kiser, and George H. Hallett, Jr., Christmas Census, 35.
 Long, William H., Christmas Census, 33.
 Loveland, David, A Bird Story, 228.
 Lundwall, Nelson, Christmas Census, 47.
 Lurger, John B., Secretary, Reports of, 199, 504.
 Mavartney, W. N., Golden-eye Duck Carrying Young, 418.
 MacIntyre, Emma May, The Lure of the Feathered Songsters, 178.
 Macnamara, Charles, and Liguori Gormley, Christmas Census, 25.
 Madison, H. L., Secretary, Report of, 481.
 Marsh, W. W., see Greenleaf, Miles.
 Marshall, Elizabeth Lawrence, Notes on Robins' Nests, 128.
 Marshall, Louise Foucar, A Thrush, 438.
 Martin, Mrs. W. H., see Beckwith, Mrs. F. T.
 Mastenstock, Mrs. Jennie H., President, Report of, 84.
 May, John B., M. D., Christmas Census, 27; Some Ruffed Grouse Notes, 161.
 McAtee, Walter, and Edward Preble, Christmas Census, 59.
 McCamant, Tom, My Back-Yard Feeding Station, 103.
 McConnell, Harry B., John Worley, and Raymond Timmons, Christmas Census, 49.
 McConnell, Mrs. Annie, Winter Mockingbirds, 150.
 McConnell, Theo. L., High Mortality among the Purple Martins in Western Pennsylvania during April, 1917, 130; see Savage, L. F.
 McWhitt, Bonnie, Poem by, 97.
 McDermott, Ornithological Club, Christmas Census, 26.
 Mellett, S. W., Christmas Census, 38.
 Mengel, Mr. and Mrs. G. Henry, Christmas Census, 38.
 Merrill, Janet, Vacation Observations, 68.
 Meudow, Mrs. Mildred, Report of, 115.
 Mickle, Anna A., see Linton, M. Albert.
 Miller, Abraham Beck, see Beck, Herbert H.
 Miller, Ansel B., Christmas Census, 36; Photograph by, 270; Robin Nourish on Ground, 200.
 Miller, W. DeW., Christmas Census, 36.
 Moore, Mr. and Mrs. Lou D., and Raymond W. Moore, Christmas Census, 39.
 Moore, Mrs. Catherine N., Acting President, Report of, 111.

- Mason, Mrs. Lora D., Secretary, Report of, 103.
 Mason, Leonard W., see Miser, Mr. and Mrs. Lora D.
- Mearns, Alice, Secretary, Report of, 104.
- Morgan, May, Christmas Census, 34.
- Morris, Elizabeth, One Bird Exhibit, 171.
- Morse, H. G., and D. C. Reed, Christmas Census, 32.
- Morris, Edwin H., Christmas Census, 32.
- Morton, Mrs. Lois, Secretary, Report of, 426.
- Murray, Mildred H., My Friend, Hum Census, 130.
- Murphy, Robert Coleman, see Latham, Rep.
- Murray, Harriet Williams, Secretary, Report of, 473.
- Nation, Harold T., Honorary Secretary, Report of, 490.
- Neff, Johnson, Christmas Census, 45.
- Nichols, E. G., and L. N. Nichols, Christmas Census, 33.
- Nichols, Edward G., see Lewis, Clark L.
- Nichols, John Treadwell, see Latham, Roy.
- Nichols, John Treadwell, Bird Banding, 475.
- Nichols, John Treadwell, Christmas Bird Census, 416; New York Region, 350, 458; Poems by, 474.
- Nichols, G., Junior Audubon Work and the English Sparrow, 58.
- Nicholson, Nevin G., Cormorant in Western Pennsylvania, 180.
- Nighting, Frieda E., Amateur Photography, 373.
- Norton, Arthur H., Field Agent, Annual Report, 405.
- Novak Frank, Christmas Census, 30.
- Oberholzer, Harry C., The Migration of North American Birds, (8, 143, 192, 193, 215, 313, Washington Program, 23, 254, 273, 274, 275, 425.
- O'Connell, Henry, Photographing the Birds, 9.
- O'Neil, H. F., Some Irish Mottos, 137.
- Osborn, William P., Christmas Census, 34.
- Otto, N. C., Cardinal in Wisconsin, 160.
- Pachard, Winthrop, Field Agent Annual Report, 364; Secretary, Treasurer, Report of, 478.
- Palmer, Dr. T. S., Reviews by, 54, 168, 226, 307, 393, 434.
- Panthers, Clifford H., Christmas Census, 30.
- Parker, John G., Birds and Bees, 264.
- Parsons, Mrs. Bertin Trauer, Secretary, Report of, 476.
- Parsons, Hayde S., Maine Notes, 418.
- Parsons, T. Gilbert, Annual Report, 455. Illustrations by, 29, 122, 125, 221, 231, 450. Least Tern, 260. Photographs by, 156, 156, 456, 462; Illustrated Juncos, 111. The Weaver, 130.
- Pell, Walden and S. Morris, Christmas Census, 33.
- Perkins, Edward H., Christmas Census, 28.
- Perry, Ellen, Photographs by, 226.
- Perrin, H. A., Secretary, Reports of, 114, 305.
- Petry, Luciana K., The Starling Feeding North, 184.
- Philo, Walter, Christmas Census, 34.
- Pierce, Mrs. Clark, Northern Shrike Visits a Feeding-shelf, 423.
- Pinkham, Roger D., Actions of a Chimney Swift, 447.
- Pittman, H. and E., Photographs by, 51, 400.
- Pittman, J. H., and Hugo H. Schneider, Christmas Census, 44.
- Potter, Julian K., Christmas Census, 33; Philadelphia Region, 21, 164, 230, 301, 350, 428; Spotted Sandpiper Colonies, 282.
- Potter, Mabel L., see Congdon, Frances.
- Powers, Arthur, President, Report of, 36.
- Pratt, Helen S., see Beckwith, Mrs. F. T.
- Pratt, Edward, see McAtee, Walter.
- Pratt, Hubert, How to Make and Erect Bird Houses, 138.
- Palton, H. F., Vice-President, Report of, 404.
- Pugoye, Mr. and Mrs. Nelson D. W., Christmas Census, 36.
- Quarles, F. A., Cornell to Teach Conservation of Wild Life, 71.
- Raker, Mary E., Birds of the Far West, 374; Christmas Census, 47. The Bohemian Wax-wings in Oregon, 170.
- Ramsdell, Henry M., Christmas Census, 33.
- Reading, Gertrude, Report of, 484.
- Reed, D. C., see Morse, H. G.
- Reeves, Wyrall, Home Observations in the South, 143.
- Reithen, Grace, Why Not Establish a Purple Martin Colony This Year? 142.
- Rice, Helen M., Christmas Census, 43.
- Rice, Ward J., Christmas Census, 29.
- Rickards, Elizabeth, Secretary, Report of, 487.
- Ringsdorf, A. A., see Macfarlane, Charles A.
- Ripple, Henry H., Christmas Census, 40.
- Ritchie, Leslie E., Christmas Census, 40.
- Robbins, C. A., see Tracy, Dr. William M.
- Robbins, Frank, see Tracy, Dr. William M.
- Roberts, George, Observations on a Food-Shell, 473.
- Roberts, Thos. S., M. D., Minneapolis Region, 24, 25, 214, 266, 269, 420. House Sparrows, Rabbitt Robins, 224. The Overbird in Minnesota, 120.
- Robinson, Donald H., Poem by, 444.
- Robinson, Virginia C., Christmas Census, 45.
- Rochner, Theodore, Christmas Census, 31.
- Rogers, Charles H., Bird-Lovers' Eighteenth Christmas Census, 40. New York City Region, 21, 153, 220. see Young, John P.
- Rogers, William, see Ponders, George I.
- Rommel, Conrad K., American Egret in Pennsylvania, 426. Christmas Census, 37.
- Ross, Mrs. M. G., Secretary, Report of, 73.
- Ross, Dr. and Mrs. Laurentius H., Christmas Census, 25.
- Russell, Private John W., Christmas Census, 40.
- Rustin, Elmer, The Robin, 182.
- Sadler, Nettie M., Christmas Census, 34.
- Saunders, Blanche, Spring Migration in the Ramble, Central Park, New York City, 404.
- Saunders, Anita A., Christmas Census, 30.
- Saunders, Margery, Anthony Saunders, and F. A. Saunders, Christmas Census, 34.
- Sawyer, Wm. F., A New Feeding-shelf, 14.
- Sawyer, Noel, A Feeding-shelf, 226.
- Savage, L. F., and Thos. L. M. Connell, Christmas Census, 37.
- Sawyer, Edmund J., Photographs by, 227; Poems by, 59, 126, 211. Swallows Feeding, 296.
- Schuler, James D., Christmas Census, 41.
- Schneiderman, George O., Secretary, Report of, 78.
- Schuler, Hugo H., Christmas Census, 44; see Pomeroy, J. H.
- Seville, George, and Theodore Spencer, Christmas Census, 37.
- Seib, Genevieve, Secretary, Report of, 421.
- Shaw, Henry, A Song Sparrow in January, 137.
- Shaw, Mr. and Mrs. J. E. Norton, Christmas Census, 28.

- Shelton, Israel R., Some High School Methods of Bird-study, 82.
- Sherrin, J. J., The Size of Rooms in Martin-Houses, 126.
- Shier, F. William, Christmas Census, 41.
- Sigler, John D., Christmas Census, 45.
- Singer, F. E., Christmas Census, 45.
- Smith, Elwood E., Royal W. Ford, and Frank Brown, Christmas Census, 29.
- Smith, O. Warren, A Not-worthy Contest, 188.
- Smith, Walter F., Hubbard's Grebe in Connecticut, 142; Photographs by 201, 202, 205, 206, 207.
- Spencer, Thelma, see Sawville, George.
- Squires, W. A., C. R. Thomas, and Harold E. Hansen, Christmas Census, 36.
- Stahler, Alex., Christmas Census, 47.
- Stagwood, Maud, How we Made a Bird-Bath, 228.
- Stankovic, Marjorie, see Woodbury, Mrs. Roland.
- Stankovic, P. H., Christmas Census, 47.
- Stehoff, Thos. G., see Van Arsdale, Mrs. Wm.
- Stehoff, Dr. T. C., and A. F. Allen, Christmas Census, 44.
- Stevens, J. A., Christmas Census, 47.
- Stockbridge, Charles A., A. A. Ringwalt, and Henry W. Lepper, Christmas Census, 41.
- Stone, C. F., Photograph by 12.
- Stout, Larry B., Secretary, Reports of, 88, 489.
- Styer, Elizabeth P., Winter Mockingbirds, 159.
- Swope, Dr. Eugene, Field Agent, Annual Report, 464.
- Talbot, I. R., and Barron Brainerd, Christmas Census, 27.
- Tatum, E. S., see Daniels, E. S.
- Terry, H. J., Secretary-Treasurer, Report of, 480.
- Thomas, C. R., see Squires, W. A.
- Thomas, John W., Secretary, Report of, 117.
- Thompson, A. H., An Audubon Library Exhibit, 376.
- Timmons, Raymond, see McConnell, Harry B.
- Tindle, Mildred A., Secretary, Report of, 115.
- Tompkins, Earle, An Exercise in Bird Study, 66.
- Tumeb, Helen, D., Christmas Census, 48.
- Toussie, S. R., see Greenleaf, Miles.
- Townsend, Alice Greenough, Secretary, Report of, 76.
- Townsend, Manley B., and John H. Bowers, Christmas Census, 26.
- Townsend, Manley B., Secretary, Report of, 481.
- Tully, Thomas, The Rabbit, 448.
- Turner, Mrs. G. M., Retiring Secretary, Report of, 82.
- Tuttle, F. May, Snowy Owl in Iowa, 426.
- Tuttle, H. E., Notes on the Nesting of the Northern Warbler, 269; Some Notes on the Bullfinch Census, 349.
- Tyler, Dr. Winsor M., Boston Region, 21, 264, 296, 299.
- Tyler, Dr. Winsor M., C. A. Robbins, and Frank Robbins, Christmas Census, 28.
- Upton, Lucy H., Migrating Bobolinks in Atlanta, 281; Notes on the Flushing of Swifts in Fall, 447.
- VanArsdale, Mrs. Wm., Bessie Harlick, L. DuFaux, and Thos. G. Steizer, Christmas Census, 44.
- VandVale, Tertius, and Hamilton Gibson, Christmas Census, 26.
- Vibert, C. W., Christmas Census, 30.
- Vinal, William Gould, The Blue Jay, 215; Photograph by 147.
- Volkman, Paul, Poem by, 174.
- Voullough, Gess. W. H., Hoosting of the American Bittern, 224.
- Wagner, Alvan, see Bay, H. W.
- Wallbridge, Caroline C., Secretary, Reports of 110, 505.
- Walter, Alice Hall Editorials by, 57, 170, 210, 216, 264, 267; The Most-Supply of the World, 428.
- Walter, Frances K., Secretary, Reports of, 105, 502.
- Wardlaw, John, A Good School-room Method, 183.
- Warner, Will H., see Fairbank, George I.
- Watson, C. G., Notes from London, Ont., 229.
- Watson, John D., Christmas Census, 41.
- Way, W. Scott, Secretary, Report of, 176.
- Weatherill, Charlotte, Secretary, Report of, 401.
- Webster, Leila J., Sem from the Window of a Rural School in Vermont, 445.
- Weiser, Charles, see Fairbairn, Arthur.
- Welts, Dr. Emma J., Secretary, Report of, 483.
- Wetmore, Alexander, Christmas Census, 45, 46.
- White, Mrs. Kellon E., Secretary, Report of, 504.
- Whitlock, Howard E., Secretary, Report of, 486.
- Wicks, Gertrude P., Secretary, Report of, 407.
- Wiggins, Mabel R., Christmas Census, 30.
- Wilson, LeRoy, Christmas Census, 32.
- Willicuts, Indianapolis, Suggestions for Bird and Arbor Day, 173.
- Williams, Belle, Secretary, Report of, 484.
- Williams, E. W., My Nuthatch Tenants and a Pair of Red-headed Robins, 217.
- Wilson, Etta S., Christmas Census, 45.
- Winters, John H., President, Report of, 70.
- Wood, Mrs. Wm. S., Our Back-Yard Visitors, 155.
- Wood, Sheridan F., Christmas Census, 42.
- Woodbury, Mrs. Roland, Eleanor Chute, Mrs. James Steadman, and Majorie Steadman, Christmas Census, 26.
- Woodward, Magnolia, Secretary, Report of, 475.
- Worden, Mona, Christmas Census, 47.
- Wurley, John, see McConnell, Harry D.
- Wright, Mabel Osgood, Three Years After—Some Notes on Birdcraft Sanctuary, Fairfield, Conn., 201; Homeland and the Birds, 406.
- Wright, Horace W., Robins Repeatedly Using the Same Nest, 156.
- Wyatt, Elizabeth, How We Study Birds in Our Room, 445.
- Wyman, L. E., see Bicknell, Mrs. F. T.
- Young, G. S., The Blue Jay Will Murder, 295.
- Young, John P., and Charles H. Rogers, Christmas Census, 31.
- Ziegler, Edward K., Christmas Census, 37.

INDEX TO CONTENTS

- Advisory Council. *BIRD-LOVER'S*, 51
 Albatross, Black-browed, figured, 2.
 Ani, figured, 206
 Annals, 48
 Arkansas, 45
 Arthur's 'Birds of Louisiana,' reviewed, 255.
 Audubon Bulletin, noticed, 508
 Audubon Society's Annual Report of the National Association of, 453; State, Affiliated with National Association, 451.
 Auk, THE, *second*, 241, 279, 444
- Baird & Jackson Papers, reviewed, 414. 'Tropical West Life in British Guiana,' reviewed, 103
 Baird, Mrs. F. Y., Photograph of, 48
 Bird Almanac, figured, 54
 Bird Census, *BIRD-LOVER'S* Eighteenth Christmas, 70, Nineteenth, 340
 Bird Clubs, 24, 242, 427. Reported of, 474
 Bird Conservation, see Bird Protection.
 Bird Day Book, noticed, 208
 Bird-House, 426, 430, 431, 434, 441, figured, 407, 421, 428, 432, 404, 185, 207, 374, 315.
 Bird Protection, 36, 70, 71, 75, 78, 101, 104, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
- Birds, American, 210, 220, 260, 440, 450, 500, 510.
 Blackbird, Red-winged, 160, 250, 239, 354; figured, 337; Rusty, 250, 232, 406
 Bluebird, 24, 163, 250, 200, 218, 407, figured, 144
 Bluebird, The, noticed, 427
 Bobolink, 181.
 Bob-white, 104, 504.
 Booby, Frigate, 204, 205, 21, 12, 154
 Booby, Turkey, 204
- California, 50, 50, 96, 105, 420, 472, 403, 501.
 Cardinal, 160, 105, 220
 Cuckoo, 184, 210.
 Cuckoo, 204, 210.
 Census, *BIRD-LOVER'S* Eighteenth Christmas, 40; Nineteenth, 416.
 Chickadee, 423; figured, 400; Black-capped, 163; Brown-capped, 164.
 Colorado, 47.
 Condor, The, reviewed, 54, 168, 236, 507, 362, 434.
 Connecticut, 70, 95, 163, 472, 403, 500.
 Cost, American, 237
 Cormorant, 180, 506; Double-crested, 361.
 Cowbird, 226, 232; eggs, figured, 226.
 Crane-Sandhill, figured, 400
 Crows, Brown, 21, 105, 428, figured, 142.
 Crossbill, Red, 25, 164, 418; White-winged, 25, 164.
 Cuckoo, Black-billed, 21, 277; figured, 277, 278; Great Cuban, 207.
- DEER, MOUNTAIN, 276, 276, 274, 264
 Duck, American Golden-eye, 105, 231, 418; American Trump Duck, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
- Florida, 204, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 74

- Thrush, Hermit, 162, 431; Olive-backed, 304, 305, 417
 Yellow, 437
 Tanager, Rufous, figured, 141.
 Tanager, 132
 Townsend's "In Audubon's Laboratory" reviewed, 307
 Towson's "The Teaching of Science in the Elementary School," reviewed, 307
 Turquoise, Florida, 361
 Vermont, 26
 Vireo, Philadelphia, 304; Plumbeous, 306; Saltrey, 304; Warbling, 437; Yellow-throated, 305, 432
 Virginia, 22
 Vulture, Black, figured, 186; Turkey, 132
 Warbler, Audubon's 15; Bay-breasted, 303, 304, 431; Black and White, 21, 305; Blackburnian, 304, 305; Black-poll, 305, 437, 438, 409; Black-throated Blue, 21, 305; Black-throated Green, 304, 431; Blue-winged, 304, Canada, 304; Cape May, 21, 304; Chestnut-sided, 302, 303, 304, 305; Connecticut, 420; Kentucky, 304, 305; Macgillivray's, 306, 431; Magnolia, 303; Martin, 21, 305, 306, 307, 437, 438, 439, 440; Nashville, 302, 306, 371, 372; Prairie, 302, 303; Prothonotary, 304, 305; Tennessee, 304; Virginia, 305; Wilson's, 304; Yellow, 431, 305; Yellow Palm, 430, 305, 306, 432; Yellow-throated, 305
 Washington, 48, 115, 114, 112, 305, 306
 Water thrush, Louisiana, 304, 312; Northern, 304
 Waxwing, Bohemian, 161, 182, 312, 212; figured, facing 201; Cedar, 21, 182, 208, 212; figured, facing 201
 West Virginia, 32, 184
 Whip-poor-will, 311; figured, 312, 216
 Wisconsin, 44, 309
 Woodcock, 21
 Woodpecker, American Three-toed, 350; Downy, 10, 21, 308, 310; figured, 309; Hairy, 308, 309, 312; Red-bellied, 431, 307; Red-headed, 22, 308, 218, 438
 Wren, Carolina, 304, 311; Bewick's, 431; House, 159, 114, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
 Yellow-legs, Greater, 115, figured, 136, 137; Lesser, 304, 430, 432



- | | |
|---|----------------------------|
| 1. SCARLET TANAGER, Adult male | 6. SCARLET TANAGER, Female |
| 2. SCARLET TANAGER, Adult male molting | 5. WESTERN TANAGER, Male |
| 3. SCARLET TANAGER, Adult male immature | 4. WESTERN TANAGER, Female |

(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. XX

JANUARY—FEBRUARY, 1918

No. 1

Photographs of Falkland Island Bird-Life

By ROLLO H. BECK

FOR the past five years Rollo H. Beck has been collecting and studying marine birds along and off the coasts of southern South America for Frederick F. Brewster and Dr. L. C. Sanford. His collections are now deposited in the American Museum of Natural History, and in the November, 1917, number of the 'Journal' of that institution he begins a recountal of his experiences by an exceedingly interesting description of his visit to the great bird colonies of the Falkland Islands.

Although these islands are treeless, they nevertheless possess a few species of land-birds. Our own House Wren is represented by a closely related species. There are also a Thrush about the size of our Robin, a Pipit, and several Sparrows, all exactly or essentially like their representatives in the neighboring parts of South America.

It is, however, chiefly as a resort of sea-birds that the Falkland Islands are known to ornithologists. Penguins, Cormorants, Ducks, and Geese of several species abound here, and there are Albatrosses, Fulmars and Skuas.

Beck landed at Port Stanley, the only town in the group, in October, 1915, at the beginning of the subantarctic spring. From this point, he writes that "it is possible to mount a horse and visit three species of Penguins on their nesting-ground and return the same day. . . ."

From Port Stanley, Beck went by sloop to the doubtless well-named Bleaker Island, about 75 miles farther south.

This island, he states, "is about twelve miles long by one wide and is devoted wholly to sheep-raising, supporting about three thousand sheep." Here he found the Gentoo Penguins landing on the south side of the island, walking a mile over their accustomed path, passing at times through flocks of feeding sheep—a strange association—to their nests within a few hundred yards of the water, but on the opposite side of the island from that on which they landed.

Mr Beck's article is illustrated with a large number of admirable photographs, several of which, thanks to his courtesy and that of the American Museum 'Journal,' we are permitted to reproduce in BIRD-LORE.—EDITOR.



Copyright by R. H. Bech

NESTING SITE OF THE BLACK-BROWED ALBATROSS

From the time that a steamer leaves Valparaiso on the west coast on its return voyage to Europe around the southern shores of South America and up as far as Buenos Aires on the east coast, there is probably not a day during the winter season that Albatrosses may not be seen from its decks. While the magnificent Wandering Albatross, with his incandescent flight, is often seen, the commoner species is the Black-browed Albatross. There are several colonies of the Black-browed Albatross to be found in the Falkland Islands, and one or two about Cape Horn. The illustration shows a typical nest placed hundreds of feet above the main surface area, close to the edge of a cliff on West Point Island in the Falklands. The bowl-shaped nest of the Albatross resembles that of the Frigatebird, being built mostly of mud pecked up nearby. Many nests are used year after year and are built up gradually to a considerable height. The young Albatross grows slowly, and it is some months before it can step from its nest and sail away over the seas.



Copyright by R. H. Beck

A SOURCE OF EGG SUPPLY IN THE FALKLANDS

Why do the petrels' nests to be found in the Falkland Islands use the Petrels and in the large quantities occurring there. The small Rock Hensons are probably 55 percent of the total. These petrels. The above illustration shows the nest and of the island on Killybegs. About the middle of January, 1921. Many young birds can be seen in the foreground, and we are told the fact that more than 100,000 eggs were taken by eggs' early in December from this same island. What this young birds are perhaps 100,000 eggs. They have their nests and placed in little basins over the rocks. One sometimes can see a dozen or twenty of the petrels' hatched together. How the petrels may meet their own young from the nest? It is possible, when returning from the sea with food, to be recognized by a noisy chorus. The petrels' eggs are widely used in the Falkland Islands, many thousands being picked and preserved for winter use.



DOLPHIN GULLS NEST BUILDING IN A FRESH WATER POND.

Copyright by R. H. Bera



Copyright by R. W. Bond

AN UNUSUALLY LARGE COMPANY OF SHEARWATERS

The Shearwaters or Kelp Pigeons, as they are known in the Falklands, are seldom seen in flocks of any size, the groups shown above being the largest observed. The possession of a large Ring-billed Gull is another attraction of these birds. In the nesting season the Kelp Pigeons hang around the Penguin and Shag rookeries, feeding these birds of desirable food, but at other seasons they feed on the numerous mollusks that are abundant everywhere along the rocky shores at low tide. The few Kelp Pigeons that remain in the Falklands through the summer are not known to nest there, the breeding ground of the species being the islands farther south.



THE GIANT FULMARS ON THEIR NESTS

About a hundred pairs of birds were resting on the flat sandy top of this island, framed only a few hundred yards from the beach. Mounted by H. S. Gentry, 1935.

PLATE 111. G. G. Gould



Copyright by K. H. Best

JACKASS PENGUINS IN A FRESH WATER POND

As parental penguins in the Jackass Islands, Kermadec, feed their young in fresh water ponds. The birds among above were playing at the edge of a fresh water pond when first noticed. They entered the water and swam about as their first-born penguins. The "motherly" penguins of the Jackass Islands in Kermadec, about 1000 miles distant from the main island of New Zealand, are notably green. They join their parents at the entrance of their burrow, and when they come to the family group, the arriving birds from the surrounding shores are often attacked by them.



JACKASS PENGUINS IN A WIND-WHIPPED RESTING-SPOT

In the windy weather which is frequent about the Falkland Islands, many of the Penguins come ashore and spend their time resting near the water. The above photograph was taken on a very windy day. The photographer approached the birds on his knees as they were in such a much agitated state. The

'Pauperizing' the Birds

By HENRY OLDYS

INTEREST in birds has grown amazingly in recent years. The charm of establishing friendly relations with these bright and attractive little creatures and of becoming familiar with their pretty ways and varied songs is making an appeal to young and old such as it never did before. Some are content with the old method of scattering a few crumbs on doorstep or window-sill and placing rudely constructed nesting-boxes about the home. Those, however, who are stirred by the always laudable ambition to attain the highest success possible study carefully the question of catering to the varied tastes of different species. On the grounds of these more energetic bird-lovers, providing for the birds is a much less simple matter. Elaborate tables are spread for the feathered guests; certain selected shrubs, which furnish food, nesting-sites, and shelter from enemies, are planted in profusion; nest-boxes of special sizes and types are constructed or purchased and erected at suitable heights and in carefully chosen localities; the pan of water is superseded by the concrete pool; and many other devices of proved service are used to attract avian visitors. Especially are these modern methods and contrivances used in the community bird sanctuaries which are beginning to dot the country in increasing numbers.

That the beneficiaries of all this activity appreciate and respond to such provision for their welfare is plainly evident to anyone who visits one of these private or public bird-havens and observes the throng of birds constantly about food tray and pool; or who is familiar with certain statistics published by the United States Department of Agriculture, which show that while the average density of birds nesting about homesteads in the eastern half of the United States is approximately one pair to the acre, places where the birds find special accommodations have as many as three, five, seven, even twelve, nesting pairs to the acre. And ever before the eyes of those cognizant of the progress of the movement is the remarkable achievement of Herr Graf von Berlepsch, who, on his estate at Witzenhausen, in Thuringia, has induced more than 500 pairs of birds to make their home annually on the 13-acre park surrounding his castle—a bird population of forty pairs to the acre!

From the standpoint of increasing the birds, the measures taken are unquestionably successful. Let it not be supposed that a greater number in one place implies a decrease elsewhere—in other words, that the excess on tracts where conveniences are supplied is drawn from other areas that are only normally attractive to birds. Birds are very local in their attachments. The same pair, in the absence of interference, will nest year after year in the same spot. And the banding experiments that have been conducted for some years by an energetic organization tend to show the same tenacity as regards their winter homes. Thus, White-throated Sparrows banded on a farm at Thomasville,

Ga. were nested at the same spot in the following winter, having spent the summer, as usual with their kind, at some point on our northern border or in Canada. While it is possible that some are diverted from less to more desirable quarters, this trait of local attachment suggests that by far the greater part responding to the offered hospitality are those which either are making a first selection of a home or have been forced to abandon the old nesting place.

It must be remembered, also, that under the human surveillance and protection engendered by the interest underlying the bounty, more birds survive the winter and more are raised to maturity. The casualties due to winter's inclemency and to the dangers that beset growing birds are almost incalculable. Much of the increase in numbers among the species directly benefiting by the new interest is undoubtedly due to this saving of bird-life.

So far all is well. The movement brings about a substantial increase in our beneficial birds and a healthy growth of human interest in animated nature. The desirability of each of these results cannot be seriously questioned. But in the midst of our felicitations on the rapid spread of the movement there comes a discordant note. From sources too sincere, too intelligent, too friendly to birds to be ignored as born of ignorance or prejudice, comes a warning—"You are doubtless enjoying yourselves, and your intentions are praiseworthy, but you are *pauperizing the birds* and destroying their usefulness. If you supply them with substitutes for their ordinary insect and weed-seed diet they will give up their foraging habits and will no longer hold the enemies of agriculture and horticulture in check."

On its face this is a plausible indictment. A Downy Woodpecker, for example, that obtains all his meals from the suet-basket will be diverted from the insect-infested tree and his service to man and tree will cease. He will be transformed from a very servicable helper to an idle pensioner, and his practical economic relation to man will be converted to a purely esthetic one.

But several factors are here ignored that are necessary to a broad and full understanding of the question. In the first place, it is extremely unlikely that any bird will satisfy his appetite only at the ready-spread table. With birds, as with man, the appetite demands diversity of food. Doubtless the Downy Woodpecker invoked as an example will help himself freely to the convenient suet, especially in times of scarcity of his natural food, but he is no more likely to feed on suet alone because of its ready accessibility than is a man to confine his diet to chicken, if chicken be furnished him without cost. If a man were to try such an experiment he would soon find himself loathing the very sight of chicken, and it is probable that birds have a similarly discriminative sense, to force them to seek that diversity of food which they need as much as man. Again, one of the best established ornithological facts is the governance of birds almost absolutely by habit. It is the habit of the Downy Woodpecker to dig in the trees for certain insects to be found there. Pecking into suet may form an

agreeable diversion and in an emergency may even be a necessity, but it is altogether unlikely that the ancestral method of feeding imposed on the birds by ages of inheritance will lightly disappear, to be replaced by a different form. It should be remembered in this connection that only as the nesting-boxes supplied birds have approximated their natural nesting-places have the birds been induced to accept them freely. Even so small a change as boring a bulging hole in the box, instead of a straight one, and beveling the lower edge of the entrance-hole, increased the occupancy of boxes in the Berlepsch woods from 30 to 50 per cent. If our supposititious Woodpecker, who is here doing duty as representative of his entire class, were to give up his investigations of the tree trunks and abandon himself to the luxury of unlimited suet-pecking, nature would prod him with that sharp stick of instinct which she uses as a stimulant to bird activities in lieu of a conscience, and he would find himself seized with an irresistible desire to fly to some tree and explore its bark for the food hidden beneath.

In the next place, the enormous number of birds must be considered—something of which few persons have an even approximately adequate conception. The immense concourses of Passenger Pigeons, remembered by many now living and so graphically described by Wilson, Audubon, and other early ornithologists, are common knowledge. But that the Robins of America are today far more numerous than the Passenger Pigeons ever were, and that many other species outnumber them also—perhaps three to one—is not generally appreciated. The gregariousness of the Pigeons, causing them to unite in a few great flocks, made the number much more manifest than do the scattered small bands and individuals of other birds. Yet when we reflect that Robins nest over an area extending at its farthest limits from Mexico to the Arctic Ocean and from the Atlantic to the Pacific, and that in much of this vast territory they are fairly crowded, it is easy to conjecture what an immeasurable army they would make if gathered into one flock. How many who read this article have even knowingly seen a Longspur? Yet on the morning after a wet snowstorm that visited Minnesota some years ago, one million Longspurs were found lying dead on the ground, having been brought down by the storm out of a flock that was passing overhead through the night.

In view of the inconceivably great number of birds that populate the country, then, it should not be difficult to comprehend very readily that the few hundred thousands or even millions that receive a varying proportion of their food directly from man constitute an inconsiderable fraction of the whole. If a million Longspurs may be stricken dead in a night without producing an appreciable increase of insects and weeds, surely we need have no concern over the possible danger that our generosity may work serious injury to agriculture.

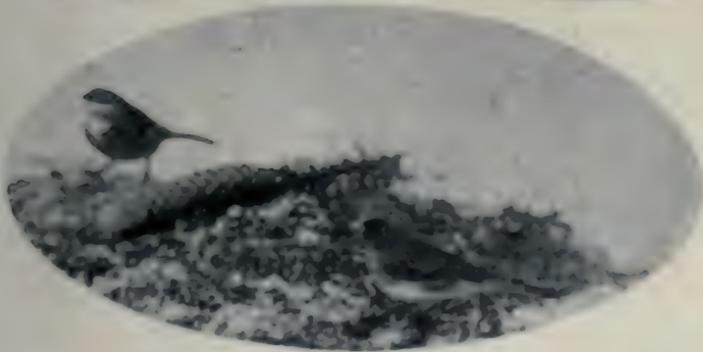
Moreover, consideration must be given to the increase in the bird population wrought by the greater protection resulting from active interest in the birds,

not only on sanctuaries but elsewhere, as, for instance, in converting many thousands of boys from bird-destroyers to bird-protectors. What degree of suppression of forces inimical to bird-life is thus occasioned we cannot know with exactness, but it must be very great. It is easily conceivable that the quantity of insects and weed seed consumed by the birds thus preserved is at least as great as any increase of these pests arising through feeding the birds.

Finally, the young birds raised on sanctuaries, public and private, are not fed from the food-shelf while they are in the nest. They require a diet of soft-bodied insects, which the parents must supply. The more young, the more insects. If four broods are raised where formerly but one was the rule, four times as many insects will be required for the purpose. This necessity of securing insects for the young will of itself prevent birds from incurring any grave danger of being pauperized, and the greater quantity of insects needed for the larger number of broods will obviate any diminution in the service to agriculture.

To this point the argument has been of an *a priori* character. But a *posteriori* conclusion may be drawn from three facts, one general, the other two specific. The general fact is that on sanctuaries, not only do the plants (including trees) show no deterioration from insect attack, but they seem to be healthier and freer from such depredations than before the feeding of birds was begun. It is largely for the purpose of benefiting the plant-life on estates that sanctuaries are established. The specific facts are as follows: When, a few years ago, E. H. Forbush, State Ornithologist of Massachusetts, increased the number of birds in his orchard by the usual means, his little pensioners, the following summer, saved his fruit crop (and, incidentally, that of his next neighbor) from the attacks of a host of tent caterpillars and cankerworms that ruined every other fruit crop in the region. Again, when a similar outbreak of caterpillars stripped the trees of a large area in Germany so bare that the summer woods resembled those of winter, the birds that Baron Berlepsch had fed and housed so protected his estate that although it stood in the midst of the devastated area the invading army could not get within a quarter of a mile of it. These examples of the actual effect of sanctuary methods amply support the theoretical conclusions previously reached.

We may, therefore, reassure ourselves and continue to enjoy our new intimacy with the birds with clear consciences. We shall not pauperize the birds by our liberality and friendliness. On the contrary, we may rest with confidence in the pleasant thought that, while instituting a delightful relationship with our welcome guests and filling our homes with the added beauty of their song and plumage we are increasing their general efficiency and so insuring a greater degree of health and beauty to our lawns, trees, shrubs, and flowers.



CAMERA PORTRAITS OF THE JUNCO
By C. F. Stone, Branchport, N. Y.

A New Feeding-Slab

By WM. E SAUNDERS, London, Ont.

SO MANY of the readers of BIRD-LORE are interested in feeding the winter birds that this magazine ought to be a medium for the exchange of ideas on that subject.

Few of us live where we are not troubled by the English Sparrows, which therefore must be reckoned with before we can successfully feed our native birds. I have done constant work in trapping Sparrows for two or three years, and have been amazed to find that one can practically exterminate them in his own back yard, even though they may be plentiful within a distance of a hundred yards, or even less. But we are learning all the time that birds are loyal in their habits, and this is only another proof added to the many that have gone before.

I have used the large box-trap, originally recommended, I think, by the Department of Agriculture, into which the Sparrows enter through spaces left at the top. I have also used a trap of the Dodson type, and while both of



THE SAUNDERS FEEDING SLAB

these are moderately successful, yet I find that they make the Sparrows very wary, and they do not give results that are at all comparable to those obtained by the use of a plain trap consisting of a shallow open box in which the bottom is replaced by wire netting. This box is held up by a stick 7 or 8 inches long, and a string attached to the stick leads to the living-room window. Millet seed is kept constantly under the box, and the Sparrows feed under it safely, and when a Sparrow gets the habit of coming to my yard at all, he soon finds the food-supply, and I notice that the seed is diminishing daily. The supply, however, is kept up, and some fine morning I find one or more Sparrows under the trap, when there is an opportunity to pull the string.

In the spring of 1916 I kept both a Dodson trap and a box-trap set throughout April and May. The Dodson trap caught one Sparrow and the other caught about twenty, and these were, of course, wary old birds. Another great advantage of the box-trap is that it is used constantly by all the visiting and resident native Sparrows as a food-supply, and they act as unconscious decoys for the House Sparrow. The trap is, of course, perfectly safe for the natives, as I never pull the string except for House Sparrows, and it is very amusing to see the absolute disregard with which the Chippies and others steal my bait, for to me the trap forms the best place for feeding native Sparrows.

Constant trapping keeps the numbers of Sparrows down to the minimum, but when in winter I put out food on horizontal platforms or perpendicular slabs, using fat and nuts, not only do the Woodpeckers and others use it, but the Sparrows find it a welcome source of food, and if they are undisturbed they will eat two or three times as much as all the native birds put together. I was so bothered in this way last winter that I was driven to invent the upside-down slab shown in the illustration, with the very satisfactory result that while the Chickadees, Woodpeckers, and Nuthatches use it freely, and apparently like it just as well as any other method, the Sparrows never touch it at all. Not only does one get ahead of the Sparrows, but the snow never covers the food, as it does where the supply is on a horizontal platform; and for the northern districts where there is a good deal of snow in winter, this is quite an important point.

The handle which projects from the center at one end of the slab is for the purpose of supporting it. One may have two nails driven in it or two little wooden sockets on the wall or on a tree, the socket or nail nearest to the feeding-slab being below the handle, and the one farthest away being above; with this arrangement one can pull the slab off, take it in for replenishment, and replace it again with equal convenience. This slab was exhibited at the last meeting of the American Ornithologists' Union and was favorably commented on by many of those present.

For food, my plan is to get a bag or two of salted peanuts, grind them in a meat-chopper, mix them with melted suet, and plaster the mass on the wood with a spoon. As soon as cool it adheres perfectly, and one has the satisfaction of knowing that the birds do not walk on their food before eating it, though that satisfaction is probably limited to the human race and not shared by the birds themselves.



The Migration of North American Birds

SECOND SERIES

II. THE SCARLET AND LOUISIANA TANAGERS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

See frontispiece

SCARLET Tanager

The Scarlet Tanager (*Piranga erythromela*) breeds in the United States and southern Canada, north to Nova Scotia, southern Quebec, Ontario, and south-eastern Saskatchewan; south to southern Kansas, Tennessee, northern Georgia, and western South Carolina. It winters in South America from Colombia to Bolivia and Peru, and migrates through the Greater Antilles and Central America. It is of casual occurrence during migration also west of Wyoming and Colorado, and east to the Bahama Islands and the Lesser Antilles.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of nesting period
Miami, Fla.			April 22, 1911
Mosquito Inlet, Fla.			April 17, 1902
Dry Tortugas, Fla.			March, 1889
Savannah, Ga.	4	April 14	April 1, 1912
Atlanta, Ga.	8	April 19	April 11, 1904
Long Island, Ala.	4	April 16	April 4, 1917
Bay St. Louis, Miss.	2	April 16	April 16, 1902
New Orleans, La.	5	April 12	April 6, 1893
Punta Isidoro, Tex.			April 22, 1907
San Antonio, Tex.			April 12, 1900
Aiken, S. C.	2	April 24	April 21, 1914
Raleigh, N. C.	11	April 29	April 19, 1911
Weaverville, N. C.	2	April 20	April 17, 1894
Variety Mills, Va.	28	April 20	April 21, 1901
Washington, D. C.	11	May 1	April 17, 1899
Waverly, W. Va.	4	April 18	April 17, 1904
White Sulphur Springs, W. Va.	6	May 2	April 28, 1893
Chattanooga, Tenn.	7	April 26	April 18, 1912
Eubank, Ky.	9	April 18	April 14, 1899
Helena, Ark.	4	April 26	April 10, 1892
St. Louis, Mo.	9	April 27	April 21, 1887
Osage, Kans.	8	May 1	April 24, 1895
Hartford, Conn.	23	May 9	May 4, 1913
Providence, R. I.	17	May 11	May 5, 1895
Boston, Mass.	24	May 11	May 6, 1892
Springfield, Mass.	7	May 12	May 8, 1895
Phillips, Maine	12	May 17	May 9, 1905
Durham, N. H.	3	May 15	May 9, 1900
Rutland, Vt.	11	May 14	May 4, 1913
St. Johnsbury, Vt.	17	May 17	May 9, 1893
Morristown, N. J.	17	May 9	April 14, 1897
Englewood, N. J.	15	May 11	May 5, 1906
New York City, N. Y.	31	May 7	April 19, 1887
Alfred, N. Y.	21	May 14	May 5, 1899
Ballston Spa, N. Y.	11	May 13	May 8, 1913

SPRING MIGRATION, continued

LOCALITY	Number of years record	Average date of spring arrival	Earliest date of spring arrival
Buffalo, N. Y.	8	May 9	April 4, 1889
Philadelphia, Pa.	24	May 7	April 30, 1791
Bismarck, Pa.	23	May 5	April 29, 1915
Buffort, Pa.	14	May 1	April 22, 1889
Cincinnati, Ohio	24	May 1	April 24, 1913
Kokomo, Ind.	9	May 7	April 15, 1911
Kokomo, Ind.	7	May 1	April 24, 1894
Wabash, Ind.	18	May 1	April 19, 1889
Chicago, Ill.	23	May 4	April 28, 1901
Kankakee, Iowa	15	May 2	April 26, 1896
Grassell, Iowa	7	May 6	April 27, 1888
Shaw City, Iowa	15	May 13	May 6, 1906
Detroit, Mich.	6	May 5	April 29, 1906
Madison, Wis.	23	May 7	April 29, 1899
Lansdowne, Minn.	10	May 11	May 7, 1887
Monticello, Minn.	14	May 12	May 6, 1913
Vermillion, S. D.	5	May 14	May 9, 1913
Grand Forks, N. D.			May 21, 1903
Secret Lake, N. B.	7	May 25	May 18, 1903
Quebec, Quebec	5	May 21	May 14, 1903
Montreal, Quebec	4	May 20	May 17, 1893
Ottawa, Ont.	25	May 20	May 17, 1912
London, Ont.	10	May 5	April 30, 1901
Marquette, Man.			May 24, 1909
Ch'Appelle, Sask.	5	June 6	May 26, 1909

FALL MIGRATION

LOCALITY	Number of years record	Average date of last one observed	Earliest date of last one observed
Montreal, Quebec	2	September 4	September 6, 1910
Ottawa, Ont.	11	September 14	October 3, 1914
London, Ont.	3	September 9	September 25, 1907
Phillips, Mich.	3	August 10	August 15, 1908
Durham, N. H.			October 5, 1890
Lebanon, N. H.			October 12, 1904
St. Johnsbury, Vt.			October 2, 1914
Boston, Mass.	7	September 19	October 3, 1900
Fryeburg, R. I.	6	September 6	October 6, 1904
Hartford, Conn.	12	September 28	October 17, 1894
Ballston Spg., N. Y.	5	August 29	September 29, 1914
New York City, N. Y.	12	September 25	October 5, 1907
Madison, Wis.	5	September 19	September 25, 1913
Lansdowne, Minn.	5	September 2	September 11, 1887
Monticello, Minn.	5	September 10	October 6, 1906
Englewood, N. J.	7	September 27	October 22, 1904
Monticello, N. J.	14	September 27	October 14, 1906
Philadelphia, Pa.	8	October 7	November 3, 1885
Bismarck, Pa.	20	September 27	October 13, 1901
Buffort, Pa.	7	September 21	September 26, 1891
Cincinnati, Ohio	8	September 10	October 2, 1901
Wabash, Ind.	9	September 22	October 6, 1891
Kokomo, Ind.	5	September 15	October 14, 1906
Detroit, Mich.	2	October 3	October 5, 1905
Chicago, Ill.	6	September 27	October 12, 1906
Shaw City, Iowa			September 25, 1910

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Grinnell, Iowa	4	September 12	September 22, 1888
Keokuk, Iowa	4	September 19	September 23, 1893
St. Louis, Mo.			October 21, 1906
Nebraska City, Neb.			September 18, 1906
Omaha, Kans.	5	August 7	August 28, 1903
Caddo, Okla.			November 2, 1881
Washington, D. C.	15	September 28	October 21, 1891
Fubank, Ky.	4	September 16	September 21, 1886
Weaverville, N. C.	4	October 8	October 20, 1902
Raleigh, N. C.	6	October 2	October 11, 1887
Athens, Tenn.	3	September 26	October 16, 1902
Atlanta, Ga.	5	September 28	October 9, 1899
Savannah, Ga.	2	September 2	September 11, 1908
Tallahassee, Fla.			October 13, 1904
Ray St. Louis, Miss.	3	October 6	October 16, 1901
New Orleans, La.			October 7, 1896
Port Arthur, Tex.			September 11, 1911

LOUISIANA OR WESTERN Tanager

The breeding-range of the Louisiana Tanager (*Piranga ludoviciana*) extends, in North America, north to southwestern Mackenzie, northeastern British Columbia and southeastern Alaska; west to western British Columbia, Washington, and California; south to southern California, southern Arizona, and central western Texas, and east to New Mexico, Colorado, and southwestern South Dakota. It winters from central Mexico to Guatemala; and occurs casually in migration east to Maine, Massachusetts, Connecticut, New York, and Louisiana.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Albion, Tex.			May 6, 1901
Albuquerque, N. M.			April 22, 1914
Tombstone, Ariz.	4	April 28	April 8, 1911
Laguna, Ariz.			April 25, 1910
Potholes, Imperial Co., Calif.			April 29, 1910
Los Angeles, Calif.	4	April 20	April 14, 1907
Modesto, Calif.	4	April 21	April 14, 1914
Omaha, Kans.	4	May 12	May 9, 1912
Colorado Springs, Colo.	10	May 17	May 12, 1882
Beulah, Colo.	13	May 14	May 7, 1911
Denver, Colo.	4	May 18	May 11, 1913
Boulder, Colo.	6	May 13	May 5, 1904
Yuma, Colo.	4	May 14	May 10, 1903
Custer City, S. D.	3	May 27	May 24, 1897
Cheyenne, Wyo.	3	May 23	May 21, 1888
Columbia Falls, Mont.	3	May 18	May 15, 1897
Rathdrum, Idaho	7	May 26	May 19, 1903
Meridian, Idaho	3	May 16	May 13, 1915
Portland, Ore.	5	May 9	May 4, 1897
Tacoma, Wash.	5	May 9	May 3, 1908
Banff, Alta.	6	May 10	April 30, 1900
Athabaska Landing, Alta.			May 14, 1903
Fort Chipewyan, Alta.			May 26, 1902
Oranoga Landing, B. C.	10	May 12	May 14, 1911

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Earliest date of last one observed
Henry House, Alta	5	September 4	September 10, 1895
Okanagan Landing, B. C.			September 12, 1911
Royal City, S. D.			October 2, 1909
Columbia Falls, Mont.	2	August 23	September 18, 1894
Missoula, Mont.			September 11, 1911
Chesapeake, Wyo.			September 8, 1884
P. Laramie, Wyo.	10	August 30	September 17, 1837
Yuma, Calif.			October 5, 1908
Boulder, Colo.			October 10, 1909
Basin, Colo.	2	September 30	September 10, 1915
Denver, Colo.			October 3, 1909
Cannon City, N. Mex.			September 18, 1879
Mendota, Calif.			August 24, 1919
Los Angeles, Calif.			September 30, 1891
Omaha, Kans.			August 14, 1913

Notes on the Plumage of North American Birds

FORTY-SIXTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Scarlet Tanager (*Piranga erythromelas*, Figs. 1-4).—The female Scarlet Tanager after acquiring its first winter plumage is alike at all seasons and all ages. Beyond saying, therefore, that our figure of it (Fig. 4) is too pale and yellow, we may pass to the exceptionally interesting plumage changes of the male.

The nestling of both sexes is dusky green, paler below, streaked indistinctly with blackish. At the postjuvénal molt the tail and wing-quills are retained, and a new plumage is acquired which resembles that of the female but has the lesser wing-coverts black as in the male. The following spring this costume (except the flight-feathers) is exchanged for that of the adult male (Fig. 1). This is worn until after the breeding-season when it is molted for the adult winter dress which resembles the female plumage but has the wings and tail black. The molting bird presents a curious patchwork appearance which has excited the curiosity of many observers not familiar with the changes of plumage through which this species passes. At the following spring the scarlet body dress is regained.

Occasional orange-bodied birds of this species are doubtless to be classed as "albinoistic," or individuals lacking the full share of pigment possessed by the normally colored kinds.

Louisiana (or Western) Tanager (*Piranga ludoviciana*, Figs. 5, 6). In juvenal or nestling plumage both sexes of this Tanager are dusky yellowish

or brownish green, yellower below and more or less obscurely streaked, the wings and tail are fuscous, and the former have two well pronounced yellowish bars, a diagnostic mark of this species in any plumage.

At the postjuvinal, or first fall molt, all but the tail and larger wing-feathers are shed and a new plumage acquired which resembles that of the adult female (Fig. 6), but has the rump and underparts somewhat yellower.

This plumage bears a strong resemblance to that of a female Scarlet Tanager, but the dusky back (instead of uniform olive-green) and pronounced wing-bars of the western bird serve to identify it. Still a Western Tanager seen in the eastern United States could easily be mistaken for the Scarlet Tanager. (I was surprised when preparing these notes, in the National Museum at Washington, to find a female Western Tanager labeled, "Highland Falls, N. Y., ♀ juv., Dec. 21, 1881, Edgar A. Mearns." The identification was a tribute to the acuteness of the ornithologist who as a boy had taken this western species, at his home near West Point, a capture which I subsequently recalled having seen recorded.)

At the spring or postnuptial molt practically all the plumage is molted except the tail, primaries, and secondaries, and the bird acquires a costume much like that of the adult male in our plate. The back, however, is duller and shows some of the feathers of the winter dress, while the new feathers are tipped with olive, the head has less red, and the old wing and tail feathers are brownish.

After the breeding-season (postnuptial molt) this plumage is completely molted and the bird goes into adult winter plumage. This resembles that of the adult in summer (Fig. 5), but the head is yellow washed with dusky, without, or with but a trace of red, the back is edged with greenish, and, the **tertials are tipped with yellowish.**

At the second spring molt only the wings and tail are retained, and the bird passes into adult breeding plumage, which is not gained, therefore, until its second year.

The plumage of the female presents but little change with age, sex or season, but some adults in summer have more or less red on the anterior parts of the head.



THE SEASON

V. October 15 to December 15

BOSTON REGION.—Robins, Bluebirds, White-throated Sparrows, and Myrtle Warblers left this region on their usual date, November 1.

More than a month of beautiful autumn weather followed before winter set in with snow and steady cold, but during this period the country was as barren of bird life as it was in the winter of 1907-08, when no birds except the commonest winter residents, and these in very small numbers, remained in this vicinity. One exception is to be noted, during November, and to the present time (December 15), Cedar Waxwings have occurred in flocks of a dozen birds or more. A few Slate-colored Junco and Tree Sparrows are wintering here.

Notwithstanding the absence of birds in the country about Boston, Dr. C. W. Townsend reports from Ipswich, Mass., a normal population of water-birds, Snow Buntings, Horned Larks, Ipswich Sparrows, and Myrtle Warblers. However, C. A. Robbins writes that the Myrtle Warbler, ordinarily a common winter visitor, is absent from Wareham this season.

None of the seven species of northern birds which visited us last winter is present this season. Northern Shrikes have been seen occasionally in the country. Now that winter has set in, they have come into the town centers where House Sparrows are plentiful.—WINSOR M. TYLER, M.D., *Longton, Mass.*

NEW YORK CITY REGION.—After an early October less pleasant than usual heretofore, the latter part of the month and November gave us, for the most part, splendid autumn weather, though rather cold. December has been marked by a noteworthy amount of cold and frequency of snowfall for so early in the winter.

Individuals, at least, of certain Warblers stayed remarkably late, as a Black-throated Blue and a Cape May at Long

Beach, L. I., October 28 (seen by Walter Granger and the writer), a Redstart (also a Black-billed Cuckoo) at Mastic, L. I., November 4 (J. T. Nichols), and a Black and White Warbler at Long Beach on November 6 (J. M. Johnson). Fox Sparrows seemed rather unusually common, singing freely, and Mr. Nichols tells me that they and the Robins stayed unusually late (into the first week of December) at places on the western end of Long Island where they do not winter.

Specimens received in November (the earliest on the 5th, from northwestern New Jersey) from outlying districts indicate an invasion of Goshawks similar to that of last winter, and at least six or eight Northern Shrikes, already reported from in and around the city, point to a rather large southward movement of that species, which was almost entirely absent last winter when so many other northern birds visited us. Several additional Red-breasted Nuthatches were seen, but I have heard of no record of any of the boreal Finches, not even the Pine Siskin.—CHARLES H. ROGERS, *American Museum of Natural History, New York City.*

PHILADELPHIA REGION.—Characteristic autumnal weather conditions prevailed throughout October and November. The first snow occurred November 28.

The Pipit was reported as very abundant at numerous points over an extended territory, being very common from the first week in October to the middle of November. Fox Sparrows and Brown Creepers were perhaps more plentiful than usual. Reports on the autumn flight of Woodcock are somewhat contradictory; that the birds are scarce, taking this region as a whole, there can be no doubt, and a close season for a term of years would not be amiss. A Woodcock was found dead early in November at South Vineland, N. J.,

which had evidently flown against a telephone wire. Boreal birds, such as Siskins, Redpolls, Crossbills, and Evening Grosbeaks, which were so plentiful late last autumn, are as yet almost totally absent. One of the surprises of the season is the appearance of the Snow Bunting in southern New Jersey (Corson's Inlet, November 11, Wharton Huber; Salem, early in November, Dr. Wharton). These birds usually appear hereabouts after blizzard-like weather conditions.

Goshawks appeared late in November in considerable numbers; several have already reached the hands of local taxidermists. A flight of about fifty Hawks, probably Broad-wings, was observed at Germantown, Pa., November 1, by Arthur Emlen.

Other interesting records are: Rough-legged Hawk, October 20, Lima, Pa., specimen examined, Delos Culver; Pine Siskin, November 1, Gwynned Valley, Pa., Wharton Huber; White-crowned Sparrow, October 25, Chester, Pa., John Carter; Great Horned Owl, Juliustown, N. J., November 17, Emory Bower; Blue-gray Gnatcatcher, Camden, N. J., October 7, J. K. Potter.—JULIAN K. POTTER, Camden, N. J.

WASHINGTON REGION.—Notwithstanding the unusually cold weather of October and November, there was little out of the ordinary to attract the interest of the ornithological observer about Washington. For the non-appearance of rare winter birds, the relatively, if indeed not actually, warmer weather of regions farther north probably accounts. The low temperature brought visions of many rare northern visitors, but up to the present these have wholly failed to materialize.

The migration during these two months was apparently about normal, although a number of birds stayed rather long, and some winter residents did not appear on time. The Chimney Swift was seen on October 20, which is ten days beyond its average autumn departure, and the Pied-billed Grebe was observed on October 26, a late autumn date. One species, the

Least Sandpiper, however, broke all its previous records for autumn lingering, as C. H. M. Barrett reported one on November 22, whereas the previous latest occurrence was November 1, 1917; this latter in itself far beyond any other date. The Herring Gull, on the other hand, appeared on November 21, which is in advance of its previous earliest record, November 25, 1894.

Although in no sense remarkable, a Long-eared Owl reported by I. N. Gabrielsen, from East Falls Church, Va., on November 14, and a Connecticut Warbler by A. Wetmore, at Washington, D. C., on October 14, are probably of sufficient interest to merit notice here.

Some species have been more than ordinarily numerous this fall, among which might be mentioned the Meadow-lark and the Killdeer. Fully 100 of the latter were noted by C. H. M. Barrett along the Anacostia River on November 21-22, in which locality but a few are commonly seen at this season.—HARRY C. ORRHOUSER, *Biological Survey, Washington, D. C.*

OHIO REGION.—A few Robins and Blackbirds lingered in October until the cold wave and snow-storm of the 20th and 21st, when they disappeared. This unseasonable storm established winter conditions as far as the birds were concerned. There followed nearly three weeks of warm weather and fair skies, but no birds returned to enjoy the belated 'Indian Summer' weather. The usual Flickers and other Woodpeckers were present, and in the beech woods, where the crop of beechnuts is abundant, there were many Red-headed Woodpeckers, who seemed intent on spending the winter there. This Woodpecker is not a regular winter bird with us, but usually remains when there is an abundant crop of beech-nuts.

As I write, Oberlin is in the midst of a second cold wave with attendant deep snow for the region. While there has been nothing out of the ordinary in the winter bird-life thus far, I fully expect that

following this severe storm there will be an invasion of the region by northern species.

In the midst of this storm I found a Yellow-bellied Sapsucker clinging to the vines which cover one of the college buildings. He was complaining bitterly. Last winter an individual of this species lived for some time during the colder weather in the same place. The Sapsucker is not a winter bird of the region.—LYONS JONES, *Oberlin, Ohio.*

MINNESOTA.—Throughout October the weather all over Minnesota was so cold and stormy as to be almost unique in the records of the state. During the very first days, freezing temperatures prevailed from the Iowa line northward, with ice on the ponds and shallow lakes and flurries of snow. Before the month was over, nearly a foot of snow had fallen and subzero temperatures had been experienced in the northern part of the state. The effect of these abnormal conditions upon bird-life was, of course, greatly to disarrange the usual migratory movements. This was especially noticeable in the case of water-birds. Many of the Ducks, notably the Canvasbacks, Redheads, and Teal, Rails, Coots, Gallinules, shore-birds, and Herons left much before their time because of the ice that locked up their food-supply. Among land-birds there was also a speedy disappearance of species that usually linger through October. The bulk of the Robins, for instance, retreated a month ahead of time and left an unusually heavy crop of mountain ash berries, wild grapes, and other fruits almost untouched, especially in the northern half of the state. They usually clean up the mountain ash berries pretty thoroughly before going.

Following the tempestuous and unreasonable October came an equally unusual November, in the beautifully odd and Indian-Summer-like character of many of its days. Snow, ice, and chill disappeared, but the birds that had earlier fled in alarm did not return in any considerable number. At Heron Lake, a

famous water-fowl resort in southwestern Minnesota, and at various places northward on both sides of the Minnesota-Dakota boundary, there was an unprecedented assemblage of Mallards, with a sprinkling of Pintails, Scaups, Ring-necks, and others. Many thousands were at Heron Lake during the third week of November.

The mild November gave way suddenly, with the advent of December, to bitter winter weather. Temperatures far below zero have prevailed all over the state, and even as far south as Minneapolis several days together have occurred without the mercury's rising to zero, even at noon, with 15° and 20° below mornings and evenings. Only light snows have fallen thus far.

The winter bird student in Minnesota must find his chief pleasure and excitement afield in the boreal visitants. So far this winter there has been little else but disappointment in this direction, despite the abundant food-supply that awaits them and the frigid northern weather of late. The usual influx of Redpolls, Snow Buntings, and Lapland Longspurs, and the roving flocks of Evening and Pine Grosbeaks and Bohemian Waxwings have not appeared or have eluded observation. A Northern Shrike on the campus of the University at Minneapolis in late November is the only winter visitant that the writer has seen thus far.

P. O. Fryklund reports from Badger, away up near Lake of the Woods, November 25: "In regard to the arrival of winter birds, . . . the only bird of the kind that has come to my notice is the Snow Bunting which I first saw on the 16th inst. Last Wednesday . . . there were three of us in company, walking all day, and the only living things that came to our notice were one Great Horned Owl, one Ruffed Grouse and one Downy Woodpecker—not a rabbit nor a squirrel were seen. The wolves will undoubtedly have a hard chase for their living, and we have quite a lot of them throughout the country." Under date of

December 14. Mr. Fryklund reports nothing new except Snowy Oals.

Prof. Eugene Van Cleet, of Duluth, reports December 12: "I have failed to see any of the winter visitants and wondered whether this was due to any lack of observational powers. I have inquired of some people whom I felt ought to know something about the situation here and they report likewise the absence of any visitants. S. George Stevens . . . states that he has heard a flock of Redpolls but has not seen them. . . I would incidentally call your attention to the fact that a year ago, i. e., October, 1916, we saw 'myriads' (taking this word from our notes) of Bluebirds in the city *en route* south. Whereas this year we saw none within the city limits and only a few outside. It would seem to be an off year with the birds."

Dr. J. C. Hvoslef reports December 12, from Lanesboro, Fillmore County, in the extreme southeastern corner of the state: "Your letter was received yesterday and from it I learned that you have had about the same experience in regard to the bird migration this fall as I had myself in my field of observation in and about Lanesboro."—THOS. S. ROBERTS, *University of Minnesota, Minneapolis.*

DENVER REGION.—The period covered by this report has not been entirely colorless ornithologically. It is normally quiet, with little bird-movement except toward its end. This year it has been quieter than usual because of the mild weather, October and November, and December up to date, giving the Denver area nearly 75 per cent of the possible sunshine, resulting in bright, warm days. Yet most of the breeders did not linger, but seemed, on the contrary, to leave perhaps earlier than usual. And, notwithstanding the mild autumn, some of our winter birds appeared on time, or even ahead of the schedule. The various

species and races of Junco came rather earlier, driven down, perhaps, by the more severe conditions in the neighboring higher altitudes. The Slate-colored Junco is very uncommon about Denver and yet, on November 11, the writer saw a large, scattered flock of Juncos, which contained many of the Slate-colored species about two miles from the foot-hills, near the mouth of Platte Canon.

The Clay-colored Sparrow and Audubon's Warbler were common until the third week in October, which is their ordinary time of departure, and the Northern Strike arrived on time late in the same month. It was a surprise to see the Western Tree Sparrow as early as October 14, even well out on the plains (along the small creeks and in the wood-patches adjacent thereto). This, in the writer's experience, is at least two weeks ahead of their usual arrival. The American Rough-leg Hawk also was on hand two weeks earlier than under ordinary conditions, appearing the second week in November. The Robin is about the only bird which met the writer's expectations by remaining longer than usual because of the fine weather; this bird remains all winter in the vicinity of Denver, but is seldom seen in the city itself after the middle of November, yet this year one was noted in town on December 4. Three things stand out in the local records for this period, the comparatively large number of adult male Marsh Hawks seen, the very large number of Ferruginous Rough-leg Hawks, and the considerable number of Longspurs also, noted near the city and its environs. It is over twenty years since the writer has seen more than a stray Longspur of any sort close to Denver. However, this autumn a number of flocks were noticed immediately south of Denver, flocks which contained Chestnut-collared and McCown's Longspurs, the latter being vastly in the majority.—W. H. BRANTOLD, M.D., *Denver, Colo.*

Bird-Lore's Eighteenth Christmas Census

THE ornithological feature of this winter, as shown by the Census reports, is the invasion of the northeastern states by Northern Shrikes. Last winter, memorable for the extensive southward movement of so many northern species, but three Shrikes appeared in censuses from Ontario, New England, New York, and New Jersey. This winter the number is twenty-five, with several others recorded as seen recently but not on the census-day—in other words, the species figures in about 35 per cent of the reports from the territory mentioned. The 'farthest south' is central New Jersey and southeastern Pennsylvania, but there is only one record from the latter state and none west of the Alleghamies except two birds seen near Denver. Furthermore, there are several mentions of Migrant Shrikes from points in and around Connecticut; this, in view of the rarity in winter of the Migrant and the unusual abundance *this* year of the Northern, is a somewhat suspicious coincidence. On the other hand, one or more of the former may have been recorded as the latter by observers thinking that any *Lanius* seen in winter is necessarily *borealis*. There has also been a marked southward movement of Goshawks and of Great Horned Owls (see especially the Warwick, R. I., report); and a flight of Iceland Gulls along the northeast coast—one, at least, reaching eastern Long Island. But of the northern Finches so prevalent last year, the only occurrences are a few widely scattered of Redpoll and Pine Siskin, of Red Crossbill in Maine and Nebraska. Evening Grosbeak at Bennington, Vt., and Pine Grosbeak and White-winged Crossbill at Newfane, Vt. There is no record of the Brown-cap Chickadee in the Census, and we know of none elsewhere.

Many observers in the East and Middle West speak of an uncommonly cold autumn and early winter and a general scarcity of birds, especially seed-eaters. On the other hand, some birds are to a certain extent wintering north of their custom, as indicated by many Belted Kingfisher records, Canada Geese at two points in Massachusetts, three on Long Island and one in Iowa, Grackles (probably all or most of them Bronzed) at eight points from Massachusetts to southeastern Pennsylvania, and an occasional individual of other species.

First place goes to the energetic Los Angelesños with 106 species observed within a 15-mile diameter. Santa Barbara is second with 92, which is the largest 'one-party' list.

Our sincere thanks are always due to our many friends who help make the Census a success, but, as usual, there is a regrettably large number who pay so little heed to our italicized requests as to leave several days between the taking and the posting of their censuses, send them to Harrisburg, or in some other such way to cause the rejection of their reports.—CHARLES H. ROGERS.

Arnprior, Ont.—Dec. 25, 9:30 A.M. to 5 P.M. Clear, 14 in. of snow; wind north-west, strong; temp. min. 14°, max. 19°. Twelve miles on snowshoes. Observers separate.

Canada Ruffed Grouse, 2; Barred^o Owl, 1 (seen flying after sunset); Hairy Woodpecker, 1; Blue Jay, 1; Finch sp., 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Black-capped Chickadee, 1; Golden-crowned Kinglet (an unusual winter resident), 4. Total, 9 species, 66 individuals. Dec. 23. Red-breasted Nuthatch and Northern Shrike. Evening Grosbeaks and other northern species that were so common last year, have been, so far this winter, entirely absent.—CHARLES MACNAMARA and LEONARD GOOMLEY.

London, Ont.—Dec. 22, combined list of four parties hunting separately, 8 to 11:30 A.M. (one party, three observers), 1:30 to 3:30 P.M. (three parties, five observers), covering on foot a stretch of country from the city west about 3 miles, following roughly the course of the River Thames. Temp. 20° at 8 A.M., 16° at 2 P.M., 15° at 6 P.M.; ground almost bare; wind very light southwest. Horned Grebe, 1; Herring Gull, 3; American Merganser, 20; American Goldeneye, 10; Ruffed Grouse, 2; Scaup Owl, 1; Great Horned Owl (?), 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 10; Crow, 1,200; Purple Finch, 20; Tree Sparrow, 18; Junco, 15; Song Sparrow, 1; Cardinal, 1; Northern Shrike, 1; Brown Creeper, 4; White-breasted Nuthatch, 4; Black-capped Chickadee, 41; Golden-crowned Kinglet, 12. Total, 21 species, 1,794 individuals. Others seen recently—Robin, Snow Bunting, Bronzed Grackle, and Wax wing.—McILWAITH ORNITHOLOGICAL CLUB. C. G. WATSON, J. F. CALVERT, J. C. MIDDLETON, E. DALY, G. GILLESPIE, E. M. S. DALE and J. R. McLEOD.

Bucksport, Maine.—Dec. 20, 8 to 11:30 A.M. and 1:25 to 3:05 P.M. Clear; 14 in. of snow; wind north, light; temp. 9° at start, 10° at end. Eight miles on foot. Herring Gull, 12; Canada Ruffed Grouse, 1; Goshawk, 1; Redpoll, 2; Chickadee, 8; Golden-crowned Kinglet, 10; Robin, 2. Total, 7 species, 36 individuals.—GEORGE L. BLOOMET.

North Bridgton, Cumberland Co., Maine.—Dec. 20, 8 A.M. to 1:15 P.M. Clear; 7 ft. of snow; wind north, light; temp. 8° at start, 18° at return. Eight miles on foot. Observers in pairs. Downy Woodpecker, 2; Blue Jay, 7; Purple Finch, 1; Red Cross-bill, 1; Redpoll, 5; Goldfinch, 2; Pine Siskin, 27; Tree Sparrow, 3; Slate-colored Junco, 2; Brown Creeper, 2; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 13; Black-capped Chickadee, 41; Golden-crowned Kinglet, 13. Total, 14 species, 111 individuals. A Goshawk is wintering in this vicinity but was not seen on this trip.—MRS. ROLAND WOODBURY, MISS ELEANOR CHUTE, MRS. JAMES STEADMAN and MISS MARGORIE STEADMAN.

Nashua, N. H. to Merrimack, N. H., and back.—Dec. 22, 9 A.M. to 3 P.M. Partly cloudy; 11 in. of snow; wind northwest, strong; temp. 32° at start, 36° at return. Fourteen miles on foot, much of distance on snowshoes. Merganser, 6; Ruffed Grouse, 1; Mongolian Pheasant, 10; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 5; Crow, 1; Starling, 207; Snow Bunting (picked up dead), 1; Tree Sparrow, 5; Slate-colored Junco, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Black-capped Chickadee, 10. Total, 14 species, 313 individuals. Saw what Owl reported on Dec. 22. Robin Dec. 20, and Golden-crowned Kinglet Dec. 28. I have seen no Redpolls this winter, all seed-eating birds very scarce. I attribute this to the lack of food. The gray birches did not seed this year. On these seeds the Sparrow tribe subsists in this latitude (in winter). Ordinarily the snow is strewn with the seeds—this winter not a seed.—MANLEY B. TOWNSEND and (part of the time) JOHN H. BOWERS.

Wilton, N. H.—Dec. 23, 8 to 11:30 A.M. Cloudy; 6 to 14 in. of snow; no wind; temp. 40° to 42°. Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 2; Chickadee, 14; Golden-crowned Kinglet, 2. Total, 5 species, 23 individuals.—GEORGE G. BLANCHARD.

Bennington, Vt.—Dec. 25, 9 to 11:30 A.M. Four-mile auto drive and back with a 2-mile walk through field and wood. Cloudy; bare ground to 10 in. of snow; wind west, strong; temp. 32°. Observers together. Ruffed Grouse, 2; Pheasant, 5; Downy Woodpecker, 1; Blue Jay, 1; Starling, 4; Tree Sparrow, 2; Northern Shrike, 1; White-breasted

Nuthatch, 1; Chickadee, 8. Total, 9 species, 23 individuals. On Nov. 2 and 3, a mixed flock of between 75 and 100 Bohemian Waxwings and Evening Grosbeaks was observed in North Bennington.—DR. and MRS. LUCRETIA H. ROSS.

Newfane, Windham Co., Vt.—Dec. 25, 10 A.M. to 1.30 P.M. Clear, 3 feet of snow, wind northwest, light, maximum temp. about -10° . About 3 miles on foot. Ruffed Grouse (*B. u. umbellata*), 6; Barred Owl, 1; Downy Woodpecker, 4; Blue Jay, 20; Pine Grosbeak, 30; White-winged Crossbill, 15; White-breasted Nuthatch, 1; Black-cap Chickadee, 2. Total, 8 species, about 80 individuals.—GEO. K. CHERRIL.

Boston to Gloucester, Mass.—Dec. 22, 1 to 4 P.M. Clear, wind northwest, strong, temp. 34° , falling to 20° . Thirty miles by steamboat. Black Guillemot, 1; Kittiwake, 20; Iceland Gull, 3; cream-white with small black bill; Black-backed Gull, 15; Herring Gull, 300; Bonaparte's Gull, 4; Red-breasted Merganser, 10; American Goldeneye, 5; Oldsquaw, 14; Canada Goose, 1. Total, 10 species, 504 individuals.—LIDIAN E. BRIDGE and ANNIE M. COBB.

Gloucester, Mass.—Dec. 24; 10 A.M. to 3.45 P.M. Cloudy to fair; old snow and ice, wind southwest, brisk, temp. 40° . Observers together. Horned Grebe, 2; Black Guillemot, 1; Iceland Gull, 32; Great Black-backed Gull, 25; Herring Gull, 200; Red-breasted Merganser, 30; Black Duck, 2; Goldeneye, 44; Oldsquaw, 12; Scoter, 5; White-winged Scoter, 4; Northern Flicker, 5; Prairie Horned Lark, collected, 1; Crow, 45; Starling, 100; Meadowlark, 2; Bronzed Grackle, 1; Snow Bunting, 21; Ipswich Sparrow, 1; Tree Sparrow, 3; Northern Shrike, 3; Black-capped Chickadee, 2. Total, 24 species, 549 individuals. The remarkable flight of Iceland Gulls consisted chiefly of creamy white birds, for two only were in the pearl-gray adult plumage.—L. R. TALBOT and BARRON BRAINERD.

Brewster, Mass. (walks taken from a central point to favorable localities).—Dec. 27, 4 hours between 8.15 A.M. and 4 P.M. Clear, with slight flurries of snow, wind north, rather heavy, temp. about 15° , ground bare. About 9 miles. Black-backed Gull, 1; Herring Gull, 10; Black Duck, 85; American Goldeneye, 4; Canada Goose, 1; Flicker, 5; Horned Lark, 6; Blue Jay, 1; Crow, 8; Meadowlark, 15; Goldfinch, 3; Tree Sparrow, 10; Slate-colored Junco, 1; Myrtle Warbler, 14; Chickadee, 1; Golden-crowned Kinglet, 1. Total, 16 species, about 168 individuals.—WARREN F. EATON.

Cohasset, Mass. (Sandy Cove region, along shore and through the woods).—Dec. 27, 2 to 4 P.M. Overcast, 1 in. of fresh snow and a little still falling, wind northeast, light, temp. 20° . Black-backed Gull, 4; Herring Gull, 50; Red-breasted Merganser, 1; Black Duck, 3; American Goldeneye, 4; White-winged Scoter, 10; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 2; Blue Jay, 1; Tree Sparrow, 4; Slate-colored Junco, 2; Cedar Waxwing, 9; Myrtle Warbler, 10; Brown Creeper, 1; Golden-crowned Kinglet, 4; Robin, 40. Total, 17 species, 148 individuals. (I consider this list as of value only as showing the small number of birds present this winter in comparison with other years.)—JOHN B. MAY, M. D.

Cohasset, Mass.—Dec. 28, 10.05 A.M. to 4.30 P.M. Cloudy, with frequent snow-flurries, wind variable, light, temp. 30° . Common Loon, 6; Black-backed Gull, 12; Herring Gull, 120; Red-breasted Merganser, 27; Black Duck, 110; American Goldeneye, 2; Oldsquaw, 1; Brant, 3; Downy Woodpecker, 1; Northern Flicker, 4; Horned Lark, 7; Blue Jay, 2; Crow, 19; Purple Finch, 3; Goldfinch, 1 male; Tree Sparrow, 40; Slate-colored Junco, 23; Song Sparrow, 7; Myrtle Warbler, 36; Black-capped Chickadee, 20; Golden-crowned Kinglet, 4; Robin, 33. Total, 22 species, 518 individuals.—BARRON BRAINERD and HASKELL B. CURRY.

Edgartown, Martha's Vineyard, Mass.—Dec. 26, 8 to 11.30 A.M. and 1.30 to 4.30 P.M. Clear, ground bare, wind northwest, strong, temp. 22° , a little warmer at noon. Five miles on foot. Herring Gull, 40; Baldpate, 3 drakes; Night Heron, 8; Sharp-shinned Hawk, 1; Flicker, 2; Horned Lark, 55; Blue Jay, 6; Crow, 41; Meadowlark, 11; Gold-

hawk, 1; Tree Sparrow, 28; Junco, 3; Song Sparrow, 11; Myrtle Warbler, 1; Pine Warbler, 1; Mockingbird, 1; Chickadee, 20; Robin, 1. Total, 18 species, about 270 individuals. A small colony of Night Herons is here each winter. Apparently the same Mockingbird was with us last winter. I have seen 14 other species, including the Northern Shrike and the Migrant Shrike, this month.—MONA WOODEN.

Fairhaven, Mass.—Dec. 14, 9 A.M. to 2 P.M. Partly cloudy; ground bare; wind southwest, strong; temp. 40°. Area, 2 by 1/2 miles, upland, woods, marsh, beach. Observers together. Herring Gull, 40; Purple Sandpiper, 3; Downy Woodpecker, 1; Flicker, 1; Horned Lark, 30; Crow, 13; Starling, 40; Goldfinch, 52; Junco, 56; Song Sparrow, 5; Tree Sparrow, 9; Chickadee, 20; Robin, 12. Total, 13 species, 268 individuals.—FRANCES CONGDON and MABEL I. POTTER.

Holyoke, Mass. (vicinity of Mt. Tom Range).—Dec. 15, 7 A.M. to 11.30 P.M. Sky overcast, with light sun at times. 8 to 10 in. of snow, wind north, light; temp. 31° at start, 43° at return. Five to 6 miles on foot. Observers together. Pheasant, 1; Ruffed Grouse, 5; Sparrow Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 15; American Crow, 14; Starling, 20; Tree Sparrow, 7; Black-capped Chickadee, 13. Total, 11 species, 82 individuals. Have observed recently a Northern Shrike and a flock of Horned Larks.—JOHN S. BACON and AARON C. BACON.

Mattapoisett, Mass.—Dec. 15, 8 A.M. to 1.30 P.M. and 2.30 to 4.30 P.M. Cloudy, some sleet; ground bare; wind northwest, moderate; temp. 45° to 30°. Observers together. Seven miles on foot. Horned Grebe, 2; Loon, 2; Herring Gull, 11; Merganser, 2; Black Duck, 1; Scaup, 7; Goldeneye, 7; Old-squaw, 23; Scoter, 80; White-winged Scoter, 3; Surf Scoter, 2; Downy Woodpecker, 2; Flicker, 2; Blue Jay, 2; Crow, 14; Meadowlark, 1; Rusty Blackbird, 16; Tree Sparrow, 1; Song Sparrow, 1; Myrtle Warbler, 20; Brown Creeper, 8; Chickadee, 26; Robin, 4. Total, 23 species, 271 individuals.—MR. and MRS. J. E. NORTON SHAW.

Wareham, Mass.—Dec. 15, sunrise to sunset. Fair, ground generally bare, with scattered patches of ice; wind northwest, light; temp. 14° at start, 28° at return. About 20 miles, mostly on foot. Observers together. Horned Grebe, 1; Black-backed Gull, 1; Herring Gull, 4; Red-breasted Merganser, 1; Black Duck, 144; American Goldeneye, 23; Old-squaw, 7; White-winged Scoter, 3; Surf Scoter, 10; Wilson's Snipe, 1; Ruffed Grouse, 3; Red-shouldered Hawk, 1; Belted Kingfisher, 1; Downy Woodpecker, 2; Northern Flicker, 4; Horned Lark, 28; Blue Jay, 11; Crow, 20; Starling, 60; Meadowlark, 11; Goldfinch, 4; Snow Bunting, 1; Tree Sparrow, 120; Slate-colored Junco, 120; Song Sparrow, 15; Swamp Sparrow, 2; Northern Shrike, 1; Myrtle Warbler, 2; Brown Creeper, 4; Chickadee, 120; Golden-crowned Kinglet, 7. Total, 31 species, 1,073 individuals.—DR. WILSON M. TYLER, C. A. ROBBINS and FRANK ROBBINS.

West Medford, Lawrence Woods and part of West Side Middlesex Fells, Mass.—Dec. 15, 8.30 A.M. to 12.30 P.M. Clear; wind east, light; temp. 10° to 15°. Pheasant, 7; Hairy Woodpecker, 1; Flicker, 1; Blue Jay, 2; Crow, 9; Starling, 8; 100 in our trees Dec. 20 and 21; Redpoll, 1; Goldfinch, 2; Tree Sparrow, 1; Northern Shrike, 1; Brown Creeper, 2; Chickadee, 7. Total, 11 species, 43 individuals.—EDMUND and LILIAN E. BRIDGE.

Kingston and Narragansett Pier, R. I.—Dec. 14, 8 A.M. to 4.30 P.M. Overcast, a little snow on ground; wind southwest, strong; temp. 35° at start, 48° at return. Half-buff's Grebe, 1; Herring Gull, 10; Red-breasted Merganser, 1; Black Duck, 14; Bullhead, 1; Ruffed Grouse, 1; Sparrow Hawk, 1; Downy Woodpecker, 2; Northern Flicker, 9; Horned Lark, 120; Blue Jay, 41; Crow, 5; Meadowlark, 7; Goldfinch, 16; Tree Sparrow, 18; Slate-colored Junco, 24; Song Sparrow, 1; Northern Shrike, 2; Myrtle Warbler, 15; Mockingbird, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 20; Golden-crowned Kinglet, 4. Total, 24 species, 372 individuals.—EDWARD H. PERKINS.

Warwick, R. I.—Dec. 23, 9 A.M. to 3:45 P.M. Clear, 3 in. of snow, wind northwest, light, temp. 18° at start, 36° at return. Ten miles on foot. Herring Gull, 16; Red-breasted Merganser, 20; Scaup, 2,000; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Flicker, 8; Blue Jay, 7; American Crow, 29; Goldfinch, 13; Starling, 200; Tree Sparrow, 34; Song Sparrow, 3; Swamp Sparrow, 1; Snow Bunting, 12; Northern Shrike, 1; Myrtle Warbler, 9; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 23; Robin, 6. Total, 21 species, 2,504 individuals. Juncos absent, Myrtle Warblers and Chickadees uncommon, in comparison with last year. Providence taxidermists have had more than 50 Goshawks, 18 Great Horned Owls and 3 Snowy Owls brought in.—HARRY S. HATHAWAY.

Bristol, Conn. (Northwestern Section).—Dec. 25, 7 A.M. to 2:30 P.M. Cloudy, then clearing at 9 o'clock, clouding over again and snow squalls, partly clear at noon, 10 to 12 in. of old snow, wind north, very light, later becoming fresh and ending at north-west, calm, with a dirty, streaky sky; temp. 38° at start, 34° at finish. About 11 miles on foot. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 2; Crow, 28; Starling, 200; Meadowlark, 2; Tree Sparrow, 13; Junco, 8; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 4. Total, 14 species, 841 individuals.—ELBERT E. SMITH, ROYAL W. FORD and FRANK BRUCE.

Fairfield, Conn. Birdcraft Sanctuary and Fairfield Beach.—Dec. 25, sunrise to sunset. Cloudy, temp. 34°, 4 in. of snow. Herring Gull, 120; Red-breasted Merganser, 2; Black Duck, 120; Lesser Scaup, 7; American Goldeneye, 3; Old-squaw, 40; White-winged Scoter, 12; Black-crowned Night Heron, 7; Sparrow Hawk, 2; Barred Owl, 1; Downy Woodpecker, 7; Blue Jay, 7; American Crow, 13; Starling, 300; Meadowlark, 1; Purple Finch, 1; White-throated Sparrow, 2; Tree Sparrow, 12; Junco, 15; Song Sparrow, 8; Northern Shrike, 2; Myrtle Warbler, 2; Brown Thrasher, 1; White-breasted Nuthatch, 1; Chickadee, 7; Robin, 1. Total, 26 species, 753 individuals.—FRANK NOVAK, Warden.

Hartford, Conn.—Dec. 24, 9 A.M. to 2 P.M. Clear, 5 to 15 in. of snow and crust; temp. zero to 24° above; wind light. Ten-mile walk. Excellent observations. Variable country, but no heavy timber—open bottom lands and swamps along the Connecticut lower north from Hartford. Merganser, 639; Red-breasted Merganser, 1; Ring-neck Pheasant, 1; Sparrow Hawk, 3; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 11; Flicker, 1; Prairie Horned Lark, flock of 16; Blue Jay, 6; Crow, 200; Starling, 8; Meadowlark, 3; Purple Finch, flock of 12; Goldfinch, 3; Tree Sparrow, 200; Song Sparrow, 1; Swamp Sparrow, 3; Migrant Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 6. Total, 22 species, 1,134 individuals.—GEO. T. GRISWOLD.

Hartford, Conn.—Dec. 27, 10 A.M. to 12:30 P.M. Cloudy, 8 in. of snow; wind north-west, temp. 32°. Hairy Woodpecker, 1; Blue Jay, 7; Crow, 12; Starling, 30; Goldfinch, 15; Tree Sparrow, 6; (Migrant?) Shrike, 1; Brown Creeper, 1; Chickadee, 10; Robin, 3. Total, 10 species, 111 individuals.—CLIFFORD M. CASE.

West Hartford, Conn.—Dec. 23, 1 to 10 A.M. and 2 to 4:30 P.M. Clear; still, 9 in. of crusted snow; temp. at start 4°, at return 18°. Nine miles of very hard tramping. Birds counted: Ruffed Grouse, 1; Sparrow Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 1; Blue Jay, 1; Crow, 100; Starling, 300; Redpoll, 10; Goldfinch, 3; Tree Sparrow, 1; Junco, 10; White-breasted Nuthatch, 3; Black-capped Chickadee, 2; Golden-crowned Kinglet, 1. Total, 14 species, 547 individuals.—EDWIN H. MESSER.

New Haven, Conn. (from a window of the New Haven Hospital).—Dec. 24. Snowing, wind north, light, temp. 30°. Downy Woodpecker, 1; Starling, 3. Total, 2 species, 4 individuals.—CLIFFORD H. PANGBURN.

New London, Conn. (to Niantic and Black Point).—Dec. 27; 8:30 A.M. to 3:30 P.M. Clear, ground mostly bare, wind northwest, light, temp. 11° at start. Fifteen miles on foot. Horned Grebe, 2; Common Loon, 3; Herring Gull, 172; Red-breasted Merganser,

2; Black Duck, 2; Baldpate, 10; Scaup sp., 200; American Goldeneye, 18; Bufflehead, 1; Sharp-shinned Hawk, 1; Kingfisher, 1; Downy Woodpecker, 3; Blue Jay, 4; Crow, 15; Meadowlark, 7; Goldfinch, 32; Tree Sparrow, 34; Junco, 27; Song Sparrow, 9; Myrtle Warbler, 12; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 12; Robin, 1; Bladder, 7. Also 200 unidentified Ducks. Total, 25 species, about 678 individuals.—FRANCES MINER GRAVES.

Norwalk, Conn.—Dec. 24, 8.30 A.M. to 1 P.M. and 2 to 5 P.M. Partly cloudy, a few light showers in the morning; wind southwest, light; temp. 34°, about 10 in. of snow. Twelve miles on foot. Herring Gull, 14; Black Duck, 3; Scaup, 300; Goldeneye, 3; Old-squaw, 4; White-winged Scoter, 6; Hairy Woodpecker, 3; Downy Woodpecker, 2; Horned Lark, 26; Blue Jay, 14; Crow, 7; Starling, 104; Meadowlark, 4; Purple Finch, 4; Goldfinch, 7; White-throated Sparrow, 1; Tree Sparrow, 6; Field Sparrow, 1; Junco, 7; Song Sparrow, 14; Brown Creeper, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 8; Robin, 1. Total, 24 species, 788 individuals.—ARTHUR A. SAUNDERS.

South Windsor, Conn.—Dec. 25, 8 A.M. to 4 P.M. Cloudy, 5 to 10 in. of snow; temp. 32°, wind light. Twelve-mile walk. Herring Gull, 2; Merganser, 1; Black Duck, 1; Ruffed Grouse, 2; Sharp-shinned Hawk, 1; Sparrow Hawk, 1; Saw-whet Owl, 1; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Flicker, 1; Prairie Horned Lark, 26; Blue Jay, 6; Crow, 200; Starling, 25; Meadowlark, 2; Tree Sparrow, 200; Junco, 1; Song Sparrow, 2; Swamp Sparrow, 1; Northern Shrike, 1; Brown Creeper, 4; White-breasted Nuthatch, 3; Chickadee, 12. Total, 24 species, 527 individuals. I took a three-day census and the additional species included 1 Goshawk and 1 Migrant Shrike.—C. W. VIBERT.

Douglaston, L. I., N. Y.—Dec. 25, 9 A.M. to 1 P.M. Clear, 4 or 5 in. of snow; wind northwest, light; temp. 19° at start, 34° at return. Observers together. Black-backed Gull, 2; Herring Gull, 90; (Goldeneye?) Duck, 15; Ducks (other than the supposed Goldeneyes), 10; (Short-eared?) Owl, 1 (flying over marsh); Belted Kingfisher, 2; Downy Woodpecker, 3; Crow, 35; Fish Crow, 75 (identified by their calls while feeding upon a garbage dump with House Sparrows and Starlings); Starling, 400 (nearly all in one flock); Meadowlark, 7; Goldfinch, 4; Tree Sparrow, 24; Junco, 14; Song Sparrow, 34; Swamp Sparrow, 2; Black-capped Chickadee, 2 (one sang). Total, 17 species, about 716 individuals.—MR. and MRS. G. CLAUDE FISHER and RUTH ANNA FISHER.

East Marion, L. I., N. Y.—Dec. 26, 9.30 A.M. to 4 P.M. Clear, ground nearly bare; wind northwest, light; temp. 26° at start, 23° at return. The chief territory covered was about a half-mile of shore along Peconic Bay and a piece of cedar and oak woods with adjoining fields. Horned Grebe, 1; Herring Gull, 150+; Scaup, 5; Old-squaw, 15; Surf Scoter, 10; Belted Kingfisher, 1; Downy Woodpecker, 1; Flicker, 4; Horned Lark, 5; Blue Jay, 3; Crow, 11; Starling, 20; Purple Finch, 1; Goldfinch, 4; Tree Sparrow, 30; Junco, 20; Song Sparrow, 1; Myrtle Warbler, 25; Black-capped Chickadee, 8; Robin, 2. Total, 20 species, about 417 individuals. An unusually small number of water-fowl were near enough to shore for identification. A Migrant Shrike was seen on Dec. 6.—MABEL R. WIGGINS.

Ft. Salonga, L. I., N. Y., near Smithtown. Covered most of the territory within a radius of 2 miles of **Sunken Meadow**.—Dec. 27, 7 A.M. to 3 P.M. Clear, 5 in. of snow; wind northwest, light; temp. 14° at start, 18° at return. Black-backed Gull, 1; Herring Gull, 101; Ring-billed Gull, 19; Bonaparte's Gull, 1; Black Duck, one flock of 1,200 +, 7 single; Green-winged Teal, 1; Scaup, 1; American Goldeneye, 24; Old-squaw, 21; American Scoter, 10; White-winged Scoter, 36; Surf Scoter, 3; Canada Goose, 1; Brant, 1; Black-crowned Night Heron, 1; Wilson's Snipe, 1; Goshawk (♂), 1; Red-tailed Hawk, 2; Bald Eagle, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Flicker, 4; Blue Jay, 2; Crow, 300+; Starling, 100; Grackle, 3; Tree Sparrow, 57; Junco, 200+; Song Sparrow, 11; Myrtle Warbler, 16; Chickadee, 144; Robin, 1; Bluebird,

Total, 133 species, 2,700 + individuals. The Green-winged Teal arrived two months ago in some fresh water ponds and has remained there ever since with a few tame Mallards. It is a fine male.—FREDOR DRIER.

Hempstead, L. I., N. Y.—Dec. 23, 8 A.M. to 3:30 P.M. and latter dark | 5:30 to 6:40 P.M. Clear, about 6 in. of frozen snow, average temp. 24°. Herring Gull, 27; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Long-eared Owl, 1; Screech Owl, 3; Downy Woodpecker, 3; Horned Lark, flock of 58; Blue Jay, 21; Crow, 190; Starling, 58; Goldfinch, 8; Savannah Sparrow, 2; Tree Sparrow, 1; Slate-colored Junco, 62; Song Sparrow, 20; Towhee, 4 together; Winter Wren, 1; Brown Creeper, 31; Red-breasted Nuthatch, 2; Chickadee, 11; Robin, 2. Total, 23 species, 694 individuals. The four Towhees, three males and a female, allowed one to get within a few yards, also heard them call several times. They were seen several times before in the same place, oak shrubbery in a pine grove. The Savannah Sparrows, together, also permitted close approach so they could be accurately identified. They were also seen Dec. 13, and on the same date 3 Mourning Doves. Other occurrences that seemed unusual to me were, 2 Hermit Thrushes seen Dec. 9, and 2 Woodcock and 1 Fox Sparrow, Dec. 18.—THEODORE ROEHNER.

Long Beach, Nassau Co., L. I., N. Y.—Dec. 20. Moderating after severe weather, temp. 34° at daylight and nightfall, ponds and marshes frozen, some remaining snow; wind southwest, light, morning gray, some half-sunshine in afternoon, a broad swell on the ocean breaking into a high, steady surf. Horned Grebe, 4; Loon, 1; Black-backed Gull, numerous, at one time fully 100 adults in sight; Herring Gull, abundant; Red-breasted Merganser, several pairs and single birds; Black Duck, innumerable, lying off shore in straggling beds extending with little interruption for several miles along the beach, very few in flight. Red-legged Black Duck, a perfectly fresh bird found dead on the shore. Mallard, a drake, with Black Ducks, Pintail, 5 drakes, with Black Ducks; Greater Scaup, two single birds, male and female, and well out three flocks of Scaups, 17 to 70; Goldeneye, 1 female; Old-squaw, 20; American Scoter, an adult; Surf Scoter, flock of 20—several small flocks of Scoters were almost certainly of both these species; White-winged Scoter, two flocks of 20 and 30, all Ducks in continuous flight were going east—larger numbers approximate. Sanderling, 2 together; Canada Geese, 5 passing out to sea, southeast; Brant, 2 with Gulls on a sand bar and one on the ocean shore, shot by a gunner—an immature bird; Sparrow Hawk, 1; Rough-legged Hawk, a pair; Horned Lark, frequent in small flocks; Starling, common, one flock of about 200; Meadowlark, 1; Ipswich Sparrow, 1; Sharp-tailed Sparrow, 3; Seaside Sparrow 27—a *Paroëtærbular*, quite certainly this, but identification not technical. Tree Sparrow, small flock; Song Sparrow, several; Myrtle Warbler, locally numerous. A Northern Shrike seen at Hewlett, less than 3 miles from Long Beach. Total, 30 species. The best Long Beach bird day for the season that I have ever known.—E. P. BICKNELL.

Long Beach, Nassau Co., L. I., N. Y.—Dec. 23, 10:05 A.M. to 5 P.M. Clear; ground here, frozen, ponds and pools frozen, cakes of ice on the beach at Point Lookout, incoming tide, wind northwest, light; temp. 40° to 43°. Loon sp., 1; Black-backed Gull, 5; Herring Gull, 2,000; Red-breasted Merganser, 6; Black Duck, 3; Scaup, 6; Old-squaw, 11; American Scoter, 1; Sanderling 1 (flew by with strong, vigorous flight); Rough-legged Hawk, 2 together; Short-eared Owl, 1; Crow, 11; Starling, 5 (in the village); Tree Sparrow, 1; Junco, 1; Song Sparrow, 8; Myrtle Warbler, 4. Total, 17 species, about 1,000 individuals. The weather was too mild and calm for many water-fowl.—GROVER F. HIX.

Orient, L. I., N. Y.—Dec. 24, 6:45 A.M. to 2 P.M. (three observers), 3:30 P.M. until dark (Latham). Cloudy most of the day, with brief periods of sunshine, a little frozen snow on the ground, brisk westerly winds, veering slightly toward south after noon, blossoming light with a trace of rain toward evening, temp. 31° at 6 A.M., rising above

the freezing-point by midday, and thawing perceptibly in the sun. Country visited: Sound and Gardiner's Bay consists of dense bushes, plowed fields, salt meadows, frozen swamps and lagoons, red cedar groves, deciduous woods on lowlands and hills. Horned Grebe, 4; Common Loon, 3; Glaucous Gull, 2; Iceland Gull, 1; Black-backed Gull, 5; Herring Gull, 180; Red-breasted Merganser, 60; Mallard, 1 (in gunner's bag); Black Duck, 10; Greater Scaup, 100 (some in gunner's bag); American Goldeneye, 1; Bufflehead, 15; Oldsquaw, 200; White-winged Scaup, 233; Surf Scaup, 113; Virginia Rail, 1 (dead); Pheasant, 1 (in gunner's bag); Bobwhite, 1 (in gunner's bag); Marsh Hawk, 1; Cooper's Hawk, 2; Sparrow Hawk, 3; Long-eared Owl, 2; Screech Owl, 1; Kingfisher, 1; Downy Woodpecker, 4; Flicker, 5; Horned Lark, 600; Blue Jay, 2; American Crow, 263; Starling, 115; Meadowlark, 12; Cowbird, 44; Rusty Blackbird, 3; Grackle, 11; American Goldfinch, 20; Snow Bunting, 205; Savannah Sparrow, 1; White-throated Sparrow, 1; Tree Sparrow, 75; Field Sparrow, 9; Junco, 3; Song Sparrow, 60; Northern Shrike, 3; Myrtle Warbler, 205; Carolina Wren, 2; Wren sp., 1; Black-capped Chickadee, 20; Golden-crowned Kinglet, 2; Robin, 24. Total, 49 species (one being 4 dead), 3,212 individuals. The Virginia Rail was found by a wood road, frozen with its head tucked under its wing-coverts, it was so thin that it exemplified the adage, but it had not been long dead. At least two of the Horned Larks closely observed appeared to be Prairie Horned Larks, although most were the usual form. The unidentified Wren was not a Carolina and probably not a Winter Wren. On Dec. 23, Mr. Latham saw: Canada Goose, 3; Sharp-shinned Hawk, 1; Rough-legged Hawk, 1; Turkey Vulture, 1 (latest Long Island record); Fox Sparrow, 1; Brown Creeper, 1. On Dec. 22, Double-crested Cormorant, 1; Fish Crow, 1. On Dec. 23, Red-winged Blackbird, 2.—ROY LATHAM, JOHN TREADWELL NICHOLS and ROBERT CESHMAN MURPHY.

Speonk, L. I., N. Y.—Dec. 28, 8 A.M. to 3 P.M. Cloudy, ground bare; wind southwest to west, moderate; temp. 31° to 42°. Herring Gull, 12; Great Blue Heron, 1; Black-crowned Night Heron, 1; Marsh Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 1; Belted Kingfisher, 1; Downy Woodpecker, 1; Horned Lark, 33; Blue Jay, 12; Crow, 2; Starling, 18; Meadowlark, 55; Tree Sparrow, 20; Song Sparrow, 6; Northern Shrike, 1; Brown Creeper, 4; White-breasted Nuthatch, 1; Chickadee, 6; Golden-crowned Kinglet, 12. Total, 29 species, 266 individuals.—LE ROY WELDON.

Albany, N. Y. (western outskirts).—Dec. 23, 10 A.M. to 2 P.M. Clear, 4 to 1.0 in. of snow; wind south, light; temp. 6° at start, 32° at return. Six miles on foot. Observers together: Downy Woodpecker, 8; Blue Jay, 1; Crow, 150; Starling, 120; Tree Sparrow, 10; Brown Creeper, 4; White-breasted Nuthatch, 5; Chickadee, 2; Golden-crowned Kinglet, 1. Total, 9 species, 272 individuals. On Dec. 23, 11 Song Sparrows (one sang) and a Robin—both rare here in winter.—JOSEPH S. LAWRENCE, M.D., and CLARENCE HOUGHTON.

Geneva, N. Y. (Lake-shore and S. Main St. region, within city limits).—Dec. 24, 9 A.M. to 12.10 P.M. and 2 to 5 P.M. Cloudy, breeze southwest, light; temp. 40° to 50°. Observers together only in the forenoon: Horned Grebe, 7; Herring Gull, 13; King-billed Gull, 1; American Merganser, 4; Redhead, 1,000; Canvasback, 200; Lesser Scaup, 9; Greater Scaup, 100; American Goldeneye, 8; Bufflehead, 4; Oldsquaw, 2; King-neck Pheasant, 7; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Red-headed Woodpecker, 1; Crow, 13; Tree Sparrow, 3; Junco, 3; Song Sparrow, 1; Cedar Waxwing, 20; Brown Creeper, 7; White-breasted Nuthatch, 11; Chickadee, 8; Golden-crowned Kinglet, 2; Robin, 1. Total, 26 species, about 8,264 individuals.—WILLIAM H. EDDY and E. H. EATON.

Hamburg, N. Y.—Dec. 22, 8.45 A.M. to 1.15 P.M. Clear to slightly cloudy, ground lightly covered with fresh snow, some old drifts still remaining; wind southwest, light; temp. 12° at start, 34° at return. Eight miles on foot through three large wood-lots, one

small swamp and intervening farm land. Ruffed Grouse, 1; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 9; Red-headed Woodpecker, 4; Blue Jay, 7; Crow, 7; Purple Finch, 12; Goldfinch, 35; Snow Bunting, one flock of 250; Tree Sparrow, 45; Brown Creeper, 5; White-breasted Nuthatch, 4; Chickadee, 12; Golden-crowned Kinglet, 4. Total, 13 species, about 407 individuals. Small flock of Red Crossbills noted here Nov. 22.—THOMAS L. BOURNE.

New Rochelle, N. Y. (Beechmont Park, Mount Tom Road and several other streets).—Dec. 28, 9.30 A.M. to 12.30 P.M. and 2 to 3 P.M. Cloudy; 3 in. of snow; no wind; temp. 27° to 34°. Herring Gull, 7; Ring-necked Pheasant, 1; Downy Woodpecker, 2; Blue Jay, 3; American Crow, 5; Starling, 37; Goldfinch, 4; Junco, 2; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Robin, 5. Total, 12 species, 74 individuals.—OLIVER M. RAYMOND.

New York City (Pelham Bay Park region around City Island station).—Dec. 22, 11 A.M. to 3.15 P.M. Clear; 8 in. of snow; wind west, fairly strong; temp. 40°. Observed together: Great Black-backed Gull, 1; Herring Gull, 100+; Duck sp., 1; Bobwhite, 8; Pheasant, 3; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Crow, 14; Starling, 45; Red-winged Blackbird, 1; Meadowlark, 2; Purple Finch, 1 brown; Goldfinch, 5; Tree Sparrow, 10; Slate-colored Junco, 9; Song Sparrow, 4; Brown Creeper, 2; White-breasted Nuthatch, 4. Total, 20 species, about 215 individuals.—WALDEN PELL, 2nd, and S. MORRIS PELL.

New York City (Clason Point, Unionport and Bronx Park).—Dec. 25, 12 to 4.15 P.M. Cloudy; 4 in. of wet snow; wind southwest, light; temp. 32°. Herring Gull, 450; Black Duck, 55; Scaup, 1; Black-crowned Night Heron, 48; Red-tailed Hawk, 3; Sparrow Hawk, 2; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 6; Crow, 52; Starling, 450; Meadowlark, 23; Grackle, 20; White-breasted Sparrow, 4; Tree Sparrow, 100; Junco, 33; Song Sparrow, 44; Fox Sparrow, 2; Brown Creeper, 4; White-breasted Nuthatch, 2; Black-capped Chickadee, 1. Total, 21 species, 2,214 individuals. About 100 more Ducks on the Sound, too far away for identification. On Dec. 24, 2 Northern Shrikes were seen in Van Cortlandt Park.—E. G. NICHOLS and L. N. NICHOLS.

New York City (Bull's Head to Richmond, via Greenridge, Staten Island).—Dec. 27, 9 A.M. to 4.30 P.M. Clear; snow on ground; wind northwest, fresh; temp. 13°, rising. Herring Gull, 10; Great Blue Heron, 1; Sparrow Hawk, 1; Belted Kingfisher, 1; Downy Woodpecker, 2; Crow, 8; Starling, 11; White-throated Sparrow, 2; Tree Sparrow, 18; Junco, 13; Song Sparrow, 14; Cardinal, 1. Total, 13 species, 104 individuals.—MITCHELL H. HOGE.

New York City (Staten Island, West New Brighton to Richmond to Bull's Head to West New Brighton).—Dec. 26, 8.30 A.M. to 2.30 P.M. Clear; about 3 in. of snow; wind southerly, light; temp. 17° to 22°. Herring Gull, 150; Red-shouldered Hawk, 1; Sparrow Hawk, 3; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 8; Blue Jay, 12; American Crow, 50; Starling, 24; Meadowlark, 30; Goldfinch, 13; Pine Siskin, 58; Tree Sparrow, 46; Slate-colored Junco, 27; Song Sparrow, 20; Brown Creeper, 3; Cardinal, 7; White-breasted Nuthatch, 1; Tufted Titmouse, 1; Robin, 1. Total, 20 species, 428 individuals.—WILLIAM H. LONG.

New York City (Richmond Valley to Oakwood Heights, Staten Island).—Dec. 23, 1.30 A.M. to 3 P.M. Clear; ground snow-covered; dead calm; temp. 12° to 33°. Black-backed Gull, 1; Herring Gull, 3,000; Black Duck, 5; Greater Scaup, 1; Goldeneye, 6; Bullhead, 27; Purple Sandpiper, 1; Ring-necked Pheasant, 2; Red-shouldered Hawk, 3; Sparrow Hawk, 4; Screech Owl, 1; Great Horned Owl, 1; Downy Woodpecker, 1; Northern Flicker, 2; Horned Lark, 13; Blue Jay, 6; American Crow, 30; Starling, 42; Meadowlark, 21; Goldfinch, 3; Tree Sparrow, 4; Song Sparrow, 10; Swamp Sparrow, 1; Northern Shrike, 1 (one sang); Myrtle Warbler, 1; White-

breasted Nuthatch, 1; Tufted Titmouse, 9. Total, 77 species, 8,704 individuals.—

HOWARD H. CLEAVES.

Poughkeepsie, N. Y.—Dec. 26, 9 A.M. to 1 P.M. Clear; no wind, temp. 29°; 8 in. of snow. Observers together. Barred Owl, 1; Screech Owl, 1; Belted Kingfisher, 1; Downy Woodpecker, 6; Blue Jay, 19; Crow, 200; Starling, 19; Tree Sparrow, 3; Junco, 7; Brown Creeper, 2; White-breasted Nuthatch, 8; Chickadee, 2; Golden-crowned Kinglet, 3. Total, 14 species, about 330 individuals.—**MARGERY SAUNDERS, ASTHONY SAUNDERS and F. A. SAUNDERS.**

Rochester, N. Y. Highland and Durand-Eastman Parks and vicinities.—Dec. 28, 7 A.M. until dark. Cloudy, with snow flurries, ground frozen with about 3 in. of snow, wind northwest, 25 miles per hour, temp. 13° at start, 3° at finish. Herring Gull, 18; Ring-billed Gull, 31; Ring-necked Pheasant, 2; Downy Woodpecker, 1; Crow, 8; Tree Sparrow, 2; Slate-colored Junco, 2; Cedar Waxwing, 4; Brown Creeper, 1. Total, 9 species, 41 individuals.—**Wm. L. G. ELLSON and R. E. HORSEY.**

Rochester, N. Y. (Cobb's Hill and Highland Park).—Dec. 27, 8 A.M. to 12.30 P.M. Clear, 3 in. of snow, wind variable light, temp. 15° at start, 29° at return. Observers together. Herring Gull, 6; Ring-necked Pheasant, 3; Northern Flicker, 1; Crow, 9; Tree Sparrow, 1; Slate-colored Junco, 4; Song Sparrow, 1; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Robin, 1. Total, 11 species, 29 individuals. The Song Sparrow was studied with an 8x glass at 25 feet. The streaks and spots on its breast were observed and its note of alarm was heard several times.—**RICHARD M. CHASE and GEORGE P. FREELAND.**

Schenectady, N. Y. (Central Park and vicinity).—Dec. 25, 9.30 A.M. to 2 P.M. Cloudy and dull, wind northwest strong, temp. 31°, about 7 in. of snow. Distance covered about 7 or 8 miles. Downy Woodpecker, 2; Blue Jay, 4; Crow, 30; Brown Creeper, 2; White-breasted Nuthatch, 3; Black-capped Chickadee, 12. Total, 6 species, 53 individuals.—**WALTER PHILO.**

Syracuse, N. Y.—Dec. 26, 10.45 A.M. to 3.20 P.M. Route from Fayetteville to Kirkville through woods. Fair, no wind, ground covered with snow; temp. 41°. Downy Woodpecker, 3; Blue Jay, 5; Crow, 2; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 9. Total, 6 species, 31 individuals.—**NETTIE M. SADLER.**

Tarrytown, N. Y.—Dec. 28, 9.45 to 11.30 A.M. and 1.30 to 4.30 P.M. Overcast, 6 in. of crusted snow, wind northwest, calm to brisk later north, temp. 25°. About 8 miles on foot. Sparrow Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 3; American Crow, 8; Starling, 50-7; Purple ^c Grackle, 20 (first record for this time of year); Goldfinch, 208; Tree Sparrow, 60; Song Sparrow, 3; Migrant Shrike, 1; Brown Creeper, 6; White-breasted Nuthatch, 4; Black-capped Chickadee, 16. Total, 15 species, 290-7 individuals.—**WILLIAM P. OSBORN.**

Sandy Hook, N. J., and Lower New York Bay.—Dec. 24, 8.15 A.M. to 4.40 P.M. Mostly clear, ground bare, wind northwest, brisk, temp. 35° at noon. Ten miles by steamboat, 6 on foot. Observers together after 11 A.M. Hobboll's Grebe, 1; Black-necked Gull, 3 adults; Herring Gull, 1, 200; Bonaparte's Gull, 1; Black Duck, 10; Golden-eye, 1; Oldsquaw, 2; White-winged Scaup, 14; Downy Woodpecker, 1; Flicker, 8; American Crow, 30; Fish Crow, 75; Starling, 70; Meadowlark, 1; Snow Bunting, 3; Ipswich Sparrow, 3; Sharp-tailed Sparrow, 2 (one seen excellently, *P. americanus*—C. H. R.); White-throated Sparrow, 9; Tree Sparrow, 10; Junco, 18; Song Sparrow, 3; Cardinal, 8; Cedar Waxwing, 3; Northern Shrike, 2; Myrtle Warbler, 35; Brown Thrasher, 2 (one seen excellently—J. P. Y.); Carolina Wren, 2; Black-capped Chickadee, 2 (one sang); Hermit Thrush, 2; Robin, 100. Total, 39 species, about 1,205 individuals.—**JOHN P. YOUNG and CHARLES H. ROGERS.**

Bernardsville, N. J.—Dec. 24, 11 A.M. to 1.30 P.M. and 3 to 5 P.M. Clear, 15 in. of snow, no wind, temp. 28°. Common Pheasant, 4; Great Horned Owl, 1; Downy Wood-

pecker, 3; Prairie?—Ed. Horned Lark, 12; Blue Jay, 21; Crow, 15; Starling, 2; Tree Sparrow, 9; Junco, 8; Song Sparrow, 2; Cardinal, 4; White-breasted Nuthatch, 2; Chickadee, 3; Robin, 2. (Pheasant and Cardinal reported, not personally seen.) Total, 100 species, 121 individuals.—J. DRYDEN KUBER.

Camden, N. J. [and vicinity].—Dec. 23, 10:30 A.M. to 3 P.M. Clear; ground bare; wind northwest, temp. 30°. Herring Gull, 6; Bob-white, 6; Marsh Hawk, 1; Red-tailed Hawk, 6; Red-shouldered Hawk, 1; Sparrow Hawk, 2; Barn Owl, 1; Short-eared Owl, 1; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 2; Crow, 10; Starling, 50; Horned Lark, 3; Meadowlark, 6; White-throated Sparrow, 8; Tree Sparrow, 10; Field Sparrow, 1; Junco, 20; Song Sparrow, 15; Cardinal, 2; Winter Wren, 1; Tufted Titmouse, 1; Robin, 1. Total, 24 species, 158 individuals.—JULIAN K. POTTER.

Englewood Region, N. J. Palisades Park, to Nordhoff, to Teaneck, through Englewood to Englewood Cliffs, and along foot of Palisades to Edgewater.—Dec. 22, 8 A.M. to 4:30 P.M. Clear, 8 in. of snow, wind northwest, brisk, temp. 30° to 40°. Fifteen miles on foot. Herring Gull, 300; American Merganser, 4; Black Duck, 15; Marsh Hawk, 1; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Duck Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 10; Flicker, 1; Blue Jay, 11; Crow, 15; Starling, 60; Red-winged Blackbird, 1 female; Meadowlark, 6; Goldfinch, 3; White-throated Sparrow, 23; Tree Sparrow, 21; Junco, 15; Song Sparrow, 33; Fox Sparrow, 3; Brown Creeper, 10; White-breasted Nuthatch, 1; Tufted Titmouse, 1; Black-capped Chickadee, 3; Robin, 1; Bluebird, 2. Total, 27 species, about 574 individuals.—CLARK I. LEWIS, JR., and EDWARD G. NICHOLS.

Hackettstown, N. J.—Dec. 28, 8:10 to 11:30 A.M. Cloudy, remainder of a 16-in. drifted snow; wind south. Downy Woodpecker, 3; Blue Jay, 4; Crow, 4; Starling, 18; Purple Finch, 21 (most of these are part of a flock of about 40 which feed at my home); Tree Sparrow, 48; Junco, 10; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 2. Total, 11 species, about 101 individuals. Flock of (Prairie?—Ed.) Horned Lark seen Nov. 17.—MARY PIERSON ALLEN.

Moorestown, N. J.—Dec. 25, 6:45 A.M. to 5:20 P.M. Cloudy, with rain at intervals through the morning; ground bare, wind westerly, light, becoming fresh; temp. at start 48°, at return 39°. Two parties covering different sections, and conveyed by automobiles. First party returned at 12:30 P.M.; second party traveled by auto 53 miles and walked about 8. Herring Gull, 38; American Merganser, 10; Killdeer, 2; Marsh Hawk, 2; Sharp-shinned Hawk, 1; Red-tailed Hawk, 2; Sparrow Hawk, 3; Kingfisher, 2; Hairy Woodpecker, 2; Downy Woodpecker, 9; Flicker, 5; Horned Lark, 11; Blue Jay, 20; Crow, 211; Starling, 313; Red-winged Blackbird, 2; Meadowlark, 1; Goldfinch, 10; White-throated Sparrow, 26; Tree Sparrow, 81; Field Sparrow, 2; Junco, 42; Song Sparrow, 22; Cardinal, 15; Mockingbird, 1; Carolina Wren, 2; Winter Wren, 2; Brown Creeper, 1; Tufted Titmouse, 6; Chickadee sp., 10; Golden-crowned Kinglet, 2; Robin, 4. Total, 32 species, 1,623 individuals. Total area covered was within a diameter of 14 miles.—M. ALBERT LINTON, ANNA A. MICKLE, JOHN D. CARTER, ALICE M. CAMBER, WM. BACON EVANS and GEORGE H. HALLET, JR.

Morristown, N. J.—Dec. 23, 9 A.M. to 12:30 P.M. Cloudy, about a foot of old snow; wind west, light; temp. 36°. Route out the Lake Road to the Lake Road Bridge, thence through Speedwell Park and Collinsville to the town's disposal beds, returning along the Erie tracks and through Evergreen Cemetery—about 6 miles. Observers together. Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 48; Crow, 15; Starling, 48; Purple Finch, 20; Goldfinch, 20; Tree Sparrow, 62; Field Sparrow, 10 (seen at close range, also two characteristic notes heard); Junco, 68; Song Sparrow, 6; Cardinal, 4; 1 male, 1 female; Brown Creeper, 1; White-breasted Nuthatch, 8; Tufted Titmouse, 2; Chickadee, 9; Golden-crowned Kinglet, 4; Robin, 3. Total, 18 species, 309 individuals.—EDWARD FAIRBANK and R. C. CARNEY.

Mount Holly, N. J.—Dec. 22, 8 A.M. to 5 P.M. Clear, no wind; temp. at start 14°, on return, 30°. Ten miles on foot. Observers together. Duck sp., 8. Turkey Vulture, 7; Cooper's Hawk, 1; Red-tailed Hawk, 2; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 10; Crow, 5000; Starling, 1000; Goldfinch, 7; White-throated Sparrow, 10; Tree Sparrow, 25; Field Sparrow, 6; Junco, 1000; Song Sparrow, 8; Cardinal, 10; Northern Shrike, 1; Brown Creeper, 1 (number too high?—Ed.); White-breasted Nuthatch, 7; Tufted Titmouse, 18; Chickadee sp., 9; Golden-crowned Kinglet, 4; Hermit Thrush, 1; Robin, 3. Total, 28 species, 6,188 individuals.—**MR. and MRS. NELSON D. W. PUMYEA.**

New Brunswick, N. J.—Dec. 22, 9 A.M. to 1:45 P.M. (S.T.D.) 9:30 A.M. to 1 P.M. and 1:45 to 4:20 P.M. (R. E. D.) Partly cloudy, 1 in. of snow, wind southerly, moderate, temp. 36° to 43°. The observers covered different ground. Herring Gull, 8; Sharp-shinned Hawk, 2; Cooper's Hawk, 1; Goshawk, 1 (—Ed.); Red-tailed Hawk, 1; Belted Kingfisher, 3; Hairy Woodpecker, 4; Downy Woodpecker, 5; Blue Jay, 14; American Crow, 433; Fish Crow, 36; Starling, 300; Purple Finch, 6; Goldfinch, 1; White-throated Sparrow, 2; Tree Sparrow, 4; Junco, 28; Song Sparrow, 14; Cardinal, 7; Winter Wren, 2; Brown Creeper, 3; Tufted Titmouse, 2; Robin, 3. Total, 13 species, 886 individuals.—**RALPH E. DANFORTH and STUART T. DANFORTH.**

Plainfield, N. J. (to Ash Swamp and back).—Dec. 22, 7 A.M. to 4:44 P.M. Overcast, drizzling rain from 7:45 to 10 A.M.; about 8 in. of snow, little wind, temp. 38° at start, 37° at return. About 12 miles on foot. King-necked Pheasant, 4 (back); Cooper's (or Sharp-shinned?) Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 24; American Crow, 123; Starling, 52; Meadowlark, 20; Goldfinch, 3 (back); White-throated Sparrow, 4; Tree Sparrow, 14; Junco, 24; Song Sparrow, 14; Cardinal, 7; Carolina Wren, 2 together; Brown Creeper, 1; White-breasted Nuthatch, 7; Tufted Titmouse, 8; Black-capped Chickadee, 8. Total, 25 species, 362 individuals.—**W. DE W. MILLER.**

Princeton, N. J. (Mercer St. to Stony Brook, and 3 miles along the brook).—Dec. 20, 10:45 A.M. to 4 P.M. Clear, crisp snow; wind northwest, light; temp. 22° at start, 24° at return. Observers most of time together. Ruffed Grouse, 1 (King-necked?) Pheasant, 1; Mourning Dove, 9; Red-tailed Hawk, 1; Downy Woodpecker, 3; Red-headed Woodpecker, 1; Northern Flicker, 1; Blue Jay, 8; American Crow, 200; Starling, 3; Tree Sparrow, 100; Slate-colored Junco, 130; Song Sparrow, 40; Cardinal, 18; Northern Shrike, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Black-capped Chickadee, 20; Bluebird, 11 (one flock). Total, 19 species, about 350 individuals. Three Song Sparrows singing softly at noon, 14 Cardinals in 1 flock.—**FERTUS VAN DYKE and HAMILTON GIBSON.**

Vineland, N. J. (Six miles northeast of Vineland).—Dec. 22, 10:30 A.M. to 4:30 P.M. Light rain, sometimes mixed with snow, all day, wind northwest, light; temp. 39°. Blue Jay, 2; Crow, 3; Starling, 7; Meadowlark, 3; Tree Sparrow, 20; Junco, 130; Song Sparrow, 1; Chickadee sp., 1. Total, 8 species, 218 individuals.—**WM. W. FAIR.**

Ardley, Hillside and Roslyn, Pa.—Dec. 22, 11:30 to 4:30 P.M. Clear; 5 in. of snow; wind west, light; temp. 37°. About 6 miles. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 2; Crow, about 1,000; Starling, 28; Purple Grackle, 1; Tree Sparrow, 62 (in song); Junco, 17; Song Sparrow, 6; Cardinal, 1. Total, 11 species, about 1,123 individuals.—**GEORGE LEAR.**

Beaver, Pa. (Beaver's Hollow, Dutch Ridge Road, Gypsy Glen).—Dec. 20, 11 A.M. to 3:14 P.M. Clear, 3 in. of snow, wind west, light, temp. 25°. Bob-white, 1 (one covey); Hairy Woodpecker, 1; Downy Woodpecker, 10; Redpoll, 4; Tree Sparrow, 127; Song Sparrow, 9; Junco, 8; Cardinal, 1; Tufted Titmouse, 1; Black-capped Chickadee, 9; Golden-crowned Kinglet, 1; White-breasted Nuthatch, 6. Total, 12 species, about 249

individuals. The Redpolls were studied for 20 minutes at 15 feet, and all distinguishing characteristics noted.—W. R. BOULTON, JR.

Buckingham near Doylestown, Pa.—Dec. 26, 7 A.M. to 2 P.M. Clear, 3 in. of snow, wind west, temp. 24°. Walked 5 miles. Bob-white, 2; Cooper's Hawk, 1; Sparrow Hawk, 3; Saw-whet Owl, 1; Screech Owl, 1; Downy Woodpecker, 1; Blue Jay, 1; Crow, 15; Starling, 20; Canadian [Tree?—Ed.] Sparrow, 2; Junco, 9; Song Sparrow, 3; Cardinal, 1; Brown Creeper, 1; White-breasted Nuthatch, 1. Total, 15 species, about 65 individuals.—ELIZABETH COX.

Forty Fort, Luzerne County, Pa. (to Trucksville and return).—Dec. 26, 9:40 A.M. to 1:30 P.M. Clear, 4 in. of snow, wind northwest, light, temp. 15°. Eleven miles, covering river flats, meadow, mountain, valley and swamps. Observers together. Sparrow Hawk, 1; Crow, 10; Starling, 2; American Goldfinch, 25; Tree Sparrow, 5; Chickadee, 2. Total, 6 species, about 45 individuals.—H. W. BAY, PAUL BITTENSCHER and ALVAN WALKER.

Haverford, Pa. (to Darby Creek and back).—Dec. 24, 10:30 A.M. to 4:45 P.M. Clear at start, showery at return, 2 in. of snow, melting fast, wind southwest, moderate, temp. 33° at start, 41° at return. Eight miles on foot. Observers separate in A.M., together in P.M. Red-tailed Hawk, 1; Sparrow Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 2; Crow, 15; Starling, 4; White-throated Sparrow, 5; Tree Sparrow, 2; Junco, 11; Song Sparrow, 13; Cardinal, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Carolina Chickadee, 7; Golden-crowned Kinglet, 3. Total, 15 species, 101 individuals.—GARDNER SCOVILLE and THEODORE SPENCER.

Limerick, Pa. (to Linfield, Limerick Center, Stone Hills, and back).—Dec. 24, 10 A.M. to 4 P.M. Cloudy, from 6 to 12 in. of snow, wind southwest, light, temp. 32° to 39°. Sixteen miles on foot. Sharp-shinned Hawk, 3; Cooper's Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Flicker, 12; Horned Lark, 1; Crow, numerous; Starling, 6; Meadowlark, 1; Tree Sparrow, 20; Junco, 33; Song Sparrow, 9; Northern Shrike, 1. Total, 15 species, about 125 individuals + Crows.—EDWARD K. ZIEGLER.

Litz, Pa. (northern Lancaster Co., upper waters of the Hammer Creek).—Dec. 23, 5 A.M. to 3 P.M. Clear, temp. 2°, ground covered with snow, wind, none. Bob-white, 76 (seven omelets); Ruffed Grouse, 2; Turkey Vulture, 28; Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 12; Flicker, 2; Blue Jay, 28; Crow, about 2,000; Goldfinch, 5; Tree Sparrow, 68; Slate-colored Junco, 81; Song Sparrow, 12; Cardinal, 16; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 10; Chickadee, 6. Total, 26 species, 346 individuals + Crows.—HENRY H. BECK, ELMER F. KAUFZ and ABRAHAM BECK MILLER.

McKeesport, Pa.—Dec. 21, 7:15 A.M. to 4:50 P.M. Mostly cloudy, light snow on hillsides, no wind, temp. 26° to 36°. Fifteen miles on foot. Observers together except for four hours. Hairy Woodpecker, 2; Downy Woodpecker, 11; Flicker, 1; Crow, 31; Tree Sparrow, 80; Junco, 91; Song Sparrow, 37; Towhee (female) heard and watched at 29 ft., 1; Cardinal, 12; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 2; Tufted Titmouse, 23; Black-capped Chickadee, 14. Total, 13 species, 204 individuals.—L. F. SCHAUM and THOMAS L. MCCONNELL.

Oaks, Montgomery Co., Pa. (Perkiomen Creek, from Mill Grove to Skippack—Schuylkill River).—Dec. 24, 8:15 A.M. until 3 P.M. Cloudy, preposterous attempts at rain throughout the day, 4 in. of snow, wind west, temp. 30° at start, 32° at return. Covered a rough triangle 6 miles around. American Merganser, 2; Red-tailed Hawk, 2 (adult and immature); Sparrow Hawk, 1; Belted Kingfisher, 2; Hairy Woodpecker, 1; Downy Woodpecker, 9; Flicker, 1; Crow, 300+; Starling, 25+; Meadowlark, 15+ (both); Tree Sparrow, 20+; Junco, 40+; Song Sparrow, 28; Cardinal, 4; Brown Creeper, 10; White-breasted Nuthatch, 2; Tufted Titmouse,

10:2 Golden-crowned Kinglet, 5. Total, 18 species, about 454 individuals.—**CONRAD K. ROLAND.**

Reading, Pa.—Dec. 23, 8 A.M. to 4 P.M. Clear; 8 to 10 in. of snow; wind north; light; temp. 16° at start, 32° at return. Observers together. Downy Woodpecker, 10; Blue Jay, 11; Crow, 20; Starling, 20; White-throated Sparrow, 6; Tree Sparrow, 10; Slate-colored Junco, 17; Song Sparrow, 10; Cardinal, 7; White-breasted Nuthatch, 3; Black-capped Chickadee, 18. Total, 11 species, 119 individuals.—**ANNA P. and MARY E. DEYER.**

Reading, Pa.—Dec. 23, 7 A.M. to 4 P.M. Clear; 8 in. of snow; wind northwest, light; temp. 16° to 31°. Observers together. Sparrow Hawk, 2; Downy Woodpecker, 6; Blue Jay, 24; Crow, 25; Starling, 14; Meadowlark, 2; Goldfinch, 6; Tree Sparrow, 3; Junco, 20; Song Sparrow, 17; Cardinal, 13; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 6; Chickadee, 10. Total, 15 species, 167 individuals.—**MR. and MRS. G. HENRY MENDEL.**

Springs, Pa.—Dec. 23, 8:15 A.M. to 12:30 P.M. Mostly clear; snow in patches; wind southwest to northwest, light; temp. 42° to 34°. Walked 5 miles. Ruffed Grouse, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 3; Tree Sparrow, 10; Junco, 6; White-breasted Nuthatch, 5; Tufted Titmouse, 4; Black-capped Chickadee, 6. Total, 9 species, 45 individuals.—**ANSEL B. MILLER.**

Telford, Pa.—Dec. 23, 8:15 A.M. to 12:30 P.M. Raining at start, but clearing at 10:15 A.M. followed by brisk north wind; temp. 34°, 8 in. of snow. Bobwhite, 15; loaves; Sparrow Hawk, 2; Great Horned Owl, 1; Downy Woodpecker, 5; Flicker, 4; American Crow, 20; Starling, 6; Tree Sparrow, 17; Slate-colored Junco, 13; Song Sparrow, 11; Brown Creeper, 3; White-breasted Nuthatch, 3; Black-capped Chickadee, 1; Golden-crowned Kinglet, 15. Total, 14 species, 113 individuals. Also one unidentified Hawk.—**CLAUDE A. BUTTERWICK.**

West Chester, Pa.—Dec. 23, 11:30 A.M. to 4:30 P.M. Cloudy, slight rain at start, buries of snow, ground covered with snow and ice, no wind, temp. 36° at start, 36° at return. Eleven miles on foot. Turkey Vulture, 2; Cooper's Hawk, 1; Red-tailed Hawk, 4; Screech Owl, 1; Downy Woodpecker, 13; American Crow, 115; Starling, 15; Purple Grackle, 2; Tree Sparrow, 50; Slate-colored Junco, 15; Song Sparrow, 45; Cardinal, 13; White-breasted Nuthatch, 3; Chickadee, 4. Total, 14 species, 344 individuals.—**C. E. EHINGER.**

York, Pa. to Wrightsville, along Susquehanna River.—Dec. 27, 7 A.M. to 12:30 P.M. Clear; 4 in. of crusty snow; calm; temp. 18° at start. Six miles on foot. Observers together. American Merganser, 3; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 11; Northern Flicker, 1; Blue Jay, 3; American Crow, 53; Starling, 1; Tree Sparrow, 10; Slate-colored Junco, 2; Song Sparrow, 12; Cardinal, 12; Cedar Waxwing, 3; Carolina Wren, 5 (singing); Brown Creeper, 1; Tufted Titmouse, 1; Black-capped Chickadee, 10 (singing); Horned Thrush, 1. Yesterday a Grackle was observed, and on Dec. 14 a male Towhee was positively identified where these observations were made. Total, 18 species, 157 individuals.—**ARTHUR FARQUHAR and CHARLES WEINER.**

Chevy Chase, Md. (northeast to Rock Creek and back).—Dec. 28, 7:30 A.M. to 1 P.M. Sky darkly overcast; snow in sheltered locations; wind north, light; temp. 40° at start, 33° at return; rain 10 to 12 A.M., snow in P.M. Eight or 9 miles on foot. Bobwhite, 2; Turkey Vulture, 4; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 17; Red-headed Woodpecker, 1; Sapsucker, 2; Blue Jay, 14; American Crow, 50; Fish Crow, 25; Starling 15 (first time the Starling has been noted in Chevy Chase, they first appeared Dec. 16); Purple Finch, 5; White-throated Sparrow, 4; Tree Sparrow, 2; Chipping Sparrow, 1; Junco, 107; Song Sparrow, 4; Cardinal, 22; Mockingbird, 8; Carolina Wren, 6; White-breasted Nuthatch, 8; Tufted

Titmouse, 15, Carolina Chickadee, 4; Bluebird, 10. Total, 26 species, about 319 individuals.—S. W. MELLITT.

Washington, D. C. (from a point $3\frac{1}{2}$ miles south of Congress Heights to Woodridge, D. C.)—8:30 A.M. to 5 P.M. Fair, winds light, variable, becoming southerly in P.M.; temp. 16° to 39° . Herring Gull, 1; Bob-white, 17; Turkey Vulture, 34; Cooper's Hawk, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 6; Broad-winged Hawk, 1; Sparrow Hawk, 2; Barred Owl, 2; Kingfisher, 1; Downy Woodpecker, 9; Red-bellied Woodpecker, 1; Flicker, 5; Blue Jay, 4; Crow, 10,000; Fish Crow, 91; Starling, 14; Red-winged Blackbird, 2; Meadowlark, 6; Purple Finch, 3; Goldfinch, 51; White-throated Sparrow, 16; Tree Sparrow, 226; Junco, 327; Song Sparrow, 34; Swamp Sparrow, 1; Cardinal, 28; Migrant Shrike, 1; Mockingbird, 3; Carolina Wren, 5; Brown Creeper, 1; Tufted Titmouse, 12; Carolina Chickadee, 12; Golden-crowned Kinglet, 4; Hermit Thrush, 1; Bluebird, 14. Total, 36 species, 10,958 individuals.—L. N. GARRISON and E. R. KALMBACH.

Washington, D. C. (Wellington to New Alexandria, Va.; Arlington, Va. to Washington, D. C.)—Dec. 26, 10 A.M. to 4 P.M. Clear, wind northwest, light but penetrating; light snow covering ground, temp. 25° to 30° . Distance 12 miles. Hooded Merganser, 15; Mallard, 30; Black Duck, 25; Redhead, 100; Canvasback, 500; Greater Scaup, 500; Lesser Scaup, 6,500 (two sizes, as well as color reflections of heads); Goldeneye, 30; Bufflehead, 12 (all ducks through telescope, 25 diameters); Bob-white, 32 (7, 8, 16, 4); Turkey Vulture, 10; Marsh Hawk, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Broad-winged Hawk, 1; Bald Eagle, 3; Sparrow Hawk, 2; Downy Woodpecker, 11; Yellow-bellied Sapsucker, 1; Flicker, 2; Blue Jay, 5; Common Crow, 300; Fish Crow, 7; Starling, 5; Rusty Blackbird, 60; Purple Finch, 2; Goldfinch, 30; White-throated Sparrow, 25; Tree Sparrow, 150; Junco, 200; Song Sparrow, 10; Cardinal, 20; Migrant Shrike, 1; Myrtle Warbler, 1; Carolina Wren, 3; Winter Wren, 2; Brown Creeper, 11; White-breasted Nuthatch, 1; Tufted Titmouse, 15; Carolina Chickadee, 40; Golden-crowned Kinglet, 150; Ruby-crowned Kinglet, 2; Bluebird, 50. Total, 45 species, 8,458 individuals. Ducks in three flocks, and actual number probably exceeded ten or twelve thousand.—MR. and MRS. LEO D. MASLER, and RAYMOND W. MOORE.

Mount Vernon to Dyke, Va. (by way of Dogue Creek).—Dec. 26, 8:30 A.M. to 5:15 P.M. Clear, 2 in. of snow; wind northwest, light, temp. 24° at start, 26° at finish. Twelve miles on foot. Observers together. Red-breasted Merganser, 15; Black Duck, 6; Canvasback, 200; Lesser Scaup, 10; American Goldeneye, 2; Ruddy Duck, 75; Bob-white, 15; Turkey Vulture, 8; Marsh Hawk, 2; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Bald Eagle, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 2; Flicker, 6; Blue Jay, 16; Crow, 84; Fish Crow, 1; Red-winged Blackbird, 1; Meadowlark, 19; Goldfinch, 11; White-throated Sparrow, 11; Tree Sparrow, 29; Junco, 156; Song Sparrow, 4; Cardinal, 8; Migrant Shrike, 3; Myrtle Warbler, 4; Mockingbird, 4; Carolina Wren, 4; Winter Wren, 3; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 18; Carolina Chickadee, 7; Golden-crowned Kinglet, 11; Ruby-crowned Kinglet, 1; Hermit Thrush, 1; Bluebird, 16. Total, 39 species, about 835 individuals.—WALDO McATEE and EDWARD A. PERLE.

Grafton, W. Va. (McGee to Benton Ferry).—Dec. 25, 7:30 A.M. to 4:30 P.M. Cloudy and snowing until noon, 2 in. of snow at noon, wind west, light, temp. 20° at start, 31° at end. Eight miles on foot. Bob-white, 6; Screech Owl, 1; Downy Woodpecker, 5; American Crow, 2; Chipping Sparrow, 1; Slate-colored Junco, 76; Song Sparrow, 5; Cardinal, 16; Carolina Wren, 6; Tufted Titmouse, 2; Chickadee, 4. Total, 11 species, about 120 individuals.—A. J. DADSMAN.

Lewisburg, W. Va.—Dec. 26, 9 A.M. to 4 P.M. Clear, 4 in. of snow (snow clinging to the undergrowth made the observation difficult and disagreeable for the observers).

no wind, temp. 8° at start, 26° at return. Fifteen miles on foot. Observers hunted separately. Bob-white, 12 (1 covers); Mourning Dove, 8; Turkey Vulture, 4; Red-tailed Hawk, 1; Sparrow Hawk, 1; Great Horned Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 11; Northern Pileated Woodpecker, 7; Red-bellied Woodpecker, 14; Northern Flicker, 4; Prairie Horned Lark, 31; Blue Jay, 11; Crow, 248; Meadowlark, 1; Goldfinch, 3; Tree Sparrow, 208; Slate-colored Junco, 438; Song Sparrow, 1; Cardinal, 7; Carolina Wren, 1; White-breasted Nuthatch, 32; Tufted Titmouse, 29; Bluebird, 6. Total, 14 species, 1,096 individuals.—HARRY and CHAS. O. HANDLEY.

Boone, N. C.—Dec. 24; 8.30 A.M. to 2.30 P.M. Cloudy early, clearing in middle of forenoon and becoming warm in middle of day—one of several mild days following two weeks of unusually cold weather and an unusual snowfall for the season; ground bare on southern slopes, 2 to 3 in. of snow in wooded valleys and on northern slopes; temp. at 8.30, 30°. Bob-white, 2; Ruffed Grouse, 1; Great Horned Owl, 1 (heard just before day); Hairy Woodpecker, 2; Downy Woodpecker, 3; Blue Jay, 1; American Crow, 11; Field Sparrow, 7; Junco, 20; Song Sparrow, 4; Carolina Wren, 1; White-breasted Nuthatch, 8; Tufted Titmouse, 10; Chickadee, 2. Total, 14 species, 95 individuals.—ROY M. BROWN.

Lexington, N. C.—Dec. 26; 10.30 A.M. to 4 P.M. Clear, 1½ in. of snow, wind northeast to north, moderately strong; temp. 23° to 25°. Eight miles covered. Bob-white, 10; Turkey Vulture, 12; Northern Flicker, 1; Blue Jay, 1; Crow, 8; Purple Finch, 2; Goldfinch, 13; White-throated Sparrow, 25; Field Sparrow, 45; Slate-colored Junco, 102; Song Sparrow, 40; Cardinal, 30; Migrant Shrike, 1; Pine Warbler, 2; Carolina Wren, 9; Bewick's Wren, 2; Tufted Titmouse, 7; Carolina Chickadee, 7; Golden-crowned (?) Kinglet, 2; Hermit Thrush, 1; Bluebird, 1. Total, 21 species, 332 individuals.—THEODORE ANDREWS.

Atlanta, Ga. (Headwaters of North Utoy Creek and Procter Creek).—Dec. 22; 8.30 to 8.30 A.M. and 1 to 4.30 P.M. Clear, wind northwest, light, ground mostly bare, a little ice and snow in shaded north exposures; temp. 36° at start, 30° at end. Twelve miles about. Killdeer, 1; Dove, 2; Turkey Vulture, 1; Cooper's Hawk, 1; Red-shouldered(?) Hawk, 1; Sparrow Hawk, 3; Flicker, 3; Blue Jay, 5; Crow, 8; Red-winged Blackbird, 7; Meadowlark, 8; Goldfinch, 9; White-throated Sparrow, 27; Chipping Sparrow, 1; Field Sparrow, 40; Junco, 132; Song Sparrow, 8; Swamp Sparrow, 1; Fox Sparrow, 4; Towhee, 4; Cardinal, 6; Loggerhead Shrike, 1; Pine Warbler, 12; Mockingbird, 2; Carolina Wren, 2; Bewick's Wren, 1; Brown-headed Nuthatch, 3; Carolina Chickadee, 6; Golden-crowned Kinglet, 1; Ruby-crowned Kinglet, 6; Hermit Thrush, 1; Bluebird, 2. Total, 32 species, 399 individuals. One Sparrow Hawk seen from office building in heart of city, where he has hunted for three years. Song Sparrows and White-throats were in song. Dec. 8 to 15 was a cold spell of unprecedented length, with snow and ice for over a week.—W. E. HANNUM.

Camp Gordon, Atlanta, Ga.—Dec. 24; all day. Clear, ground bare, patches of snow and ice in woods; wind southwest, light; temp. 39° to 39°. Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 31; Crow, 3; Meadowlark, 6; Purple Finch, 11; White-throated Sparrow, 12; Chipping Sparrow, 100; Junco, 30; Song Sparrow, 8; Swamp Sparrow, 4; Towhee, 7; Cardinal, 2; Myrtle Warbler, 3; Pine Warbler, 20; Mockingbird, 4; Carolina Chickadee, 22; Ruby-crowned Kinglet, 2; Robin, 15; Bluebird, 20. Total, 20 species, about 430 individuals.—PRIVATE JOHN W. RUSSELL.

Nashville, Tenn. (Bellemeade, Glendale Hills and 40-acre reservoir).—Dec. 25; 8 A.M. to 2 P.M. Clear; little snow, no wind; temp. 25° to 40°. Four miles on foot. Mallard, 8; Killdeer, 3; Bob-white, 6; Black Vulture, 24 (together); Turkey Vulture, 2; Red-tailed Hawk, 3; Sparrow Hawk, 1; Screech Owl, 1; Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Red-bellied Woodpecker, 5; Pileated Woodpecker, 1; Yellow-bellied Sapsucker, 6; Flicker, 15; Prairie Horned Lark, 23 (2 flocks);

Crow, 12; Meadowlark, 50; Branched Grackle, 1; Purple Finch, 4; Goldfinch, 3; White-crowned Sparrow, 4; White-throated Sparrow, 50; Field Sparrow, 14; Song Sparrow, 9; Fox Sparrow, 2; Junco, 60; Towhee, 8; Cardinal, 15; Myrtle Warbler, 3; Mockingbird, 12; Carolina Wren, 4; Bewick's Wren, 2; Winter Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 4; Carolina Chickadee, 8; Hermit Thrush, 2; Bluebird, 8. Total, 30 species, about 476 individuals.—A. F. GANIER

Bardstown, Ky.—Dec. 22, 9.30 to 11 A.M. and 2 to 4 P.M. Cloudy; wind southeast, at times rather strong; temp. 30° to 45°. About 4½ miles. Black Vulture, 2; Cooper's Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 1; Red-bellied Woodpecker, 2; Flicker, 21; Prairie Horned Lark, 17; Blue Jay, 11; Crow, 34; White-throated Sparrow, 2; Tree Sparrow, 1; Field Sparrow, 1; Slate-colored Junco, 61; Song Sparrow, 7; Towhee, 1; Cardinal, 8; Cedar Waxwing, 30; Myrtle Warbler, 16; Tufted Titmouse, 11; Carolina Chickadee, 23; Robin, 125; Bluebird, 11. Total, 23 species, about 347 individuals.—BEN. J. BLINCOE.

Albion, Ill. 1 to point 7 miles west and return.—Dec. 25; 9.15 A.M. to 5 P.M. Cloudy; 2 to 3 in. of snow; wind north, light, increasing in afternoon; temp. about 30°. (Cooper's) Hawk, 1; Sparrow Hawk, 1; Bob-white, 3 together; Downy Woodpecker, 15; Red-bellied Woodpecker, 8; Flicker, 1; Blue Jay, 5; Crow, 25; Junco, 150 (or more); Song Sparrow, 1; Brown Creeper, 1; Tufted Titmouse, 5; Carolina Chickadee, 15. Total, 11 species, 231 individuals.—JOHN H. GOOCH.

Chicago, Ill. (Jackson Park—Riverside to Willow Springs along the DesPlaines River.)—Dec. 23, 7.30 A.M. to 4.30 P.M. Cloudy with slight rain; temp. 35° to 45°. Horned Grebe, 1; Herring Gull, 27; Ring-billed Gull, 10; Cooper's Hawk, 1; Hairy Woodpecker, 6; Downy Woodpecker, 2; Blue Jay, 15; Crow, 45; Lapland Longspur, 10; Tree Sparrow, 70; Song Sparrow, 20; Junco, 4; Cardinal, 12; Carolina Wren, 2 (in full song); Brown Creeper, 4; White-breasted Nuthatch, 1; Chickadee, 3; Robin, 2. Total, 18 species, about 225 individuals.—JAMES D. WATSON.

Port Byron, Ill. 3 to 5 miles southeast.—Dec. 23, 8.15 A.M. to 3.20 P.M. Cloudy; ground bare, ice in the creeks; wind south, moderate; temp. 40° at start, 48° at return. Bob-white, 6 (Covey); Rough-legged Hawk, 2; Screech Owl, 1 (heard at 6 P.M.); Great Horned Owl, 2; Hairy Woodpecker, 3; Downy Woodpecker, 12; Red-headed Woodpecker, 20; Red-bellied Woodpecker, 8; Northern Flicker, 2; Blue Jay, 25; Crow, 10; Tree Sparrow, 30; Slate-colored Junco, 100; Cardinal, 27; Brown Creeper, 1; White-breasted Nuthatch, 10; Tufted Titmouse, 7; Chickadee, 30. Total, 18 species, about 221 individuals.—J. J. SCHAFER.

Rantoul, Ill. 2 miles through woods.—Dec. 23, 1.2 M. to 2 P.M. Slightly cloudy; wind southeast, strong; temp. 20°. Bob-white, 12; Prairie Hen, 14; Cooper's Hawk, 1; Red-tailed Hawk, 1; Rough-legged Hawk, 3; Screech Owl, 2; Hairy Woodpecker, 3; Downy Woodpecker, 8; Arctic Three-toed Woodpecker, 1; Flicker, 1; Horned Lark, 30; Blue Jay, 12; Crow, 200; Meadowlark, 31; Goldfinch, 12; Longspur, 130; Tree Sparrow, 12; Junco, 10; Song Sparrow, 31; Cardinal, 32; White-breasted Nuthatch, 4; Red-breasted Nuthatch, 12; Tufted Titmouse, 18; Black-capped Chickadee, 7; Bluebird, 2. Total, 22 species, 276 individuals.—FRED C. CARLSON, SIDNEY E. and ED. L. ERBLAW.

Fort Wayne, Ind.—Dec. 26; 8.45 A.M. to 1.2 M. Fair; wind east, light; temp. 14°; ground bare. About 7 miles on foot. Duck sp., 2; Sparrow Hawk, 1; Barred Owl, 1; Downy Woodpecker, 4; Flicker, 1; Blue Jay, 8; American Crow, 2; Tree Sparrow, 12; Slate-colored Junco, 14; Song Sparrow, 2; Cardinal, 23; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Black-capped Chickadee, 4. Total, 14 species, about 64 individuals.—P. WILLIAM SIBLER.

Fort Wayne, Ind.—Dec. 23; 7.45 A.M. to 1 P.M. Cloudy; ground bare; no wind; temp. 41°. Eight miles on foot. Observers together. Hairy Woodpecker, 4; Downy Woodpecker, 1; Flicker, 2; Prairie Horned Lark, 4; Blue Jay, 2; American Crow, 10;

American Goldfinch, 30; Tree Sparrow, 71; Slate-colored Junco, 35; Song Sparrow, 4; Towhee, 2; Cardinal, 7; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 9; Black-capped Chickadee, 2. Total, 16 species, 230 individuals.—CHAS. A. STROCK, MAJOR, A. A. RINSWALT and HENRY W. LEPPER.

Lafayette, Ind. Tecumseh Trail to Wabash Valley Sanitarium and back through Happy Hollow.—Dec. 23, 10 A.M. to 2.30 P.M. Partly cloudy; ground bare; wind north, raw and cold; temp. thawing slightly in sun in sheltered spots. Seven miles on foot. Hairy Woodpecker, 3; Downy Woodpecker, 2; Blue Jay, 1; Crow, 7; Goldfinch, 14; Tree Sparrow, 20; Junco, 25; Cardinal, 6; Brown Creeper, 2; Tufted Titmouse, 11. Total, 10 species, 111 individuals.—M. L. FISHER.

Roachdale, Ind.—Dec. 24, 8 A.M. to 12.30 P.M. Cloudy; ground bare; wind southwest moderate; temp. 40° to 46°. Eight miles on foot. Barred Owl, 1; Downy Woodpecker, 2; Red-bellied Woodpecker, 3; Flicker, 4; Blue Jay, 6; American Crow, 240; Tree Sparrow, 7; Slate-colored Junco, 40; Song Sparrow, 10; Cardinal, 5; Carolina Wren, 2; Brown Creeper, 2; Tufted Titmouse, 3; Black-capped Chickadee, 11. Total, 14 species, about 340 individuals. Also one large, unidentified Hawk.—WARD J. RICE.

Cadiz, Ohio.—Dec. 23, 6.15 A.M. to 1.20 P.M. Cloudy; ground bare to 2 in. of snow in the woods and on northern slopes, and remains of great drifts in places; wind southeast light; temp. 27° to 36°. Walked 7 miles. Bob-white, 15; Sparrow Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 7; Red-bellied Woodpecker, 4; Flicker, 6; Crow, 5; Goldfinch, 1; Tree Sparrow, 2; Junco, 15; Song Sparrow, 9; Cardinal, 8; Carolina Wren, 2 (sang); White-breasted Nuthatch, 8; Tufted Titmouse, 16 (sang); Chickadee, 3; Bluebird, 1. Total, 17 species, 112 individuals.—HARRY B. McCONNELL, JOHN WORLEY and RAYMOND TIMMONS.

Canton, Ohio.—Dec. 23, 7 A.M. to 3.45 P.M. Cloudy; ground with numerous snow patches; wind southeast light; temp. 26° to 35°. Ground covered, 10 miles. Marsh Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Tree Sparrow, 230; Song Sparrow, 19; Cardinal, 4; White-breasted Nuthatch, 4; Tufted Titmouse, 6; Black-capped Chickadee, 2. Total, 10 species, 287 individuals.—EDWARD D. KIMES.

Canton, Ohio.—Dec. 26, 10 A.M. to 4 P.M. Clear; wind north light; ground bare with patches of snow; temp. 17°. Five miles on foot. Observers together. Downy Woodpecker, 7; Blue Jay, 5; Tree Sparrow, 40; Junco, 3; Song Sparrow, 3; Cardinal, 5; Brown Creeper, 5; White-breasted Nuthatch, 3; Tufted Titmouse, 7; Chickadee, 1. Total, 10 species, 52 individuals.—MAY S. DANNER and MARY KINS.

Crestline, Ohio.—Dec. 28, 9.30 A.M. to 3 P.M. Light clouds, flurries of snow; ground almost bare; temp. 5° at start, 16° at return; wind north, very sharp. Walked 6 miles. Nearly all the birds found on south side of the woodlands. Hairy Woodpecker, 6; Downy Woodpecker, 7; Red-headed Woodpecker, 3; Red-bellied Woodpecker, 3; Flicker, 8; Blue Jay, 1; Crow, 3; Tree Sparrow, 50; Slate-colored Junco, 35; Song Sparrow, 2; Cardinal, 1; White-breasted Nuthatch, 6; Tufted Titmouse, 4; Black-capped Chickadee, 1. Total, 14 species, 135 individuals.—SHERIDAN F. WOOD.

Delaware, Ohio.—Dec. 25, 10 A.M. to 4 P.M. Cloudy; ground lightly snow-covered; temp. 20°. Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 1; Blue Jay, 2; Crow, 3; Junco, 4; Song Sparrow, 2; Towhee, 2; Cardinal, 6; Titmouse, 1; Golden-crowned Kinglet, 1. Total, 13 species, 34 individuals. Blue Jays and Cardinals seem very scarce this winter.—HARRY H. HIPPLE.

Hillsboro, Ohio.—Dec. 27, 6.30 A.M. to 12 M. Cloudy, 8 in. of snow, drifted; wind northeast, slight; temp. 25°. Mourning Dove, 2; Sharp-shinned Hawk, 2; Red-shouldered Hawk, 1; Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 3; Red-bellied Woodpecker, 5; Flicker, 2; Yellow-bellied Sapsucker, 1; Blue Jay, 10; Crow, 84.

Meadowlark, 1; Tree Sparrow, 20; White-throated Sparrow, 5; Slate-colored Junco, 22; Song Sparrow, 10; Cardinal, 15; Winter Wren, 2; Carolina Wren, 1; White-breasted Nuthatch, 8; Tufted Titmouse, 7; Black-capped Chickadee, 12; Robin, 1. Total, 23 species, 248 individuals.—LETHA E. ROADS.

Huron, Ohio.—Dec. 25; 7 A.M. to 4 P.M. Cloudy with snow and rain, wind south, fresh, temp. 33°. Observers together. Herring Gull, 10; Merganser, 5; Bald Eagle, 1; Downy Woodpecker, 5; Northern Flicker, 3; Blue Jay, 4; Bronzed Grackle, 2; Tree Sparrow, 37; Slate-colored Junco, 3; Song Sparrow, 2; Cardinal, 8; White-breasted Nuthatch, 2; Tufted Titmouse, 5; Chickadee, 3; Golden-crowned Kinglet, 2. Total, 15 species, 92 individuals.—H. G. MORSE and D. C. REED.

Laceyville, Ohio. (9 miles west of Cadiz).—Dec. 25, 10 A.M. to 1 P.M. Cloudy, with sun in the evening, ground partly covered with snowdrifts, wind east and southeast, temp. 22° in morning, 40° at noon. Red-tailed Hawk, 1; Great Horned Owl, 1; Screech Owl, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 2; Crow, 5; Tree Sparrow, 25; Junco, 10; Song Sparrow, 3; Cardinal, 3; Cedar Waxwing, 1; Carolina Wren, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 10; Chickadee, 5. Total, 15 species, 80 individuals. I found the winter residents very scarce compared with other winter censuses.—E. E. SMITH.

Oberlin, Ohio (radius of 6 miles south and west of town).—Dec. 27, 9 A.M. to 3 P.M. Cloudy, ground barely covered with snow; wind northeast, sharp, snappy; temp. 24° at start, 37° at return. About 15 miles on foot. Herring Gull, 3; Mallard, 1 female; Baldpate, 3; Marsh Hawk, 1; Sparrow Hawk, 3; Screech Owl, 4; Hairy Woodpecker, 2; Downy Woodpecker, 8; Red-headed Woodpecker, 2; Flicker, 6; Blue Jay, 8; Goldfinch, 12; Tree Sparrow, 75; Slate-colored Junco, 13; Cardinal, 8; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 5; Red-breasted Nuthatch, 1; Tufted Titmouse, 2; Chickadee, 3; Robin, 1. Total, 22 species, 165+ individuals.—HELEN M. RICE.

Wilmington, Ohio.—Dec. 23, 9 A.M. to 3:30 P.M. Walked about 8 miles. Ground partly covered with snow; temp. 32° to 40°, wind southeast to west, cloudy. Black Vulture, 19; Red-tailed Hawk, 1; Sparrow Hawk, 3; Great Horned Owl, 1; Owl (unidentified), 1; Hairy Woodpecker, 1; Downy Woodpecker, 11; Red-headed Woodpecker, 3; Red-bellied Woodpecker, 9; Flicker, 13; Blue Jay, 12; Crow, 28; Goldfinch, 19; Tree Sparrow, 30; Junco, 84; Song Sparrow, 19; Fox Sparrow, 1; Towhee, 10; Cardinal, 31; Nuthatch, 5; Titmouse, 25; Chickadee, 9; Golden-crowned Kinglet, 6. Total, 22 species, 439 individuals. The Black Vulture is becoming common in Canton and Warren Counties. This is the first time we have seen the Fox Sparrow wintering in this locality. Out of the 26 Towhees, 3 were females, the first time we have known the females to winter here. This was immediately following two weeks of severe winter temperature as low as 20° below zero.—GEORGE D. HAWORTH and H. N. HENDERSON.

Youngstown, Ohio.—Dec. 25, 8 A.M. to 3 P.M. Cloudy, ground slightly snow-covered, wind northwest; temp. 27°. Walked about 15 miles, by automobile 20 miles. Observers were separated some of the time. Ruffed Grouse, 4; Red-tailed Hawk, 1; Sparrow Hawk, 1; Buried Owl, 1; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 18; Red-headed Woodpecker, 12; Red-bellied Woodpecker, 5; Blue Jay, 41; Goldfinch, 2; Tree Sparrow, 64; Slate-colored Junco, 11; Song Sparrow, 14; Towhee, 2; Cardinal, 19; Brown Creeper, 2; White-breasted Nuthatch, 30; Tufted Titmouse, 22; Chickadee, 129; Golden-crowned Kinglet, 7. Among additional species seen the previous week were Hooded Merganser, Pileated Woodpecker, Pine Siskin and Carolina Wren. Total, 20 species, 473 individuals.—GEORGE L. FORBYS, C. A. LEEPY, WILLIS H. WARNER and VOLNEY ROGERS.

Detroit, Mich. (Palmer Park and Belle Isle).—Dec. 24, 8 A.M. to 12 M. and 2 to 4 P.M. Cloudy, with misty rain; ground bare; no wind, temp. 42° to 44°. Herring Gull, 20;

Merganser, 14; Snipe, 100; American Goldeneye, 50; Barrow's Goldeneye, 20; Redhead, 5; Hairy Woodpecker, 21; Downy Woodpecker, 4; Slate-colored Junco, 20; Blue Jay, 4; Crow, 31; Brown Creeper, 2; White-breasted Nuthatch, 8; Black-capped Chickadee, 2. Total, 14 species, 211 individuals.—ERIC S. WILSON.

Lauderdale Lakes, near Elkhorn, Wis.—Dec. 20, 10 A.M. to 12.30 P.M. and 2.30 to 3.45 P.M. Partly cloudy, ground bare, wind east, shifting to southwest, brisk, temp. 17° at start, 20° at finish. Five miles on foot. Observers together. Mallard, 11; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 2; Crow, 7; Tree Sparrow, 12; White-breasted Nuthatch, 1. Total, 7 species, 49 individuals. This winter is remarkable for the absence of the Black-capped Chickadee, only one having been seen since Oct. 20, very plentiful here in previous winters.—LELA DUNBAR MILNER, ELIZABETH LEAN and ROBERT DUNBAR, JR.

Racine, Wis. Lake front, 3 miles up river and back.—Dec. 21, 6 A.M. to 2.30 P.M. Cloudy, sun shining dimly at times, no snow, wind south, light, temp. 20°. Ten miles on foot. Observers in two groups. Herring Gull, 103; American Scaup, 4; Downy Woodpecker, 10; Blue Jay, 11; Crow, 48; Red-breasted Nuthatch, 1. Total, 6 species, 202 individuals.—MRS. WM. VAN ARSDALE, MISS BESSIE HORNICK, MISS L. DE FOER and THEO. G. STELLER.

Waukesha, Wis.—Dec. 21, 8.30 A.M. to 4.35 P.M. Morning cloudy, afternoon clear, ground bare, wind east, light, temp. 20° at start, 30° at return. Ten miles on foot. Hairy Woodpecker, 1; Blue Jay, 7; American Crow, 2. Total, 3 species, 11 individuals. Remarkably few birds in this vicinity this winter.—MAY MORLAN.

Mankato, Minn.—Dec. 25. Cloudy, clearing before noon, snow in patches, temp. -4° to +10°. Screech Owl, 1; Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 10; Plumed Woodpecker, 1; Blue Jay, 4; Crow, 1; Tree Sparrow, 50; Slate-colored Junco, 44; White-breasted Nuthatch, 4; Black-capped Chickadee, 1. Total, 11 species, about 120 individuals.—WALKER FERGUSON.

St. Peter, Minn.—Dec. 25, 10 A.M. to 4 P.M. Clear, ground covered by light snow, wind northwest, medium, temp. 6° below zero. Five mile tramp, woods, fields and river bottom. Observers together. Wilson's Snipe, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 6; Tree Sparrow, 3; Brown Creeper, 4; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 2; Black-capped Chickadee, 26. Total, 9 species, 63 individuals. Flashed the Snipe twice, was able to approach within 15 feet of it.—H. J. LADUE and R. H. FERMAN.

Bettendorf, Iowa.—Dec. 24, 8.30 A.M. to 12.30 P.M. Bettendorf and vicinity, 3 to 4.30 P.M., Suburban Island. Partly cloudy, ground bare, wind south, light, temp. 34° at start, 40° at return. Nine miles on foot. Canada Goose, 2; Screech Owl, 1; Hairy Woodpecker, 23; Downy Woodpecker, 11; Red-headed Woodpecker, 11; Flicker, 7; Blue Jay, 11; American Crow, 6; Red-winged Blackbird, 330; Tree Sparrow, 60; Slate-colored Junco, 107; Song Sparrow, 1; Cardinal, 2; Brown Creeper, 3; White-breasted Nuthatch, 12; Tufted Titmouse, 11; Black-capped Chickadee, 30. Total, 17 species, 609 individuals.—HUGO H. SCHROEDER.

Davenport, Iowa.—Dec. 23, 1 to 3 P.M. Cloudy, ground bare, wind south, light, temp. 40° at start, 48° at return. Five miles on foot. Observers together. Hairy Woodpecker, 2; Downy Woodpecker, 4; Flicker, 2; Blue Jay, 16; Red-winged Blackbird, 1,200; Tree Sparrow, 4; Slate-colored Junco, 100-4; Towhee, 1; Cardinal, 4; White-breasted Nuthatch, 4; Tufted Titmouse, 2; Black-capped Chickadee, 14; American Robin, 1. Total, 13 species, 1,664 individuals. An unusual number of Red-winged Blackbirds this autumn and winter—flocks of thousands on several dates.—J. H. POARMANN and HUGO H. SCHROEDER.

Sioux City, Iowa (Stone Park and vicinity).—Dec. 23, 8.30 A.M. to 3 P.M. Clear, wind southeast, light, temp. 31° to 42°. Observers together. Five to 7 miles about

Red-tailed Hawk, 1; Western Horned Owl, 1; Downy Woodpecker, 12; Flicker, 4; Blue Jay, 1; Crow, 14; Goldfinch, 40; Pine Siskin, 1; Tree Sparrow, 52; Junco, 12; Cardinal, 8; Brown Creeper, 1; White-breasted Nuthatch, 9; Chickadee, 31; Bluebird, 1. Total, 18 species, 211 individuals.—**DR. T. C. STEPHENS and A. F. ALLEN.**

Jefferson Barracks, Mo. (woods and river nearby).—Dec. 25, 10 A.M. to 1 P.M. Cloudy; ground bare and frozen; wind northeast; temp. 15°. Cooper's Hawk, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 2; Flicker, 2; Prairie Horned Lark, 2; Blue Jay, 5; Crow, 20; Redpoll, 8; Goldfinch, 40; Pine Siskin, 26; Tree Sparrow, 10; Junco, 50; Cardinal, 4; Brown Creeper, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Tufted Titmouse, 10; Chickadee, 6; Bluebird, 5. Total, 19 species, 200 individuals.—**PRIVATE GEORGE E. EKBLAW.**

Marionville, Mo.—Dec. 26, entire day. Wind cold, strong. Red-tailed Hawk, 2; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 1; Flicker, 1; Prairie Horned Lark, 20; Blue Jay, 6; Crow, 100; Meadowlark, 2; Goldfinch, 1; White-throated Sparrow, 3; Field Sparrow, 2; Slate-colored Junco, 20; Cardinal, 4; Mockingbird, 1; Winter Wren, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 1; Chickadee, 8; Robin, 15; Bluebird, 6. Total, 22 species, about 225 individuals.—**JONSON NEFF.**

Marshall, Mo.—Dec. 22; 9 A.M. to 3 P.M. Cloudy; ground bare; wind light, south; temp. at start 36°. Distance, 8 miles. Bob-white, 5; Marsh Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 3; Hairy Woodpecker, 5; Northern Downy Woodpecker, 12; Red-bellied Woodpecker, 8; Northern Flicker, 2; Blue Jay, 11; American Crow, 22; American Goldfinch, 63; Tree Sparrow, 35; Slate-colored Junco, 1; Cardinal, 32; Carolina Wren, 4; Tufted Titmouse, 14; Black-capped Chickadee, 12. Total, 18 species, 314 individuals. Note the shortage of seed-eating birds, the absence of occasional visitants, as well as of some of the regulars.—**J. A. LACROIX.**

Marysville, Mo. (west, north, and east of town and back).—Dec. 26. Cloudy; wind southeast, strong; temp. 27° at start, 28° at finish. Fourteen miles on foot, three types of country in vicinity. Red-tailed Hawk, 1; Downy Woodpecker, 2; Northern Flicker, 1; Blue Jay, 1; American Crow, 2; Tree Sparrow, 36; Slate-colored Junco, 130; Cardinal, 2; Brown Creeper, 1; Black-capped Chickadee, 17. Total, 10 species, about 211 individuals.—**VIRGINIA C. ROBINSON.**

Salem, Mo.—Dec. 24, 10 to 11:30 A.M. and 2 to 4:20 P.M. Cloudy; ground and trees covered with ice; wind, chill northeast, brisk; temp. 25° in morning, 30° in evening. Twelve miles on foot. Observers together. Duck sp., 1; Wilson's Snipe, 1; Turkey Vulture, 1; Sharp-shinned Hawk, 1; Sparrow Hawk, 2; Hairy Woodpecker, 4; Downy Woodpecker, 8; Red-bellied Woodpecker, 3; Red-headed Woodpecker, 11; Flicker, 5; Prairie Horned Lark, 17; Blue Jay, 38; Crow, 108; Red-winged Blackbird, 2; Meadowlark, 26; Rusty Blackbird, 30; Bronzed Grackle, 1; Purple Finch, 2; American Goldfinch, 7; White-throated Sparrow, 3; Tree Sparrow, 107; Field Sparrow, 10; Slate-colored Junco, 348; Song Sparrow, 4; Towhee, 3; Cardinal, 11; Loggerhead Shrike, 1; Myrtle Warbler, 1; Carolina Wren, 1; Winter Wren, 1; Bewick's Wren, 2; White-breasted Nuthatch, 4; Tufted Titmouse, 4; Carolina Chickadee, 12; Golden-crowned Kinglet, 1; Robin, 5; Bluebird, 6; Total, 37 species, 888 individuals.—**PAUL DENT and DENT JONES.**

Dewitt, Ark.—Dec. 20; 8 A.M. to 12 M. Clear; ground bare; wind light, south; temp. 47° to 50°. Five miles through heavy bottom-woods and cultivated fields. Mallard, 100; Mourning Dove, 14; Turkey Vulture, 9; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Yellow-bellied Sapsucker, 2; Pileated Woodpecker, 4; Red-bellied Woodpecker, 14; Flicker, 1; Blue Jay, 13; Red-winged Blackbird, 60; Meadowlark, 14; Rusty Blackbird, 430; Bronzed Grackle, 76; Goldfinch, 29; White-throated

Sparrow, 46; Field Sparrow, 16; Junco, 150; Song Sparrow, 11; Swamp Sparrow, 7; Fox Sparrow, 2; Towhee, 1; Cardinal, 6; Cedar Waxwing, 30; Migrant Shrike, 1; Myrtle Warbler, 16; Pipit, 4; Mockingbird, 7; Brown Thrasher, 1; Carolina Wren, 9; Bowick's Wren, 1; Brown Creeper, 5; White-breasted Nuthatch, 3; Tufted Titmouse, 11; Carolina Chickadee, 7; Golden-crowned Kinglet, 7; Hermit Thrush, 2; Robin, 13; Bluebird, 6. Total, 46 species, 1,461 individuals.—ALEXANDER WETMORE.

Aransas Pass, San Patricio Co., Texas.—Dec. 24, daylight until dark. Fair and calm, temp. 47°. Country visited: Mesquite prairies, fresh water ponds, live-oak groves, bays and beaches. Loon, 1; Herring Gull, 25; Ring-billed Gull, 20; Laughing Gull, 20; Caspian Tern, 20; Royal Tern, 2; Gull-billed Tern, 20; Forster's Tern, 1; Florida Cormorant, 20; White Pelican, 5; Brown Pelican, 100; Gadwall, 2; Green-winged Teal, 2; Shoveler, 2; Pintail, 1,000; Redhead, 75; Canvasback, 2; Lesser Scaup, 300; King-necked Duck, 1 (collected); Hutchin's² Goose, 6; Lesser Snow Goose, 15; (Ward's² Heron, 10; Egret, 1; Little Blue Heron, 100; Yellow-crowned Night Heron, 1; Least Sandpiper, 6; Red-backed Sandpiper, 15; Semipalmated and Western Sandpiper, 100; Sandpiper, 2; Greater Yellowlegs, 4; Lesser Yellowlegs, 1; Western Willet, 1,000; Long-billed Curlew, 4; Hudsonian Curlew, 1; Black-bellied Plover, 25; Killdeer, 4; Semipalmated Plover, 2; Piping Plover, 1; Snowy Plover, 2; Turnstone, 8; Mourning Dove, 1; Mexican Ground Dove, 1; Inca Dove, 6; Turkey Vulture, 25; Black Vulture, 8; Marsh Hawk, 10; Sharp-shinned Hawk, 1; Sparrow Hawk, 3; Audubon's Catbird, 4; Red-bellied Woodpecker, 1; Flicker, 5; Phoebe, 4; Texas Horned Lark, 8; Red-eyed Cowbird, 1; Rio Grande Meadowlark, 75; Great-tailed Grackle, 250; Goldfinch sp., 1; Savannah Sparrow, 1; Field Sparrow, 2; Gray-tailed Cardinal, 10; Tree Swallow, 6; Loggerhead Shrike, 1; Myrtle Warbler, 25; Pipit sp., 15; Mockingbird, 10; Black-crested Titmouse, 2; Ruby-crowned Kinglet, 4; Hermit Thrush subsp., 1. Total, 68 species, 3,497 individuals. Seen also on preceding and following days: Horned Grebe, 4; Pied-billed Grebe, 1; Red-breasted Merganser, 50; Hooded Merganser, 2; Mallard, 1; Baldpate, 4; White-fronted Goose, 11; Wood Duck, 3; Louisiana Heron, 4; Black-crowned Night Heron, 2; Long-billed Dowitcher, 1; Horned Owl, 1, making a grand total of 80 species. Census gives no idea of the extreme abundance of shore-birds, which have been protected in Texas for three years. Shoveler and Forster's Tern much commoner than census would indicate.—LIEUT. CARROLL R. DUNHAM, U. S. R., and LIEUT. LUDLOW GRISCOM, U. S. R.

Eagle Lake, Texas.—Dec. 27, 8.30 A. M. to 12 M. and 1 to 4 P. M. Clear; wind light south, temp. 55° to 65°. Walked 9 miles through marsh, cultivated lands, live oaks and scrub. Green-winged Teal, 132; Shoveler, 12; Coot, 8; Wilson's Snipe, 6; Least Sandpiper, 2; Killdeer, 3; Quail, 12; Mourning Dove, 1; Turkey Vulture, 15; Black Vulture, 30; Red-tailed Hawk, 4; Red-shouldered Hawk, 3; Sparrow Hawk, 2; Downy Woodpecker, 1; Yellow-bellied Sapsucker, 3; Red-bellied Woodpecker, 8; Yellow-shafted Flicker, 10; Phoebe, 3; Blue Jay, 10; Crow, 2; Cowbird, 15; Red-winged Blackbird, 150; Meadowlark, 12; Brewer's Blackbird, 300; Great-tailed Grackle, 75; Goldfinch, 30; Vesper Sparrow, 4; Harris's Sparrow, 1; White-crowned Sparrow, 100; White-breasted Sparrow, 3; Song Sparrow, 5; Swamp Sparrow, 2; Fox Sparrow, 2; Arctic Towhee, 1; Green-tailed Towhee, 1; Cardinal, 40; Cedar Waxwing, 30; Shrike, 2; Myrtle Warbler, 8; Yellow-throat, 7; Pipit, 75; Mockingbird, 50; Brown Thrasher, 30; Carolina Wren, 6; House Wren, 1; Long-billed Marsh Wren, 2; Tufted Titmouse, 3; Plumbeous Chickadee, 4; Ruby-crowned Kinglet, 3; Hermit Thrush, 3; Robin, 7; Total, 81 species, 1,245 individuals.—ALEXANDER WETMORE.

Fremont, Neb.—Dec. 26, 8 A. M. to 12 M. Wind south, r.a.s., temp. 15°, no snow. Hairy Woodpecker, 4; Downy Woodpecker, 3; Flicker, 3; Prairie Horned Lark, 10; Blue Jay, 3; Crow, 4; Red Crossbill, 1; Western Meadowlark, 1; Goldfinch, 2; Tree Sparrow, 12; Slate-colored Junco, 6; Brown Creeper, 2; Cedar Waxwing, 1; Chis-

adze, 12, Golden-crowned Kinglet, 4; Robin, 1. Total, 16 species, 72 individuals.—LITA REED BURTON.

Omaha, Neb.—Dec. 27. Clear, no wind, ground bare, temp. 30°. Trips in four directions through parks partly wooded and cemeteries right about the city. Mallard, male, 1; Wilson's Snipe, 2; (Broad-winged?) Hawk, 1; Long-eared Owl, 1; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 16; Red-headed Woodpecker, 1; Flicker, 17; Blue Jay, 11; Crow, 1; Goldfinch, 1; Harris's Sparrow, 6; Tree Sparrow, 7; Slate-colored Junco, 261; Song Sparrow, 1; Cardinal, 9; Brown Creeper, 3; White-breasted Nuthatch, 5; Chickadee, 47; Golden-crowned Kinglet, 1. Total, 22 species, 462 individuals.—MILES GREENLEAF, L. O. HORSKY, W. W. MARSH and S. R. TOWNE.

Fargo, N. D.—Dec. 23; 11:30 A. M. to 4 P. M. Mostly cloudy, wind south, very light, shifting to north and starting to storm, very little snow on fields, 3 to 4 in. in woods, temp. 30°. Fields and woods along river, 12 to 14 miles on foot. Hairy Woodpecker, 2; Horned Lark² (flying at a distance), 2; Brown Creeper, 2; White-breasted Nuthatch, 7; Chickadee, 4. Total, 5 species, 13 individuals.—O. A. STEVENS.

Bozeman, Mont.—Dec. 23; 9:30 A. M. to 12 M. and 2:30 P. M. to 4 P. M. Fair to cloudy, a trace of snow, calm; temp. 19° at start, 34° at return. Seven miles on foot. Belted Kingfisher, 1; Red-shafted Flicker, 2; Magpie, 10; Clarke's Nutcracker, 1; Redpoll, 40; Western Tree Sparrow, 16; Mountain Song Sparrow, 1; Bohemian Waxwing, 75; Long-tailed Chickadee, 17. Total, 9 species, 163 individuals.—NELSON LUNDWALL.

Missoula, Mont.—Dec. 25, 10 A. M. to 1:30 P. M. Cloudy, no wind; freezing; ground bare. Six-mile circuit. Belted Kingfisher, 2; Batchelder's Downy Woodpecker, 1; Red-shafted Flicker, 5; Magpie, 2; Bohemian Waxwing, 1,000 or 1,200 in flocks averaging perhaps 200 each; Dipper, 3; Long-tailed Chickadee, 8. Total, 7 species, 21 individuals + Waxwings.—A. D. DUBOIS.

Meridian, Idaho (irrigated farm lands).—Dec. 23, 8 A. M. to 2:45 P. M. Dark cloudy, raining about half the time; ground bare, grass growing a little; no wind, temp. 42° (?) at start, 48° (?) at return. Eleven miles on foot. Mallard, 155 (6 flocks); Shoveler (2), 3 (each one alone, only one seen at all well); Great Blue Heron, 2; Wilson's Snipe, 3; Killdeer, 12 (flock); Bobwhite, 13 (covey and one bird heard in another place); Chinese Pheasant, 44; Western Mourning Dove, 1; Sharp-shinned Hawk, 4 (2 or 3 may have been some other kind); Hawk sp. (large), 1; Long-eared Owl, 2; Short-eared Owl, 1; Red-shafted Flicker, 18; (Pallid?) Horned Lark, 292; Magpie, 259; Blackbird sp., 3; Western Meadowlark, 33 (nearly all singing); House Finch, 180; Pale Goldfinch (7), 31; Gambel's Sparrow, 65; Shufeldt's Junco, 148; Merrill's Song Sparrow, 51; White-rumped Shrike, 1; Ruby-crowned Kinglet, 3. Total, 24 species, about 1,162 individuals.—ALEX. STALKER.

Denver, Col.—Dec. 23, 10 A. M. to 12:15 P. M., 8 miles by auto to eastern edge of city, 1:20 to 1:15 P. M., 14 miles by auto, south along Platte River. Clear, ground bare; temp. 8 A. M., 28°, noon, 46°, and 3 P. M., 46°. South wind A. M., north wind P. M., both mild and light. Great Blue Heron, 1; Ring-necked Pheasant, 26; American Rough-legged Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Red-shafted Flicker, 4; Desert Horned Lark, 40; Magpie, 30; Red-winged Blackbird, 123; Meadowlark, 8; House Finch, 12; Tree Sparrow, 180; Slate-colored Junco, 1; Montana Junco, 1; Pink-sided Junco, 2; Gray-headed Junco, 1; Song Sparrow, 8; Northern Shrike, 2; Long-tailed Chickadee, 3. Total, 19 species, about 379 individuals.—W. H. BRIDGEMAN.

Fort Morgan, Col. (a cross-country walk of 5 miles and in returning following a river 6 miles).—Dec. 24, 8:30 A. M. to 4 P. M. Clear, very little snow scattered about, light west wind, temp. 30° at start, 45° at return. Eleven miles on foot. Wilson's Snipe, 14; Western Goshawk, 1; Ferruginous Rough-legged Hawk, 1; Belted Kingfisher, 1; Red-shafted Flicker, 3; Desert Horned Lark, 16; American Magpie, 14; Pileon Jay, 7; Western Tree Sparrow, 125 (3 flocks); 1 flock of 40 Pink-sided and Gray-headed

Juncos, Northern Shrike, 1, Oregon Chickadee, 8. Total, 12 species, about 252 individuals. The Goshawk was seen coming up the river toward me as he was pursuing the Kingfisher. Just as the latter was close to me I stood up to get a better view, when the Hawk instantly halted in mid-air and retreated as the Kingfisher flew on past me. It was a rather exciting picture.—P. H. STEELE.

Sacaton, Arizona (from Santan Day School on Pima Indian Reservation to Gila River and return in circular route).—Dec. 25, 9 A.M. to 4 P.M. Clear, ground bare, plenty of feed for all; very calm; temp. average, 65°. Killdeer, 10, Gambel's Quail, 500, Mourning Dove, 31, Turkey Vulture, 6, Western Red-tailed Hawk, 4, Roadrunner, 4, Gila Woodpecker, 6, Red-shafted Flicker, 9, Red-winged Blackbird subsp., 30, Western Meadowlark, 60, Brewer's Blackbird, 80, Western Vesper Sparrow, 50, White-crowned Sparrow, 170, Intermediate Junco, 40, Texas Cardinal, 14, Western Blue Grosbeak (male), 1, White-rumped Shrike, 6, Palmer's Thrasher, 18, Lead-colored Bush-tit, 11. Total, 19 species, 1,156 individuals. The Blue Grosbeak was studied with 8x glasses at close range, dark blue in color, bluish bill, very strong and wide.—JOHN B. SLATE.

Spokane, Wash. (to Long Lake and back).—Dec. 23, 10 A.M. to 4 P.M. Clear, ground bare, stiff north breeze, temp. 32° at start, 35° at return. Thirty miles by auto, 3 miles on foot. Observers together. Pied-billed Grebe, 1 (collected), Belted Kingfisher, 1, Red-shafted Flicker, 6, American Magpie, 2, American Red Crossbill, 8, Willow Goldfinch, 4, Oregon Junco, 25, Merrill's Song Sparrow, 2, Slender-billed Nuthatch, 1, Red-breasted Nuthatch, 4, Pygmy Nuthatch, 6, Oregon Chickadee, 10, Western Golden-crowned Kinglet, 7, Western Robin, 1, Western Bluebird, 5. Total, 15 species, 83 individuals. The weather so far this winter has been invariably mild, snowless and almost frostless, so that the usual flocks of birds from the north are mostly absent.—FREDERICK GREENWOOD, DR. A. H. BENEFIELD and WALTER BRUCE.

Multnomah (near Portland), Ore., to Columbia Slough (near Vancouver), Wash.—Dec. 23, 9 A.M. to 3 P.M. Clear, wind westerly, temp. 40°. Thirty miles by auto, 7 on foot. Observers together. Glaucous-winged Gull, 12, Herring Gull, 87, Mallard, 45, Canada Goose, 43, Great Blue Heron, 1, Killdeer, 1, Desert Sparrow Hawk, 2, Kennicott's Screech Owl, 1, Northwestern Flicker, 9, (Streaked?) Horned Lark, 51, Stellar's Jay, 7, Western Meadowlark, 27, Brewer's Blackbird, 35, Golden-crowned Sparrow, 2, Oregon Junco, 241, Rusty Song Sparrow, 19, Oregon Towhee, 11, Western Winter Wren, 1, Western Golden-crowned Kinglet, 11, Ruby-crowned Kinglet, 15, Western Robin, 5, Western Bluebird, 5. Total, 22 species, about 630 individuals.—MAMIE E. CAMPBELL, A. L. CAMPBELL and O. I. GALE.

Portland, Ore.—Dec. 23, 9:30 A.M. to 1:15 P.M. and 1:45 to 5 P.M. Fair, after several days' hard rain; light wind, mostly northeast, ground bare, average temp. 41°. Glaucous-winged Gull, 13, California Gull, 18, Mallard, 8, Bufflehead, 47, Canada Goose, 100, Great Blue Heron, 2, American Coot, 25, Ring-necked Pheasant, 1, Desert Sparrow Hawk, 2, Northwestern Flicker, 6, Western Crow, 87, Northwestern Crow, 2, Western Meadowlark, 14, Willow Goldfinch, 50, Nuttall's Sparrow, 2, Golden-crowned Sparrow, 13, Oregon Junco, 115, Rusty Song Sparrow, 18, Yakutat Fox Sparrow, 1, Oregon Towhee, 7, Oregon Chickadee, 1, Golden-crowned Kinglet, 2, Western Robin, 10. Total, 23 species, 520 individuals.—MARY E. RAKER.

Portland, Ore.—Dec. 26, 9 A.M. to 1 P.M. and 1:45 to 4:30 P.M. Ground bare, rain throughout day; temp. 43° to 58°. California Gull, 6, Mallard, 4, Blue-winged Teal, 5, Bufflehead, 100, Canada Goose, 1, American Coot, 10, Ring-necked Pheasant, 5, Desert Sparrow Hawk, 1, Belted Kingfisher, 2, Harris's Woodpecker, 1, Northwestern Flicker, 2, Willow Goldfinch, 4, Golden-crowned Sparrow, 12, Oregon Junco, 70, Rusty Song Sparrow, 16, Oregon Towhee, 7, Chestnut-backed Chickadee, 4, Golden-crowned Kinglet, 2, Western Robin, 30, Varied Thrush, 2. Total, 20 species, 277 individuals.—HELEN D. TONSETTE.

Diablo, Calif. (within about 1 mile radius from post office).—Dec. 22, 7 A.M. to 6 P.M. Heavy fog all day; light west wind; temp. at start 33°, at return 43°. Killdeer, 23; California Quail, 85; (Cooper's?) Hawk, 1; Western Red-tail, 4; Desert Sparrow Hawk, 5; Nuttall's Woodpecker, 7; California Woodpecker, 42; Red-shafted Flicker, 45; Anna's Hummingbird, 6; Ash-throated Flycatcher, 1; Black Phoebe, 5; California Jay, 42; Western Meadowlark 57; Brewer's Blackbird, 75; Green-backed Goldfinch, 7; Nuttall's and Gambel's Sparrows, 250; Golden-crowned Sparrow, 650; Western Tree Sparrow, 150; Oregon Junco, 250; Samuel's Song Sparrow, 100; Forbush's Sparrow, 2; Oregon Towhee, 32; California Towhee, 36; California Shrike, 3; Myrtle Warbler, 2; Audubon's Warbler, 25; Pipit, 150; Vigors's Wren, 27; Slender-billed Nuthatch, 5; Plain Titmouse, 68; Bush-tit, 56; Ruby-crowned Kinglet, 15; Dwarf Hermit Thrush, 23; Western Bluebird, 18. Total, 34 species, about 2,366 individuals.—RICHARD COX

Los Angeles, Calif. (within a diameter of 15 miles, including Hyperion, Nigger Slough, and some of the city parks and cemeteries).—Dec. 21, 7 A.M. to 4.30 P.M. Clear, north wind, light; temp. 63° at start, 70° at return. Nine members of the Los Angeles Audubon Society, in seven parties. Territory reached by street car and automobile, observations taken on foot. Western Grebe, 3; Eared Grebe, 4; Pied-billed Grebe, 15; Glaucous-winged Gull, 3; Western Gull, 106; Herring Gull, 16; California Gull, 748; Ring-billed Gull, 222; Short-billed Gull, 2; Heermann's Gull, 14; Bonaparte's Gull, 354; Forster's Tern, 3; Farallon Cormorant, 27; White Pelican, 1; California Brown Pelican, 35; Baldpate, 1; Green-winged Teal, 2; Cinnamon Teal, 6; Shoveler, 6; Pintail, 2; Redhead, 29; Canvasback, 23; Lesser Scaup, 17; Surf Scoter, 240; Ruddy Duck, 6; Bittern, 1; Great Blue Heron, 10; Egret, 7; Black-crowned Night Heron, 2; Sora, 1; Coot, 552; Northern Phalarope, 20; Least Sandpiper, 25; Western Sandpiper, 30; Sanderling, 225; Greater Yellowlegs, 2; Spotted Sandpiper, 1; Hudsonian Curlew, 36; Killdeer, 98; Snowy Plover, 22; Valley Quail, 272; Ring-necked Pheasant, 1; Band-tailed Pigeon, 2; Mourning Dove, 19; Turkey Vulture, 24; Marsh Hawk, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Western Red-tailed Hawk, 2; Pigeon Hawk, 1; Desert Sparrow Hawk, 16; Barn Owl, 1; Short-eared Owl, 1; Burrowing Owl, 4; Roadrunner, 2; California Cuckoo, 1; Belted Kingfisher, 2; Willow Woodpecker, 1; Red-breasted Sapsucker, 1; Red-shafted Flicker, 31; Black-chinned Hummingbird, 1; Anna's Hummingbird, 53; Cassin's Kingbird, 3; Say's Phoebe, 9; Black Phoebe, 41; California Horned Lark, 200; California Jay, 44; Western Crow, 16; San Diego Redwing, 77; Western Meadowlark, 107; Brewer's Blackbird, 534; California Purple Finch, 5; House Finch, 897; Willow Goldfinch, 16; Green-backed Goldfinch, 57; Lawrence's Goldfinch, 6; Western Savannah Sparrow, 57; Redwing's Sparrow, 14; Large-billed Sparrow, 2; Western Lark Sparrow, 14; Gambel's Sparrow, 235; Golden-crowned Sparrow, 40; Western Chipping Sparrow, 4; Thurler's Junco, 42; San Diego Song Sparrow, 89; San Diego Towhee, 17; Anthony's Towhee, 7; Phainopepla, 1; California Shrike, 33; Hutton's Vireo, 9; Audubon's Warbler, 314; Pacific Yellowthroat, 11; Pipit, 273; Western Mockingbird, 45; California Thrasher, 20; San Diego Wren, 8; Western House Wren, 10; Western Marsh Wren, 4; Plain Titmouse, 20; California Bush-tit, 208; Pallid Wren-tit, 46; Ruby-crowned Kinglet, 21; Western Gnatcatcher, 8; Dwarf Hermit Thrush, 12; Western Robin, 21; Western Bluebird, 11. Total, 107 species, 6,988 individuals.—MRS. F. T. BECKNELL and MRS. ROBERT FARGO; DR. E. A. DIAL and MRS. W. H. MARTZ, MISS HELEN S. PRATT, MRS. JOSEPH ANTHONY, MR. L. E. WYMAN, MRS. C. H. HALL and MR. ALFRED COOKMAN.

San Francisco County (Golden Gate Park to Lake Merced), Calif.—Dec. 23, 4.30 A.M. to 6 P.M. Cloudy light southwest wind, 50° to 55°. Observers in two parties. Western Grebe, 9; Halibull's Grebe, 1; Eared Grebe, 57; Pied-billed Grebe, 11; Common Loon, 1; Glaucous-winged Gull, 6; Western Gull, 5,000; Herring Gull, 5,000; Ring-billed Gull, 5,000; California Gull, 1; Heermann's Gull, 1; Bonaparte's Gull, 9; Farallon Cormorant, 2; Mallard, 300; Baldpate, 46; Green-winged Teal, 100; Shoveler, 55;

Pintail, 2; Canvasback, 20; Lesser Scaup, 75; American Goldeneye, 1; Bufflehead, 6; Whistling Swan, 2; Great Blue Heron, 9; Black-crowned Night Heron, 1; Sora, 1; Coot, 800; Killdeer, 181; California Quail, 317; Cooper's Hawk, 1; Western Goshawk, 2; Western Red-tailed Hawk, 1; Ferruginous Rough-legged Hawk, 2; Desert Sparrowhawk, 3; Western Belted Kingfisher, 1; Red-shafted Flicker, 6; Anna's Hummingbird, 27; Black Phoebe, 5; California Jay, 1; Blue-colored Blackbird, 463; Brewer's Blackbird, 18; Western Meadowlark, 55; Western Purple Finch, 1; California Linnet, 2; Green-backed Goldfinch, 1; Bryant's Marsh Sparrow, 1; Gambel's Sparrow, 1,000; Nuttall's Sparrow, 1,200; Santa Cruz Song Sparrow, 100; Golden-crowned Sparrow, 12; Sierra Junco, 53; Lincoln's Sparrow, 1; Yakutat Fox Sparrow, 4; San Francisco Towhee, 3; California Shrike, 1; Hutton's Vireo, 27; Audubon's Warbler, 477; Salt Marsh Yellowthroat, 6; Pipit, 70; Vigors's Wren, 5; Western Winter Wren, 2; Tule Wren, 1; Santa Cruz Chickadee, 16; Coast Bush-tit, 49; Ruby-crowned Kinglet, 1; Dwarf Hermit Thrush, 7; Western Robin, 2. Total, 67 species, 6,868 individuals. On December 24, the following, also, in the near vicinity: American Bittern, 1; Western Sandpiper, (black); Least Sandpiper; Hudsonian Curlew, 1; Western Mourning Dove; Marsh Hawk; California Woodpecker; Western Crow; Western Bluebird. Grand total, 76 species, for two days.—W. A. SQUIRES, C. R. THOMAS, and HAROLD E. HANSEN.

Santa Barbara, Calif. (Mission Canyon, Stearns Wharf, Laguna Blanca, west to La Patera—12 miles over all.)—Dec. 26, 6 A.M. to 5:30 P.M. Partially overcast to clear, light rain the preceding evening, temp. 51° at 6 A.M. Forty miles by automobile and on foot. Observers together. Western Grebe, 7; Horned Grebe, 1; Eared Grebe, 20; Pied-billed Grebe, 7; Glaucous-winged Gull, 3; Western Gull, 600; California Gull, 270; Ring-billed Gull, 150; Heermann's Gull, 40; Bonaparte's Gull, 60; Royal Tern, 6; Parallon Cormorant, 2,500; Brandt's Cormorant, 500; California Brown Pelican, 60; Mallard, 3; Baldpate, 60; Green-winged Teal, 40; Cinnamon Teal, 3; Shoveler, 1,000; Pintail, 2,000; Canvasback, 90; Lesser Scaup, 500; White-winged Scoter, 300; Surf Scoter, 40; Ruddy Duck, 400; Bittern, 1; Great Blue Heron, 6; Sora, 1; California Black Rail, 1; Coot, 1,000; Least Sandpiper, 200; Red-backed Sandpiper, 3; Western Sandpiper, 100; Sanderling, 250; Spotted Sandpiper, 3; Black-bellied Plover, 50; Killdeer, 40; Snowy Plover, 4; Valley Quail, 10; Mourning Dove, 2; Turkey Vulture, 7; White-tailed Kite, 1; Marsh Hawk, 1; Western Redtail, 4; Golden Eagle, 1; Duck Hawk, 3; Sparrow Hawk, 8; Barn Owl, 1; Burrowing Owl, 2; Belted Kingfisher, 1; Nuttall's Woodpecker, 1; California Woodpecker, 14; Red-shafted Flicker, 20; Anna's Hummingbird, 10; Say's Phoebe, 8; Black Phoebe, 6; California Horned Lark, 200; California Jay, 6; San Diego Redwing, 700; Western Meadowlark, 200; Brewer's Blackbird, 400; House Finch, 200; Willow Goldfinch, 2; Green-backed Goldfinch, 2; Western Savannah Sparrow, 200; Belding's Marsh Sparrow, 20; Large-billed Marsh Sparrow, 5; Western Lark Sparrow, 5; Gambel's Sparrow, 800; Golden-crowned Sparrow, 40; Sierra Junco, 10; San Diego Song Sparrow, 20; Spurred Towhee, 1; Anthony's Towhee, 6; Tree Swallow, 5; California Shrike, 14; Hutton's Vireo, 1; Dusky Warbler, 1; Audubon's Warbler, 500; Tule Yellowthroat, 20; Pipit, 400; Western Mockingbird, 2; Western House Wren, 1; Tule Wren, 6; Plain Titmouse, 4; Bush-tit, 40; Pallid Wren-tit, 3; Ruby-crowned Kinglet, 8; Western Greatcatcher, 2; Dwarf Hermit Thrush, 6; Western Robin, 1; Western Bluebird, 8. Total, 92 species, about 14,000 individuals. The California Black Rail, the first I have ever seen at Santa Barbara, was flushed at close range in the Estero, within the city limits. On the 24th: Pacific Loon, Parasitic Jaeger, Herring Gull, Baird's Cormorant, Oldsquaw (a female narrowly scrutinized), Wilson's Snipe, Cooper's Hawk, Red-bellied Hawk, Pigeon Hawk, California Screech Owl, and Auburn Canon Wren. For two days, 103 species. This small list is due in part to an unusually dry season, in part to the recent destruction (by fire) of much of the neighboring chaparral, but most of all to the absence of preliminary scouting trips.—GILES E. DAWSON and WILLIAM LEON DAWSON.

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 seventeen 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—Harrist I. Thornber, Tucson, Ariz.
CALIFORNIA—Joseph Grinnell, University of California, Berkeley, Calif.
CALIFORNIA—Walter K. Fisher, Palo Alto, Calif.
COLORADO—Dr. W. H. Bergtold, 1159 Rose St., 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, Kans.
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, 3105 Morgan St., St. Louis, Mo.
MONTANA—Prof. J. M. Flood, 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. Libbey, University, N. D.
 NORTH CAROLINA.—Prof. T. G. Pearson, 1924 Broadway, New York City
 OHIO.—Prof. Lydia Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 OREGON.—W. L. Finley, Milwaukie, Ore.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. L. Clyde Todd, Carnegie Museum, Pittsburgh, Pa.
 RHODE ISLAND.—H. S. Hathaway, Box 1496, Providence, R. I.
 SOUTH CAROLINA.—Dr. P. M. Rea, Charleston Museum, Charleston, S. C.
 TEXAS.—H. P. Attwater, Houston, Texas.
 UTAH.—Prof. Marcus F. 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. Rathbun, 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 Peets, 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.

Book News and Reviews

BIRDS OF AMERICA. Editor-in-Chief, T. GILBERT PEARSON, Consulting Editor, JOHN BERROUCHS, Managing Editor, GEORGE GRADDES, Associate Editor, J. EDWIN BURROCK; Special Contributors, EDWARD H. FORBUSH, HERBERT K. JOB, WILLIAM L. FINLEY, I. NELSON NICHOLS, ARTHUR L. A. FUERTES, R. B. HORSFALL, R. I. BRASHER, HENRY THURSTON. Nature Lovers' Library, The University Society, Inc., New York City, 1917. Three vols. 4to. Vol. I, XVIII + 272 pages, Vol. II, XIV + 271 pages, Vol. III, XVIII + 289 pages.

These handsome, well-made volumes contain descriptions of the plumage, nest and eggs, a statement of the range, and description of the habits of the birds of America north of Mexico.

The descriptions of plumage and outline of distribution are based upon Ridgway's standard 'Birds of North and Middle America.' Species not as yet treated in that work are here described by R. I. Brasher.

The biographies, as the title-page indicates, are from a variety of sources. Some have been contributed by well-known ornithologists of wide experience and contain much original matter. Others have been compiled from various works. They average three-fourth of a page in length, and, so far as these limits permit, usually present a pleasing and satisfactory sketch of the life history of the species. The absence of migration dates, however, detracts from their practical value for the field student. A similar omission is found in the text devoted to nests and eggs.

These volumes are profusely illustrated with photographs of birds from nature, from mounted specimens, and from drawings, both uncolored and colored. It is to be regretted that, in justice to the bona fide wild-life photographer, the photographs of living birds are not clearly distinguished from those of mounted ones. It is true that photographs of Habitat Groups and other subjects in the American Museum, obviously depict mounted speci-

mens. It is equally obvious that photographs by Allen, Finley, Bohlman, and Job, for example, portray wild birds. But there are others, attributed to contributors who are included in the book's 'Advisory Board' under the head of 'Naturalists' or 'Wild Life Photographer,' which are quite as obviously made from mounted birds placed amid more or less appropriate surroundings out-of-doors. The inclusion of these 'faked' pictures in a work of this nature is unfair not only to the reader, but to every honest bird photographer.

The uncolored drawings of birds by Brasher, Horsfall, and Thurston vary much in character. Some are excellent, while others betray an evident unfamiliarity in life with the species figured, and few show that genius for bird portraiture which characterizes the work of Fuertes.

The colored plates of birds are by the last-named artist and were drawn by him to illustrate Eaton's standard work on the 'Birds of New York,' in which they originally appeared. We fail, however, to find any statement to this effect, and the inclusion of Mr. Fuertes' name on the title-page of the work with that of the artists who have made drawings for this work leaves one to infer that his drawings, in spite of the reference on them to the New York State Museum, also were made for it. As a matter of fact, we are informed that these drawings by Fuertes were included in this work without his knowledge, and that he has instituted proceedings against the publishers of it for the unauthorized use of his name.—F. M. C.

AUDUBON THE NATURALIST: A History of His Life and Times. By FRANCIS HOBART HERRICK, Ph.D., Sc. D. In two volumes, illustrated. D. Appleton & Co., New York, London, 1917. 8vo. Vol. I, xi + 451 pages, Vol. II, xiii + 494 pages.

In these two notable volumes Professor Herrick has shown that a mind trained to the pursuit of ornithological

biography may be employed to equal advantage in the study of the biography of an ornithologist. His work is characterized by keen, patient, persistent, thorough search for information bearing directly or indirectly on his theme, by breadth of knowledge, both ornithological and historical, which gives him a clear perception of the significance and relations of facts and events, by facility of expression, and by a sympathy with his subject which does not, however, handicap his judgment or predetermine his point of view.

Add to this equipment an evident interest in his task which has made it a labor of love, and it is clear that the fruit of this labor must be given high rank in the literature of biography. Taken in connection with Audubon's 'Journals,' published by his granddaughter, Maria R. Audubon (Scribner, 3 vols.), Professor Herricks' scholarly memoir gives us as complete, adequate, and faithful a history of Audubon's life as we may ever expect to have.

Among the surprising amount of new information concerning Audubon's early life which Professor Herrick has unearthed, the discovery of the place and date of Audubon's birth of course stands pre-eminent.

Heretofore the evidence available has led to the generally accepted belief that Audubon was born at Mandeville, La., on May 5, 1780. Professor Herrick, however, presents data which prove that the great naturalist first saw the light at Les Cayes, Haiti, April 26, 1785.

From this date to the day of his death, January 27, 1851, Professor Herrick gives us a detailed history of the remarkable life of this remarkable and lovable man.

Through it all runs the exhibition of those traits which are shown only by the man born with that intense interest in birds which gives them at all times and in all places first claim to his attention. Whether as a schoolboy in France, as a youthful farmer in Pennsylvania, as a merchant in Kentucky, or as a teacher of drawing in Cincinnati, Audubon's

inherent love of birds is constantly in evidence. There were no fellow ornithologists, no one to stimulate or encourage him—indeed, his ornithological pursuits were the immediate cause of disaster in his commercial ventures—not had he up to this time (1820) conceived the idea of his stupendous undertaking. But the germ was there, nothing could prevent its growth, and it finally carried him triumphant through all the hardships and difficulties of ornithological exploration and the even greater trials of ornithological publication.

To everyone the history of Audubon's life must possess the combined fascination of biography and romance, but to the ornithologist it is a thrilling demonstration of the impelling power contained in an inborn love of bird life. No manual or textbooks of ornithology can ever teach him the lesson which he may read in every chapter of this work, the lesson that, given a genuine love of birds, he has stored within him a potential force which will enable him to develop his talents to the utmost limit of achievement.—F. M. C.

The Ornithological Magazines

THE CONDOR.—The number of 'The Condor,' for November, 1917, contains two general articles, several brief notes and editorials, and the index of the volume. The principal articles comprise 'The Birds of Molly Island, Yellowstone National Park,' by M. P. Skinner, and a description of 'A New Subspecies of *Geothlypis beldingi*,' by Harry C. Oberholser. Molly Island is a small island in the southeastern arm of Yellowstone Lake, 20 miles off the usual tourist route, and consequently not often visited. The birds include about 700 White Pelicans and 1,000 California Gulls which utilize the island as a nesting-ground, and a few Caspian Terns which have been observed in spring but thus far not found actually breeding. Yellowstone Lake, while one of the important breeding-places of the White Pelican and California Gull, is not the most eastern nesting ground as intimated,

since both species breed as far east as North Dakota. Under the name *Geococcyx helldoni goldmani*, Oberholser has separated the Yellowthroat of the central part of the Peninsula of Lower California and has selected a specimen from San Ignacio as the type of the new form.

The short notes include two records of the breeding of the Sierra Junco at Berkeley in 1917, some additional observations on the occurrence of Goshawks in California

during the winter of 1916, and other notes of interest.

This number concludes Vol. XIX, which contains 198 pages and shows a reduction of 20 per cent from the size of the previous volume. Doubtless present high prices of paper and presswork are responsible for the decrease in the number of pages, but it is to be hoped that it will not be necessary again to reduce the volume below the limit attained a year or two ago.—T. S. P.



SNOWY OWL

Photograph by H. and E. Pittman

The accompanying photograph of a Snowy Owl was taken in Saskatchewan during the severe winter of 1915-16. During that winter I must have seen nine or ten different birds of this species—more than I have ever seen in a season before or since.

A large straw-pile was left for the young cattle, with two portable granaries to provide shelter. By making a detour it was possible to reach the long cattle-barn from the house without going in sight of the straw-pile, and from the barn it was possible to reach the granaries unseen; it was from one of these that the photographs were taken. The Owl, and later on another one, stayed around the buildings and corrals two or three weeks.—H. H. PITTMAN, Hartney, Manitoba.

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
Published by D. APPLETON & CO.

Vol. XX Published February 1, 1918 No. 1

SUBSCRIPTION RATES

Five in the United States, one dollar and seventy-five cents; outside the United States, one dollar and seventy-five cents, postage paid.

COPYRIGHTED, 1918, BY FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

With the appearance of this number, **BIRD-LORE** enters upon its twentieth year. During the two decades of its existence the organization for which it stands has become a firmly established, powerful influence in the conservation of bird-life and in the dissemination of knowledge concerning the value of these winged protectors of our crops and "most eloquent expression of Nature's beauty, joy, and freedom."

Adequate laws for the protection of birds have been passed and their enforcement assured. Scores of bird-refuges and nesting-grounds have been guarded by Audubon wardens and their once persecuted inhabitants, now certain of protection, are returning to their own, and so increasing that those who come after us may be promised those sights in the bird world of which an earlier generation has written. How this preservation of the most attractive of Nature's forms would have delighted the man for whom our Society is named and whose most recent biography is reviewed in this number of **BIRD-LORE!**

But first among the notable achievements of the Audubon Association is its work in the schools. During the last three years alone over half a million children have been enrolled in its Junior Classes and have received systematic instruction in the value and beauty of birds. The limit to which this profoundly important phase of the Association's work

may be developed is set only by the extent of the resources which may be devoted to it. If the Association had nothing else to its credit but this awakening of the child's mind to the uplifting influences of an acquaintance with birds, it would be eminently deserving of the support which the public has so generously accorded it.

The clouds of war should not be permitted to cast their shadow over this work. However much we may be called upon to give for the honor of our country and the freedom of mankind, our children should not be deprived of even a fractional part of their heritage in nature.

Six young men from the American Museum's Department of Birds and Mammals have answered their country's Call to Colors. Anthony is a lieutenant of artillery, Boyle has been in France for months, the first of the group to reach there, Chapin, Empey and Griscom are lieutenants of infantry, and Leo Miller, a lieutenant of aviation.

It is an honor roll of which the Museum may well be proud. All but one of these men have had more or less, several of them exceptional, experience in zoological exploration, and we cannot but feel that the spirit which led them cheerfully to accept the hardships and dangers they have encountered in the pursuit of their profession as naturalists has prompted them eagerly to offer their services in this call to a higher duty. We are sure that it will enable them to meet the vital tests of endurance and courage which await them.

This we do know, that their experience in the field helped prepare them for their entrance examinations as well as for the subsequent courses of study and training through which they received their commissions.

We commend to Bird Clubs for discussion the possible relation between the unfavorable climatic conditions which prevailed over so wide an area last spring and the existing scarcity of winter birds.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 62 Oriskany Avenue, Providence, R. I.

A NEW YEAR'S GREETING

" 'Tis always morning somewhere, and above
The awakening continents, from shore to shore
Somewhere the birds are singing evermore"

—HENRY W. LONGFELLOW

A STEP FORWARD

The year 1918 brings with it many new problems but an equal number of possibilities in the way of real progress. It has long been the wish of the School Department that our State Audubon Societies might be more closely brought together, so that, individually, each might share the benefit of a knowledge of what all collectively are doing. At present, many valuable leaflets, bulletins and larger publications are being issued by State Audubon Societies which do not reach the audience of which they are worthy.

There could not fail to be an added zeal in our State Audubon work if more intimate exchanges of reports and observations of bird-study were possible. Take, for example, the recent bulletins in magazine form, published by the Illinois Audubon Society. Here is a wealth of carefully prepared, recent observations and lines of work carried on in the state, which would be valuable and most suggestive to any other State Audubon Society. These bulletins certainly show a decided step forward in the recognition of workable material and live observation. Without attempting to review them, a brief outline of the different aspects of bird-study with which they deal may suggest to other State Societies an improved point of departure. First, these bulletins are charmingly illustrated with pictures showing the discriminating photographer and nature-lover. Second, certain broad fields of study are definitely approached, covering areas within the state which deserve particular notice either on account of their natural beauties and advantages or their possibilities of reclamation and ultimate productivity. Thus 'The Ozark Region of Illinois' is described historically in connection with its ecological and ornithological significance, as one of several tracts, which should be put "under the public care at a time when purchase would incur but little expense," and the Illinois Audubon Society is particularly named as the proper sponsor of a movement to preserve this tract as "a refuge for wild life and as a source of pleasure to coming generations." Similarly, an article dealing with farm and orchard surveys,

"primitive" areas, comparison of nesting records, the invasion of new areas, and town or city bird censuses maps out definite work to be profitably done in home surroundings, whether rural or urban.

The adventures of a party of Boy Scouts on a trip of discovery down the Embarras River, the work of teachers of zoology and nature-study, of local Bird Clubs, and of museums and individual observers *who have things of value to report* are given space in a most helpful way. The underlying objects of the Illinois Audubon Society itself are not overlooked, for both legislative and educational matters of moment are brought clearly to the attention of the reader. It is well worth while to publish such parts of the state and federal game laws as should be made familiar to everyone, whether adult or child, and it is equally of value to collate a bird bibliography especially applicable to the study of birds in the home state of an Audubon Society as is done in these bulletins. The editorials also, are to the point and practical, and are written evidently to aid the farmer as well as the teacher or scholar. Check-lists of Illinois birds, arranged according to orders and comparative local seasonal lists, place within the reach of every child and Audubon Society member information which otherwise might be unattainable by reason of expense or lack of acquaintance with the nature-books in libraries or actual working lists of reliable ornithologists. Altogether, the appearance of these bulletins is most hopeful for a broader, and far more practical and coordinated grasp of bird-study in relation to Audubon Society ends and aims.

From time to time the School Department will bring to the notice of its readers publications of this nature, and, in doing so, invites the cooperation of State Societies in sending copies of such publications for inspection. The success of nature-study undoubtedly depends much upon the united effort of State Audubon Societies and their friends with that of teachers and pupils. Again, the emphasis must be laid upon *unity, not only of purpose, but also of action.*—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXVII: Correlated with Physiology and Spelling

THE BIRD'S STORE OF ENERGY

In 1915, we commenced a series of simple studies in structure. The plan of a bird was discussed, some of the most striking features of its skeleton, namely, lightness, compactness, and stability were noted, and the adaptation of the beak and tail and the development and use of feathers were briefly touched upon. All of these parts of a bird's structure are important in its flight, search for food, and nest-building, but they are not the parts which first of all produce its

energy. We know that, of all living creatures, birds have the greatest amount of energy and are most tireless in their activities. The secret of this fund of power must be sought in the organs of digestion and circulation.

One might suppose that a much larger body would be needed to generate as much energy as a bird needs, and that a framework of elephantine size, for example, would be productive of far greater speed in flight and endurance in cold, storms, or continuous exertion. That this is not only not the case, but is quite unnecessary and even impracticable, Nature has demonstrated during untold ages, for we have now at hand so many of her former experiments in various types of flying monsters for comparison, that we can safely be assured that the modern bird, endowed with flight, has been developed along the most effective and economical lines, to take its part in the world-complex of living organisms.

Just how this has been brought about, the study of comparative anatomy tells us, for without it, some of the peculiarities of the bird's structure would be an insoluble puzzle. In this exercise, therefore, let us search for some of the reasons why a bird is able to produce and keep up so great an amount of motor-power, or energy, observing that this energy is most strikingly expressed in the form of motion and heat in the case of a bird. When one calls to mind a Hummingbird, poising on wings which vibrate so rapidly that they cannot be clearly seen, it is certain that there must be a remarkably perfect mechanism for transmitting the energy which sustains such rapid, and long-continued motion. Great wheels chained to roaring waterfalls and belted to smaller wheels, which in turn move giant gangway saws or huge millstones, scarcely produce an amount of power which will cause more rapid motion.

Again, if one considers a bird like the Penguin, which nests in Antarctic regions, incubating its single egg and rearing its nestling young successfully with no other aid than a particularly warm blanket of fat which keeps in the heat of its body so that it does not succumb to the cold and freeze, it is clear that the energy necessary to keep up and conserve this body heat must be practically never-failing.

The temperature of our own bodies as ordinarily taken by placing a temperature-bulb under the tongue, is normally 98.6° F. On the surface of the skin the temperature varies around 90° F., while inside the body, in the liver, it rises as high as 107° F.

Birds normally maintain a temperature of over 100° F, in general 10° to 12° higher than our own, which is an indication of the rapid rate at which they generate heat. It is useful to remember that no other living organisms have so high a body-temperature. Now the question arises: What produces this wonderful amount of motion and heat, and having once produced it, what keeps it up? A fire will burn fiercely when first kindled, but it soon dies down unless replenished. In a similar manner, as fuel must be constantly supplied to keep up a fire, so fuel in the form of food must be supplied to keep up the energy

necessary to maintain the heat of the body or any of its activities such as motion, locomotion, or, in man, an activity like the power of thinking.

Food, then, is the real source of the bird's unsurpassed energy, and, consequently, the food-habits of birds form one of the most important and instructive chapters in their life-history. In this exercise there is not space to devote to the kinds of food birds eat, since our object now is to gain some idea of how food is transmitted into a sufficient amount of energy to maintain the tireless activities of birds. It is evident that whatever the process of taking in and digesting food is, it must be governed by certain regulations.

Some of these regulations in the case of birds are:

1. Capacity for a rapid, large, and frequent intake of food.
2. Capacity for rapid and thorough digestion.
3. Capacity for rapid elimination of all waste material.

All of the powerful apparatus necessary to keep up the bird's food-factory must, moreover, conform to the requirements of its general structure, which, we have recalled, are lightness, compactness, and stability. In other words, the bird must at one and the same time keep up a maximum of food-producing energy with a minimum of apparatus. It is a wonderful problem worked out in some of Nature's most perfect ways.

Watching a bird eat, perhaps the most surprising thing is the amount it eats and the rapidity with which it eats. Although a bird may occasionally get choked or have a pain from such hasty and unlimited eating, it is probable that its digestion is so carefully regulated that few upsets of this kind occur. Nature has provided birds with two very effective contrivances to take care of the large amounts of quickly gulped food, namely a crop and a gizzard. The crop, you may recall, is between the mouth and the stomach, a sort of half-way reservoir where food can be stored until the stomach is ready to take charge of it. Now a bird's stomach is made up of two parts, a *proventriculus* or glandular stomach, resembling the human stomach, with gastric juices to aid in breaking up particles of food, and a gizzard or grinding-mill, as it might be described, from its thick walls and content of stones, swallowed by the bird for the actual purpose of grinding its food. Following the digestive apparatus on farther through its tortuous windings, we discover that as soon as all of the useful parts of the food-materials in the stomach have been broken up and passed on into the blood to be circulated throughout the body, the refuse or non-usable parts, are rapidly pushed along out of the food-tube to make room for a fresh supply. This well-nigh perfect system of digestion insures to the bird the ability to produce, by means of an unusually large amount of food, the immense motor-power which it requires for its daily activities. Could we examine in detail this digestive outfit, we should understand far more clearly the value of birds as the friends of man and the guardians of forests and fields. At the same time, we should be more than ever impressed with Nature's ability to perfect a plan in a special manner for a particular purpose. Although

it is too long and complicated a story for us, as yet, to follow through, we can learn it bit by bit, as we study more and more into the subject of the bird's structure.

When we come to the circulatory system of the bird, which goes hand in hand with its digestive system, the same economy of apparatus is found, *without loss of thoroughness*. In birds, the blood is kept pure and moving rapidly, especially to the relatively huge flight muscles, for it is very necessary to have constantly on hand fresh, air-purified blood in sufficient quantity to aid in producing the energy which must be ceaselessly transmitted into heat and motion and other uses.

If you could look at the heart of a fish and the heart of a reptile and the heart of a bird, with all the arteries, veins, and tiny tubes called capillaries that go into them, you would have one of Nature's interesting stories before you. It is something to look forward to as you study more, and though it is in places difficult to discover all the reasons for the different ways in which the blood of fishes, reptiles, and birds circulates, there is *always* a reason and it can be found out by careful study.

A point to emphasize now is the practical working of the bird's internal machinery and, as already said, this centers around food. With the bird, it is always food and more food. In fact, food is the mainspring of all life, and this we are coming to realize in these days of stress and war, as never before in this generation. If the food-relations of different races and classes of men could be more equally adjusted, it is probable that the major woes of mankind would disappear, for the demand for food and for more food is constantly uppermost in our daily life, with the increase and spread of population. Birds have then a problem quite like our own to face, which should lend interest and sympathy to our study of and relations with them. It is a modern philosopher who says: "The haps and mishaps of the hungry make up natural history."

In this year of 1918 we are all called upon to conserve and to produce more food than ever before. The birds can help us if we will help them. One way to take hold of this question of the food-relations of birds and man is to classify the different kinds of food and food-habits—first, of birds and, second, of man.

A simple scheme with reference to birds, as follows, may be suggestive to you, in making out a similar scheme for man:

I

1. Fish-eating birds.
2. Vegetarian birds. Weed seed, fruit, grass and tender weeds.
3. Insectivorous birds.
4. Carnivorous birds.
5. Birds which eat more than one kind of food.
6. Birds which vary their food during the different seasons of the year.
7. Birds which eat carrion or are of scavenger habit.
8. Birds which feed in flocks and reasons for the kinds of damage they may unwittingly do to crops.

9. Birds which distribute seeds, useful to man, harmful to man.
10. Birds as guano producers. Actual money-value to man.
11. Birds as guardians of forests, as pruners of vegetation.
12. Birds in relation to destructive insect pests, fungous pests.

Refer to *Useful Birds and Their Protection* by E. H. Forbush, *Birds in Their Relations to Man*, by Wood and Dearborn, and bulletins of the United States Department of Agriculture on Economic Ornithology.

II

1. Kinds of food of different races of men.
2. Distribution of staple articles of food, such as wheat, corn, rye, barley, sugar-cane, vegetables, fruits, rice and other cereals, coffee, tea, *cacao*, coconut, dates, figs, fish, and shell-fish.
3. Supply of milk, cream, fats, and meat and necessity for any or all of these.
4. Which kinds of food are most indispensable to life?
5. Which kinds properly cooked and properly eaten will produce the most energy?
6. Which kinds are produced in the greatest abundance?
7. Which kinds are used by the greatest number of people?
8. Which kinds of food preferred by man do birds eat?
9. Which kinds used by man do birds protect?
10. Which kinds are capable of being improved? How?
11. Which kinds can be grown in a home garden? Which, only in large and specially cultivated areas?
12. How can man best help birds so that they in turn may help him best?

See *Crop Zones and Life Zones of the United States*, by D. C. Hart Merriam, Bulletin No. 10, 1898, U. S. Department of Agriculture, Work of Luther Burbank, *Wild Bird Guests*, by Ernest Harold Baynes.—A. H. W.

FOR AND FROM ADULT AND YOUNG OBSERVERS

SOME HIGH-SCHOOL METHODS OF BIRD-STUDY

In response to inquiries concerning our work, I wish to inform you of what we are doing here in the way of interesting the students in birds and bird-study.

During the first two weeks in February I showed a set of lantern-slides to all our first-year classes and encouraged them to form a Junior Audubon Society. The slides showed types of winter birds and methods of attracting birds. In my talk I emphasized the economic importance of birds.

Since that time, under the direction of Miss Amy E. Hale, about forty students have formed a society. They are to send their names this week.

This past week, through the direction of the South County Rod and Gun Club and the State Bird Commission, thirty-five students have distributed 300 pounds of scratch-feed and the Boy Scouts each carried a bag of grain when they started on their hike. The newspapers have reported

this, and some wholesome aid has been given to interesting the people in finding the birds.

Miss Hale in her Introductory Science Classes has planned extra work for credit in recognizing and keeping records of birds and bird migrations. Several have started records of this kind. I hope that the stories and records of this work will be worth sending to you later.—ISRAEL R. SHELDON, *Principal, Westerly High School, Westerly, R. I.*

BIRD CONSERVATION IN CEMETERIES AND PARKS

Bird-lovers generally are beginning to realize what wonderful opportunities for bird conservation are to be found in our city cemeteries and, possibly, even in the small city parks, wherever the vagrant cat problem is not too much neglected. Philadelphia, with the largest natural park in the world, has just decided to utilize the wonderful resources for increasing the bird-life about the city, a very necessary consideration with all the added vegetable-gardens under cultivation this year. Insecticides are necessary and helpful, but the best insect-destroyers of all do not come in bottles or packages, but in nests and bird-boxes.

Under the encouragement of Mrs. W. Hersey Thomas, a student of birds and insect life, the children in the Friends' Schools of Philadelphia and Germantown have this past spring made a number of Bluebird and Wren-boxes, and, with the cooperation of the Park Commission, forty of these boxes have already been erected in Fairmount Park, about Chamounix, and on the upper part of Lincoln Drive. More



THE GIRARD AVENUE JUNIOR
AUDUBON SOCIETY

will follow next year. Feeding-stations for winter care of the birds will soon be put up, and bird-patrols among the school-children will look after them.

This movement, if consistently developed, should succeed in increasing the

knowledge of birds and their usefulness to man better than mere class-room work and could well be made part of the regular curriculum in our schools.

Every child interested means one less unconscious destroyer of bird-life and one more active helper in its conservation.

[To these practical suggestions, the School Department can add only its unreserved approbation. Concrete work with a definite end in view will help to raise the standard of bird-study more than any other one thing. For further advice in this matter, see Circular No. 2, 'Cemeteries as Bird-Sanctuaries,' National Association of Audubon Societies.—A. H. W.]

A WORD OF APPRECIATION AND A TESTIMONY TO THE VALUE OF BIRD-STUDY

I get the *American Boy*, *Boys' Life*, *Boys' Magazine*, *Youths' Companion* and many other magazines, but BIRD-LORE has always been my favorite paper. I started getting it November-December, 1914. I enjoy reading it through again and again. I wouldn't stop getting it for the world.

My favorite pastime is bird-study. I am just 13 years old but have seen, mostly in Hampden, 104 species of wild birds, including the Wood Duck, Snowy Owl, Great Blue Heron, Woodcock, Little Green Heron and Bittern. All of these were seen in Hampden. The Robin, Bluebird, Song Sparrow, Crow and Junco are already here from the South, and to-day I put up a ten-room and a three-room Swallow house and a two-room and a one-room Bluebird house. I already had out several houses and two big lunch-counters. Today I put out a cement bird-bath.

I will be mighty glad when I get the next issue of BIRD-LORE.—NORMAN LEWIS, *Hampden, Maine*.

It is pleasant to know that BIRD-LORE is so much appreciated, especially when it is compared with such admirable publications as those cited above. One reason for the strong appeal which this magazine makes is the fact that it is based almost entirely upon actual observation of living birds. In no study is there a wider opportunity for keen observation, careful discrimination, and esthetic appreciation. Again the consciousness comes to mind of the value of bird- and nature-study for purposes of culture and utility. It hardly seems that any other study is better adapted to these ends.—A. H. W.]

A RURAL JUNIOR AUDUBON SOCIETY

As the teacher of Junior Bird Class 783, Hudson, Mass., I would like to tell you a little of our work.

During the year we held twenty nine meetings. The average attendance was eight. May 6 we had an exhibition in the primary room of our rural church, which was attended by interested friends, who examined carefully the work of the children. A collection of forty nests, belonging to the class, was shown. Our oldest member gave us the Audubon motto beautifully lettered. Another member had a most interesting collection of feathers, each mounted on a card.

with the name of the species to which it belonged, while another showed a "Book of Birds" which she had worked on all winter. The Leaflets made a great display and represent many, many hours of work. A short program, given by the children, consisted of original papers, poems by various authors, etc.

On our first bird-walk we observed eight species, and on our last walk for the year, twenty-three. The older members keep weekly lists. At our last meeting one member had twenty-six species. The number of species observed by the class is forty-three. It has been a great surprise that the pupils could so easily see and hear such a large number of species.

One member saw a Junco with nesting material in its bill, and later in the season I saw and heard the Junco singing its simple trill. A pair of White-breasted Nuthatches nested near my home and brought their three babies to the winter feeding-station.

The lessons in the School Department are greatly enjoyed by the class. They are now learning the one about types of nests. The second year's work has started well, fifteen children being enrolled at the second meeting.

This report tells nothing of the joy of the children over each new species, nor of my own in the class as a whole. Some of the members are looking forward to years of work together. —AGNES M. LEARNED, *Hudson, Mass.*

From the *Clinton Daily Lion* the following description of the reasons for the organization of this Junior Class is taken. The article, together with the teacher's letter brings out several points of distinct value: First, the formation of the Society as a natural and spontaneous outgrowth from a Sunday school class in which a live interest in nature had been awakened, is distinctly unusual and wholly to be commended. Second, the exhibition held in the children's room in the church, to which "interested friends" were invited, who "examined carefully the work of the children," is an example of painstaking, concrete work, individually helpful and rewarding to teacher and pupil alike. Third, the value of weekly bird-walks with individual lists not only taken and kept, but compared in the class, is brought out. Fourth, the joy and comradeship of this Junior Audubon Society, and the desire of many of its members to continue bird-study, are evidently a natural outcome of sympathetic teaching and willing working. —A. H. W.]

THE CHICKADEE

There's a little bird singing up in the tree,
 "Chickadee—Chickadee—Chickadee—dee."
 He wears a black cap and has a black throat,
 The rest of him's grey. Can you hear his clear note?
 He does not keep still very long, you may know,
 And he keeps hopping 'round, in the rain or the snow.
 He's happy all day, if warm or if cold;
 He comes near the house, but is not very bold.
 He gets very tame if you treat him just right,
 And will stay near your house from morning 'till night.

—By a member of the Hudson Junior Bird Club.

HENRIE McCULLOCH, VIII Grade.

AN OBSERVATION AT FIRST HAND

I am writing to tell you about a bird I have seen. One night after school I was playing in the yard and a Cedar Waxwing lit on the ground by a stone. I thought it seemed very tame and so I tried to see how close I could come to it before it flew. So I went up to it. It did not seem afraid, so I picked it up in my hands. It did not struggle. I carried it into the old wash-house in a basket and fed it on seeds. It got so it flew all around and then I carried it across the road and let it go and it flew away.—LEONICE HILL, *Ashville, Maine.*

Perhaps this bird was exhausted from a storm, or was not well, for even birds can be ill, or it may have been a young bird, strayed from its mates. Cedar Waxwings are accustomed to go in flocks, usually small but sometimes, as has been lately reported, in numbers as large as twenty-five or thirty or more.—A. H. W.]

AN EXERCISE IN BIRD-STUDY

Dear Jerome:

In the paper there was a notice to feed the birds. There are a great many birds in your woods, and when you go to the camp you could feed all the wild birds. You ought to read the story of "Freckles" and do the same as he did. When I go out there we will take a walk in the woods and see the birds. The snow is very deep out there, and the birds can't find anything to eat. I will write and tell you about our bird-club sometime.—EARLE TOMPKINS, *Easthampton, Mass.*

[The teacher who sent this article, simply asked her class to write something about birds, after reading the scene in "Freckles" which describes his interest in birds. She writes: "In addition to the club in my own school, I have been starting bird-study in the other public schools of the town. As an experiment, we took only grades 3 to 7 and have ten clubs. The Superintendent has furnished a substitute for my room, and I have done it without extra pay, for the experience. I hope sometime to get into this work altogether." Again, a teacher who is full of enthusiasm and a desire to make bird-study, not only successful, but general in the middle grades, shows how possible it is to put this study on a practical and at the same time, pedagogical basis. It is much to be desired that more experienced teachers can go into the work of organizing bird-clubs.—A. H. W.]

MAKING BIRD-BOXES

I am going to make a bird-box for the birds. When the cold weather comes they like to have a house to go into. In our room we have made forty-one bird-boxes. Many boys and girls have made one, and they have put up forty-one bird-boxes. In our room some of the boys and girls have joined the Audubon Society.—EDITH STRIGEL, *Lawndale, Pa.*

[This brief chronicle of work accomplished suggests the question of how many birds seek bird-boxes as places of shelter during the time when they are not nesting. Who can answer this question from personal observation?—A. H. W.]

A SOUTHERN CHRISTMAS CENSUS

We are two little girl-sisters who are living in Georgia now with our papa and mama.

We were born in Knoxville, Tenn., on Chestnut Hill, where there are a great many birds, and Aunt M—— W—— who loves birds, taught us their names. When I was two and a half years old I could name twelve birds.

Aunt M—— came from Tennessee to spend Christmas with us.

This morning we took little sister B—— and walked through Inman Park where there are a great many evergreen trees called water oaks. We were looking for birds for our Christmas Census. We saw: 12 Blue Jays, 6 Towhees, 5 Cardinals, 2 Mockingbirds, 25 in all. We heard a Flicker and a Carolina Wren and thought we heard a Bewick Wren.

The weather is so warm that we have the windows open.—ANNE WOODWARD KING (age 5 years), BETH RANKIN KING (age 2 years), *Atlanta, Ga.*

[This census is dated December 25, 1916, and being published a year later, as it is, comparisons with this year's weather, which is unusually severe up to the time of writing, December 12, as well as with the occurrence of winter birds this season, will be helpful. The fact that one of these little girls learned to name twelve birds before she was three years-old suggests the appeal of birds to very small children. A boy friend, James York, learned to recognize many birds from a picture-book almost as soon as he could talk.—A. H. W.]



A SNAPSHOT OF A GRAY SCREECH OWL

Note.—The contributor of this picture, Wolfrid Rudyerd Boulton, Jr., writes from Beaver, Pa.: "A snapshot of a gray Screech Owl that wintered in our orchard. Its mate was rufous. A pair of Flickers raised a brood of six young ones in the same hole this season."

[This observation of double tenantry during a season might often be duplicated, no doubt, if Junior Audubon members were on the lookout *during all seasons of the year*. The Screech Owl, one of our small Owls, is quite common throughout a wide area, and

is almost as interesting as well as useful neighbor. Just why its weird, tremulous call should lead superstitious people to think it harbinger trouble, it is hard to say, unless it is the survival of a tradition among country folk handed down for centuries.—A. H. W.]

VACATION OBSERVATIONS

This summer I spent part of my vacation at Lake Winnepesaukee, N. H. One morning when I was out on the lake I saw an Eagle flying not far above us. That afternoon as I was enjoying a motor-boat ride to Centre Harbor, I saw two Bald-headed Eagles resting on the limbs of a dead tree. We were so close to them that we could easily see the white spots on their heads which I was told is the reason for calling them bald-headed. A little further along we passed near two Loons. Our view of them was very short, as they soon went under water, which is their custom when danger approaches.

Another day we went across the lake to visit the Libby Memorial Museum, which contains specimens of all the birds, mammals, reptiles, and fish which inhabit the surrounding country. I recall particularly the handsome feathers of the wild Ducks and Pheasants, also those of the Partridge and Woodcock. If any of your readers should visit that part of the country, I hope they will go to the Libby Museum at Luftenbrough. It is worth while.—JANET MERRILL, (age 12 years, Grade VIII), *Methuen, Mass.*

["Written by a member of the Methuen Junior Audubon Society," says the letter of the organizer of the Society which accompanied these observations. "The writer is very observant and enthusiastic, and I am anxious to encourage these traits in the other thirty members of our flourishing Club. They read *Bird-Lore* at the meetings." To those acquainted with the bird-life about Lake Winnepesaukee, these notes on the Bald-headed Eagle and Loon will bring back delightful memories of similar observations on red-letter days.—A. H. W.]

JUNIOR AUDUBON WORK AND THE ENGLISH SPARROW

We have just got up a bird club in our room, but we haven't named it yet. I would like it to be an Audubon Society. We had a bird club here for children and adults last year. There were about twenty-five adults and twelve boys.

We had Prof. Randolf from Youngstown, Ohio, give a lecture on his experiences with the birds, using lantern-slides to illustrate it. The club has broken up now although I don't know the reason.

I listed 121 different species of birds last year and have 41 this year so far.

We are in a good place to look for birds, as Grove City is situated a mile and a half from Barmore Lake, and on the banks of Wolf Creek. Lots of Wild Ducks visit these waters. A Wood Duck has nested for several years along Wolf Creek, 2 miles out from town.

As I sit here and write I have to tap the window every few minutes to keep the English Sparrows from eating the food that I have set out for other birds. I have had Robins, Chipping Sparrows, Song Sparrows, and Chickadees

visit my feeding-house, in a town of 5,000. I am eleven years old.—NEVIN G. NICHOLSON, *Grove City, Pa.*

Readers of the *School Department* will be interested, it is hoped, to report on the amount of interference with other birds, caused by the English Sparrow at winter feeding-counters. All such observations will be gladly received and compared.—A. H. W.]



The boys of the Junior Audubon Nature Study Club, Bellefontaine, Ohio, decorated a tree for the birds on December 24. Pop-corn, suet, cranberries, bread, etc., were hung on the tree, with Xmas balls.—DANIEL McMILLIN, *President, Bellefontaine, Ohio.*

BIRDS ON A STATUE

I watched some birds across a city street
 Affrighted at the sound of coming feet.
 They scorned the teamster's proffered grain to share
 Viewing each lure askance as though a snare.
 While little children brought their crumbs in vain,
 Eager some mark of confidence to gain.
 Distrustful of each human move, at last
 They flew upon a statue where they passed
 Long restful minutes on the arms and head
 That, never having moved, they knew were dead.
 O what a travesty on *gentle Man!*
 That even little birds have learned to scan
 Him first, if he indeed be flesh and bone,
 Or, harmless bronze, or cold protecting stone.

—E. J. SARTER

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, 1924 Broadway, New York City.

WILLIAM DUTCHER, *President*
FREDERIC A. LUCAS, *Acting President* T. GILBERT PEARSON, *Secretary*
THEODORE S. PALMER, *Past President* JOSEPH W. OWENS, JR., *Treasurer*
SAMUEL I. CARTER, JR., *Attorney*

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
\$500 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 WARNING!

There is great danger that, in the face of the numerous calls on the time and means of the people of this country to help fight the battle of civilization, the necessity of conserving our wild bird and animal-life may, in a measure, be lost sight of. In fact, there are many signs that this tendency has already developed. Numerous bird-clubs and other organizations of a similar character have recently reported the suspension of activities.

It is perfectly natural that many good, patriotic people who have theretofore warmly supported bird-protective efforts should now feel that all their available resources must be given to the defense of their country and to the alleviation of human suffering.

But if the friends of bird-protection are to some extent temporarily suspending their interest in the cause, it is most certainly true that the enemies of wild life are very much alive, and the time has come when those of us more actively engaged in wild-life conservation should set the danger-signals flying from every hill. Never since this Association began its organized work, thirteen years ago in January, have there been so many indica-

tions of concerted effort to break down bird- and game-restrictive measures as right now.

Let me cite a few examples: Gunners in several of the eastern counties of Massachusetts have combined, and, by the assistance of certain officials in Washington whose names need not be called, have begun a dangerous move to throw open the spring shooting of wild fowl in that territory. Exactly similar efforts are being made by the coastwise gunners of New Jersey. The very existence of Klamath Lake and Malheur Lake as Federal bird reservations is today hanging in the balance. These contain the most important breeding colonies of Ducks and Geese in the northwestern part of United States.

Down in the mountains of northern New Mexico is one of the largest breeding territories of Ducks in the Southwest. For weeks this office and the Game Protective Association of New Mexico have been exerting the utmost efforts to prevent this breeding area, known as Stinking Lake, from being leased to a company of eastern gunners for exploitation.

The most important inland wintering-place for Ducks in the eastern United

States is Big Lake, the Federal reservation in eastern Arkansas. As this is being written, a communication lies before me stating that, backed by commercial interest, it would seem that every man, woman, and child in all the country surrounding this great lake has recently signed a petition asking that, at least for the duration of the war, all prohibition of shooting be suspended, so that Ducks may here be killed for food. From Virginia come reports of efforts being made to suspend the law so as to permit the netting of wild water fowl.

When we consider the enormity of the food problems which may confront this country, the danger that lies behind these cunningly conceived moves is very apparent.

The Migratory Bird Treaty Bill passed the United States Senate on July 30, but thus far it has been absolutely impossible to induce Congressman Flood, Chairman of the Foreign Relations Committee of the Senate, to report the bill for senatorial action. If this is not done at the present session of Congress, all the efforts which the bird protectors have made the past two years to get this treaty measure concluded will come to naught. There is every indication that tremendous pressure has been brought to bear on the Foreign Relations Committee to induce its inactivity.

What are the friends of the birds going to do in this country? The time has come when the situation should squarely be faced. Are we going to say that we have no more time and money to give to help preserve the birds that make it possible to grow the crops of the land and to preserve our diminishing supply of wild game-birds? Are we going to say that the birds must shift for themselves until the enemy is conquered? In other words, are we going to abandon the work of a generation because of anxiety regarding conditions across the sea?

Where can we get more valuable workers to help win the war than we have in our groves and fields? The wild birds ask for nothing more than to be let alone. This Association, in common with other organizations and individuals, has for years been standing as best it could between our Wild Life and the greed of mankind, and it would be an everlasting calamity if the work of all these years should be wiped out or nullified to a horrible extent for the lack of earnest volunteer workers, or a few thousand dollars with which to fight the battles for the birds, and yet this is a possibility.

There never has been a time when the friends of conservation should more loyally support the efforts for bird-protection than today.

CORNELL TO TEACH CONSERVATION OF WILD LIFE

By **B. A. QUARLES**, Director

Department of Game Breeding, American Game Protective Association

The recent announcement by Cornell University of the establishment of a course of intensive instruction in the conservation of wild life is welcome news. Commencing February 18, 1918, there will be given at this institution what will be known as the Long- and Short-term Courses in wild life conservation.

The Long-term Course is designed for those who wish to make a life-work of conservation, and it is designed especially for the training of men and women who

expect to engage in the many forms of field and executive work that the conservation movement has already developed, such as, for instance, state secretaryships of Audubon Societies, game protective associations, bird-lecture work, etc. This course will require four years' work for completion and will lead to the degree of Bachelor of Science. The usual Cornell entrance examinations will be required of those seeking to take it.

The Short-term Course, for which

entrance examinations are not required, is designed more particularly for the following

1. Those who wish to receive instruction in the principles of game breeding and preserving, with the idea of fitting themselves for the position of gamekeeper.

2. Those who wish to take up the breeding of game as a commercial pursuit.

Lectures and laboratory work in this course will be given from February 18 to May 11, and the entire work of the course will be completed September 1, the interval between the end of the lectures and the closing of the course being spent on a game-breeding experiment farm which has just been established at Cornell under authority of an act passed by the New York Legislature at its last regular session.

For the benefit of many who will be interested to know the facts leading up to Cornell's unique action, the following brief history is given: To Herbert K. Job, director of the Department of Applied Ornithology of the National Association of Audubon Societies, is due the credit for first putting in operation the teaching of wild-life conservation in an American institution of learning. This work was in the Connecticut State Agricultural Experiment Station at Storrs.

Later, Charles E. Treman, of Ithaca, N. Y., a trustee of Cornell University, suggested informally that the installation of a game-breeding experiment farm at the University would be of great value in increasing the game-supply of the state. No definite steps were taken, however, to bring about action on the suggestion.

Three years ago, those in charge of the Department of Game Breeding and Preserving of the American Game Protective Association found that the movement to supplement the supply of wild game by producing it under intensive methods in captivity was heavily handicapped through the lack of men experienced in game-breeding and scientific game-preserving. Men qualified for such work are usually termed gamekeepers. The principal source of supply for such workers was Great Britain, but that country was

not able to furnish a sufficient number of men to meet the demand.

Finding itself faced with such a serious check to a movement so promising to the betterment of wild-life conservation work, the American Game Protective Association set about finding a solution for the problem.

It took little reasoning to suggest that the utilization of the many excellent schools of poultry husbandry presented the best and quickest solution. The Cornell School was fixed upon as an institution of splendid promise after a thorough investigation.

Cornell had to be convinced, however, and so an opening wedge was used in the offer, two years ago, to give a lecture on the technique of game-breeding before the Department of Poultry Husbandry. This was accepted, and it resulted in an invitation for a second lecture and a series of talks on game breeding during the following session.

These lectures, fourteen in number, were given last December and were attended by more than 1,500 persons. The lecturers were Messrs. Herbert K. Job, Harry T. Rogers, and E. A. Quarles. Several of these lectures were repeated the February following, during Farmers' Week at Cornell, when nearly 4,500 farmers from the entire United States were in attendance at the University.

The situation was now ripe for the movement to establish a game-breeding experiment farm at Cornell and install a course of instruction in game breeding and wild-life conservation. A bill appropriating \$1,000 to purchase the farm was introduced and, strongly backed by the National Association of Audubon Societies through its secretary, T. Gilbert Pearson, and the American Game Protective Association, it was passed and received the approval of Governor Whitman.

The farm has been selected. Taking title awaits the approval of the Attorney-general. It is located within easy walking distance of Cornell and possesses unusual advantages for the purpose for which it is to be employed. This course of instruction

tion has all been laid out and awaits only the approval of the Cornell authorities for implementation.

Among those who will take an active part in the lecture work may be mentioned Messrs. T. Gilbert Pearson, Herbert K. Job, E. H. Forbush, Ernest Harold Barnes, and Clinton G. Abbott, well-known lecturers on birds, Louis Agassiz Faucher, Dr. A. K. Fisher, W. L. McAtee, Bradford A. Scudder, and many others equally well-known. The work on game-breeding and preserving will be con-

ducted by Messrs. Job, Rogers, MacVicar, Burnham, Quarles, and others. From the Cornell faculty will be drawn such men as Dr. Arthur A. Allen, whose work in economic ornithology is so well known, Dr. J. G. Needham, the well-known biologist, Prof. James E. Rice, and others.

Conservationists may well look upon the work proposed as one of the most important that has yet been undertaken in connection with the national movement to increase the country's wild life.

BIRD LECTURES

Herbert K. Job, of the Association's Department of Applied Ornithology, will devote part of his time this winter and spring to giving public lectures, both on general topics of wild bird-life and on the practical aspects of attracting and propagating wild birds and game. A descriptive circular of these lectures will be mailed, either by Mr. Job or from this office, to those who desire it. The lectures

are illustrated either with motion pictures or from Mr. Job's wonderful collection of colored lantern-slides. All fees received are used in support of the work of this Association, and it is hoped that these lectures will be in great demand by our friends. Detailed information may be obtained by writing Mr. Job at 591 Main Street, West Haven, Conn.

REPORTS OF AFFILIATED ORGANIZATIONS

Audubon Society of Sewickley Valley (Pa.).—Birds in this valley have noticeably multiplied since the organization of this Society on April 28, 1914, at the home of Mary Roberts Rinehart, and we feel that a goodly percentage of credit in their increase is due to the efforts of our Society.

Our activities for the past year include such efforts as interesting and educating the children through propaganda work in the schools; lectures for all ages, field outings for every member, bringing together the members of two Audubon Societies at a large annual dinner, and legislative work for the protection of Herons and migratory birds.

The work among the school children has resulted in several Junior Audubon classes, and in the springtime they made several excursions with their leaders into the fields and woods. The study of birds is also included in the school curriculum, and a practical turn is given to this study by the making of bird-houses, of which over seventy were turned out by our school last spring.

A lecture in Sewickley, on November 17, by Mrs. S. Louise Patteson, of Cleveland, on 'How to Have Bird Neighbors,' was of especial interest, as her bird- and feeding-boxes were so simple that an unskilled child could make them.

Mr. Oldys, from Washington, D. C., was again with us this spring, and gave

a lecture on 'Bird Friends' and several informal talks illustrated with stuffed bird specimens. He also conducted several outings.

One of the most enjoyable affairs of the year was the second annual meeting of the Western Pennsylvania Audubon Society and the Audubon Society of Sewackley Valley, at a dinner in the Fort Pitt Hotel, in Pittsburgh, at which several hundred members were present. Several notable speakers addressed the gathering, including Mr. Norman McClintock, who illustrated his address with his wonderful moving pictures of birds. A new committee has been appointed to erect bird-houses and winter feeding-stations along the miles of bridle-path through woodland and field.

A very interesting article, taken from the *Ladies' Home Journal*, on 'The Destructiveness of Cats on Bird Life,' was published by this Society in the local weekly paper. The Audubon posters for the encouragement of birds in our war gardens have been displayed in the shop windows of the neighborhood. The Society joined in the general protest to Congress in defense of the Migratory Bird Treaty Act, and many assurances of support were received. A bill before the Legislature at Harrisburg was so amended, on protest by this Society, that full protection to the Herons in this State is now assured. The Society now numbers 235 members and feels that it has had a very successful year.—(Mrs.) M. G. ROSE, *Secretary*.

Audubon Society of the Pacific.—This Society was organized January 25, 1917. Though the active members number only 80, and the war has called some away, the organization has already earned recognition by scientific organizations and several departments of our state and Federal governments.

The need had long been felt for a sustained supervision over a wider area of the Pacific Coast than had as yet been attained by any local and already-existing State Audubon Society. The organization of the Audubon Association of the Pacific was for the purpose of meeting this necessity. The organization was hardly completed before many and important tasks were clamoring for attention. In the first few weeks of its existence the Association was instrumental in securing the defeat of the notorious 'Flicker Bill' in Legislature at Sacramento. This was an attempt by pseudo-sportsmen to put some useful insectivorous and song-birds on the roll of their hapless victims, the game-birds. The preservation of certain harmless Hawks, Owls, and Kingfishers, which had heretofore been included among the destructive species to bird and fish-life in the Golden Gate Park, San Francisco, was taken up with the Directorate of the Park and met with a cordial and ready approval. The passage of the Federal Migratory Bird Treaty Act was urged upon representatives from the seven California counties at present included in the membership of the Association. All these lawmakers expressed approval of the measure and promised to support it.

The Association is carrying on a world-wide investigation as to the des-

traction of bird-life by waste oil on the ocean. It is hoped that some information will be forthcoming in the near future, and that measures may be inaugurated for the suppression of this scourge to the ocean avifauna, which has assumed alarming proportion off our California coast. An investigation as to the killing of birds at the lighthouses of the Pacific Coast is also under way, and some thirty-six letters have been received from lighthouse keepers in answer to a list of questions sent out. The study of these letters promises to shed some new light on the destruction of birds at such places and also some interesting facts as to the migrating habits and routes of travel of our Pacific Coast migrants.



CHASE LITTLEJOHN AND AMY E. GUNN
INTERVIEWING A BABY PUFFIN

Lectures have been given at the monthly meetings, the subjects presented covering interesting features of research on matters ornithological, both in local and foreign fields. The list of speakers, a veritable scientific galaxy, includes Grinnell, Storrer, Bryant, Loomis, Evermann, Maillard, and others. Frequently, lantern illustrations were by cinematographs and slides, taken by members themselves.

Field-trips under the guidance of some local expert have been made at frequent intervals. These trips have proved most attractive, as well as educational, careful notes of each trip being secured by the 'historian' appointed for the day. These are read at the following open meeting of the Association, after which they are printed and filed with the Library records.

The trip of August 3 to the Farallon Islands was of more than passing interest. These Islands lie in the Pacific Ocean, 25 miles off the Golden Gate, and are under the jurisdiction of the Department of Commerce. They are well known as of special ornithological interest, being the nesting-place for ocean-going birds and teeming with bird-life in the breeding season, and once being a favorite haunt for egg poachers, as recorded in the encyclopedias. The Federal Government prohibits visitors to the Islands, but, in recognition of the Association's work, honored it as a special guest, taking us to and from the lighthouse tender. It seemed to the members of the Association that the superabundance of Western Gulls was probably a factor in the evidently steady

decrease of the once amazingly abundant Murre population, and that measures for lessening the Gull myriads might be advisable. The Association has also asked the Federal authorities to extend the closed season on the Islands to the end of August, as many young birds and some brooding ones were evidently disturbed and endangered by our visit on August 3. We subscribe, through the National Association, for the magazine, BIRD-LORE, which we place in the hands of every member — C. B. LASTRETO, *President*.

The Bird Club of Long Island. — During the past year the Club has acquired an additional membership of 150—138 being annual subscribers and 21 life members. This gives the Club a total enrollment of 545, and thus presents a very satisfactory increase over the membership list of the previous year. It may be noted also that the Club is represented in no less than fifty-four localities on Long Island, and has therefore a more extended influence than ever before.

The Treasurer's statement shows receipts, including the balance of last year, in the sum of \$1,248.43, leaving a credit on July 1, after the payment of all necessary expenses, of \$1,047.64, of which the sum of \$782 is represented in an interest-bearing certificate issued by the New York Life Insurance and Trust Company, this amount, however, being for investment by our Finance Committee, and covering life membership fees, as under a previous ruling of the Executive Committee these are retained and only the income may be applied toward general expenses.

The activities of the Club have been pursued along nearly the same lines as during the previous season. More than 1,000 enamel and linen signs, printed in English and Italian, were posted on trees and fences, threatening all persons with arrest and prosecution who molested birds or destroyed their nests. The public and private schools now enrolled as unit members show a total attendance of some 2,235 children who receive, under the same arrangement as last year, through the National Association of Audubon Societies, such printed matter as it may issue, including leaflets and pictures of bird-life, and thus acquire a knowledge of the usefulness of birds and an interest in their protection. Bird buttons were distributed to the children attending public schools, and also given to the employees on private estates, in order to arouse their sympathy and support and instill in the minds of all, especially those of foreign birth, the fact that birds must not be harmed or injured in any way. A publicity committee of seven was also instituted to collect and publish information and answer inquiries; these are numerous and indicate a widespread desire on the part of many to cooperate in extending the good work which the Club was intended to perform.

A larger membership, however, is desirable in order to provide an adequate income to carry out the useful purposes for which our Club was organized and also permit the Executive Committee to undertake the development of certain



COL. THEODORE ROOSEVELT, PRESIDENT OF THE LONG ISLAND BIRD CLUB, TALKING WITH CAPT. WM. SPRINKLE, AUDUBON WARDEN AT PASS CHRISTIAN, MISSISSIPPI.

plans in view. It is therefore urged that an active interest may be shown to increase our list of subscribers to at least 1,000, and that our birds may be protected, their wanton destruction checked, and information distributed as to the best methods of attracting them, while their economic value may be taught to the landowner and farmer in every part of our Island. This great service The Bird Club of Long Island is anxious to perform if means are forthcoming from a larger membership to enable it to accomplish those benefits to the community that its limited resources render impossible at this time. With the present scarcity of labor, the necessity of bird protection becomes more and more evident, and this was never more apparent than at the present moment.

—ALICE GREENOUGH TOWNSEND, *Secretary*.

Bird Conservation Club (Maine).—Our Bangor Club, which was started three years ago by a half-dozen ladies who were especially interested in bird-study and conservation, grew rapidly for the first year, and during the last two years has increased more slowly but steadily. Our membership is now 75.

Our activities have not included great undertakings, but we know that we have influenced the sentiment of our community. We have had printed some

conservation posters, planned to interest and enlighten, and these we have had distributed broadcast over the state, to school-rooms, post-offices, town halls, wherever our members have wandered. Also, we have had printed some cloth reservation posters. These we have used in vicinity of Bangor, where we have persuaded many owners of large estates or woodlands to reserve their property as bird sanctuaries and to forbid all shooting and hunting.

We have communicated with all the granges of our county and distributed much literature to them. Thus we hope to reach the ears and hearts of the farmers, to whom bird-conservation is so important.

We are not allowed to form clubs in the public schools of the city, but we have offered prizes for bird-houses, and the manual training departments of the schools have turned out a great many nesting-boxes which we have assisted the boys and girls to place. The Club itself has placed eight to ten dozen nesting-boxes, and we have been rewarded by many bird tenants—Martins, Bluebirds, Wrens and Tree Swallows.

During the winter months we have fed the winter birds. Last winter several hundreds pounds of suet were placed by the Club and by individual members, as well as large quantities of dry feed for the seed-eating birds. Not many species of birds brave our Maine winters, but Hairy and Downy Woodpeckers, Chickadees, and both White- and Red-breasted Nuthatches were daily pensioners of our bounty, and several other kinds came occasionally to our feeding stations. We have also been visited by flocks of Pine Grosbeaks, Evening Grosbeaks, Bohemian Waxwings, and Redpolls.

In the last two years our Club has planted nearly a hundred trees in the various parks of the city: fruit-bearing trees, mountain-ash, and wild crab-apple to furnish food for our winter birds, and evergreen trees to furnish them needed shelter.

During the winter we held regular monthly meetings, when we have listened to many interesting papers and discussions. Occasionally we have secured speakers of some note. The meetings have been very well attended. During the spring season, and again in the fall, we have held numerous field meetings, which have been delightful and conducive to increase interest.

We have tried to "do our bit" by writing letters to our Congressmen in both State and National Legislatures whenever any measures bearing on bird-protection were up for consideration.

We have done something in the past, and we hope to do more in the future.
—ALICE B. BOWEN, *Secretary*.

Birdlovers' Club of Brooklyn (New York).—During the season of 1916-17 the Birdlovers' Club of Brooklyn held monthly meetings from October to May and conducted monthly field trips to Prospect Park under the leadership of members of the Club. Addresses were given on various phases of bird-study and identification in the field by Dr. Edward W. Victor

and Edward F. Fleischer. Howard H. Cleaves, of the Staten Island Museum, gave an interesting address on his recent trip to the Virginia coast, with beautiful lantern slides of the bird-life of that region.

The Club sent typewritten letters to all Senators and Representatives at Washington in favor of the Migratory Bird law, and many individual members wrote both Senators and Representatives.

A bird-glass was presented as a prize to the boy or girl doing the most efficient work in bird-study in the Children's Museum. This competition aroused much interest among the school-children in the study of local birds.

The study collections of the Children's Museum Bird-Room were materially increased and improved by a fund of nearly \$200 raised by the Birdlovers' Club. These study collections are used continually for intensive study by groups of Audubon members. The Birdlovers' Club maintains, through Doctor E. W. Viator, a monthly Bulletin, posted in the Brooklyn Museum and in the Children's Museum, of the birds of Prospect Park. Up to the present time the Club has identified a total of 168 species of birds in Prospect Park.

One interesting inquiry came to the Club from Russia, the heart of the war zone, for material on the subject of bird-conservation.—GEORGE O. SCHOONHOVEN, *Secretary*.

Blair County (Pa.) Game, Fish and Forestry Association.—The conservation and propagation work of the Association, as applied to wild birds, was carried forward during the past year in the same effective manner as that of previous years.

Realizing that it is education that forms the common mind, the Association offered prizes to the school-children of the county who would erect bird-boxes and have them first occupied in the spring. The children entered spiritedly into the contest, with results that were countywide. The sum of \$25 was appropriated for bird-boxes that were presented to the schools of the county, hundreds of houses being built by the Association on Government specifications and sold broadcast for 25 and 30 cents each, or the bare cost price. The sum of \$42 was appropriated and invested in grain, which was carried to all sections of the county during the severe winter months and used to feed game-, song- and insectivorous-birds. The Association also invested \$33 in hawberry and bayberry trees, planted in selected spots to furnish feed for birds.

The Blair County Club is instrumental in having the county closed to Quail and Ring-necked Pheasants for the 1917 season, and made an earnest effort to have Ruffed Grouse protected for a year, but in this was unsuccessful. Several hundred notices, calling attention to the state law regarding the disturbing of wild birds or their nests, were posted in all parts of the county, and

several prosecutions were made and convictions secured for the killing of wild birds, with excellent effect on the irresponsible element that causes such destruction. And what is probably most important in the organization's work, it has educated an unthinking public to a point where there is a protective thought for the wild bird. —JOHN H. WINTERS, *President*.



SIGN AND BIRD-BOX ERECTED BY BLAIR COUNTY, PENN. SYLVANIA, GAME, FISH AND FORESTRY ASSOCIATION THOUSANDS OF PEOPLE PASS CLOSE BY THIS SPOT

Brookline (Mass.) Bird Club.—The report of the Brookline Bird Club for this year might well be a repetition of last year's work. Though the war has stopped the proposed publishing of the work of the Club to date and drawn very heavily upon the time and energy of the Directors, progress can be reported in all lines of effort.

The membership of the Club—nearly 600—is the largest since the organization came into existence.

The lectures and "round-table talks" prove as popular as formerly, and much information and instruction is obtained by those attending. This year, the Directors are endeavoring to develop these meetings so that more members will take an active part and become contributors to it, thus offering an opportunity for questions and the relating of bits of interesting bird-experiences.

We are especially glad to be able to report that, through the efforts of the Club, Horace Taylor was again engaged to lecture to the children in the public schools. We believe that this will now become a permanent feature of the nature-study work, and the Superintendent of Schools states that an appropriation will be asked for next year to continue this good work.

The Forestry Department of the town, whose activities are closely interwoven with those of the Bird Club, continues its very practical bird-welfare work. Mr. Lacey, the Superintendent and Bird Warden, reports that his sixty feeding-stations, scattered about the town, will be maintained again this coming winter. Permanent, solid shelters are being set up at these stations, and last year's results will justify the expenditure of public money in this manner. The several hundred nesting-boxes which were placed about the town have been reset and many of them located to better advantage. The laws regarding shooting within the town (now a reservation) are well observed, and public sentiment leans strongly toward their enforcement. These all contribute to the very healthy interest in birds and their protection that increases every year, and we are more and more impressed by the real interest displayed by those who are taking up the subject of ornithology as beginners, even among the older people, and how true it is that those once actually interested seldom, if ever, lose this interest.—CHARLES B. FLOYD, *President*.

Brush Hill (Mass.) Bird Club.—The most important move on the part of the Club during the past year was to extend our active membership list so as to include the entire township of Milton; up to last April only residents of the Brush Hill and Blue Hill sections of the town were eligible as active members. This has resulted in bringing in many new members from the more densely settled parts of Milton and has made the Club a town affair, rather than a sectional one.

We had a talk last November by Mr. Floyd, President of the Brookline Bird Club, on the organization of his Club and its activities, municipal or otherwise. During the winter Messrs. Adams, Horton, and Walt F. McMahon, the latter from the National Association of Audubon Societies, gave us illustrated lectures on local topics. In April, when we made the change in the constitution, we had Mr. Baynes give his popular illustrated lecture at the Town Hall.

During the past two years we have prosecuted a vigorous campaign against the English Sparrow, hiring an employee of the State Fish and Game Commission to exterminate these birds wherever possible in our section of the town. This was made possible by the cooperation of the Board of Selectmen, who appointed him a special officer, with permission to shoot anywhere on the public land of the town. We obtained written permits from most of the landowners in our section. As a result, over 1,600 Sparrows were shot last year and over 600 the year before, when we instituted the plan and had but a short time to act. This almost exterminates the local flocks, but the fact that their places

are taken every fall by migrations from the neighboring cities makes a yearly campaign necessary.

Our business manager, Dr. Harris Kennedy, secured a good collection of the skins of common perching birds of this neighborhood last spring, and has had them preserved in individual celluloid tubes which are unbreakable, hermetically sealed, but perfectly transparent. These are to be used as a circulating library by members of the Club, for study or reference, as the case may be. The collection was purchased by means of a fund collected from some of the Club's members for that purpose.

Naturally, the war has made itself felt here, and there has been a very noticeable slackening of interest among the Club members. We hope, however, that we can keep the organization running fairly strong despite this fact. We are about to start a 'fall drive' in the town in an attempt to materially increase our active membership.—NATHAN CHANDLER FOOT, *President*.

Buffalo (N. Y.) Audubon Society.—The eighth year of this organization closed May 18, 1917, with a paid-up membership of 264. There were four meetings of the Society and six meetings of the Executive Committee for the transaction of business during the year.

Through the courtesy of Henry R. Howland, Superintendent of Natural Sciences, cards of admission to four lectures were sent to each member. The lectures of the year were as follows: October 16, Mrs. S. Louise Patterson; November 23, Ernest Harold Baynes; December 5, Edward C. Avery; December 8, T. Gilbert Pearson; February 24, Guy A. Bailey; March 23, Dr. Arthur A. Allen; March 30, Clinton G. Abbot; May 18, Clinton E. Kellogg.

For the second year the Audubon Society furnished money to pay dues to make each boy and girl on the Cattaraugus Indian Reservation a member of a Junior Audubon Circle. Membership in the National Association of Audubon Societies and in the Erie County Society for the Prevention of Cruelty to Animals was continued.

The financial report of the year ending May 18, 1917, follows: Receipts, \$937.28; disbursements, \$620.65. On hand, May 18, \$302.63. To this will be added more than \$50 from 'Notes of the Audubon Society,' published in the *Express*, not yet paid in. The Bird Almanac netted the Society \$68.71. The copies that remain unsold may be obtained free from Miss Mary Ellis, 763 Bird Avenue, by members of the Society or by teachers who have formed Junior Audubon Circles. The postage is 5 cents for Buffalo. For the seventh year 'Notes of the Audubon Society' have (since March 8) appeared weekly in the *Illustrated Sunday Express*. One-half value of published articles is returned to the writers. The Junior Audubon work is very prosperous. The Director, Miss Mary Ellis, is untiring in the work; and as many Circles have been formed during this as in past years. The Migration Calendars in the *Express* have been in charge of Miss Caroline L. Doll, whose efficient service is appreciated by

many readers in western New York. At the direction of the Executive Committee, the Secretary prepared an article on "How to begin Bird Study," and mailed it to twelve newspapers in Erie County, outside of Buffalo. Copies of papers containing the printed article were returned by the publishers to the Secretary.

Four bird identification walks, free to members of the Audubon Society, were conducted by the Secretary in May. Nineteen bird talks were given by members during the year, under the auspices of the Society: C. B. Hersey gave three, H. C. DeGroat gave two, and the Secretary gave fourteen. Ten new lantern-slides have been added to the set owned by the Society. There are now sixty-five slides, all in perfect condition. Seven members of our Society were sustaining members of the National Association of Audubon Societies the past year. The Tri-State Bird Contest for 1916 was won by western New York. Owing to the much-regretted death of Rev. Reuben F. Randolph, who originated the Tri-State Contests, a challenge from New York has not been accepted for 1917.

The past year has furnished an opportunity to every member of the Society to help further protective legislation. Calls were received as follows: August, 1916, to protest against an extension of an open season on wild-fowl in any part of the county; September, 1916, to help save Lake Malheur, Ore., as a bird reservation. February, 1917, to help in passing the Migratory Bird Treaty Act; March, 1917, to endorse the State Legislature imposing a tax on cats. The response of members to these calls for help have been most gratifying.

Realizing the need of educating the general public regarding bird helpfulness to man, bird laws, and how to have laws enforced, 25,000 copies of a circular fully explaining these points have been printed and distributed in more than 100 schools of Buffalo and western New York. Additional circulars are in the hands of the Secretary, Miss C. A. Doll, 587 Ellicott Street. Upon request they will be sent, to the number of 100 or less, to persons or places where they would be helpful. Members are asked to give thought to this offer. A special meeting of the Audubon Society, held May 5, led to a change in the administration of the affairs of the Society. At the annual meeting of May 18 a new constitution was adopted. Officers and Directors were elected as follows: President, Dr. Channing E. Beach; Vice-President, Dr. Anne E. Perkins; Secretary, Miss Caroline L. Doll; Treasurer, Miss Harriet S. Baker; Directors, Miss Mary Ellis, James Savage, J. M. Overfield, Jr. According to the new constitution of the Society, the annual meetings are to be held the third week in February. Dues are payable (in advance) March 1 of each year.

The Secretary has received a most courteous response from all newspapers when requested to give publicity. The appreciation of the Society is due to our printer, Charles M. Nicholson, of 84 Ellicott Street, for the interest he has, for seven years, shown in rendering prompt and accurate service at a very moderate price. In closing a service of eight years, on account of the removal of



COVER OF A LARGE BIRD CALENDAR ISSUED BY THE BUFFALO AUDUBON SOCIETY

her home from Buffalo to Riverside, Cal., your Secretary desires to express her sincere appreciation to the Society for the freedom that has been permitted her, for the confidence shown in her, for the loyal responses to her many requests for assistance, for the many kind words expressed, and for the goodly amount of work accomplished through the united efforts of the members. Under the new officers, with its large membership, healthy bank account, and a splendid foundation on which to build, the Audubon Society of Buffalo should render additional service to its members and to its larger field of work—all western New York.—MRS. G. M. TURNER, *Retiring Secretary*.

Burroughs Junior Audubon Society (Kingston, N. Y.).—Our Society was organized in the fall of 1915 with about 80 members. Each year new members have been added. Our meetings have been held monthly, at which time different birds, their habits, etc., were discussed. During the past year we visited John Burroughs, the naturalist, at his home in West Park, N. Y., saw and inspected 'Slabsides' and enjoyed a most profitable experience. Mr. Burroughs himself was a guest at one of our meetings and told many interesting stories of his acquaintance with birds. His granddaughter is a member of our Club, and this week was elected Secretary.

Last February we hired Edward Avis to give his lecture-recital 'Birdland.' This was illustrated with stereopticon-views, and various birdcalls were given by him. With the proceeds of this lecture we purchased several additional books for the bird library, Victrola bird-records, field-glasses, bird-houses, etc. Some of the boys are making feeding-stations now for the coming winter. Just before school closed we donated \$30 to the Red Cross.

Last April, on State Bird Day, we gave the little playlet which was published in BIRD-LORE, in the school assembly.

We are trying to create a wider interest in birds and hope to make the coming year the most successful one we have had.—(Miss) JENNIE H. MAUTERSTOCK, *President (Honorary)*.

Cayuga (N. Y.) Bird Club.—Seven morning trips for the study of birds completed the fourth successful year of the Cayuga Bird Club. These trips were held in the Bird Club Sanctuary Saturday mornings, from April to June, and were well attended, requiring three or four sections each morning. L. A. Fuertes, A. A. Allen, Mrs. A. A. Allen, and C. W. Leister acted as leaders, and, owing to the retarded vegetation, unusual numbers of birds were seen.

The number of public lectures was this year reduced, but the activities of the Club in other ways surpassed previous years. The annual Field Day, usually held in the Bird Club Sanctuary, was this year altered so that the Club might cooperate with the city authorities in the establishment of a new park in Six Mile Creek Glen. Benefiting by their previous experience in the Sanctuary, the 700 or 800 school-children ably assisted in the building of the



DEDICATING THE ARCH AT THE ENTRANCE OF THE CAYUGA BIRD CLUB SANCTUARY.
 Photograph by A. A. Allen.

paths, the clearing of brush, and the planting of wild flowers in this new park. The Bird Club, with the help of Mr. Bush, the manual-training instructor, instituted a bird-house competition in which about 75 boys took part. Excellent nesting-boxes were built by the boys, and these were put up in the new park as one feature of the exercises.

Another successful enterprise with which the Cayuga Bird Club cooperated was the establishment of a program of wild-life conservation in connection with



RUSTIC BRIDGE AND FEEDING-ARCH, CAYUGA BIRD SANCTUARY.
 Photograph by A. A. Allen.

Farmers' Week at Cornell University. The program consisted of a series of lectures by eminent authorities in the various fields of wild-life conservation and an elaborate exhibit, and was concluded by a banquet tendered to the visiting conservationists. It is planned that this program shall become a permanent feature of the annual gathering of the farmers of the state at the State College of Agriculture at Cornell University.



LOUIS AGASSIZ FUERTES AT THE FUERTES ARCH EN
TRANCE OF CAYUGA BIRD CLUB SANCTUARY

Photograph by A. A. Allen

Equally successful was the movement to construct a suitable arch at the entrance to the Bird Club Sanctuary. A concrete arch was designed by President Fuertes, and funds for its construction raised by public subscription. The ground had been prepared for it on the previous annual Field Day, when the children, with great eagerness, had placed their names in a steel box to be incorporated in the foundation of the arch. Upon the completion of the arch,

appropriate dedication exercises were held, and the arch, which had been concealed by large American flags, was unveiled.

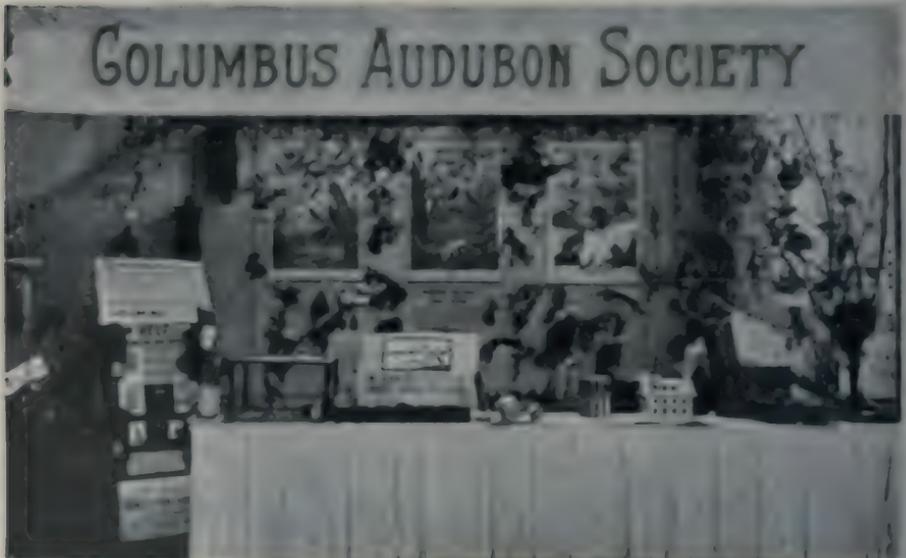
The usual work of feeding the birds in winter was carried on by the Club in its Sanctuary, and several hundred pounds of grain were given to the Ducks on Cayuga Lake. Through the generosity of James S. Taylor, a rustic feeding arch, similar to the one erected near the rustic bridge in the Sanctuary, was placed in the city cemetery, and this will henceforth be maintained.

Upon the resignation of the Treasurer, Mrs. S. A. Munford, because of leaving the city, a vote of appreciation for her efficient services was extended to her. Mrs. A. A. Allen was elected to the vacancy. The officers of the club are: Hon. President, Dr. Andrew D. White, President, L. A. Fuertes, Vice-Presidents, Mrs. J. H. Comstock, Mrs. A. W. Smith, W. D. Funkhouser; Secretary, Dr. A. A. Allen; Treasurer, Mrs. A. A. Allen.—A. A. ALLEN, *Secretary*.

Columbus (Ohio) Audubon Society.—Beginning in October with a very successful bird-protective exhibit at the Public Library, the Columbus Audubon Society has held a meeting each month. Three illustrated lectures were given. Sixteen field-trips have been taken, and \$150 worth of prizes were distributed in the bird-house contest in March.

In January, Ernest H. Baynes lectured on 'How to Attract Wild Birds.' In February, Prof. Lynds Jones talked of the 'Value of the Quail to the Farmer.' At the beginning of the garden season Prof. Hobert Osborn, of the Ohio State University, lectured on the relation of birds to injurious insects.

During the Bird Exhibit 39 new names were added to the membership.



BIRD EXHIBIT OF THE COLUMBUS, OHIO AUDUBON SOCIETY

Over 90 people joined the Club at the time of Mr. Baynes' lecture. The field-trips have been the means of attracting 35 more, making an addition of 171 new members.

Among the 3,000 visitors to the October Exhibit were about 400 students from the State School for Deaf Mutes. These children eagerly grasped everything explained to them. They afterward wrote creditable essays on what they had seen, some of them closing with "I wish to hear the song of birds." Many pupils and teachers from the State School for the Blind attended Mr. Baynes' lecture and are planning to make bird-houses for the next contest.

Space was given the Audubon Society for an exhibit at the State Fair in August, in order to reach the farmers. The farmers showed more appreciation of the display of birds and their nests, weed seeds, winter foods, etc., than did the city people. One country woman remarked, reminiscently, "Oh, yes, I know the Quail, he hollers nice." The men were glad to get the National Association's 'war' posters to put up on their farms. Many of them told of feeding the winter birds. People from nearby towns asked for information about starting bird clubs and were interested in the bird books displayed. Besides the 'war' posters given out to the farmers, the Boy Scouts put up numbers of them in the parks and surrounding country.—LUCY B. STONE, *Secretary*.

Cumberland County (Maine) Audubon Society.—November 3, 1916, in the first snowstorm of the season, a little band of seven people gathered at the Natural History Rooms to form a society for the study and protection of the birds. Though small in number, the enthusiasm was great. Those present were made a committee of the whole to obtain new members, and though not yet a year old, we have an active membership of 107. We met once a month until June, when outdoor walks took the place of indoor meetings.

On January 7, Arthur H. Norton, the well-known ornithologist of our own city, gave an illustrated talk on 'The Mockingbird' that was wintering in one of our parks. In February, letters were sent to our Congressmen in regard to the Migratory Bird Treaty, and replies from them, promising their support, were received. In April, Ernest Harold Baynes gave us a much-enjoyed lecture, and in May, Mr. Bisbee, of our own city, gave us an illustrated lecture.

No 'war' bird posters have been put up as yet, but we are now working for that, as well as arranging for the winter feeding of the birds. We have all enjoyed the work and meetings, and feel that a foundation has been laid for much good work in the future. Our later reports will prove if this be so and if we are doing our part to keep the birds with us.—ADA OGDENSE FOGG, *President*.

Detroit (Mich.) Audubon Society.—The Detroit Audubon Society was organized May 8, 1916, at the home of Mrs. Edward F. Rush, who became the Society's most efficient Secretary. The program for the winter included an

interesting lecture by J. H. McGillvray, of the Public Domain, on 'Forestry and Birds.' A fine series of slides illustrated the work the Game Commission and the Forest Scouts are doing in the state. The Society joined with the Conservation Department of the Federation of Women's Clubs in holding an exhibit of bird-houses and bird-shelters made by the boys of the manual training classes of the public schools. A beautifully illustrated talk on shore-birds was given by G. L. Abbott, of Grosse Pointe Shores, at this time.

Field-outings were held during the months of October, November, and December. The Chairman of the Field Committee, Mrs. F. W. Robinson, secured the cooperation of the Commissioner of Parks and Boulevards in an effort to feed the birds on Belle Isle during the winter. Two shelters were built at his direction and placed in locations chosen by the Committee. The result was a decided increase in the number of winter birds on Belle Isle. The children of the Junior Leagues made weekly trips all winter to carry food for the birds. On February 10 they found a Bluebird feeding, making the earliest Bluebird record for Detroit, so far as we know.

Six Junior Leagues, with an enrollment of 174, were organized by Miss Gertrude Gilmore, Chairman of the Junior Leagues Committee. Two new Leagues and many new members have been added this fall. This work was begun in the school-gardens of the city.

The Detroit Audubon Society responded to the call to help save the Migratory Bird Law from ruin.

Nicholas Woods, of the Game Committee, had the Michigan state law relating to birds translated into several languages and posted in the foreign districts. The President has given twenty-five talks, most of them with slides, before schools, libraries, and clubs. Much interest and enthusiasm for birds and their protection has been shown, especially among the school-children.—
MRS. JEFFERSON BUTLER, *President*.

Doylestown (Pa.) Nature Club.—The Doylestown Nature Club has increased in membership and activities to a marked degree since the report sent to the National Association of Audubon Societies last October. Our membership now numbers 167. At the regular meetings which take place on the second and fourth Mondays in the month, the following subjects were studied and presented: The Wind in Poetry, Water Fowl, A Study of Roots, Ferns in their Native Haunts, Emerson as a Poet of Nature, Luminosity of Insects and Other Organisms, Poisonous Plants, Birds of Prey, Nature's Highways and Byways, Seed Travelers, Wonders of the Sea, Serpents, A Symposium, Nature's Calendar. A talk on 'Sweet Peas up to Date,' was given among a thousand hybridized sweet peas at W. Atlee Burpee's Seed Farm, Doylestown, in June by the sweet pea expert, George W. Kerr.

C. F. Choffner, founder of the Liberty Bell Bird Club, gave a stereopticon lecture on the value of birds in the public school, to which the school-children

were invited. An illustrated lecture on the constellations was given by William Henry Frome in the open on a perfectly clear moonlight night in July. A huge screen was erected in a field on a hill on which the pictures were plainly seen after dark, the members being seated on the ground. At the conclusion of the lecture, thirteen brave members slept on straw under the open sky, along the Neshaminy Creek, at Dark Hollow, a place rich in Indian legends, remote from the habitations of men, with a mangy dog and a flashlight for protection. By a huge campfire, a midnight feast was prepared, also a 5 o'clock breakfast the next morning. Dr. Edward William Geil, the



A VIEW IN THE BIRD SANCTUARY OF THE DOYLESTOWNS, PA. NATURE CLUB.

noted traveler and lecturer, will give a talk before the Nature Club in January on 'Ants and Ant Hills.' Dr. Henry C. Mercer, of Moravian Pottery fame, is booked for the lecture on 'Historic Trees,' in November. Most of the Club's lectures are given in the public school to create an interest among the pupils in nature studies. The Nature Club for two years has made a plea for the protection of wild flowers by posting notices along the roads. May 12, the annual sunrise walk, to study the migration of Warblers, was enjoyed by 50 members, with a gypsy breakfast afterward in the woods at 6 o'clock. For nine years, the Nature Club has been taking these sunrise walks, and no matter what the condition of the weather at 4 A.M., a large percentage of the members has been ready to start at that time.

The annual canal-boat trip was taken Saturday, September 22, with 76 people on board. The route, from New Hope to Point Pleasant, Pa., along the Delaware Valley, was most interesting, abounding in fall flowers, ferns and beautiful grasses on the banks of the canal, and attractive bungalow homes lent much interest to the scene. While an informal talk on 'Rock Formation,' a Victrola and ukulele music varied the monotony of speed-locomotion by mules.

We have indorsed every bill presented relating to bird protection. Efforts have been made to have an ordinance in Doylestown taxing pet cats and eliminating stray ones in the interest of birds, but the Club has only been able so far to agitate the matter through the press and create more of a sentiment for



A CANAL BOAT TRIP OF THE DOYLESTOWN, PENNSYLVANIA, NATURE CLUB

bird-protection. The Bird Sanctuary of the Nature Club is situated at Fonthill, the estate of Dr. Henry C. Mercer, and comprises 10 acres. A third of it is wooded, with plenty of water, and berries, fruits and weeds allowed to grow wild for bird-food. Many bird-boxes, for nests, and feeding-boxes are placed in appropriate places, and in winter systematic feeding of the birds is done. An old stone house built in 1755, situated in the heart of the Bird Sanctuary, has been loaned to the Nature Club by Dr. Mercer, and a museum of natural science has been started there with many interesting specimens.—ELIZABETH F. JAMES, *Secretary*.

Englewood New Jersey Bird Club.—Last April the Englewood Bird Club entered the third year of its activities with a large membership, one-third of which is Junior—that is, under eighteen years of age.

During the past months men of reputation in the bird world have inspired us. Among them, Charles C. Gorst, of Cambridge, Mass., by his remarkable imitations of bird-songs; Howard H. Cleaves by his 'Experiences in Wild Bird Photography,' Herbert K. Job, by his helpful talk and wonderful motion-pictures, and Mrs. Mabel Osgood Wright, who pointed to us the way of 'The Making of a Bird Sanctuary.'

From time to time letters have been written our Congressmen relative to the passage of such bills as the Migratory Bird Treaty Act, the Cat License Bill, etc., in the good cause of bird-conservation.

A specially delightful feature of the spring was a series of bird-walks under the competent leadership of Howard H. Cleaves of the Staten Island Museum, Charles H. Rogers of the American Museum of Natural History, and others. When nearly 40 members tumble out of bed to meet at a remote station of the town at 6 A. M., the enthusiasm may be taken for granted, but—(*addendum*)—Dr. Frank M. Chapman was our leader!

Recently the following officers were elected: President, Dr. Frank M. Chapman; Vice-President, William M. Shackford; Secretary, Miss Irene A. Hackett; Treasurer, Howard Barton.—(Miss) ELIZABETH A. DANA, *Secretary*.

Forest Hills Gardens (N. Y.) Audubon Society.—A noticeable increase in the number and variety of the birds visiting the Gardens and remaining there to make their nests is the most important thing to record for the spring and summer of 1917. It is believed that this increase is due to the fact that in Forest Park the underbrush has been cleared away and the natural cover so destroyed that the birds have taken refuge in the Gardens where the shrubbery has grown rapidly and where there is abundant food, water and protection. Only the vagrant cat remains a problem, especially to the little, low-nesting birds.

The Society lost its efficient President, E. A. Quarles, and gained a genuine bird- and nature-lover and knower in Fritz Hagens. Two lectures, one by Nell Morrow Ladd, President of the Greenwich Bird Protection Association, and one by Mr. Button of the State College of Agriculture, N. Y., were given during the year. But the main efforts of the Society were concentrated on an exhibit of local birds which was held during the Easter holidays at the schoolhouse. Besides the specimens of stuffed birds, there were charts and other educational matter loaned by the American Museum of Natural History, the Children's Museum of Brooklyn, and the National Audubon Society. Some one of the trustees was in charge each day, and each afternoon there was some sort of entertainment. One day Mrs. Schoonover, from the Children's Museum of Brooklyn, gave a talk, and another time the Garden Society gave a copy of Reed's 'Bird Guide' to the boy and girl able to name the most birds out of a possible list of twenty-five.

A feature of our work which is continuous throughout the year is the

lamp-post bulletins which give items of bird news and show appropriate pictures.

The Society made a particular effort to provide adequate winter feeding during the early spring snow- and sleet-storms which meant starvation and death to the birds unfortunate enough to be caught at that season. It also distributed free 100 pounds of chick-feed, and at different times put out 15 pounds of suet in especially designed wire baskets.—MARY EASTWOOD KNEVELS, *Secretary*.

Frankfort (Ky.) Bird Club.—Our Club was organized in July, 1916, following a lecture by Ernest Harold Baynes. In October, Mrs. McBrayer Moore, President of the Bird Club of Versailles, Ky., a neighboring town, came before the Club and gave an interesting talk on the different characteristics of birds, as well as on the separate functions of the wings, tail, feet, and bill of a bird. Mrs. Elizabeth King Smith, of Lexington, Ky., addressed the Club in January of this year, telling her experiences with birds during the last fifteen years. In April, another speaker from Lexington, Mrs. W. L. Maclain, gave an interesting talk on the songs of birds.

Last winter many persons became interested in feeding the birds during snowy weather, due largely to a campaign waged in the interest of the feathery tribe by members of the Club and by friendly newspaper articles. The Boy Scouts put out a good many seeds. The school-children in general were much interested, and a feeding-station was established in the cemetery.

Several bird-walks were conducted by older members of the Club for the Junior members, and many of the children taking manual training made bird-houses. Audubon buttons and printed matter on birds were furnished each Junior member. Another Bird Club was organized by a member of the Frankfort Club, a teacher in a suburban school, and all the pupils evinced much interest.

At one time in the late winter, while snow was still on the ground, large flocks of Robins arrived in Frankfort, and several bird-lovers entertained literally hundreds in their back yards for several days. One member of the Club solved the problem of how to take care of the birds when the snow was on the ground in January, by sweeping the snow from the roof and sill of her library bay-window, which was directly below the sill of an upstairs window, and filling the window-sill and roof with bread-crumbs, hominy, rice, and hemp seed. The ground-feeders were not forgotten and reveled in all the bird-seed they could eat, feeding on a snow-cleared path. She reported the following birds as her visitors: a Blackbird, Crow, Yellow-hammer, Chewink, Blue Jay, Mocking-bird, several Cardinals, Tomtits, Chickadees, Fox Sparrows, Woodpeckers, Juncos, and the ubiquitous English Sparrows.—HARRY G. BRIGHT, *Secretary*.

Glenville (W. Va.) Normal Bird Club.—Our Club was officially organized March 30, 1917. We have an enrollment of 52 members, and at least 30 of these are young teachers, while a large majority of the rest expect to teach.

During the last five years we have studied birds in connection with a Nature-study Course offered in the Normal School. A study of birds is required of all Nature-study students and comprises nearly one-third of the course.

Beginning in the early spring and continuing until sometime in June, we make two bird-study trips every Saturday morning. The first group starts at 5.30 and the second one at 8 o'clock. These trips are under the guidance of the biology teacher, E. R. Grose, who is a most efficient student of birds.

Last winter there were four feeding-boxes put up by members of our Club, and two of these were so arranged as to be seen from the windows of the Training School.

Miss Ina Barnes, Supervisor of Training, contemplates organizing a Junior Bird Club in the Training School this year.

Our Club has ordered a number of the cloth 'Warning Notices' and is going to post them about our town and in the rural community surrounding it. We feel that many people take no action against the mistreatment of birds through sheer ignorance of the law concerning them.

We have also distributed the following publications of the National Association of Audubon Societies among our members: 'Audubon Movement,' 'Formation of Bird Clubs and Audubon Societies,' 'Women and the Birds,' and 'Cemeteries as Bird Sanctuaries.'—EDGAR I. HATFIELD, *President*.

Hartford (Conn.) Bird-Study Club.—The past season has been a busy one for the members of our Club, as a copy of our Year Book will indicate. We have held twenty-four indoor meetings and twenty field meetings. Despite the number of persons engaged in the great war's activities, our average attendance at both indoor and outdoor meetings has been good. As heretofore, the greater part of talent for our indoor meetings has been supplied by our own members. During the season, however, we have been favored with illustrated lectures by Charles Crawford Gorst and Clinton G. Abbott, which were largely attended and much enjoyed.

Many rare and unusual birds have been seen on our outings, among which might be mentioned the Little Blue Heron, Whistling Swan, Widgeon, Gadwall and Canvasback Ducks, White-rumped and Pectoral Sandpipers, Golden and Black-bellied Plover, Pileated Woodpecker, Snowflake, Evening Grosbeak, both varieties of Crossbills, and Connecticut Warbler. On one of our field-trips we were privileged to see a female Worm-eating Warbler on her nest within a few feet of us, and located not 60 feet from the nest of a Whip-poor-will. The nest of a Rough-winged Swallow was also observed.

Over 40 pounds of bird-seed have been fed at one windowsill feeding-tray

to a flock of Evening Grosbeaks—the location being in the city where houses are close together.

The Club drew up and presented to our last Legislature what it considered a model cat license bill, but was unsuccessful in having it enacted as a law. We are not discouraged, however, and shall make another effort at our next legislative session to have the bill become a law. Largely through the efforts of our Club, a joint field meeting was held in May of this year at 'Birdcraft Sanctuary,' Fairfield, at which meeting twenty different nature clubs were represented by upward of 300 people. At this meeting the Connecticut Federation of Bird and Nature Clubs was formed and a constitution adopted. This Federation had been in process of completion for nearly five years.

Our Club is now planning the organization of junior departments for the benefit of the younger people located in the many suburbs of Hartford, in order that meetings may be held in close proximity to the homes of the children, with the idea in mind that to preserve the bird-life of the future we must cultivate the junior nature-lover of today along the right lines. Many bird-boxes have been erected by Club members during the year, with varied success. Personally, I have had nesting in my front yard four varieties of birds, within an area of 50 feet square, in boxes which I erected for their use.

We would appreciate suggestions from anybody who may be interested concerning the organization and operation of junior departments above referred to.—ARTHUR POWERS, *President*.

Los Angeles (Cal.) Audubon Society.—The activities of the Los Angeles Audubon Society have been directed the past year along the lines of the economic value of birds. We have been addressed by the following speakers: Mrs. Wm. Folger, past President of the North Dakota Audubon Society; Dr. L. B. Bishop, of New Haven, Conn.; Mrs. Hatch, of Imperial Valley; Mrs. H. D. Moore, of Seattle; Dr. Mary Hart, of Alaska; Mrs. Charles A. Wiley, of the Forestry Department; Prof. Alfred Cookman, of Long Beach; Dr. Emily Hunt, Pasadena; and Mrs. G. H. Schneider, one of our own members, and now holding the office of 'official speaker' of our society, who reported active bird work among the Boy Scouts, schools, clubs, etc.

We have had, besides the indoor meetings, nine field-day trips to beaches and cañons, and one reciprocity program for women's clubs in the District Federation. A charming playlet, 'The California Woodpeckers' Convention,' was given. It was written by our able President, Mrs. F. T. Bicknell, and Mrs. Robert Fargo. We have created the new offices of Official Speaker, Custodian, District Federation Secretary, Historian, and District Press Chairman. Our President has been appointed District Chairman of Birds, and our honorary member, Mrs. Harriet Williams Myers, Chairman of the National Federation.

At each indoor meeting we have had interesting reports of the birds seen at



LOS ANGELES AUDUBON MEMBERS STUDYING THE TULE WREN AT DOMINGUEZ SLOUGH

Photograph by Mrs. F. T. Hicknell

the previous field-day; have held nine Board meetings through the year, have had our annual pilgrimage to Fellowship Hill, and the usual day in June with the Pasadena Society, as their guests. We are working hard to secure a cat license for our city. We have been able to secure protection for water-birds at Silver Lake, near Los Angeles. In legislative work we have helped secure pro-



A LOS ANGELES AUDUBON MEMBER POSTING ONE OF THE NATIONAL ASSOCIATION'S "WAR" NOTICES IN THE CLEVELAND FOREST RESERVE IN THE SAN JACINTO MOUNTAINS, CALIFORNIA



MRS. F. T. HICKNELL,
President of the Los Angeles Audubon Society

tection for Blackbirds, Meadowlarks and Flickers, and the amendment to the hunting license limiting the age of applicants to not less than fourteen years.

We have had notices of meetings posted in all libraries and have joined with the Pasadena Society and all interested in birds and formed an 'Audubon Council' at which, after an enjoyable luncheon, we discuss all Audubon matters and find this of material benefit.

At the State Federation Meeting of Women's Clubs in Pasadena, our Society participated, and on request furnished an attractive exhibit of a mounted black cat, amid trees and shrubs, holding an Oriole in its mouth, and a nearby poster announced it to be 'The Birds' Worst Enemy.'

We have added a number of rare mounted birds to our Museum—birds found disabled or dead—and have also secured over \$150 to build a bird fountain in Exposition Park. The President has had over five dozen 'war posters' put up during the summer. During the field-trips, and 'trail' trips conducted through the summer, there have been observed 125 species and 4,310 individual birds.—(Mrs.) GEORGE H. CRANE, *Corresponding Secretary*.

Maywood Ill. Bird Club.—Our Club was organized March 6, 1917, at the home of Samuel A. Harper, its founder and President. An able lawyer, a successful business man, a social worker, two women active in club and civic affairs, a minister, and a grade school principal compose its directorate. Active membership numbers a few less than 100 persons. Meetings are held in the village hall. The Club is a sustaining member of the National Association of Audubon Societies and a contributing member of the Illinois Audubon Society.

As a mark of recognition, the Club has elected to honorary membership three sons of Illinois who have attained eminence as ornithologists: Robert Ridgway, Benjamin T. Gault, and Ruthven Deane. Other honorary members are the presidents of the village School and Library Boards, and the teachers of Junior Audubon Classes in Maywood and Melrose Park schools.

The Club printed and distributed two circulars containing information about nesting boxes and the security of their tenants from cats and English Sparrows. Copies of articles on the protection and encouragement of birds were distributed at meetings, village ordinances relating to these matters were reprinted in the local papers, and items on the Club and its work and on the cat were contributed. At the request of the Club, Dr. W. A. Evans wrote, in the *Chicago Tribune*, a health article on cats entitled, 'Cats Only a Menace.' Ten copies of the Biological Survey poster, 'Feed the Birds This Winter,' were displayed as soon as they came off the press. The Maywood Public Library is adding a few bird books each month, selecting titles from a list submitted by the Club.

This spring, the Maywood Twentieth Century Club offered prizes to school-children for the best three essays on birds written by girls and for the best

three nesting-boxes made by boys. The contest was a great success. The Bird Club will urge the women to hold this contest each spring. Supplementing this, the Maywood Bird Club fostered the making of nesting-boxes by the boys during and after school hours. Over night, it seemed, bird-boxes grew on trees and posts and buildings everywhere until there were more houses than bird families.

Maywood now has a model cat ordinance, framed by the Club and passed by the unanimous vote of the village Board. The opposition, by a futile petition to the Circuit Court to enjoin the village Board from enforcing the ordinance, gave it statewide publicity and thereby made it a precedent. Being based on the law relating to public nuisances, it declares stray and unrestrained cats to be a source of damage to gardens and a menace to public health and bird-life. It provides for the killing of all stray cats and the confinement of all other cats between 7 P. M. and 9 A. M. every day from April 1 to September 30, inclusive. All persons are given the right to kill any and all cats trespassing on their premises. Fines are imposed for violations. The Maywood Bird Club asked the Illinois Audubon Society to assume the responsibility of securing an amendment to the Illinois statutes which will enable villages and cities to pass ordinances compelling the licensing of cats.

April 3 is now a red-letter day in Maywood. This spring it was John Burroughs' eightieth birthday. On that day, in honor of Burroughs and Audubon, the Club organized Junior Audubon Classes and created the Burroughs Association of Junior Audubon Classes as a department of the Club through which to assist them. When school closed in June, 12 classes, with an enrollment of 330 children, had been organized. The Club is now putting the matter before each of the remaining 50 teachers with the hope that every school-boy and girl in Maywood and Melrose Park will soon be wearing a button with a Robin on it. As protection and encouragement naturally follow enlightenment on bird-life, and as bird-lore greatly adds to the joy of living, the Club considers the organization and moral and material support of these classes of first importance. —ROY M. LANGDON, *Secretary*.

Meriden (N. H.) Bird Club.—Our Club began the year by issuing its Third Annual Report. This document is in the form of a book containing 114 pages and 32 half-tone illustrations from photographs. The following important letters, recently received by our General Manager, also appear in the Report:

MY DEAR MR. BAYNES:

I have heard with sincere interest of your campaign in behalf of American birds, and want to give myself the pleasure of expressing my great interest and of wishing you the most substantial success.

Cordially yours,

(Signed) WOODROW WILSON.

MY DEAR MR. BAYNES:

I wish you all possible success in your movement. Few things mean more for the attractiveness and beauty of the country life than the establishment of those bird clubs, and this entirely apart from their general utilitarian significance.

The Meriden Bird Club has been an example of inspiration to all of us, and I earnestly hope its example will be followed throughout the country.

Sincerely yours,

Signed THEODORE ROOSEVELT.

Through our influence, bird clubs have been formed recently in Topeka, Kans.; San Antonio, Texas; Yonkers and Millbrook, N. Y.; Northfield, Bradford, and Lunenburg, Mass.; and at Wellesley College; and many clubs previously organized have been persuaded to join the National Association of Audubon Societies.

The Club has had interesting lectures by Herbert K. Job, Robert Cushman Murphy, Henry Oldys, Lawrence Smith, and Ernest Harold Baynes.

The students and faculty of Kimball Union Academy have shown unusual interest in our work this year, and the senior class has pledged itself to support the Bird Club in every possible way.

For the third successive year, the Congregational Church at Meriden recognized 'Bird Sunday.' Services were held in the Sanctuary as usual, and Mr. Baynes delivered a sermon on 'Our Bird Allies in the World's War.' Mr. Wilfred Barnes furnished violin music, and the pastor, Rev. Noble O. Rowley, conducted the service. The offering was divided between the Church and the Bird Club.

In August, the Ben Greet Players gave two performances of 'As you Like It' on the stage in the Sanctuary, and the Club made a net profit of \$85.

In September, the General Manager delivered a lecture for the benefit of the local branch of the Red Cross Society.

'Sanctuary Day' was held on Monday, October 8, and sixteen women, sixteen men, and two horses worked in the Sanctuary with a view of making it more attractive, both to the bird tenants and their human visitors.

Our members have put up thirteen war posters supplied by the National Association of Audubon Societies.—(Miss) ELIZABETH BENNETT, *Secretary*.

Minneapolis Branch, Minnesota Game-Protective League.—Most of the work being done by the Minneapolis Branch is more or less a duplication of the work done during 1916.

Briefly, the new work accomplished by our League the past year is as follows: During the last session of the Legislature, eleven out of twelve bills in which we were interested were passed. Among the most important of these were: A close season on the Ruffed Grouse for three years; the cutting in half of the open season and bag limits on Prairie Chickens or Pinnated Grouse, Sharp-tailed Grouse and Quail; stopping of shooting from automobiles; an Alien Gun Law similar to that in force in the State of Pennsylvania; the age-limit taken from

the Hunter's License Law providing that all persons over fourteen years of age, instead of twenty-one, must take out a license to hunt, protection of bear, gray and black fox squirrel which have not had protection in the past in Minnesota, and a law providing for the codification and revision of the Game and Fish Laws to be presented to the next session of the Legislature; also, an appropriation of \$15,000 for the maintenance of a State Game Farm for two years. Upon this appropriation being made, the Minneapolis Branch turned over to the State, on May 1, 1917, the Big Island Game Farm where more than 3,000



PINNATED GROUSE, OR PRAIRIE CHICKENS, AFTER BEING CURED OF JIGGER; AND READY TO LEAVE THE HOSPITAL.

birds were reared and distributed this year. The Minneapolis Branch maintained the same number of paid employees as given in the Annual Report, with the exception of the Big Island Game Farm where I am now employed by the State as Superintendent of Game Propagation.

Since the Minneapolis Branch started, in March, 1915, with a paid Field Secretary, much work has been accomplished, especially in the way of establishment of game refuges. The Refuge Law was passed in 1915 through the efforts of the Minneapolis Branch. The Minnetonka Game Refuge, covering 60,000 acres, was the first refuge established under this law. There are now more than 2,000,000 acres in game refuges, which include the Superior National Forest

and State Parks. Minnetonka Refuge recently has been increased to 85,000 acres, which makes about 100,000 acres in game refuges now cared for and patrolled under the auspices of the Minneapolis Branch. Public sentiment in favor of wild-life conservation has been very noticeable during the past two years, especially in regard to the protection and care of the song and insectivorous birds and in game-breeding. The literature and books put out by the National Association of Audubon Societies has probably done more in helping to create this sentiment than anything else. Several hundred copies of the Bulletin on 'The Breeding of Upland Game Birds and Aquatic Fowl,' written by Mr. Job, were distributed throughout the state. Without these Bulletins it is not likely that game-breeding in Minnesota would have received the attention that it has. Many of the notices put out by the National Association of Audubon Societies during the past year, against the slaughter of birds, were received and posted by wardens employed by our League.

The war has stopped the taking up of any new work during the past few months, but the regular work of the League will be carried on as usual so far as is known now.—FRANK D. BLAIR, *Secretary*.

Natural History Society of British Columbia (Victoria, B. C., Canada).—

This year, for the first time, a Bird Section of the Society was formed, with Dr. Hasell as President and Henry F. Pullen as Vice-President. Several interesting round-table talks were given, illustrated by museum skins. The most interesting of these were by Frank Kermode, Director of the British Columbia Museum, Dr. Hasell, and Arthur S. Barton.

Note was made from time to time throughout the year of the scarcity of birds in this section of the country. This was supposed to have been caused by the severe winters of 1915-16 and 1916-17. From all over Vancouver Island similar reports arrived. All bird-life has been scarce, but especially the insect-eating migrants, such as the Warblers, Song Sparrows, Wrens, and Humming-birds.

Last winter there was an invasion of Western Horned Owls, caused, it is said, by unusual scarcity of rabbits in the northern interior. These birds attacked almost everything, but their favorite prey was the Chinese Pheasants which formerly were very numerous here. They were reported to have killed cats, puppies, and many species of birds. Hundreds of the Owls were shot, but some remained in the vicinity until spring.—H. F. PULLEN, *Vice-President*.

Newburyport (Mass.) Bird Club.—As the result of a lecture delivered in this city by Mr. Baynes, the Newburyport Bird Club came into existence, and was formally organized in November, 1916, as a branch of the Conservation Department of the Women's Club. It has since become an independent

society of about 70 members and seeks to cooperate with the State and National Audubon Societies in their aims and work.

The first year of the Club has been an interesting and successful one. Its individual members have endeavored to attract, feed, house and water the birds, and many of the school-children have become interested in this phase of the work. One of our members keeps a most accurate record of his observations the year round, and by comparing the records of several successive seasons has gathered some valuable information in regard to bird-life in our community.

Winthrop Packard gave an interesting illustrated lecture in the fall of 1916. Last spring we were favored by an afternoon with C. C. Gorst, whose wonderful gift of imitating bird-notes was much enjoyed and appreciated. This talk was inspirational as well as educational. One or two members addressed the Club during the winter months. In connection with the Gorst lecture there was an exhibition of Audubon leaflets, colored by the school-children under the direction of the Teacher of Art. This was honor work, and only the best 150 were selected. These leaflets, neatly mounted, adorned portions of the wall in the hall where the lecture was held. There were also specimens of bird-houses made by some of the school-boys. This small exhibit was afterward transferred to the Public Library for the summer, as an encouragement to the children and an incentive to further work.

A small, enthusiastic bird-class took walks in the spring, during a period of six weeks, under the direction of the well-informed members of the Club. Much pleasure and profit resulted therefrom.

This organization supported the passage of the Migratory Bird Law, through the Massachusetts Congressmen, at Washington. The cat and Sparrow questions have been discussed, but although some traps are in use, no genuinely satisfactory method of dealing with the problem has been found.

The Club hopes to continue doing good work through the coming year and especially to interest the children in a much greater degree.—(Mrs.) LORA D. MOORE, *Secretary*.

The North East (Pa.) Nature-Study Club.—Our Club was organized May 8, 1916, and has a membership of 25 enthusiastic men and women, boys and girls. The President and Vice-President are men of wide experience and careful study, which they are willing to share with others.

The regular meetings are held monthly from September to June, inclusive, one of the most interesting features being the specimens brought by each member, either labeled with a description of the same or for identification. As many as forty specimens are often presented at one meeting—some of them rare and beautiful and their display made possible only by the combined efforts of many. They include flowers, ferns, leaves, fungi, galls, berries

seeds, vines, mosses, lichens, birds and their nests, butterflies, moths, insects, frogs and bats.

The Club divided into groups to make a special study of one subject during the summer months and then report. The fern group studied under the direction of L. B. Cushman, who has a collection of at least twenty different species of fern growing on his private grounds. Two high-school girls did splendid work in the moth and butterfly field, having about fifty specimens mounted and ready to exhibit and describe. The different stages of the worm and the chrysalis, or cocoon, were also shown.

Robert Cushman, an entomologist stationed in the Lake Erie fruit-belt by the Government, spoke to the Club on the subject of 'Flowers and Insects.' Our Vice-President addressed the high-school students on 'The Protection of Our Songbirds.' The Club has placed two scientific magazines and a book on 'Moths' in the public library.

Members of the Club who travel often give us observations from other places, and word-pictures of Florida and the Adirondacks were made much more vivid to us by reason of our mutual knowledge of scientific terms.—(Miss) ALICE MOORHEAD, *Secretary*.

Pasadena Cal.) Audubon Society.—Our Society held seven meetings during the year, about six weeks apart, one of them in the afternoon, five in the evening, and the last was an all-day picnic outdoors.

At the first meeting Mrs. Harriet Williams Myers, Secretary of the California Audubon Society, gave a talk on the recent progress of Audubon work; Miss Alice Lockwood, of Sierra Madre, read a paper entitled, 'Our Feathered Friends as Weed-Destroyers.' At the second meeting we had an illustrated lecture on bird-life by Mrs. Granville Ross Pike, Bird Chairman for the Federated Clubs of the State of Washington, and lecturer for the National Association of Audubon Societies.

Wilfred Smith, one of the Directors of the California Audubon Society, and at that time its Acting President, was the speaker at our third meeting, and at our fourth, Mrs. Mary E. Hart, President of the Alaska Cruise Club, gave us a lecture on the 'Customs and Superstitions of the Alaska Indians,' with remarks upon the bird-life of that country. Mrs. William Folger, formerly president of the North Dakota Audubon Society, gave a delightful talk at our fifth meeting on the birds about her Dakota home.

At the sixth meeting, we enjoyed a talk by John J. Fredericks, Treasurer of the California Audubon Society, on the subject of his then-recent work in the cause of birds among the legislators at the state Capitol. The seventh meeting was the picnic, where our entertainers were three members of the Los Angeles Audubon Society. At all these meetings there were, besides the above, prepared papers or informal talks, or both, by our members.

Our Society has had made and placed on the roof of a tall bank building of

Pasadena a Martin box consisting of thirty rooms, in three stories. At Christmas time we placed a 'Birds' Christmas Tree' in one of our parks, in close proximity to the large municipal Christmas tree. We thought this might add to the children's interest in birds. In the winter we contributed \$200 each to the California Humane Association and the California Audubon Society, to aid them in important legislative work then pending. We were able to give this sum of \$400 through the generosity of Mrs. E. W. Brooks, since deceased, who was always a true friend to the birds.

We are annual members of the American Humane Association, The California Humane Society, Pasadena Humane Society, the National Association of Audubon Societies, the California Audubon Society, and the British Royal Society for the Protection of Birds.

Some of our members, in small groups, but not as a Society, have taken bird-walks now and then during the year, especially in the spring. A number of the National Association's 'war' posters have been put up.—MISS FRANCES K. WALTER, *Secretary*.

Port Huron (Mich.) Bird Club.—The Club has had the pleasure of hearing two public speakers during the year 1916-17. On October 20, 1916, Walter Tripp, of Forest, Ont., gave an interesting talk on 'My Bird Friends.' Prof. Hegner, of Ann Arbor, in connection with the Teachers' University Extension Course, gave a lecture illustrated by the stereopticon, February 8, 1917. In March, a bird-house campaign was started and work was zealously done by the school-children. On April 7, the exhibition of bird-houses was held in the Public Library, and prizes were awarded for best workmanship in high-school, seventh and eighth grades, and below the seventh grade. Prizes, also, for feeding-, drinking- and bathing-devices were open to all grades. The school having the most entries was given an Audubon Chart, thus stimulating interest in bird-study. Prizes were also given for bird stories. There were 115 entries in the exhibit, and the increasing number of bird-houses seen around the city shows splendid interest in the welfare of the birds. A fine present of bird food was given to the different schools, to be fed by the children to the birds in the winter-time when food is scarce.—MRS. JOHN GAINES, *Secretary*.

Rhinebeck (N. Y.) Bird Club.—The Rhinebeck Bird Club was just two years old when, on November 21, 1916, it became officially affiliated with the National Association of Audubon Societies. In that time it had grown from nothing to a vigorous club with the sentiment of the whole village aroused to a keen interest in its bird-life. During the last year it has, perhaps, been not quite so active, owing to the absence of the President on military duty and other urgent demands upon its members. Nevertheless, the usual program has been maintained, including public lectures, work in the schools, and publications.



1. PLACING SEEDS FOR BIRDS



2. CHICKADEE AT FEEDING STATION



3. CHICKADEE AT SUET STICK AND SUET BASKET.



4. CHICKADEE AT FOOD HOPPER.

Photographs by Clinton G. Abbott, Roseton, N. Y.

Herbert K. Job, William L. Finley, and Maunsell S. Crosby have been the lecturers so far this year.

One of the difficulties of the Club is the absence of a hall large enough to accommodate all those who desire to attend the lectures, for Mr. Finley two sessions were necessary. Junior Audubon work is flourishing in the schools, 262 Junior members being recorded at the last annual meeting. A contest in bird-feeding devices and nesting-boxes made by school-children brought forth so much excellent material that the judges had a hard task to select the prize-winners. In addition, commercially manufactured bird-boxes are always for sale at the headquarters of the Club and have been extensively purchased by members. Winter bird-food, amounting to ton figures, has also been used by members. For small users, the food is put up in 5- and 10-pound bags, marked with the name of the Club.

In the way of publications, the Club has distributed its Annual Year-Book, which this year included a reprint of twenty-two newspaper articles by the President, Maunsell S. Crosby. The booklet has proved of such value that it is being used as a textbook on birds in some of the schools of Dutchess County. At the proper seasons, the Club sent to its members and to all school-children tables of spring and fall migrations and nesting dates, also compiled by the President from his observations. Finally, illustrated Rhinebeck Bird Club 'stickers' for letters and parcels have been distributed broadcast through the town.—CLINTON G. ABBOTT, *Secretary*.

Rockaway (N. Y.) Bird Club.—In November, 1916, we completed the organization of the 'Rockaway Branch of the National Association of Audubon Societies' by forwarding our fee to the home office and becoming formally affiliated with the National work.

We have had two public meetings during the year, both of them lectures illustrated by stereopticon views. The first speaker was Herbert K. Job, of the National Association, and, it being our first attempt, the lecture was held in a small hall. We were delighted to find it filled to overflowing, with corridor and all available spaces occupied by standees. With this encouraging outlook, we held the second lecture by Baynes in a much larger hall. There was a splendid attendance and several dollars were added to our almost empty treasury.

The monthly programs have brought forth several interesting and valuable papers and talks on such subjects as 'Conservation as Applied to State Forest Land in the Adirondacks,' 'A Visit to Fairfield (Connecticut) Sanctuary,' 'Bird Migration,' 'Bird-Routes and Time-Tables.' An interesting part of each program is the round-table talks and the question-box with which we usually conclude our meetings. Bird-houses have been made and placed, several bird-baths made, feeding-stations established and kept supplied all winter, and ice in fresh-water ponds broken and the water made accessible to winter residents.

On January 1, 1917, when members were replenishing a birds' Christmas tree, several varieties of birds were seen drinking at a hole made in the ice within a few minutes of its being opened. Among these were Robins and a Red-breasted Nuthatch that passed the winter in the vicinity.

One of the most fortunate events that has occurred so far in the history of the Club is the establishment, by Mrs. Daniel Lord, of her estate 'Sosiego' as a bird sanctuary. The estate is bordered on one side by the salt-marshes near the ocean, and has a large fresh-water pond and a wood which has long since been appropriated by the Black-crowned Night Heron and the Little Green Heron as a sanctuary peculiarly their own. Members of the Club are privileged to visit the estate at any time for observation and study. We have taken an active interest in the Migratory Bird Law at Washington and have endorsed and circulated the petition for legislative work on the 'Robinson Act' for licensing of cats in New York state.

On June 16 the Club joined the Woman Citizens' League of Flushing, L. I., in a bird-walk and basket picnic, ending with a talk on birds by Dan Beard. In the same month we sent a special contribution of \$5 to the National Association in response to an appeal for money to carry on the work of further protecting the song-birds from ruthless slaughter. The Club received and placed in various haunts of the birds, both in Queens and Nassau Counties, 600 of the National Association's 'war' posters, printed on cloth, and is expecting to post 100 more of these when they arrive. The English Sparrow discussion has been frequent and animated, but, without organized and united effort of the entire community, it is nearly useless to attempt anything.

The townspeople, as a whole, do not seem keenly interested in Nature, but the Club hopes to reach many of these indifferent people through its various Junior Audubon Clubs, several of these having already been started by teacher-members of the regular society. If we can get enough of these formed, we will at least rest assured that we have laid a firm foundation for thorough and successful work in the future.—MARGARET S. GREEN, *Secretary*.

Rumson (N. J.) Bird Club.—Owing to the war, there has been a restricted activity in the affairs of the Rumson Bird Club this past year of 1917. We, however, have not been altogether inactive.

In January, we had a very interesting lecture entitled 'Wild Birds and How to Attract Them,' by Ernest H. Baynes, of Meriden, N. H. The lecture was held at the residence of the President of the Club. There was a good attendance, composed of all the prominent members.

In February, a lecture was given by the well-known bird imitator, Edward Ayts, in the People's Lecture Course at Oceanic, N. J., the expense of the lecture being defrayed by the President of the Rumson Bird Club. Beecher S. Bowdish, Secretary of the New Jersey Audubon Society, was present at this lecture and spoke, particularly urging the boys and girls to engage in a contest for the con-

struction of bird-houses, for which suitable prizes were awarded. There were three prizes, all in gold, which were presented to the successful contestants in March.

In April, Chapman's book, entitled "Travels of Birds," was distributed among the individual members of the Club.

We have endeavored to support the efforts of the National Association and have posted 250 parchment circulars in regard to bird-protection. This was done under the supervision of the Rev. Arthur A. McKay, of Oceanic, a part of the Borough of Rumson. Mr. McKay is at the head of the Boy Scouts in Rumson, and the boys were employed to distribute these circulars.

We have distributed approximately 150 bird-houses this fall, comprising those for Flicker, Nuthatch, Wren, and Bluebird, among the members of the Club. We expect to go still further with this work in the year of 1918.

It is the aim of the Executive Committee of the Rumson Bird Club to endeavor to stimulate interest in birds and their protection, particularly among the natives of the borough. Unfortunately, the Club has not had very much success at present in exciting much interest among the children of the wealthy summer residents. The Executive Committee is convinced that native children will be more receptive and show more interest in birds and their protection if some kind of stimulus can be placed before them. This we hope to do by offering yearly prizes for bird-house construction, engaging some well-known lecturer to speak as a part of the regular Oceanic Course of Entertainment, and always at the expense of the Rumson Bird Club.—JOHN B. LUNGER, *Secretary*.

Saratoga (N. Y.) Bird Club.—Our Club has held nineteen meetings during the year. The following addresses and talks have been given:

September, 1916, 'Forestry and Its Importance in Preserving Wild Life,' Prof. Samuel N. Spring, Cornell School of Forestry. November, 1916, 'Birds of Saratoga County,' S. R. Ingersoll, Ballston Spa, connected with Federal field-work; the meeting on this date was held with the Junior League at the High School Auditorium. March, 1917, 'Bird Migration,' S. R. Ingersoll. March, 1917, 'Birds of Texas,' Mrs. James W. Lester, a Club member. July, 1917, 'Birds and Trees of Florida,' Mrs. Adelaide Deulbon, a Club member. August, 1917, 'The Human Side of Birds,' Dr. Caline S. May, New York City. At the March 15 meeting, the President, Waldo L. Rich, reported having written members of the Senate regarding passing of the cat ordinance. April 5, 1917, 'Bird Sanctuaries,' Gilbert Benedict. May 17, 1917, 'Methods of Teaching Children How to Work with Best Results,' Miss McCluskey.

The Bird Club enjoyed a visit to the country home of one of its members, a short trip by trolley.

The importance of bird-protection has often been emphasized. The Juniors built a Martin-house for our city park. Last November our Club joined the

National Audubon Society. Our President has reported forty pairs of Martins in his garden this summer.

Mr. Ingersoll told us that the most beautiful bird he had ever seen was a Redstart, which was pure white except the wings, which were yellow, a very rare case.—CAROLINE C. WALBRIDGE, *Secretary*.

Seattle (Washington) Audubon Society.—The second year of our Society has been one of success, both in the increase in membership and in interest shown.

There are now 132 active members. Regular monthly meetings are held in the rooms of the Chamber of Commerce and Commercial Club, where lectures have been given by Samuel F. Rathbun, Prof. Trevor Kincaid, Miss McCorney, and others. We have had a number of 'bird-walks' which have been well attended and much pleasure and knowledge derived therefrom. The public school teachers have entered into the work whole-heartedly, and too much praise cannot be given them for the work that they are doing with the school-children.

Our chief activity during the year was a bird-exhibit which was given in conjunction with the manual training department of the city schools. Bird-



BOOTH OF SEATTLE AUDUBON SOCIETY AT SPRING "BIRD EXHIBIT," 1911.
COLLECTION OF BIRD SKINS LOANED BY PROF. TREVOR KINCAID.

houses by the hundreds were exhibited, also bird-nests. Great interest was manifested, and the exhibition was visited by several thousand people, the hall being crowded all day and evening. The advertising was unique, bird-houses by the hundred being hung up at street-corners and electroliers in the business



EXHIBIT IN SEATTLE, WASHINGTON. BIRD BOXES MADE BY PUBLIC SCHOOL PUPILS UNDER DIRECTION OF PROF. B. W. JOHNSON.

district, each carrying a banner advertising the exhibition. The boys sold a great many houses, and the Society received an accession in membership.

Efforts are being made to have bird-houses and drinking-fountains placed in the public parks, and the Society hopes that the time is not far distant when the cats will be licensed, to which end we hope to secure the cooperation of the Humane Society.

Addresses before the Parents Teachers' Associations have been made by local members. A call for literature on bird conservation came to us from far-off Russia, and these things have given us courage and enthusiasm for the work of the coming year.—(Mrs.) KATHERINE N. MOORE, *Acting President*.

South Bend Ind. Humane Society.—The South Bend Humane Society has about 100 slides of birds, and during the year these have been used in a number of the schools.

The Bird Club in this city has been more or less active and has had monthly meetings and numerous bird-walks. Quite extensive bird-work has been done in the public schools through the aid of the teachers. Once a week every teacher in the lower grades gives talks on the birds and animals, and a great many of the buildings are ornamented with hundreds of bird pictures in the halls and rooms, so that the children are being continually educated by the eye as well as the ear.

This spring we had an essay contest at which over 500 essays on birds and animals were submitted. This winter the Society expects to give quite a number of illustrated bird-talks.

A few days ago the writer gave a bird-talk for the benefit of the Red Cross Society with the result that the sum of \$40 was secured for the work.

During the year the National Association of Audubon Societies formed a number of Junior Audubon classes in the schools of South Bend. These did good work.—H. A. PERSHING, *Secretary*.

South Haven (Mich.) Bird Club.—This Club was temporarily organized in August, 1917, under the direction of Ernest Harold Baynes, following one of his lectures, and the presentation of the Bird Masque, 'Sanctuary.' We permanently organized in October, with 36 members enrolled. We meet once a month, short papers and informal discussions make very enjoyable evenings. We joined the National Association, placed the magazine *BIRD-LOOK* in our library, asked our local paper to publish a list of bird books to be found at the library, and for a few weeks caused to be published, one day a week, a few suggestions for the care and protection of our early migrants. Our Christmas Census contained 14 species and 151 individuals. At the 'Scott Club' (our local ladies' literary club) we celebrated John Burroughs' birthday, April 5, by giving a bird program, decorating the rooms with spring flowers and buds, nests and forty mounted specimens of birds and a hundred or so colored plates, bird-houses, bird-music, bird-poetry and bird-papers, filled two hours' time and much interest was taken.

Many of our members added more houses for the spring arrivals, and some have successfully trapped the English Sparrow. A Mockingbird gladdened the heart, eyes, and ears of our President all winter and well into the spring, when she spent much time in her garden.

May 5 a small party of our members spent a delightful day in the woods, by creeks and lakes, and identified 52 species of birds. We are trying to get our Council to secure an ordinance for the control of stray cats.

We are young, very young, and a little proud, so far, for a one-year-old.—FLORENCE L. GREGORY, *Secretary*.

Spokane (Wash.) Bird Club.—Our organization has been in existence for three years. Early in the present year we had an illustrated lecture by

Prof. Hungate of the Cheney Normal School on 'The Economic Value of Birds.'

One of the regular meetings was planned for the purpose of making the members acquainted with each other. Instead of the usual formal program, contests were arranged, requiring the identification of local birds.

Last spring several bird-trips were planned by the committee appointed for that purpose, the one on Decoration Day to Glen Tana Farms being the most



A VIEW OF PORTION OF EXHIBIT MADE BY SPOKANE BIRD CLUB AT THE INTERSTATE STATE FAIR, SEPTEMBER, 1927

largely attended and the most successful from the standpoint of the number and variety of birds seen.

The Bird Club exhibit at the Interstate Fair, held the first week in September, was greatly appreciated, judging from the favorable comments of the large crowds that stopped to examine this display.

The members of the Bird Club feel that they have accomplished a good work this year by helping to establish a much-needed city museum. One floor of a down-town business block has been rented, and a large collection of stuffed birds, birds' eggs, and other interesting material has been assembled for the instruction of the public. A curator has been placed in charge, and the museum is kept open each afternoon of the week. The Bird Club now holds its fortnightly meetings in these rooms.—GERTRUDE KAYE, *Secretary-Treasurer*.

Sussex County (N. J.) Nature-Study Club.—This Club will, in November, celebrate its eleventh birthday, and, although organized for the study of Nature in general, from the first, birds caught and have held our interest, and our 'bird-walks' still prove the most popular feature of our work. While this has not been a banner year in the number of birds seen, we have been pleased with a number of the rarer ones—Pine and Evening Grosbeaks, several species of Ducks, Lawrence and Mourning Warblers, and White-crowned Sparrow. The food-shelves provided by the individual members attract the usual winter visitors, many of whom become tame enough to eat from the hand. The increasingly large flocks of Starlings are causing apprehension. Three years ago only here and there was a stray one to be seen.

Our Club has endeavored to comply with all requests sent by the National and State Audubon Societies relating to legislative work, and have posted in various places in our county the 'war' posters provided by the National Association. During the year one moving picture entertainment was given at the county-seat, Newton. This consisted of an exhibition of reels from the National Audubon Society. Every month a report of the Club-meeting is sent to the county papers, and the interesting bird items contained in these reports have, we believe, done their part toward rousing the interest of the people of Sussex County in birds—their great value and the necessity of becoming their protectors. As in many communities, there still exists in the hearts of some of our hunters an antagonism for the Audubon Society, but a lack of sympathy for the law-breaker is fast causing enforced respect, if not honest abandonment of ruthless killing.—F. BLANCHE HILL, *Secretary*.

Vassar College (N. Y.) Wake-Robin Club.—During the past year the activities of our Club have not been so extensive as formerly, because of the necessity found in all organizations in college of economizing both in time and money, as a result of our war preparedness program. We fed the birds on the campus during the winter. In the spring the Club made its annual visit to John Burroughs at 'Slabsides,' where, after a picnic lunch, Mr. Burroughs spoke to us informally on the birds.—Miss MILDRED A. TINDLE, *Secretary*.

Vigo County (Ind.) Bird Club.—The plea of the birds was first heard in Terre Haute in August of 1916. Their messenger, Ernest H. Baynes, the naturalist of Meriden, N. H., on a Chautauqua tour, organized the Vigo County Bird Club, whose aim was to foster bird-preservation and study and further the movement for bird sanctuaries. The officers were: President, Mrs. Sara Messing Stern; Vice-President, Assistant Superintendent of Schools Tilley; Treasurer, Mrs. William Cheney; Secretary, Miss Amanda Lotze.

The regular program for the year, under the direction of Prof. Tilley, whose suggestions were most helpful, was as follows: 'Biography of John Audubon,' 'Fall Migration,' 'A study of vacated nests' (found by the members



JOHN BURROUGHS AT FLAVERSIDE, ENTERTAINING THE VASSAR COLLEGE WAKE FOREN CLUB.

and brought to the meeting), 'Our Winter Birds,' 'Physiological Parts of a Bird,' a stereopticon lecture on 'Winter Haunts.' Many additional features were accomplished through the aid of Prof. Tilley and Prof. Howard Sandison of the Indiana State Normal School. A contest was conducted among the school-children for the making of novel and practical bird-houses. These were exhibited in the windows of the prominent stores and the awards made at the Public Library.

Many of the public schools made charts of their districts. The children located as many bird-nests as possible and marked their location on the chart. They then watched the progress of the brooding and, as the eggs were laid, colored the marks on the chart accordingly and classified the species. This slight research work aroused great interest among the little people. Miss Rose Griffith, head of the art department of the public schools, stimulated further interest by introducing a course of bird- and nest-drawing into the curriculum of her department.

A vigorous newspaper campaign was conducted against the wearing of bird ornaments or feathers as adornment. The general publicity, so graciously given us by the newspapers, was of great aid in our first year's work. They accorded space for articles written monthly by Club members, the subject each month being the birds inhabiting those parts at the time. The Bird Club was

instrumental in having the Congregational Church bring to the city Mrs. Theron Colton, of Chicago, who gave an interesting and illuminating talk on 'Birds and Their Nests,' illustrating her lecture with some fifty specimens and enlivening it with her interpretation of bird-calls.

Many other activities, too numerous for mention, were carried on. As we of the Vigo County Bird Club look back upon our first year's work, we feel most happy at the results our efforts have obtained, and we look forward eagerly to another year's work and study of the little feathered brothers.—(Mrs.) MILDRED MESIROW.

Wellesley College (Mass.) Bird Club.—Our Club is only six months old, but it combines with the enthusiasm of youth very definite purposes. Its objects are to encourage the study of birds and to conserve and develop the bird-life of the college grounds. The need of conservation was the immediate motive for the organization of the Club, the restoration of the birds to the campus being called for by the ravages of the gypsy moth. The Club was organized early in the spring of 1917 and was launched very happily upon its course by Ernest Harold Baynes, with a lecture on 'Wild Bird Guests.'

During the spring the Bird Club organized and conducted a series of early morning bird-walks and kept posted on its bulletin board a record of spring arrivals. Each member of the Club was provided with a check-list of the Massachusetts Audubon Society, and in several cases these lists included more than 70 birds observed.

The Club is also working in close cooperation with the Faculty Committee on the Conservation and Development of the College Grounds (one member of this Committee being a member of the Executive Committee of the Club). This Committee, by means of a generous gift of an interested alumna, had, during the preceding fall, established more than a dozen winter feeding-stations at various points on the campus, and had erected posts for nearly 100 nesting-boxes. The Bird Club was presented with 75 'Wellesley' bird-boxes by their designer, John C. Lee, of Wellesley. In the care of these feeding-stations and of the nesting-boxes, the Bird Club will render valuable assistance to the cause of conservation. Already, in the first season, more than half the boxes were occupied by nesting birds.

The restoration of birds to the college grounds and their protection will be an active stimulus to the study of birds. The Club, therefore, in its many plans for the future, keeps steadily in mind measures that will assist in their conservation. It is their aim to make, each year, some permanent contribution to this cause, such as a bird-bath, a drinking-fountain, or a bit of planting that will provide both food and shelter. In this way the interest of the Club will find permanent expression, and the beauty of the campus will be preserved and increased for future generations.—MABELLE E. ALMY, *Secretary*.

Western Pennsylvania Audubon Society.—The Society's outings the past year under the enthusiastic leadership of the 'Country Rambler,' Edmund W. Arthur, were very popular. These are all-day affairs (Saturday). Arriving at the appointed place, the Chairman appoints leaders of small groups and assigns them a territory. In the mid-afternoon all groups unite and the leaders report the discoveries made by his or her group. Usually a silent period was observed, all listening for bird-voices.

The lectures are, as a rule, free to members, with a small fee for visitors. The lecturers during the past year were Henry Oldys, Washington, D. C.; Mrs. S. Louise Patteson, Cleveland, Ohio; George L. Fordyce, Youngstown, Ohio; T. Walter Weiseman, Emsworth, Pa.; W. S. Thomas, Pittsburgh, Pa.; W. E. Clyde Todd, Beaver, Pa.; and T. S. Briggs, of Norristown, Pa.

A union dinner of our Society and the Sewickley Valley Audubon Society is an annual affair in March. Members are thus enthused to get out notebooks and field-glasses and take to the highways and hedges. Last March 580 bird-lovers dined and were addressed by the President of the societies, Charles B. Horton, and by Witmer Stone, of Philadelphia, Pa., President of the state Society. Greetings were received from Walt F. McMahon, representing the National Association of Audubon Societies. Mr. Norman McClintock, of Pittsburgh, exhibited his wonderful motion pictures of bird-life—proclaimed by authorities to be the finest ever taken. The Society has increased the interest in bird-study in the schools and created a desire for bird-knowledge in thousands of people. All over western Pennsylvania, bird-shelters, feeding-stations, and nesting-boxes have been erected; food-bearing shrubs and trees have been planted, cat facts have been made known, and appeals for bird-feeding at times of heavy snow-fall have been made in the daily papers. The officers of the Society are as follows: President, Charles B. Horton; Vice-President, Fred L. Homer; Second Vice-President, E. J. Robinson; Third Vice-President, R. H. Santens; Treasurer, T. Walter Weiseman.—JOHN W. THOMAS, *Secretary*

Wild Life Protective Society of Milwaukee.—Realizing the immense value of junior work in connection with wild-life protection and conservation, our main activities were centered about the school-children and their schoolrooms with the idea of organizing a strong army of defense—inculcating into every boy's and girl's mind the noble spirit of wild-life protection. In other words, we hoped to accomplish by constructive measures what restrictive measures had failed to do.

Our plan was to organize in every school, whether public, private, or parochial, a bird club comprising the fifth, sixth, seventh and eighth grades. The teachers of the different grades selected one of their number to act as director of the club and the children elected a president and secretary. Each member of these clubs was then presented with a button emblematic of the

parent society and showing their affiliation with it. Each club was also presented with a No. 1 Audubon Bird Chart to be used in their daily or weekly work, and especially for object study. The future conduct of these clubs is, of course, left largely to the directors and the principals of the various schools, our Society being at all times ready to assist them by word and counsel.

With the assistance of a large chart, slides, and films, I talk to these clubs from time to time and help to keep alive the interest. We have now some 8,000 children enrolled in these affiliated bird clubs, and we have only started. Have also had made a set of slides for use in our local movie houses. We have found these to be of great value in carrying on this work and earnestly recommend this method of propaganda to all our fellow conservationists. This has been almost our entire effort the past year, and we hope to continue the work this coming year. I believe that education is the only real solution of this great problem, and that to educate the children and teach them the first ethics of wild-life conservation is the greater and more important obligation of all lovers of our feathered friends.—ADOLPH BIERSACH, *Secretary*.

Williamstown (Mass.) Bird Club.—Our Club was started in January, 1917, after a lecture by Mr. Baynes. In the spring there was a lecture for the school-children, given by Mr. Packard. On Arbor and Bird Day there were addresses by Prof. S. F. Clarke and Judge Fenney.

Letters were written by Prof. Clarke and by Judge Fenney to our legislators, in regard to the Migratory Bird Treaty Act.

The Club was made a member of the National Association of Audubon Societies by the sending of \$5 to the Massachusetts agent, Winthrop Packard. A special contribution of \$5 was sent to the Massachusetts Audubon Society for the protection of our native birds, made necessary at that time by the unusual amount of the shooting of birds by foreign laborers, who plead the excuse of the high cost of meat.

A beginning has been made toward a collection of bird-skins, and the following ones have been purchased: Tree Swallow, pr.; Red Poll, pr.; Tree Sparrow, pr.; Evening Grosbeak, pr.; Chickadee, pr.; Pine Finch, pr.; Hudsonian Chickadee, pr.

The Bird Box Committee was authorized to spend \$15 on nesting-boxes. About fifty boxes were put up in various parts of the village and many of them were occupied. Some members of the Club were active in reducing the number of English Sparrows, and more members fed the winter birds with seeds and suet.

The Club has a membership of 57 and a balance in the bank of \$47.—MARY L. FERNALD, *Secretary*.

Winston-Salem (N. C.) Audubon Society.—Our May meeting was held on the lawn at Mr. and Mrs. H. W. Foltz's home on West Second Street.

There was a very large attendance, including several visitors, and three new members were added to our roll. This was our first outdoor meeting, and it was so thoroughly enjoyed by all present that we decided to hold more of them. We met at 4.30 P. M., Dr. Schallert, the President, presiding. After the business had been attended to, Dr. Schallert read a very gratifying report of our Society from the last annual report of the National Association of Audubon Societies. He also told us of his experience in providing nesting-boxes for the birds at his home. Upon invitation it was decided to hold our next meeting with Mr. and Mrs. Victor Craigen, two miles out of the city, near the Bethania Road.

Our kind host and hostess then conducted the company over their spacious grounds of several acres, where we were shown the nests of various birds, including the Robin, Cardinal, Thrush, Catbird, Bluebird and Carolina Wren, some on trees and bushes, some in nesting-boxes, and some on their back piazza. Also a goodly number of birds were seen and heard during the evening, and they seemed to fear no danger from the gathered company. We returned by way of some well-laden service berry and cherry trees, the delicious ripe fruit of which constrained us to linger long by the way, and when we finally reached the lawn again, we were refreshed with most excellent lemonade before we adjourned to our homes.

Our June meeting was held with our enthusiastic members, Mr. and Mrs. Craigen, at their beautiful new home northwest of the city, near Reynolds. The afternoon was warm but clear, and a goodly company were in attendance. We first adjourned to the fine springs at the foot of a steep hill north of the dwelling, and after drinking of the excellent water, we started on our tramp of a half-mile through the woods and fields, along streams of running water bordered with beautiful ferns and wild flowers of many varieties, the latter being explained to us by our botanical friend, Dr. Schallert.

Among the birds' nests found and examined we remember especially that of a Chipping Sparrow in an old apple tree; a Chewink whose nest with five brown spotted eggs was right on the ground, a nest of Flycatchers on a dog-wood limb that was so full of fluffy youngsters that it seemed to be overflowing, a Mourning Dove that was sitting on her two cream-white eggs in a rough-looking nest in a wild plum tree, but she flew away on our approach. When we returned to the house, almost every lady had quite a collection of wild flowers and medicinal herbs.

Sitting on the large front piazza in the cool evening breeze, the business session was attended to, and then we bid our kind hosts adieu, and in motor cars sped away to our city homes.

We have a number of Junior Audubon Societies organized in our city schools, and some of them are doing splendid work. We are going to try to extend our work to the country schools this fall and hope to have good results.

We had one excellent illustrated lecture during the year by R. E. Parker.

State Secretary of the Audubon Society of North Carolina.—H. W. FOLTZ,
Corresponding Secretary.

Wyncote (Pa.) Bird Club.—In the history of the Wyncote Bird Club the past year has been the most successful because the Club has become more of a community activity. This has been in spite of the fact that in these war days so many more pressing duties are demanding our attention. Our Presi-



BLUEBIRD AT BOX MADE BY WYNCOTE BIRD CLUB

dent, E. H. Parry, who has done so much for our birds and for our Bird Club, expects any day to go to camp at his country's call, our former President, Ernest Corts, is already in camp, and we will unquestionably miss their able assistance.

Over one Wren and Bluebird houses have been made and erected in the neighborhood. On a Junior walk in early spring we put up some of these houses in an old orchard and within fifteen minutes saw Bluebirds enter one of them.

Adult and Junior walks were conducted frequently in the spring, usually going by autos to some woods over a mile from Wyncote. These trips are very

popular, and sometimes our trusty Fords are filled to overflowing. We had our usual picnic in June, with a bird-walk first and then lunch in the woods. In July, 47 members went in two big automobile trucks to visit the Philadelphia Academy of Natural Sciences, 10³ miles away.



JUNCOS FEEDING ON WINDOW SILL. WYNCOTE
PENNSYLVANIA, BIRD CLUB

Prizes were awarded for: (1) Bird photographs; (2) imitations of bird songs; (3) essay on 'Wild Life'; (4) first bird (other than English Sparrow or Starling) to hatch young in box made by competitor; (5) first person on whom a wild bird alights (not awarded).

A Sparrow trap was bought by the Club, and the English Sparrow popula-

tion has considerably diminished. Some have tried eating them and endorse this as a good way to aid food-conservation.

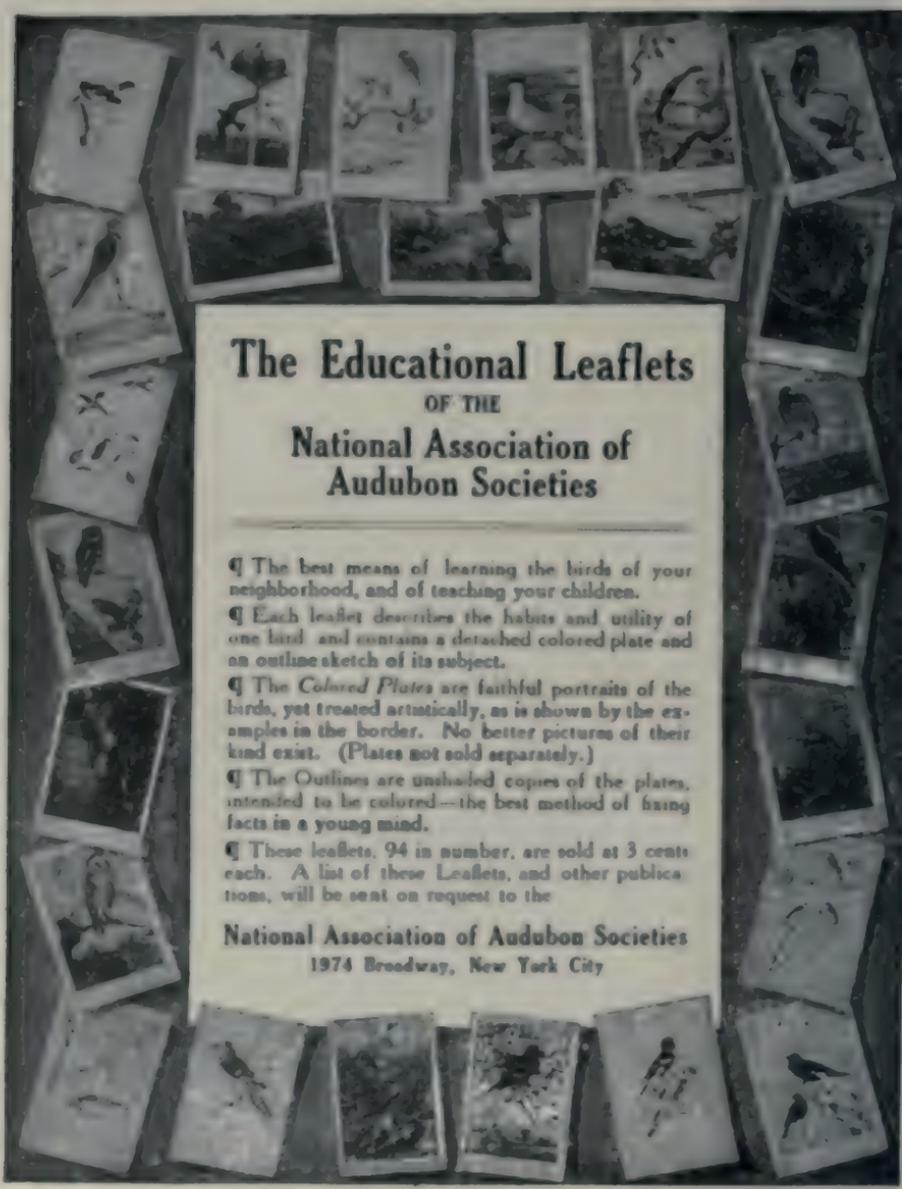
Several feeding-stations were kept constantly supplied with food last winter, and the State Game Commission helped us in this by donating \$10 to the cause.

We have had some good lectures this year, one by Samuel Scoville, Jr., Staff Naturalist of the Boy Scouts of Philadelphia and Counties; Rev. Herbert Westwood, of Mt. Airy, who used the Pennsylvania State Museum Slides; and Dr. Joseph Kalbfus, Secretary of the State Game Commission, who used stuffed specimens of our common birds to illustrate his interesting talk. In December, 75 of us went to hear Ernest Harold Baynes, the founder of our Club, in his ever-interesting and impressive lecture on 'Wild Birds.'

At one meeting the entertainment was almost entirely by the Juniors. Their interest is a great source of encouragement to the Club. We feel that especially in these strenuous times the Bird Club gives a needed recreation and has another purpose than helping the birds.—ESTHER HEACOCK, *Corresponding Secretary*.



JOIN THIS ASSOCIATION
AND
HELP THE CAUSE OF BIRD-PROTECTION!



The Educational Leaflets OF THE National Association of Audubon Societies

¶ The best means of learning the birds of your neighborhood, and of teaching your children.

¶ Each leaflet describes the habits and utility of one bird and contains a detached colored plate and an outline sketch of its subject.

¶ The *Colored Plates* are faithful portraits of the birds, yet treated artistically, as is shown by the examples in the border. No better pictures of their kind exist. (Plates not sold separately.)

¶ The *Outlines* are unshaded copies of the plates, intended to be colored—the best method of fixing facts in a young mind.

¶ These leaflets, 94 in number, are sold at 3 cents each. A list of these Leaflets, and other publications, will be sent on request to the

National Association of Audubon Societies
1974 Broadway, New York City

SUBSCRIBE TO THE MAGAZINE
BIRD - LORE

COLORED PLATES ONE DOLLAR AND A HALF A YEAR



1. SUMMER Tanager, Adult male
 2. SUMMER Tanager, Young male
 3. SUMMER Tanager, Female

4. HEPATIC Tanager, Male
 5. HEPATIC Tanager, Female

(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 XX

MARCH—APRIL, 1918

No. 2

Some Notes on Martin Colonies

I. WHY NOT ESTABLISH A PURPLE MARTIN COLONY THIS YEAR?

By GRACE ReSHORE, Dowagiac, Mich

IF YOU love the companionship of birds, plan to establish a Purple Martin colony this year on your home grounds.

Several years ago, a bird-loving friend said to me one April day, "I see, on the wires about the city, hundreds of Martins that I think would nest and spend the summer here if they could find suitable nesting-places."

For years we have had one colony in the cornice of one of our business blocks, the space is limited, and when the young birds return to the home nesting-place, after their winter in South America, they are obliged to move on to find and make new homes for themselves. The old birds will, if the nests suit them, return each year to the old home and bring their family with them, who in turn will make for themselves new homes in the same locality, if suitable places can be found.

In my innocence and ignorance, I wrote Ernest Harold Baynes, a well-known authority on the subject, that there were Martins in the town, but that I had never seen them about our place—did he think I could get them to locate there? He replied that I had never seen them, probably for the reason that I had never had anything there to attract them; that, if I would put up a Martin-house, they would, without doubt, inspect it within an hour they would come and look it over, and, if it suited, would take possession probably the first year. (Two houses are better than one, as the Martins like company.)

Mr. Baynes stated that there were many good Martin-houses on the market, but he had never been able to see that the birds showed any preference. They would be as apt to locate in a simple homemade affair as in a more elaborate one, and if the house were well located in the open, with the pole on which it was mounted made cat-proof, I would, without doubt, have the pleasure of seeing the house used and hearing the Martins' jolly music all summer.

About that time, I saw in *BIRD-LORE* a cut, with accurate measurements and directions for making a ten-room Martin-house. I took the cut to a local carpenter, asking him to make me two of the houses, following the same general plan as illustrated in the cut, which he did. I do not think the houses would be winners in a beauty contest, but, as Mr. Baynes said, the Martins are not critical.

I secured a 20-foot pole from the local telephone company, and, before painting it, I covered a part of the lower half of the pole with a sheet of tin, thus making it cat-proof. I then fastened the house on the pole with heavy angle irons, getting the first one up late in the afternoon of May 1.

The next morning I heard an unusual bird-note and looked out to locate it: sure enough, there were six or eight of the Martins circling over and around the new house. They soon alighted on it and looked into the rooms. More came, until it seemed to me that all of the Martins in the city must be there on a tour of inspection, but they did not remain long.

In a day or two I put up the second house, and that, also, was, in its turn, promptly looked over. There would be a day or so at a time when I did not see any birds around, but nearly every day a few would come and fly back and forth from one house to the other, then go away.

By the middle of the month, a few pairs came to stay; probably they were the young, immature birds from the old colony. I could not see much difference in the birds, as all looked alike. The young male and adult female look very much the same—backs a dusty black and breasts gray. The full-plumaged male does not have the complete dress of shining purple-black until his second postnuptial molt.

My success encouraged others to erect houses for them, and we now have in the city nine or ten houses of from eight to twenty rooms, all of which are occupied partly or in full. For the last two years I have had 'capacity' houses. During the middle of a hot day they will seem to be away for several hours, but morning and evening they can be seen and heard most of the time.

It is said that a Martin will eat a thousand mosquitoes in a day. While I cannot say that I miss any yet, I know that the Martins get a large part of their food at or near the house, and all of their food is obtained from the air as they fly about. The only time you see Martins on the ground is when they are gathering materials for their nests. Straw, dry leaves, shavings, mud, and a few green leaves for lining the nest seem to be the materials most used, and from the inspection of the nests when the houses are taken down for the winter, one could not give them a first-class recommendation either as housekeepers or nest-builders.

They nest only once during the season, and that rather late, as it must be warm enough for plenty of insects to be in the air for food for the young birds.

Plan to start a colony this year, get your house ready and put it up the last of April or the first of May. Any boy can make one. Mount it away from trees

or buildings, put it up 15 or 16 feet from the ground, and see if it will not attract some of the birds flying over, who will come down and inspect it and, perhaps, locate. You will be repaid for your effort by their jolly music during the summer.

The Martins leave rather early in the season—soon after the young learn to fly. The time of their coming varies with the season—April 15 is as early as they have come to stay in southern Michigan.

II. SOME TOWN MARTINS

By R. F. O'NEAL, St. Louis, Mo.

For several seasons we have had a colony of Purple Martins in a rather thickly settled residence part of St. Louis. It seems that they have found their surroundings congenial enough, and that they are not at all disturbed by the noise and bustle that are a part of city life.

At first there was a four-family box, then two of them. For two summers it has been a sixteen-family settlement and the home of ten to twenty Martins. The small boxes—about 25 feet above the ground—are on scantlings fastened to a frame garage about 25 feet from the rear of the house and on the line of a brick paved and, at times, very noisy alley. The large box is on an upright that rises from the center of the roof. Within 300 feet there are five garages tenanted mainly with not always silent Fords, and there is nothing of the "Sleepy Hollow" kind in this stretch of alley. So much for the social disposition of these cheerful birds.

The first box was not put up until the Martins had been flying about for some time, and they came to it at once. On March 31, 1914, a lone male came to the box about 7 o'clock in the morning, sat on the upper perch for a little while, then flew away. It seems that the males always come first, and the first to put in his appearance in 1915, came on April 6. Others were flying about in a leisurely way, and it is possible that they had been in the neighborhood for several days. In 1916, the date of arrival was March 30, again at about 7 o'clock in the morning. The winter of 1916-17 was a mild one, a good part of March being rather springlike, and one or two came about 9 o'clock on the morning of the 15th.

A somewhat peculiar feature in the domestic situation of these birds is the fact that the little colony for several seasons has been made up almost entirely of females. There have been visitors from time to time, sometimes making up a mixed company of some twenty-five, but for three summers there were seldom more than two males that seemed to be taking part in building the nests and bringing up the young birds. Sometimes two females gave their attention to one apartment, and it seemed probable that they were using a single nest, as is common with some of the domestic fowls.

At first, the diet of the fledglings is made up of the common catch that is

easily swallowed and quickly digested. Later, when the young are well grown, it seems that dragon flies are much sought, and these are crammed down the throats of the voracious youngsters—wings, legs, and all, without trimming, pruning, or macerating of any kind. Catch on the wing and feed as caught—this seems to be the Martins' way of providing for their young.

While highly specialized along certain lines, as in their manner of seining the air for gnats and other minute flyers, the Martins are not all-round experts by any means. They are very solicitous for the safety of their young, but they are not apt at meeting some unusual conditions, and the fledgling that falls to the



SOME TOWN MARTIN HOMES

Photographed by Edward S. Daniels

ground is usually lost. And that first plunge, that trying of wings without even the experience that comes of instinct, with even chance of reaching a landing or dashing against a wall—this is the supreme test in which a Martin lives or dies.

They are real artists in some respects, but are utterly lacking in the skill that enables some of the ground-birds to pound a hard beetle into a luscious morsel. They know nothing of the engineering tactics shown by the House Wren when she takes a stiff 6-inch twig through a hole the size of a quarter. The straw that offers slight resistance is allowed to fall to the ground, and they seem to waste a good deal of time in building very ordinary nests. The young birds usually come out in July, and, if the first flight is successful, soon learn to

disport themselves with remarkable ease and grace. They usually leave for other climes about September 1, but they sometimes get away earlier. And that long flight may be from New England to Brazil—but what is that to these free-lances of the air!

There seems to be a rather general impression that Martins are very particular as to the size of their quarters, and especially as to the size of the openings through which they are to come and go. There are reasons why this is partly true, there are reasons, too, why it is true only in part. The habits of animals and birds are controlled largely by instincts that lead them to seek dark corners in inaccessible places, mere existence being the first consideration, comfort and convenience not having much part in the matter. Wild creatures can exist under most uncomfortable conditions, but they should not be forced to do so. If we set out to attract the birds and offer artificial homes as inducements, we should also consider their comfort and happiness, as well as their safety, even if in so doing we run counter to some of their ways. Shame on the bird-lover who would inveigle a pair of Wrens into a tomato can, only to be roasted, with their little ones, in the broiling sun of the long summer days!

The dimensions of our smaller boxes are, approximately, $15 \times 9\frac{1}{2} \times 11$ inches. This gives the lower apartments about $6 \times 8\frac{1}{2}$ inches, with height of 5 inches. The slanting roof, which has a break on each side for ventilation, gives the upper apartments the advantage of greater height. The openings are 2×2 inches, the height being increased by slight arch, with perches about $1\frac{1}{2}$ inches from the box. An extra perch, much liked by the birds, is on slender uprights and about 6 inches above the roof. The large box—the centerpiece of the set—has the upper perch, also upper and lower perches on the four sides, and eight apartments, each about $8\frac{1}{4} \times 14\frac{1}{2}$ inches. This box fronts in four directions and has sixteen openings, about $2\frac{1}{4} \times 3\frac{1}{4}$ inches. Not much to the liking of the birds at first, not at all in accordance with the ideas of the critics of this kind of architecture, it has been a kind of playground, and several broods have been brought up in it.

With the ordinary boxes, if the several apartments are occupied, there is not room at night for the pair and their fledglings, and the result is that some of them are crowded almost to suffocation. Just here it is that the large box has served as a sort of overflow bungalow, affording daytime shelter in inclement weather and comfortable sleeping-quarters for home folks and guests through the warm summer nights.

It was the intention to let the birds give grace and charm to the picture, but they stole away early, without notice of the time of their departure.

Of the Martins it may be said that they are birds of good cheer. When perched about their homes, and also in their rooms, they have a kind of rolling warble, winding up with a smacking of the mouth, and repeated *ad finem*, if not *ad infinitum*. Their note, when on the wing, is clear and far-carrying, and seems to mean that they are having a very good time. An occasional part of their

noisy ways, heard usually when they have gone into their chambers, is a sort of subdued chuckle, with sound suggestive of the grinding of molars, that seems to be an expression of good feeling and contentment.

Such are some of their usual notes, but there is one other that is perhaps best of all. This is their loud, clear, exultant call, uttered when the bird is perched, with an air of great alertness, when his fellows are cleaving the air for the sheer pleasure of artistic flying—the ringing 'come-home' call and the joyous welcome to the swift flyer that is first to reach the goal.

III. THE SIZE OF ROOMS IN MARTIN-BOXES

By J. J. SHERIDAN, St. Joseph, Mo.

It seems to me some steps should be taken to unify sentiment on building bird-nesting boxes for Purple Martins. An exhibition of bird-boxes being held at our public library this week shows the greatest variety of ideas as to the proper size to construct these boxes, one handsome structure containing forty apartments had the rooms $3\frac{1}{2} \times 5$ inches in dimensions, while another had them about 10 inches each way. That this condition should be corrected in some manner goes without saying, but the leading authorities are as widely apart. For example, in your January-February issue of 1914, a writer on 'How to Start a Purple Martin Colony' says the rooms should be $8 \times 8 \times 10$ inches, while Mr. Ned Dearborn, a Government expert, says the rooms should be $6 \times 6 \times 6$ inches. An authority on the subject says the Purple Martin is 7.8 inches in length. If this is a fact, then it stands to reason a room should be at least large enough to admit the entire bird, and 8×8 inches would be none too large. There is no doubt but the bird will adapt himself to 6×6 -inch quarters if he can do no better, but he will abandon the restricted quarters when he can find rooms large enough to accommodate him. I can recall several instances where this has happened. My boxes are built with rooms $8 \times 8 \times 6$ inches, and I think this compromise will come as near meeting the requirements of the birds as any size I have seen mentioned—at least my colonies stay with the boxes, and that is a good argument.

IV. HIGH MORTALITY AMONG THE PURPLE MARTINS IN WESTERN PENNSYLVANIA DURING APRIL, 1917

By THOS. L. McCONNELL, McKeesport, Pa.

The old saying about the arrival of spring birds bringing good weather has no foundation upon actual facts. The warm spell in March, 1917, brought back the Purple Martins ahead of time, and the subsequent cold rainy weather almost annihilated the early migrants. Insectivorous birds that feed, like the Swallows, entirely on the wing and not off the trees or on the ground, require warm, fair weather.

On May 20 the writer removed seven dead male Purple Martins of mature plumage from his bird-house at Kittanning, Pa. This colony is about twenty years old, and for years has been made up of about fourteen pairs of older birds, all in high plumage, and this is the first year that many birds in second-season plumage are in evidence. Last year's young birds do not return until May, and usually cannot get room in a well-established colony, hence seeking new homes. It is estimated that between one-third and one-half the older Martins perished during April.

Upon going back over the daily weather reports for March, April, and May for Pittsburgh, Pa. (45 miles south of Kittanning), the following exceptional conditions were found:

It rained almost continuously from April 4 to 8, inclusive, with the highest temperature for each day under 50°, except on the 5th, when it climbed to 61°. From the 9th to 11th, inclusive, it was fair and cold, the highest daily temperatures being 40°, 34°, and 40°. During the remainder of the month there were shorter periods when the Martins were unable to feed.

The fact that all the dead birds found were males leads to the conclusion that the high mortality must have been early in the season, as the males precede the females in migration. The date of arrival for the Kittanning colony is not known, but it is known that the Martins returned seven to ten days ahead of their usual time throughout the state. The first Martin, male, reached McKeesport on March 26, and many first arrivals were seen on the 24th at Waynesburg, Pa.

Referring to the mortality among the Martins at McKeesport, the writer's present home, there are now only six to eight birds where sixteen to twenty were seen in previous years. The two big local colonies are nearly wiped out.

While this calamity is only a light killing when compared to the almost total destruction of Purple Martins throughout the New England States in 1903, had the bad weather come two or three weeks later there would have been few Martins left to replenish our colonies.

V. A COLLAPSIBLE MARTIN-HOUSE

By G. HILLER, Cincinnati, Ohio

For the benefit of some of your readers, I enclose herewith pictures of a 'Homemade Martin-House,' made of soap-boxes, the lower story being somewhat smaller, thus giving the effect of a Swiss cottage. The house is hinged together and collapsible. The removable pins in the hinges allow the house to be taken apart for cleaning. The side of the house where the openings are for the nesting chambers is provided with hinged porches, thus making it possible to keep the house closed to Sparrows until the proper tenants, the Martins, arrive. The partitions inside are worked in grooves, thus allowing a thorough cleaning. The pole or pipe is made of two

pieces, 2 and 1½ inches in diameter respectively, with a collar near the top from which three thin cables run to as many cement anchor posts. The house has a 2-foot pipe fastened to the bottom, fitting snugly in the main pole, the latter resting on a firm cement base, 5 feet in the ground, with a steel shafting in center extending 3 feet above base, over which the main pole slips in place. In winter, the pole with house is taken down to be put in a safe place indoors, to preserve it from the ravages of winter. While we have other bird-houses in our garden, this is, by far, the prettiest of all, and its cost is very little.



COLLAPSIBLE MARTIN HOUSE



A MARTIN HOME IN CINCINNATI

Notes on the Tree Swallow

By VERDI BURTON

With photographs by the author



MALE TREE SWALLOW

Watching female as she leaves the nest, almost turning over as she swings away.

THIRTY years ago Tree Swallows were very common over Lake Keuka, at Branchport, N. Y., and from early spring, often before the ice had left the lake, until mid-September, these graceful Swallows coursed over the marsh and skimmed over the waters of the lake, their beautiful, iridescent blue backs gleaming in the sun. In those days there were, bordering on the lake and marsh, many old willow, elm, and maple stubs with their deserted Woodpecker holes, and in these the Swallows made their nests.

As the years passed, the old stubs were cut, or crumbled and fell until all were gone, and the Swallows, after spending the

early spring with us, passed on to some more favorable locality to rear their young.

In the spring of 1915 I saw a pair of Tree Swallows investigating a box that I had put up on my lot for Bluebirds. This box was more than 50 rods from the lake, and, although the Swallows hung around it for several days, it did not seem to suit them exactly and was not used. However, their presence about the box gave me an idea which I carried out the following spring, when I made boxes purposely for the Swallows, placing them on the sides of posts which were driven out in two or three feet of water in the marsh. This was done April 28, when there must have been twenty or more pairs of Tree Swallows flying about.

The very next day I saw a Swallow enter one of the boxes, and on May 4 a pair of Swallows were carrying nesting materials into one of them. This same day



MALE TREE SWALLOW AT HOME

I grafted an old Downy Woodpecker's nest on to the top of another post which was driven out in the water, and before I had rowed my boat 15 feet away from it, a female Tree Swallow had alighted and was peering into the hole, while her mate was hovering overhead. The hole seemed to suit, as they almost immediately took possession and began to carry nest materials into it.



A TREE SWALLOW FAMILY.—THE MOTHER RETURNS

Although they began nest-building thus early, it was done in a rather desultory manner, and they did not appear in real earnest until the latter part of May. By June 20 they were feeding young, both parents working diligently and supplying an abundance of food, various small dragon-flies forming a large part of it. Both parents were seen carrying excreta from the nest, flying with it out over the water, where they dropped it 5 or 6 rods from the nest.

A record of a typical half-hour's observation at the nest June 30 follows: Female feeds young while the male sits on top of the stub resting and yawning several times, then he flies away and soon returns with a small dragon-fly, which he takes into the nest and almost immediately reappears with excreta which he carries out over the water, dropping it some distance away. Soon he comes again with another dragonfly, alights at the hole, but flies away again without entering, does this several times, then enters. Appears in the opening, where he remains several minutes until the female comes. She goes in and stays there. Soon he comes back with a dragon-fly, goes part way in, backs out again, and waits for the female to crowd out past him when he goes in.

Of the nine boxes placed in the marsh this year, five were occupied.

After the nesting-season is over, the Tree Swallows, with hundreds of Barn, Cliff, and Rough-winged Swallows, gather in the evenings over the waters of the lake and creek, where they skim lightly over the surface of the water or fly high in the air, gathering their suppers from the hosts of insects flying there. At night they roost in the cat-tails, many of them close to the water's edge. A few alight at a time, those already there welcoming the others with soft twitterings as they come; then there are constantly some flying up to take a few more turns in the air, and one too many will alight on the same leaf, causing it to bend to the water, when all fly up and alight in another place. So it is really quite dark before all get settled for the night.

The fishermen here use an acetylene light with reflector, and we sometimes get one of these and row down the creek, and, by going carefully and throwing the light on the cat-tails, the Swallows can be seen, with heads tucked under their wings, asleep. Rowing carefully along, we were able to pick them from the flags with our hands.

The Tree Swallow is very fond of the water and will be found most abundant about a lake or stream where there are many dead trees, with their old Woodpecker holes, and, as I have shown, they can be easily induced to use boxes put up by man.



FEMALE LOOKING OUT FROM NEST



TO THE SONG SPARROW

By EDMUND J. SAWYER

'Ground Bird' we called you in our barefoot days,
When Spring impelled us on our truant ways.
How well we knew and loved those happy lays

 You caroled from the 'pussy-willow' bough!
In feather, form, and note you are the same;
Old Time has overlooked you, soul and frame;
The flight of years has changed you but in name:

 'Ground Bird' of old, we call you Song Sparrow now

Now flitting and skulking by the brook,
Calling and peering from the grassy nook,
Hopping and hiding, you have every look

 Of sprightly youth you had in days of yore.
Your merry song, so sweet, so glad and free;
Your pose atop the fence or willow tree;
Your long, loose tail, abob—all bring to me

 The days that were, the days that are no more.

From morn till night you sing, unlike the Thrush
Remote within the woodland's shade and hush,
Nor like the soaring Lark whose songs outgush

But reach us faintly like the songs in dreams.

Banks of the tinkling stream, the grassy dell,
The homely wayside nooks of field and fell—
Familiar places that we love so well—

These are at once thy chosen haunts and themes.

Of gorgeous birds in fabled happy lands,

Or flying over palms on coral strands,

Where tropic seas and isles the view commands.

Let others sing; their splendors I despise.

The Eden of your songs my feet have trod;

The Heaven that you praise is just the sod;

Yet somehow I seem nearer to my God,

Brown bird, with you, my Bird of Paradise!



How to Make and Erect Bird-Houses

By HUBERT PRESCOTT, Ashland, Ore.

PEOPLE are beginning to understand more clearly the relationship of birds to mankind, and, as a result, they are putting forth greater effort toward the protection and preservation of bird-life.

One good method of bird preservation is the building of bird-houses, and, as far as individual effort is concerned, a good deal of it has been directed in this line. Some have met with success and some with failure, the reason for the failures being that a very large percentage of the bird-houses built are worthless because they are wrongly constructed.

It is well that we should put up houses for the birds, but first we must understand a little of bird nature so that we may better know what kind of houses are suitable.

Originally, birds which nested in cavities either used cavities in trees caused by rotting of the heart of the tree, or they made their own nest cavities or used those made by other birds or animals.

The Woodpecker is, perhaps, the best example of a bird which digs its own nest cavity. If we will observe we will find that the holes made by Woodpeckers for nesting purposes are generally facing the east or south, and, if in a horizontal or slanting limb, they will always be on the underside.

Facing the east or south they are less exposed to storms than they would be if they were facing the north. They are on the underside of a limb for the same purpose, and also as a protection against animals or other birds, being then difficult of access and out of view. On observation we will find that the bottom, or floor, of the nest cavity of a Woodpecker is 6 inches or more below the entrance-hole. This serves several purposes: It gives the bird room to sit without blocking the entrance, it serves as a protection against enemies, and it prevents the young from leaving the nest too soon.

Thus, as a result of natural selection, birds have acquired the instinct to build in nest cavities of this kind, and if we apply a few of these particulars in building bird-houses, much better results will be obtained than we would get otherwise.

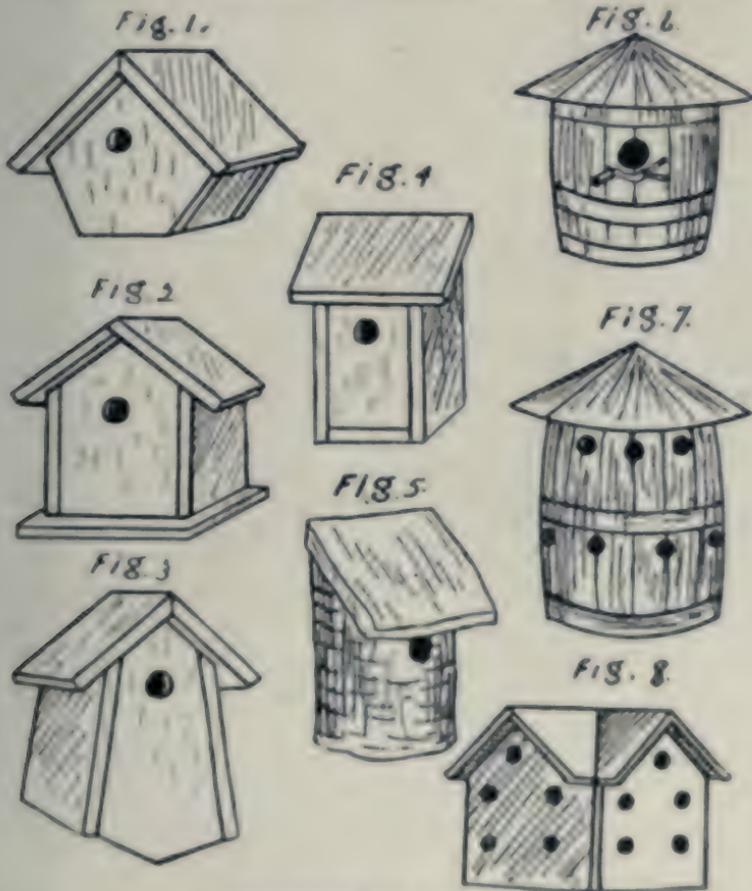
One of the greatest, yet most common mistakes is making bird-houses like the houses of human beings, with the entrance on a level with the floor.

Birds do not value things from the esthetic standpoint. They prefer an old weather-worn bird-house to a highly painted one which shows skillful workmanship. The kind of nesting-site they choose is of vital importance to them, and they select it for the protection and service it affords. Bird-houses can be made out of hollow trees, kegs, slabs, and boards of any kind.

Another very common mistake is that of making the bird-houses or rooms too large. For small birds which nest in solitary pairs, such as Wrens, Chickadees, Bluebirds, etc., a room 4 inches wide by 5 inches long by 7 inches high

is large enough. For Flickers, Owls, Sparrow Hawks and other larger birds, the rooms should be about 6 inches wide by 7 inches long by 14 inches high. For Martins and other birds which nest in colonies, a bird-house can contain as many rooms as desired, each room having about the same dimensions as given for the first.

It is a good idea to have the side or the top of the bird-house hinged or removable, so that the old nest can be cleaned out, thus making room for a new



SUGGESTIONS FOR BIRD BOXES

one for the following summer, and the birds will return to rear a brood year after year.

A bird-house should not be placed less than 6 feet from the ground—10 feet or above is preferable. They can be placed on barns, sheds, fence-posts, or hung from trees.

Birds always prefer houses more or less in the open, so that they can detect any intruders which may come that way. They should not be placed amid the

thick foliage and branches of trees—not that the bird-house should be placed in a conspicuous place, but the view from it should be clear.

A very suitable method is to bore a hole in a barn or shed and place the bird-house on the inside. This is especially suited for observation and experimental purposes.

Several different types of very satisfactory bird-houses are shown in the accompanying diagrams. Figures 1, 2, 3, 4, 5, and 6, are for birds nesting in solitary pairs; 7 and 8 for birds which nest in colonies.

These are a few of the main particulars in building and erecting bird houses, and with a little effort directed in the right way, we may forever have these feathered songsters about us, to add life and grace to our surroundings, to fill the air with song, and to glean the foliage of harmful insects.

Photography at Feeding-Stations

By C. BREDER, Jr., Newark, N. J.

A NATURAL outlet for the city-dwelling bird-lover's enthusiasm is the establishment of a back-yard feeding-station. As the location of my home is not the least suburban, all the birds that deigned to visit mine were gladly welcomed. Blue Jays, Slate-colored Juncos, Hairy and Downy Woodpeckers, and Brown Creepers were among the more regular visitors, and I considered myself rather successful. With the coming of these birds came the desire to record their visits photographically. This was not easily accomplished because of their unusual timidity, due to the man-made surroundings and the daily onslaughts of the horde of House Sparrows that infested the place. Seeing that the photographs that could possibly be taken would be few and far between, with the probable result of driving the birds off altogether, the idea was partly given up, but still the desire to picture our winter residents hung on.

Early in the fall of 1916 the idea struck me of establishing a woodland feeding-station for photographic purposes—going to the birds if the birds would not come to me. A companion nature-lover and myself, on October 1, decided to take a bird walk through some rather unfamiliar territory in the nearby countryside. After about one hour's trolley-ride into the suburbs and fifteen minutes' stiff hiking, we came to a beautiful bit of wooded farmland. Several trips were made to it before the winter set in, and we found it well supplied with bird-life and were enabled to add a number of new names to our lists. On the 14th we decided at just what points to establish the much-talked-of feeding-stations.

The first opportunity to do this came on the 21st. We went armed with a brace and bit, and suet that had been run through a meat-chopper. Stations were located at five points. One was in a large dead chestnut tree. It consisted

of ten holes, $\frac{3}{8}$ inch in diameter, arranged in the form of a triangle. While no bird photographs were taken there, it was used very much by the birds of the vicinity. Another was located in a dead sapling of the same species, but for some unknown reason the birds refused to use it, except in the very coldest weather. A third was in the cracked limb of another blighted chestnut, about 10 feet from the ground. It held more food than the rest and was always emptied before the others. For a long time it was a mystery as to what manner of creature could dispose of so much food in such a short time. Blue Jays were suspected, but not many were in this neighborhood, and nothing could be proved against them. It was not until the winter had begun to break up that we learned that we had been feeding a flock of about five Crows. I believe a feeding-station for Crows is unique, even if it is unintentional. Many Brown Creepers were attracted to suet forced into the crevices in the bark of a living oak. Some photographs of Brown Creepers on it were taken by my companion, but they proved to be a little too perfect examples of protective coloration. The fifth and last station was only a fence-post with an ample crack into which suet was forced. It was to this that by far the most birds were attracted, and where the balance of the studies were taken.



TUFTED TITMOUSE

The hunting-season opened, and on November 11 we saw only a solitary Song Sparrow, and it was not before the 18th that all the suet was gone. We replenished it that day, but still the only birds we saw were two Song Sparrows and two Brown Creepers. Our next trip was on December 2, and the hunting season was to be over on the 15th. Already the great number of 'sportsmen' that infested the woods was beginning to thin out, and the birds were returning to the section. It was this day that I first saw the birds at the food. On the oak tree were two Brown Creepers and a White-breasted Nuthatch. I refilled the stations twice before the 25th, when I took my trusty old plate camera. I focused on the fence-post, but the birds kept their distance, and I took home no portraits. I used an electric device to operate the shutter from a distance for all of these pictures.

The day after Christmas, a biting cold day, I had the camera set by 9 o'clock. Forty minutes later I took my first feeding-station picture—a Brown Creeper. There were two on the post at the time, but one was out of range of the lens. A Downy wanted the food but feared the staring Cyclops that guarded the treasure. He would swoop down and make me believe that he was about to alight, when off he would go, only to make another similar swoop. The single Creeper was the only picture I took that day.

On December 30, two White-breasted Nuthatches tried the same maneuvers as the Downy, keeping me on the jump for naught. A Brown Creeper was Tuss-



BROWN CREEPER

ing' around also, but refused to get in a position worth wasting a plate on. But then something happened. A hurried chattering cry—a flutter of wings—something landed on top of the post and was gone again, flitting up into the tree behind which I was hiding. Then I saw it to be a Tufted Titmouse. But that is not all. I had pushed the button in that fraction of a second that he was on the post-top. The most that I could hope for on the plate was a blur of wings. On developing it I was more than delighted. Later a Hairy tried diving for the food, but without success for either him or me. That ended my year's experiences. It began to snow a little, and I could not have stood still a moment longer because of the intense cold.

The next trip taken when the sun made bird photography possible was January 6. Numbers of Chickadees were around the empty post when I arrived, and picked up the crumbs that dropped from my hand as I stuffed the

crack with suet. Three photographs were taken of these confiding little fellows, but one turned out a complete failure. Another Brown Creeper picture was the day's remaining bit of success.

On the 27th, Tufted Titmice chattered at my attempts but refused to have their image imprisoned in a piece of 4 x 5-inch glass, despite all my coaxing. February 10 the last attempt was made but without success.

In this way the winter of the past year was spent pleasantly, healthfully, and profitably—pleasantly by association with nature, healthfully by outdoor activity in all sorts of weather, and profitably by the making of valuable additions to my knowledge of bird-life. Of all the exposures made, only two were failures, and both those because of some accident in manipulating the camera. This year more elaborate preparations will be made and better results looked for.

Holbøll's Grebe in Connecticut

By WILBUR F. SMITH, South Norwalk, Conn.

THE largest number of Holbøll's Grebes that I have known to be in this section occurred in the spring of 1916, and as none of the books to which I have access give much information concerning their food habits or their behavior when on land, I was glad when exceptional circumstances gave me an opportunity to observe both at close range.

The first Grebe reported was found on March 19, on the snow far from the shore, and, as so often happens, the party finding it ran for a gun and shot it. Fortunately I was able to save the skin for Birdcraft's Museum.

On March 24 the ice began to break up in Rowayton harbor, and, in a small open space near the docks, just behind some fishermen's boats in which they were repairing an engine, two of these Grebes were feeding. They fished continually, and hunger may have had something to do with their apparent lack of caution, boldness, or confidence in man, as at times they came up within 15 feet of the boat in which the men were working.

One of the men told me that he saw one catch a large smelt, and that when he went on deck in the night "they were still fishing and seemed to be always fishing." While I watched them they were feeding on small flounders, and occasionally they would catch one too large to handle in the open water, whereupon they would swim into shallow water or to the edge of the ice, and strike and pound the fish into condition to eat.

On March 26 three of us went to Rowayton to see the Grebes. We found that the ice had gone farther out of the harbor and that the Grebes were fishing farther off shore, where three more had joined them. A number of Herring Gulls were sitting around on the ice and floating down on detached cakes, and, as it proved, watching the Grebes as intently as we were, for when a Grebe

would come up with a fish, one or more of the Gulls would pounce upon it for the food, and the Grebe would have to dive to escape with its prize. Generally they saved their fish by coming up at a considerable distance, though the Gulls succeeded in worrying a fish from the Grebes at times.

They were wonderful divers, at times seeming to 'just disappear,' but, when really fishing, they would throw themselves forward and almost out of the water with the violence of their effort, and I wondered if the depth of water had anything to do with the manner of diving. With watch in hand, we timed them under water, and on two occasions one Grebe was down fifty-five seconds—forty-five to fifty-five seconds was the average.



HOLBELL'S GREBE
Photographed by Wilbur S. Smith

On April 13 one was seen in Saugatuck Bay, and on April 20 one was found in a yard in the east end of town. I liberated it, first photographing and studying its actions and posture on land. It sat forward on its breast, and it seemed to me the bird realized its helplessness, for, when placed on the lawn with no one near, it made no effort to escape and kept up a constant calling. A small child with a stick could have killed it, though it struck viciously with its long bill when anyone came within reach, but the blow did not have the force or power of that of a Heron of equal size.

From its actions one might have thought it was wounded, but when it saw the salt water—possibly first sensed it—a marked change took place in the Grebe's actions, and it struggled violently to escape. Placed on the ground some distance from the shore it went floundering along, propelled by wings and feet, until it reached the water, when it was the perfection of graceful motion. It dove and preened and dove again, raised high on its feet and shook itself and flapped its wings, dove again, and then headed for open water at a pace that proved it to be in good condition.

The Migration of North American Birds

SECOND SERIES

III. THE SUMMER AND HEPATIC TANAGERS, MARTINS,* AND BARN SWALLOWS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey
(See Frontispiece)

SUMMER Tanager

There are two subspecies of the Summer Tanager, an eastern and a western, which of course occupy separate areas in summer but which mingle more or less during the migrations and in winter.

The **Summer Tanager** (*Piranga rubra rubra*) breeds in the eastern United States, north to Delaware (formerly to New Jersey), southern Ohio, southeastern Wisconsin, and southeastern Nebraska; west to eastern Kansas and central Texas, and south to northeastern Mexico, southeastern Texas, southern Mississippi, and central Florida. It winters in Central and South America, south to Guiana, Ecuador, and Peru, and north to Yucatan and central Mexico. It is also of casual occurrence north to Nova Scotia, New Brunswick, Quebec, and Ontario; and is accidental in the Bahama Islands.

Cooper's Tanager (*Piranga rubra cooperi*) breeds in the southwestern United States and northern Mexico, north to central New Mexico and central Arizona, west to southeastern California; south to northern Durango and central Nuevo Leon, and east to central western Texas and eastern New Mexico.

In the following migration tables all records of Cooper's Tanager are indicated by an asterisk (*), all the others, therefore, should be considered as referring to the eastern Summer Tanager.

SPRING MIGRATION

LOCALITY	Number of years recorded	Average date of spring arrival	Earliest date of spring arrival
Amelia Is., Fla.	2	April 13	April 12, 1910
Chiles, Fla.	2	April 5	March 21, 1886
Tallahassee, Fla.	4	April 5	March 30, 1902
Savannah, Ga.	15	April 6	March 29, 1908
Kirkwood, Ga.	14	April 11	April 3, 1891
Charleston, S. C.	7	April 11	April 1, 1903
Long Island, Ala.	4	April 17	April 12, 1916
Biloxi, Miss.	4	April 4	March 31, 1904
New Orleans, La.	13	April 5	April 1, 1904
Brownsville, Tex.			February 11, 1851
San Antonio, Tex.	5	April 10	April 8, 1898
Kearville, Tex.	16	April 11	April 5, 1913
Gonzalesville, Tex.	7	April 14	April 10, 1885

* The Purple Martin and Barn Swallow were figured in Birds-Lost for September-October, 1917, before this second Series was begun. They are treated here to make our migration records of the Swallows in North America complete. The remaining species of the family were figured and treated in Birds-Lost for November-December, 1917. -Lester.

SPRING MIGRATION, continued

LOCALITY	Number of years record	Average date of spring arrival	Earliest date of spring arrival
State College, N. M.*			May 7, 1911
Tombstone, Ariz.*	1	April 27	April 18, 1901
Tucson, Ariz.*	2	April 24	April 19, 1909
Fort Mojave, Ariz.*			April 25, 1880
Raleigh, N. C.	31	April 20	April 6, 1888
Weaverville, N. C.	6	April 23	April 20, 1894
Variety Mills, Va.	13	April 27	April 21, 1900
Washington, D. C.	16	May 1	April 18, 1890
Waverly, W. Va.	4	April 29	April 25, 1904
Athens, Tenn.	8	April 17	April 10, 1900
Eubank, Ky.	10	April 19	April 15, 1891
Helena, Ark.	24	April 14	April 7, 1907
Lawrence, Kans.	2	May 9	May 1, 1906
Denver, Colo.			May 12, 1871
Philadelphia, Pa.			May 7, 1884
Sing Sing, N. Y.	2	May 10	May 8, 1884
Chillicothe, Ohio	3	April 25	April 24, 1904
Bloomington, Ind.	8	April 26	April 18, 1880
Olin, Ill.	6	April 23	April 21, 1893
St. Louis, Mo.	8	April 24	April 6, 1909

FALL MIGRATION

LOCALITY	Number of years record	Average date of last one observed	Latest date of last one observed
Sing Sing, N. Y.			September 26, 1887
Philadelphia, Pa.			September 27, 1884
Chillicothe, Ohio			October 1, 1904
Bloomington, Ind.			September 28, 1887
Olin, Ill.	8	September 18	October 1, 1889
St. Louis, Mo.			October 5, 1906
Washington, D. C.	7	September 14	September 19, 1900
Variety Mills, Va.			September 19, 1884
Weaverville, N. C.	2	October 4	October 7, 1891
Raleigh, N. C.	10	September 26	October 29, 1880
Spencer, W. Va.			September 18, 1909
Athens, Tenn.	6	October 2	October 14, 1902
Eubank, Ky.	6	September 24	October 19, 1890
Charleston, S. C.	5	September 28	October 14, 1911
Kirkwood, Ga.			September 15, 1902
Savannah, Ga.	4	September 21	October 20, 1908
Tallahassee, Fla.	3	September 16	October 26, 1904
Fernandina, Fla.			October 20, 1900
Iliaca, Miss.			October 21, 1911
Helena, Ark.	3	September 24	October 2, 1897
New Orleans, La.	4	October 19	October 27, 1897
Chloride, N. M.*			September 11, 1911
San Francisco River, Ariz.*			October 10, 1871
Whetstone Mountains, Ariz.*			September 27, 1908
Rincon, Ariz.*			September 21, 1907
San Clemente Is., Calif.*			October 11, 1907

HEPATIC Tanager

The **Hepatic Tanager** (*Piranga hepatica*) is one of the Mexican birds which reaches the United States only along the southwestern border. Owing to its limited distribution and to its frequenting the less inhabited parts of the United States there are comparatively few data on its migration. The range of the typical subspecies (*Piranga hepatica hepatica*), the only one occurring in the United States, extends from central western Texas, central New Mexico, and northwestern Arizona south over the table-land of Mexico to Guatemala. Another race, the Mexican Hepatic Tanager (*Piranga hepatica dextra*), occupies eastern Mexico from the state of Vera Cruz north to Nuevo Leon.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Hachita Grande Mountain, N. M.			May 19, 1897
Huerfano Mountains, Ariz.			April 11, 1907
Fambotone, Ariz.			April 20, 1912
Paradise, Ariz.	2	April 27	April 24, 1913

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last seen observed	Latest date of last seen observed
Yuma, N. M.			September 14, 1886
Huerfano Mountains, Ariz.			October 25, 1907
Fambotone, Ariz.	2	September 2	September 20, 1913

PURPLE MARTIN

The Purple Martin has a wide distribution and is well known wherever it lives. It is the earliest spring migrant to enter the United States from the south, so early, in fact, that we can with difficulty believe that it does not pass the winter in the United States. There is apparently, however, a period of a month or two during December and January when it is not found even in southern Florida, although it appears sometimes as early as January 20, and has been seen as late as December 18. The latter, however, must be regarded as an unusually late date. There are two subspecies, both of which summer in the United States.

The **Purple Martin** (*Progne subis subis*) breeds in temperate North America, north to Nova Scotia, New Brunswick, northwestern Ontario, Manitoba, and Montana, west to Idaho and Arizona, south to Tepic and Vera Cruz, Mexico, and to southern Florida; migrates through Central America and northern South America; winters in Brazil; and occurs accidentally on the Bermuda Islands and in Great Britain.

The **Western Martin** (*Progne subis hesperia*) breeds in the Pacific Coast region of North America from southwestern British Columbia to southern Lower California, and occurs during migration in Central America. Its winter home is not known, but is presumably South America. In the following migration tables an asterisk (*) indicates the records belonging to the Western Martin.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Orlando, Fla.....	10	February 8	January 27, 1911
Melrose, Fla.....	7	February 4	January 20, 1901
Tallahassee, Fla.....	9	February 20	January 20, 1911
Savannah, Ga.....	14	March 18	March 4, 1911
Charleston, S. C.....	23	March 3	February 15, 1907
Carrollton, Ala.....	5	March 9	March 9, 1883
Biloxi, Miss.....	6	February 13	January 29, 1911
New Orleans, La.....	12	February 14	January 21, 1864
Kerrville, Tex.....	16	February 24	February 11, 1909
Gainesville, Tex.....	5	March 1	February 27, 1884
Huachuca Mountains, Ariz.....		April 14, 1900	April 14, 1900
Stockton, Calif.*	9	March 6	March 1, 1879
Raleigh, N. C.....	18	April 22	March 16, 1909
New Market, Va.....	29	March 28	March 14, 1898
Washington, D. C.....	22	April 1	March 9, 1908
Mardela Springs, Md.....	6	March 31	March 18, 1889
French Creek, W. Va.....	8	April 11	April 9, 1890
Eubank, Ky.....	12	March 21	March 14, 1887
Athens, Tenn.....	7	March 21	March 17, 1907
Helena, Ark.....	30	March 4	February 18, 1897
Osage, Kans.....	17	April 6	March 26, 1900
Loveland, Colo.....	2	April 22	April 21, 1887
Morristown, N. J.....	15	April 17	April 8, 1890
Berwyn, Pa.....	14	April 19	March 27, 1913
Oberlin, Ohio.....	23	April 8	March 25, 1910
Fort Wayne, Ind.....	13	April 4	March 19, 1907
Chicago, Ill.....	21	April 12	March 23, 1884
St. Louis, Mo.....	11	March 21	March 15, 1888
Keokuk, Iowa.....	20	March 30	March 17, 1903
Sioux City, Iowa.....	13	April 13	April 4, 1900
Lincoln, Neb.....	3	April 9	April 8, 1900
Jewett City, Conn.....	30	April 13	April 2, 1912
Block Island, R. I.....	3	April 17	April 10, 1915
Boston, Mass.....	14	April 20	April 6, 1907
Norway, Maine.....	16	April 21	April 16, 1914
Tilton, N. H.....	6	April 25	April 20, 1906
Rutland, Vt.....	11	April 26	April 16, 1915
New York, N. Y.....	9	April 18	March 21, 1897
Saratoga Springs, N. Y.....	18	April 16	April 6, 1912
Detroit, Mich.....	16	April 19	April 5, 1912
Ann Arbor, Mich.....	20	April 12	March 23, 1907
Madison, Wis.....	23	April 13	March 29, 1897
Lanesboro, Minn.....	11	April 9	Feb. 14, 1890†
Sioux Falls, S. D.....	4	April 19	April 1, 1888
Larimore, N. D.....	10	May 6	April 9, 1910
Great Falls, Mont.....	3	May 14	April 19, 1886
			May 10, 1907

† Accidental at this early date.

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Tacoma, Wash.*	3	April 11	April 1, 1905
South Lake, N. B.	15	May 2	April 21, 1900
Chatham, N. B.	25	May 10	May 2, 1887
Quebec, Quebec	6	May 5	April 26, 1901
Montreal, Quebec	11	May 2	April 9, 1911
London, Ont.	11	April 17	April 9, 1900
Ottawa, Ont.	32	April 24	April 13, 1909
Margaret, Man.	8	May 11	May 2, 1914
Arctic, Man.	10	May 11	April 25, 1896
South Q' Appelle, Sask.	8	May 17	May 5, 1904
Red Deer, Alta.	2	May 21	May 7, 1891
Vancouver, B. C.*	2	May 10	May 6, 1889

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last year observed	Latest date of last year observed
South Lake, N. B.	7	August 29	September 13, 1912
Quebec, Quebec			September 6, 1894
Montreal, Quebec	11	August 22	September 25, 1897
Ottawa, Ont.	26	August 21	September 12, 1907
Margaret, Man.			August 20, 1911
Arctic, Man.	6	August 13	September 11, 1897
South Q' Appelle, Sask.	3	August 11	August 25, 1911
Lawson, Minn.	6	August 20	September 4, 1901
Lancaster, N. H.			September 2, 1909
Tilton, N. H.	4	August 20	August 24, 1907
Hartford, Vt.			September 4, 1914
Hampden, Mass.	3	August 22	September 12, 1908
Black Island, R. I.	3	September 5	September 15, 1914
Hartford, Conn.			September 27, 1901
Genoa, N. Y.	2	September 2	September 12, 1915
Swampy Springs, N. Y.	15	August 13	August 27, 1902
Yakuburg, Mich.	11	August 30	September 16, 1907
Madison, Wis.	5	August 25	September 6, 1912
Lambert, Minn.	7	September 1	September 21, 1911
Santa Falls, N. D.	4	August 24	September 2, 1910
Mariontown, N. J.	13	August 31	September 11, 1911
Boysie, Pa.	9	August 19	September 24, 1896
Chardon, Ohio	8	August 20	September 30, 1907
Indianapolis, Ind.	4	September 11	October 1, 1913
Chicago, Ill.	7	September 12	September 27, 1900
Kankakee, Iowa	12	September 3	October 11, 1892
Camasville, Mo.	7	September 2	September 11, 1913
St. Louis, Mo.	2	September 20	September 24, 1892
Lincoln, Neb.			September 10, 1892
Washington, D. C.	10	August 25	September 14, 1894
New Market, Va.			August 14, 1915
Raleigh, N. C.	6	August 20	September 9, 1907
French Creek, W. Va.	4	August 9	August 16, 1891
Indian, Ky.	7	August 26	September 4, 1887
Kennett, Tenn.	11	September 13	October 5, 1889
Ozark, Kans.	17	August 20	September 28, 1896
Charleston, S. C.			October 6, 1911

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of last late arrival	Latest date of last late arrival
Savannah, Ga.			August 26, 1909
Tallahassee, Fla.	3	September 18	September 27, 1901
Orlando, Fla.			December 18, 1911
Carrollton, Ala.	3	August 24	August 28, 1886
Biloxi, Miss.	3	August 27	October 9, 1910
New Orleans, La.	4	October 8	October 22, 1894
Austin, Tex.	2	September 17	September 28, 1903
Tombstone, Ariz.			September 10, 1900
Stockton, Calif. *			September 8, 1878

CUBAN MARTIN

The **Cuban Martin** (*Progne cryptoleuca*) is a native of the island of Cuba, but is of accidental or occasional occurrence in southern and central Florida. The only authentic records for the United States are one specimen taken at Cape Florida on May 18, 1858, and another specimen, without date, obtained at Clearwater, Fla.

GRAY-BREASTED MARTIN

The **Gray-breasted Martin** (*Progne chalybea*) ranges from northeastern Mexico and extreme central southern Texas, south through Mexico, Central America, and South America, to Bolivia and southern Brazil. The only records for the United States are a specimen taken at Rio Grande, Tex., on April 25, 1880, and another obtained at Hidalgo, Tex., on May 18, 1880.

BARN SWALLOW

The **Barn Swallow** (*Hirundo erythrogastris*) is one of the most familiar and widely distributed North American birds. It breeds north to central Quebec (southern Ungava), southern Manitoba, northern Mackenzie, and northwestern Alaska, south to North Carolina, Arkansas, southern Texas, Guanajuato, Jalisco, and Tepic, Mex. It winters from southern Mexico, through Central America and South America to Brazil, Argentina, and Chile. In migration it passes through the Bahamas and the West Indies, and is of accidental occurrence in Greenland, the Bermuda Islands, and the Galapagos Islands.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Dry Tortugas, Fla.			April 8, 1890
Amelia Is., Fla.	2	April 11	April 9, 1916
Savannah, Ga.	10	April 5	March 26, 1905
Charleston, S. C.	4	April 10	April 3, 1909

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Biloxi, Miss.	4	April 3	March 27, 1904
New Orleans, La.	12	April 1	March 20, 1893
Eagle Pass, Tex.	4	February 28	February 9, 1887
Gainesville, Tex.	3	March 30	March 21, 1886
Albany, N. Y.			April 5, 1914
Tombstone, Ariz.	3	April 10	March 20, 1900
Fresno, Calif.	6	March 14	March 4, 1914
Raleigh, N. C.	19	April 14	April 2, 1888
New Market, Va.	21	April 15	April 4, 1888
Washington, D. C.	27	April 14	March 30, 1890
Campden, Md.	6	April 11	April 3, 1913
White Sulphur Springs, W. Va.	8	April 12	April 3, 1892
Athens, Tenn.	6	April 14	April 8, 1906
Lubank, Ky.	10	April 10	April 1, 1891
Orange, Ky.	24	April 17	April 11, 1890
Boulder, Colo.	7	May 5	April 21, 1912
Minertown, N. J.	17	April 19	April 5, 1890
Philadelphia, Pa.	21	April 18	April 11, 1916
Cincinnati, Ohio	23	April 12	March 30, 1897
Richmond, Ind.	13	April 15	April 1, 1893
Chicago, Ill.	29	April 19	April 4, 1897
Camden, Mo.	5	April 21	April 17, 1914
Kokoski, Iowa	8	April 19	April 3, 1903
Lincoln, Neb.	3	April 24	April 18, 1900
Jonestown, Conn.	30	April 19	April 3, 1892
Providence, R. I.	20	April 25	April 16, 1906
Woods Hole, Mass.	7	April 15	April 1, 1894
Boston, Mass.	23	April 22	April 14, 1904
Phillips, Maine	12	April 28	April 25, 1908
Titon, N. H.	6	April 27	April 18, 1912
St. Johnsbury, Vt.	17	April 20	April 14, 1892
Baldwin Spa, N. Y.	24	April 28	April 16, 1891
New York, N. Y.	26	April 20	April 3, 1882
Ann Arbor, Mich.	25	April 18	April 7, 1888
Madison, Wis.	11	April 22	April 14, 1901
Minneapolis, Minn.	8	April 26	April 9, 1908
Vermilion, S. D.	4	May 2	April 29, 1912
Grand Forks, N. D.	4	May 12	May 11, 1908
Cheyenne, Wyo.			April 21, 1882
Levy, Mont.	7	May 11	May 5, 1894
Great Falls, Mont.	1	May 13	May 12, 1892
Meridian, Idaho	4	May 13	April 25, 1914
Portland, Ore.			April 13, 1897
Tacoma, Wash.	4	April 29	April 24, 1908
Pittsburg, N. S.	8	May 13	May 1, 1895
St. John, N. B.	12	May 6	April 25, 1892
North River, P. E. I.	5	May 9	May 7, 1887
Quebec, Quebec	13	April 29	April 22, 1906
Montreal, Quebec	5	April 30	April 25, 1894
Ottawa, Ont.	29	April 26	April 17, 1900
Lampson, Ont.	18	April 23	April 15, 1892
Alexandria, Man.	13	May 15	May 2, 1915
Indian Head, Sask.	8	May 18	May 7, 1903
Cardel, Alta.	7	May 13	May 6, 1915
Okanagan Landing, B. C.	8	May 8	April 26, 1906
Fort Chipewyan, Sask.			May 20, 1877
Nulato, Alaska			May 13, 1867

FALL MIGRATION

LOCALITY	Number of immatures found	Average date of last one observed	Latest date of last one observed
Sitka, Alaska			August 22, 1911
Pictou, N. S.			September 1, 1894
St. John, N. B.	10	September 11	September 22, 1891
North River, P. E. I.	4	September 6	September 15, 1887
Quebec, Quebec			August 23, 1894
Montreal, Quebec	6	August 29	September 8, 1912
Ottawa, Ont.	28	September 6	September 29, 1910
Ayrton, Man.	14	September 10	September 28, 1907
Oxabogan Landing, B. C.	7	September 14	September 20, 1907
Orono, Maine	4	September 5	September 16, 1890
Tilton, N. H.	6	August 28	August 31, 1911
St. Johnsbury, Vt.	2	September 1	September 2, 1911
Woods Hole, Mass.	6	September 18	October 2, 1894
Providence, R. I.	13	August 29	September 19, 1904
Hartford, Conn.	19	September 20	October 2, 1906
New York, N. Y.	12	September 3	September 23, 1904
Ann Arbor, Mich.			September 6, 1913
Madison, Wis.	7	September 10	September 25, 1913
Lanesboro, Minn.	4	August 29	September 8, 1887
Great Falls, Mont.			September 4, 1889
Meridian, Idaho	2	September 14	September 15, 1914
Seattle, Wash.	3	September 18	October 22, 1911
Newport, Ore.			September 16, 1906
Morristown, N. J.	13	September 10	October 1, 1907
Philadelphia, Pa.	5	September 9	October 17, 1911
Reno, Pa.	10	August 19	September 29, 1898
Cincin., Ohio	7	September 18	October 13, 1906
Richmond, Ind.	5	September 19	October 13, 1906
Chicago, Ill.	7	September 4	September 15, 1914
Grinnell, Iowa	5	September 8	September 16, 1881
Concordia, Mo.	7	September 20	October 11, 1909
Lincoln, Neb.	2	October 2	October 5, 1899
Washington, D. C.	9	September 8	September 19, 1911
Ft. Det., N. C.	0	August 26	September 16, 1886
French Creek, W. Va.	4	August 22	August 24, 1889
Athens, Tenn.	3	September 4	September 15, 1901
Onaga, Kans.	24	September 17	October 3, 1892
Caddy, Okla.			September 19, 1883
Boulder, Colo.	4	September 23	September 29, 1909
Flagstaff, S. C.	2	September 29	September 28, 1884
Savannah, Ga.	4	October 15	October 17, 1910
De Funiak Springs, Fla.			September 26, 1909
Amelia Is., Fla.			December 13, 1905
Biloxi, Miss.	5	October 1	October 19, 1908
New Orleans, La.	3	October 24	November 3, 1891
San Mateo Mountains, N. M.			September 30, 1906
San Pedro River, Mex., Bound. Line.			
Atlix			October 13, 1897
Fresno, Calif.	2	September 28	October 1, 1909

EUROPEAN CHIMNEY SWALLOW

The European Chimney Swallow (*Hirundo rustica*) is a familiar bird in Europe, where it takes the place of our Barn Swallow. In one or more of its forms it occurs in summer or winter over nearly all of Europe, Asia, Africa, and the East Indies, and travels occasionally to Australia. The typical subspecies, *Hirundo rustica rustica*, finds a place in the list of North American birds only by reason of its accidental occurrence in southern Greenland.

Notes on the Plumage of North American Birds

FORTY-SEVENTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Summer Tanager (*Piranga rubra*, Figs. 1-3).—At the first fall (postjuvinal) molt the young male acquires a plumage which closely resembles that of the female (Fig. 3) but is somewhat more ruddy, with saffron under tail-coverts and a tinge of red on the crown. The extent of the spring (first prenuptial) molt varies greatly among different individuals. Some birds gain a wholly red body and retain only the primaries and secondaries of the winter plumage. Others acquire only a few red body feathers. Between these extremes there is every degree of intergradation, the bird shown in our plate (Fig. 2) representing a not infrequent plumage of this Tanager in its first breeding dress. Birds in this plumage present a most striking appearance and are sometimes reported by inexperienced observers as 'new' or 'strange' species.

At the second fall (first postnuptial) molt, the adult plumage, with wings and tail as well as body red, is donned, and thereafter (unlike the Scarlet Tanager) the bird shows no further change in color.

The female passes from the nestling or juvinal plumage into one resembling that of the adult (Fig. 3). This, it will be observed, is much yellower than that of the female Scarlet Tanager, the wings and tail especially being less fuscous.

Hepatic Tanager (*Piranga hepatica*, Figs. 4, 5).—The nestling of this species is olivaceous above, paler below, and is obscurely streaked with blackish. At the postjuvinal molt, the male in passing into first winter plumage, becomes much like the adult female (Fig. 5). A plumage essentially like this, but with a few more red feathers on the head and throat, is worn by at least some birds in their first breeding dress. I have not a large enough number of specimens to state whether all young males wear this plumage, which corresponds to the first breeding dress of the Summer Tanager.

The adult plumage is apparently secured at the first postnuptial or second fall molt, and is thereafter retained. It may be like that of our plate (Fig. 4), or still show traces of the olive-green dress of immaturity.

After the postjuvinal molt the female presents no color changes in plumage.



Notes from Field and Study

A Census from France—An Addition to the Eighteenth Christmas Census

Northeastern France.—Dec. 12; 10 A.M. to 4:30 P.M. Cloudy; wind light; temp. about 40°. Partridge, 71; Wood Pigeon, 4; Skylark, 38; Rook, 800; Carrion Crow, 5; Jackdaw, 100; Magpie, 32; Jay, 12; Starling, 83; Goldfinch, 2; Chaffinch, 1; Yellow Bunting, 41; Wren, 3; Tree Creeper, 1; Marsh Tit, 7; Blue Tit, 3; Great Tit, 15; Redbreast, 4; Blackbird, 3. Total, 19 species, about 1,225 individuals.

—E. W. CALVERT, Canadian Expeditionary Forces.

The Warbler Wave of the Spring of 1917 at Branchport, N. Y.

The weather last May was very unseasonable at Branchport, N. Y., and the Warblers were a week late, the bulk arriving May 20. Even then it was cold, and I think it was on this account that they were



THE BLACKBURNIAN WARBLER

Photographed by Verdi Burtch

so tame and kept in the lower branches of the trees and even on the ground instead of in the tree-tops as usual.

Many Cape Mays and Tennessees were seen. This was unusual, as some migra-

tions pass without our seeing a single one. The streets were full of Redstarts and Blackburnians. The Redstart, in particular, was noticed by many people who usually take no interest in birds, and many came to me asking about the beautiful little black-and-orange-colored bird that they had seen.

A friend who was working on a new cottage by the lake said that a Redstart alighted on his shoulder, also on his hat and on a rule that he held in his hand, then it flew up and hung before his face on rapid-beating wings. A neighbor brought to me a beautiful male Blackburnian which he found fluttering against the window in his barn. Another neighbor brought a dead male Chestnut-side that her cat had brought in; and I have no doubt that hundreds were killed by cats while they were so close to the ground.

May 30 a male Blackburnian spent nearly the entire day on my lawn and in the garden. He was very busy all of the time, hopping over the ground like a Chipping Sparrow and seemed to be picking up minute insects. It was difficult to get a photograph of him, not that I could not get near enough, for he came up very close to me, even passing between my feet. The trouble was that he came too close, and although I had him on the ground-glass many times, sharp and life-size, and made my exposures in $\frac{1}{16}$ second, he was so lively that when I developed my plates I found my Blackburnian out of focus. Many times he was within a few inches of my hand as I was on my knees holding my camera near the ground. I used eight plates in all, at a distance of from 2 to 6 feet, and got just one good picture.—VERDI BURTCH, Branchport, N. Y.

Spring Notes from a New Hampshire Farm

"There is a gorgeous riot of color flying up in front of the tractor; come to the meadow and see!"

This invitation lured me to the great meadows bordering the Connecticut River whence a sullen 'chug-chug' announced the progress of a farm tractor. That the machine was 'doing its bit' on a New Hampshire farm the increasing acres of brown furrows showed plainly—the large green wheels rose and dipped over the undulating land. I followed them and so made my discovery of a power in the tractor not advertised in commercial catalogues, for even as the Pied Piper charmed the rats of Hamelin with his strange notes, so did this throbbing engine draw the birds. They hopped and flew ahead of the wheels, there were large birds and small birds, birds of brilliant and of dull plumage. Ours is an old farm, dating from Colonial days, when the pioneers left their hill homes (secure from prowling Indians), to raise, in common, crops on these fertile river meadows. Until this spring of 1917 no other power than horse or ox has moved the plow, yet now, when the novel monster moves over the acreage, the birds, with indifference, just keep beyond the wheels—their attitude is absolute unconcern. I kept my eyes on the ground in front of the tractor where the birds were hunting grubs and bugs. The dark, rain-faded clouds overhead intensified the coloring of the feathered gleaners—it was as though a flock of tropic butterflies were balancing on the dun earth. Here four Scarlet Tanagers, gorgeous in their red and black, fairly, barned the soil, there several dainty Canadian Warblers explored, besides tiny Redstarts, fan-tails spread, like skittishicks dyed flame and black, flew up and down, up and down, in aimless ways—Satins, soft-hood Kingbirds, audacious Bobolinks, Field Sparrows, and other birds garnered on the ground, while above the Swallows skimmed and dipped past the steaming funnel. Then the clouds stopped rain and I left the river-rimmed meadows to hurry for the distant house. But I soon forgot the raindrops, for between the stables and the corn barn I came upon a band of Warblers feeding on the ground. There were male Chestnut-sided Warblers picking up invisible bits, one bird let me

stand beside him while he pecked in the road. Some very friendly Black-throated Blue Warblers and a Black-throated Green Warbler picked up their supper, chicken-like, at my feet. There were Redstarts everywhere, both male and female, they fluttered into the cow-stables, allowing the herdsman to catch them. One moved between the ponderous hind feet of the work horses, flying onto their driver's boot. These Redstarts were very confiding with me, and I watched in fascination the Japanese little Warblers. One Redstart, feeding beside me, would dart into the air to the height of my head—once, plopp! down he came on my hat-brim and hopped around it!

This bewildering springtime brought its tragedies, such confidence was sometimes betrayed—witness an exquisite dead Parula Warbler (a female), and a handsome male Magnolia Warbler, and one of the Redstarts—these last, with their heads snapped off and lying beside their bodies.

I have always known and observed the bird-life about me, but never do I recall such myriads of birds. To a patriotic farmer's wife it seems a hopeful sign that our feathered friends in strong battalions will help us feed the world and win the war.—KATHARINE UPHAM HUNTER, *West Claremont, N. H.*, May 24, June 3, 15, 1917.

Our Back-Yard Visitors

Perhaps many city people think bird-study is a too far distant subject to take up, that in order to study and know the birds one must be out-of-doors the whole time, or else take many trips to the woods or country. But such is not the case, for if one keeps his eyes open he can see many of these bird treasures in his own garden. In looking over our lists, it is surprising to find that until June 1, 1917, we have seen about fifty different kinds of birds in our yard, and probably then have not seen all that were there, as many of the observations were short ones.

Throughout the winter we were regularly visited by three Chickadees, three or four

Nuthatches, two to four Downy Woodpeckers, occasionally a Crow and Pine Siskins, and one unwelcomed Sharp-shinned Hawk. February 27 brought the first Robin, which was again seen on the 28th, but a cold spell after that probably caused him to seek warmer quarters. This is the earliest date, for the Robin. March 28, Purple Grackles fed in the yard, and a flock of them has since nested in a small cemetery about two blocks away. A day later, Juncos and Bluebirds put in their appearance.

April brought us a visit from a single Meadowlark, a number of Brown Creepers and Chipping Sparrows, a pair of which have nested in our pear tree. Flickers occasionally find their way here, and a pair of them have a nest in a stump in the cemetery with the Grackles. Early one morning we saw two Hermit Thrushes. White-throated sparrows were quite numerous during migration, and both Kinglets were seen.

The May visitors were much more numerous about the middle of the month. One rainy morning, a flock of four Purple Finches created havoc by picking off many blossoms, particularly from the plum trees. Their work seemed to be in direct contrast to that of the Orioles which were among the blossoms at the same time. The next morning was fair, and the Finches were still around, not in the fruit trees, however, but eating the seeds of the elm. The change in the weather had caused them to change their diet, but why I do not know. Barn and Tree Swallows were seen flying overhead, as were also numerous Hawks. House Wrens are nesting with us, and Swifts can be seen at any time. Hummingbirds are occasionally seen, and we welcomed visits from the Oven-bird, Yellow-billed Cuckoo, Scarlet Tanager, Rose-breasted Grosbeak, and Hairy Woodpecker. A Least Flycatcher, Warbling Vireo, and Yellow-throated Vireo sing in the trees continually, and, we presume they are nesting in the vicinity.

The Warbler migration, May 17 to June 1, brought a number of interesting visitors in the order named: Black and

White, Yellow, Redstart (numerous), Black-throated Green, Black-throated Blue, Magnolia, Wilson's, Canada, Tennessee, Bay-breasted, Blackburnian, Nashville, and Blackpoll.

Other visitors have been a Red-breasted Nuthatch, which took a few meals from our suet, Song Sparrows and Catbirds, a Black-billed Cuckoo, an Olive-backed Thrush, and numerous Goldfinches, of which we had the pleasure of seeing eight male birds at one time, in an elm.

This concludes the May migration seen in our yard. So far in June the Night-hawk is the only new arrival.

It is quite surprising when looking over the notes to find that so many birds have visited us this year. With the exception of the Meadowlark, which was seen in the lot back of our yard, all of the birds mentioned have been seen in the yard or flying overhead.

Probably many others of our city folks who think they cannot study the birds will see just as many, or perhaps more, if they keep their eyes open and give a few spare moments to the things that are going on in birdland in their own yards.—Mr. and Mrs. WILLIAM S. WOOD, Kingston, N. Y.

Robins Repeatedly Using the Same Nest

In the summer of 1916, at Jefferson Highland, N. H., a Robin, for her second nesting, built in the woodbine climbing on the front of our cottage, which faces northeast, placing her nest upon a substantial crossing of stout stems of the vine close to the shingles and under a projecting cornice about 12 feet from the ground. Its position secured to the occupant complete protection from falling rain and all drip from the roof. So well placed was the nest that a casual observer would have said of the location, "How discreetly chosen!" The Robins proceeded very quietly and confidently all through the nesting period, scarcely sounding any shrill cries of alarm over our movements day by day, and they brought up their brood successfully. This was a July nest-

ing. It is likely that the pair had brought up a first brood somewhere near in June.

Very soon after the young were on the wing from their home in the woodbine, we perceived that the mother was again occupying her nest, and our continued observation showed that she laid a second set of eggs in it and brought up a second brood, which got on the wing in August. The impression conveyed at the time was that she had found such full satisfaction and contentment in her chosen site that she was drawn back to it for her next nesting.

When we returned to the cottage on June 1 of the following summer, 1917, we discovered that a Robin had built the nest for her first brood on a horizontal beam of the covered piazza on the southeast side of the house, placing it snugly up in the corner where the beam joins the house. So little did this mother Robin give heed to our movements, and so little did we hear any loud cries of alarm during the entire nesting, that we felt quite sure that our woodbine-nesting Robin of the previous summer was again with us, and that she had again made choice of a well-protected site, this time under the roof of the piazza, thereby showing the same discretion which had guided her the previous season. At this time the woodbine had not yet put forth its leaves. The last year's nest, however, was still resting securely in the vine, but was fully exposed to view. Two birdlings were raised, and these left the nest on June 16. Ten days later we perceived that the Robin was again occupying her nest on the piazza beam without having made any attempt to reconstruct it or build anew. Again it was apparent that she liked this chosen location so well that she at once returned to it for her second nesting, as soon as she had sufficiently cared for the first brood, thus showing an indisposition to choose some other location. This second nesting proceeded successfully. On July 7 there were three young which the parent birds were feeding, and on the 20th, towards evening, the birdlings left the nest, or,

rather, one was seen taking short flights about the piazza and the other two seemed ready to use their wings. But we were apprehensive the next morning whether these two had gotten safely away, since we found the nest had been pulled from its place by some agency we could not with certainty determine, and lay empty and broken upon the floor. We kept no cat, and there was but one, to our knowledge, in the immediate neighborhood. This one may have been the culprit. With our hope that the birdlings had already safely flown before this catastrophe came was united a regret that the nest had been destroyed, for we felt it would have been very interesting to learn whether this Robin was of so constant a nature in her satisfaction with a well-chosen site that she would retain it for a third nesting. The opportunity for this test was lost.

But there came, perhaps, the better proof of her constancy when, six days later, we perceived that the old nest in the woodbine on the front of the house was again in use. There was no remaining question with us now. Our piazza-nesting Robin, which manifested her tenacity to a location there by twice using the same nest for two broods, was indeed the woodbine-nesting Robin of 1916 which had used the same nest for two successive nestings in the vine. She had now returned to her first well-chosen site, to her old nest, still in a full degree of preservation, and at this time well screened from view by the thick leafage of the vine, for her third nesting of the season. Three eggs were laid, and three birdlings were hatched and grew to maturity. They left the nest on August 27.

Thus we have the interesting fact of a Robin building but two nests for the rearing of five broods in two successive seasons, and during the second season, after rearing two broods in the same nest, returning to her old nest of the previous year, in which she had then reared two broods, for raising her third brood. Such an example of constancy and conservatism is, perhaps, rare. In this instance it was doubtless due first to her good judg-

ment in selecting locations, and then to her full contentment and sense of satisfaction arising from her daily experience of being undisturbed and not being interfered with in any way.

Her mate, as may be supposed, gave us much song early and late and between-whiles. His night perch was just across the road where is a wooded hillside. One evening in early July, when I was recording the order of the evening of all the bird voices within reach of me, this mate sang his final song at 7.50, and a very pretty little response came from the mother on her nest in the woodbine, just a few softly given notes expressing 'good night,' and there was silence.—HORNELL W. WRIGHT, *Boston, Mass.*

Notes on Robins' Nests

For three summers now we have been visited by Robins which are very poor nest-builders. I imagine it is the same pair each year which has not improved in their method, and realize, perhaps, that Fate,

in the guise of my father, will take care of them. The first summer, a hard wind-storm during the night loosened the badly constructed nest, built in an apple tree, and the four little birds fell to the ground. The distress of the parent birds attracted my father. The baby birds were apparently dead, but finding one showed signs of life, he carried them all into the house, wrapped them in flannel (only one had a few feathers appearing) and put them on the hearth of the kitchen stove. Then he went out and patched up their nest, finally tying it with a piece of black silk, the old birds all the time regarding the affair with great interest. The little birds, when thoroughly warm, revived and were returned to the nest, and three lived to grow up.

The next year the Robins built on a board which I had nailed under the eaves, and the nest, when the young were half-grown, being most inadequate and shaky-looking, another board was nailed under the first, making the shelf wider. This summer the Robins built over a little water-pipe, and, again, when the young birds looked in imminent danger of falling, an under board, with low rail-effect in front, was put up for protection. If the old birds noticed while it was being erected, no outcry was made, and while the little front board almost hid the nest, the male Robin, without an instant's hesitation, on perceiving the change, flew up and fed the young birds as before.—

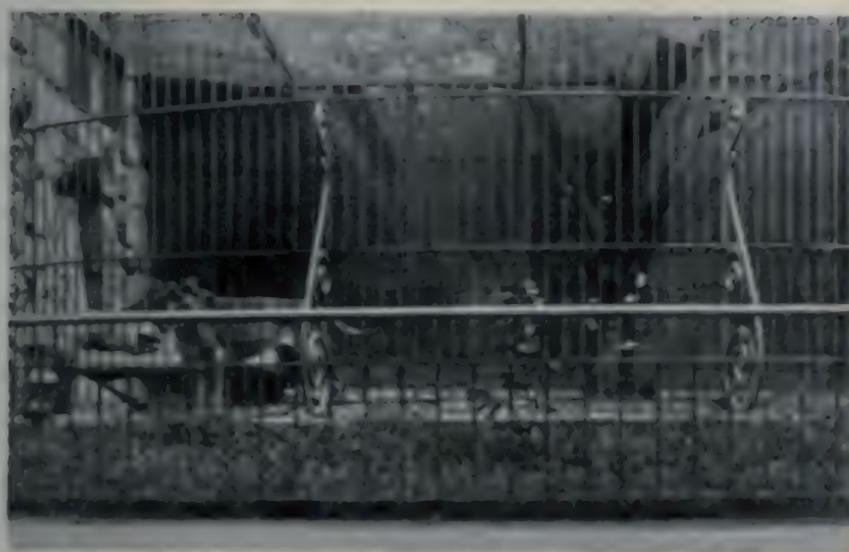
ELIZABETH LAWRENCE MARSHALL
Amestown, R. I.

A Sanctuary within a Sanctuary

Although the entire 160 acres of the National Zoological Park at Washington, D. C., constitutes a carefully preserved sanctuary for native wild birds, some summer visitants this past season apparently not satisfied with the protection afforded by the Park authorities, found added



Flicker at nest in the lion's cage.



LION'S CAGE IN THE NATIONAL ZOOLOGICAL PARK AT WASHINGTON IN WHICH A PAIR OF FLICKERS AND A PAIR OF HOUSE WRENS NESTED

security by nesting within the outdoor enclosure of an African lioness. The lion's cage is 30 by 30 feet and 10 feet high, joins the building on one side, and is otherwise completely enclosed by steel bars $3\frac{1}{4}$ inches apart at the most open places. In holes in a stump of an old tree within this enclosure a pair of Flickers and a pair of House Wrens nested and reared their broods in safety. The Flicker hole is $6\frac{1}{2}$ feet above the ground, and the Wren's nest about 6 inches higher, on another branch.

Visitors to the Park were quick to find interest in this novel sight, and crowds enjoyed watching the Flickers dart between the bars of the cage to feed their eager young, while the Wrens fussed, scolded, and sang from their own particular branch of the snag. The lioness, an unusually active animal, offered no objection to the intruders. Surely a place safer from nest-hunting boys or predatory animals could hardly be found than that selected by these two pairs of birds, and this lion's cage has every claim to the title of a model bird sanctuary.—N. HOLLISTER, *National Zoological Park, Washington, D. C.*

A Winter House Wren

Not far from my home in Evanston lives a florist who has a large greenhouse. One day last fall he left the front door open all day. Toward evening he closed it and soon heard a House Wren's song inside. The bird evidently flew in through the open door. It seemed very content, and so was allowed to remain. In the zero weather of January it was delightful to go in and hear the cheerful song of the Wren. It also helped the florist, in a large measure, to keep the insects in check.—CONROY EVANS, *Evansston, Ill.*

Three Winter Mockingbirds

A mockingbird was seen here the first week in January. It was feeding on honey-suckle and pokoberries and apples hanging on the tree, and was quite shy.—ELIZABETH P. STYER, *Concordville, Pa.*

It seems worthy of note that among our bird-guests there is a Mockingbird. For several years we have heard of a single male being at Sandy Hook, and now he seems to have chosen this side of the

nomie effect, nesting-homes must be set out, not in tens but in hundreds of thousands, if not in millions, and hence they must be made cheaply enough to permit this. The experiments of the Bedford Audubon Society, of Bedford Hills, N. Y., show that gourds fulfil the needs of the case, in being both very attractive to the birds and extremely cheap, so cheap that over 2,000 of them have been sold within the last two years to people living in and about Bedford Township. They were first brought here for this purpose by Wm. G. Borland.

These gourds, when tried in competition with more than 600 shingle boxes, of a form approved by several of the most competent American authorities, proved much the more attractive, 50 per cent of



NESTING BOX AND GOURDS.

those examined having been nested in during the first year against only 10 per cent of the boxes.

These gourds, strung with marlin and ready for hanging, with the proper holes for entrance and draining, cost us only 10 cents apiece. But a properly organized industry ought to turn them out much more cheaply, probably at a cost of not over 6 cents each, because our cost was based on unfavorable conditions, working in an amateur way, with no special appliances, wholly by adult hand-labor, on a small scale, and at a great distance from North Carolina, where our gourds were raised, so that our freight charges were excessive.

A gourd lasts four years, and perhaps

longer. Papier-mâché gourds would last much longer, and might, perhaps, be made at an even lower cost, to judge from the cost of papier-mâché pails, but here actual experiments are needed to show whether a finish could be given them which would attract the birds.

The cost of raising and curing the gourds themselves is very small, and the only additional expense is that of cleaning them out and cutting and stringing a few holes, so that the total cost is small enough to permit distributing them on a scale of real importance to agriculture. The preparation would naturally be done in winter, and therefore under favorable labor conditions.

Here, then, seems to be an industry awaiting a captain. The work to be done is, first, to diffuse among the farmers the knowledge of the benefit from setting up nesting-homes and winter feeding, so as to create an active demand; and, second, to organize in the South an industry for preparing and delivering these gourds.—H. M. Howz, Bedford Hills, N. Y.

Some Ruffed Grouse Notes

The Ruffed Grouse, in spite of three centuries of persecution, is still fairly common in some parts of Massachusetts. Even within 10 miles of Boston it is met occasionally by the haunters of the isolated woodlands which persist almost in sight of the gilded dome. The wise policy of the Metropolitan Park Commission in setting aside hundreds of acres of undeveloped land has done much to preserve our wild life, while the town of Brookline has been a pioneer in prohibiting shooting *at all times* anywhere within the town boundaries.

The accompanying photograph, was taken at Waban, Mass, May 13, 1916, in a small plot of second-growth woodland, adjoining on one side a large cornfield and on another side the Metropolitan Park Road along the Charles River. Quail are sometimes seen in the cornfield, and Pheasants are becoming very common

through the entire neighborhood, but the Grouse was a surprise.

From my house in Waban I heard the harsh cackling of the cock Pheasants daily in these woods, and their dusting-places were frequently seen. On the afternoon of May 12 I started out to look for a Pheasant's nest, near where the cackling seemed most frequent.

I had hardly gone 200 feet from the edge of the cornfield clearing when, to my surprise, I saw a hen Pheasant sitting among



RUFFED GROUSE SITTING
Waban, Mass., May 13, 1916

the dead oak leaves at the base of a small chestnut tree. She sat very close, not leaving her thirteen greenish tinted eggs until I had crept up to within 6 feet of her. I regret to state that she never came back to the nest. The only other Pheasant's nest I have found was also immediately deserted, though in this case there was only one egg, and we almost stepped on the mother without seeing her. The nest was not touched or disturbed in any way, as

the eggs were plainly visible as soon as the hen flushed.

I considered myself in great luck to have found the nest before the bird flushed from it, as her protective coloration makes discovery difficult, but even better luck was in store. A few minutes later, at the base of a small second-growth oak, within 150 feet of the Pheasant's nest, I found a second nest, and, to my surprise and delight, Mother Grouse was at home. She flushed when I was about 10 feet away, but was back on the eggs in about an hour. There were eleven eggs in this nest, quite different in appearance from the Pheasant's eggs, being smaller and buffy in color.

The next morning I returned to the woods with camera, tripod, and a 15-foot extension cord for releasing the shutter. The Pheasant's nest was unoccupied, and I snapped the eggs, then approached the Grouse's nest. The mother was less timid today, but I could not quite snap her before she flushed. I therefore set up the camera, took a couple of pictures of the eggs, and left for an hour's walk by the river. Returning I found Mother Partridge as you see her in the picture.

She was still sitting on May 20, when I last saw her, but upon my return from a brief visit to my camp in New Hampshire, some broken shells showed that the young had been successfully hatched. Later, a friend told me that he saw a brood of Ruffed Grouse, tiny downy chickens, about May 30 in these same woodlands, and I trust the family is still intact and will increase in the neighborhood.

The previous fall we had posted the district pretty thoroughly with 'No Shooting' signs, and many birds had crossed the river to seek sanctuary from the gunners. The river being in the Metropolitan Park, is a bird reservation, and is resorted to yearly by American Mergansers, Golden-eyes, and, occasionally, Wood Duck, Black Duck, and Teal.—JOHN B. MAY, M.D., 'Winnetaska,' Ashland, N. H.

THE SEASON

VI. December 15 to February 15

BOSTON REGION—The present winter has proved the most severe season recorded from this region by the weather bureau. Low temperatures have been phenomenal, both on account of protracted periods of cold, during which the thermometer has remained at zero or below, and on account of the extremely low temperature (15° and 20° below zero) which has accompanied the cold waves. The ground was covered with snow and ice from November 25 (the first snowfall) until the thaw of February 12-13 removed a large part of the snow.

Fortunately, there were very few birds here to suffer from these unfavorable weather conditions. Although flocks of Cedar Waxwings continued to appear through the winter and Black-capped Chickadees were present in normal numbers, wintering Juncos and Tree Sparrows were rare. From the observations of several members of The Nuttall Ornithological Club it appears that most of the Tree Sparrows of this region are collected south of Boston, and although many, of course, are wintering along the coast, the inland country to the west and northwest of Boston is nearly deserted.

The harshness of the winter brought one novelty—during the arctic weather, Snow Buntings, of late years a rarity except on the coast, came familiarly in flocks of dozens into the country roadways and even into the streets of Lexington, where they fed on horse droppings.—WINSOR M. TYLER, M.D., *Lexington, Mass.*

NEW YORK CITY REGION—Till this winter, the local weather bureau's lowest recorded temperature was -6° , touched several times, but that record has been broken on two occasions, -13° being reached on December 30, and -7° in January. Furthermore, remarkably cold weather has been almost continuous. However it has not been an unduly stormy

winter, but, in the lack of warm spells, the snow that has fallen has stayed, so that the ground was not bared from the time of the first snowfall, late in November, till a general thaw which began in the second week of February. Naturally, ice-thickness broke all records; people walked across the Hudson from upper New York City.

On the whole, birds have been scarce these last six weeks, both in species and individuals, so that it has been customary to list about sixteen species in a day's tramp instead of the ordinary twenty-odd. There has been a particular scarcity, at least in northern New Jersey, but less so in the city and eastward, of White-throated and Tree Sparrows and Juncos, and I know of no record since December for Field Sparrow (except one on Long Island by E. P. Bicknell), Golden-crowned Kinglet, Hermit Thrush (except on Sandy Hook, or Bluebird. On the other hand, Downy Woodpeckers, Goldfinches, White-breasted Nuthatches, Black-capped Chickadees, and others have been in wonted abundance, and it is remarkable that on Long Island, with so much ice, Canada Geese have been much less scarce than usual in winter. The presence of the Northern Shrike in exceptional numbers has been a feature of the season; in a dozen trips, since December 20, the writer has seen six, whereas he had previously not averaged one a winter. Many Goshawks have been taken around the outskirts of our Region (in Connecticut and north-western New Jersey), but I have heard of none nearer by. There has also been an unusual southward movement of Owls, indicated hereabouts by several Great Horned (apparently of one or more northern races), a Snowy trapped at Wilton, Conn., and one claimed to have been seen by a Coast Guard on Long Beach, Nassau County, L. I., and rather more Saw-whets than usual. I know of no record, anywhere near this Region, of Evening Grosbeak,

Pine Grosbeak, Red Crossbill, White-winged Crossbill, Redpoll, or Brown-capped Chickadee.—CHARLES H. ROGERS, *American Museum of Natural History, New York City.*

PHILADELPHIA REGION.—This vicinity came in for its full share of the abnormal cold of December and January. All records of the local weather bureau for long-continued cold were broken. The departure from normal averaged, for the two months, almost -8° . The Delaware River, above Philadelphia, was frozen from shore to shore, and ice was said to be 18 inches thick a short distance up the river (Torresdale, Pa.), the thickest in the memory of the local rivermen.

As for the birds, there appeared to be about the same number of species present as in late November, but a decided falling-off in the number of individuals was apparent. This was no doubt due to some extent to the deep snows, which forced the birds into restricted areas where food was obtainable. For instance, a small flock of Meadowlarks which had taken winter quarters on a nearby river-meadow could not be found. After repeated attempts to locate them had failed, they were finally discovered some distance away feeding on the top of a heap of compost. They were very loath to leave and came back as soon as the opportunity offered. With them were numbers of Horned Larks and Song Sparrows.

The Northern Shrike was the only species from the North that appeared in sufficient numbers to break the monotony of the ordinary list of the common winter birds.

A brief but characteristic report for the two months might be summed up in the words: bitter cold, birds scarce.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—Notwithstanding one of the severest winters in local annals, there were few of the more northern winter residents about Washington during December and January. The common and regular winter birds have been about as

numerous as usual, although more unequally distributed, owing perhaps to the cold weather and almost continuous covering of snow in the country districts. Very noticeable, however, has been the almost entire absence of the Red-breasted Nuthatch, which is normally a more or less common winter resident.

Hawks have been present in more than ordinary numbers, many of them resorting to places in the immediate suburbs of the city, particularly the lower part of the Potomac Park. Here the Red-tailed Hawk, which is considered a rather rare bird about Washington, has been seen regularly. Other species observed during December and January were the Red-shouldered Hawk, Broad-winged Hawk, Bald Eagle, Marsh Hawk, Cooper Hawk, Sharp-shinned Hawk, and Sparrow Hawk and most of these have been reported as more or less common.

In the District of Columbia, that is, the environs of the city of Washington, the Bob white has been, it is a pleasure to say, unusually numerous. In view of the severe weather, interested persons took measures to save the birds from starvation by systematically feeding them, and with gratifying results.

A flock of Prairie Horned Larks, rather large for this vicinity, consisting of several hundred individuals, with a slight sprinkling of Horned Larks, were by several observers noted in the vicinity of Arlington, Va., on January 24 and on several subsequent dates. The Prairie Horned Lark has also been reported from other places in the Washington region.

The European Starling has been much in evidence, moving in flocks all winter, and has appeared in a number of places in various directions from Washington. It is perhaps also worthy of note that the Horned Grebe was observed by Mr. R. H. Swales, on December 6, 12, 13, and 14, 1917, in the Potomac River, opposite the lower end of Potomac Park, and a Cat-bird in the same place on December 6, 1917.

Of the more uncommon winter visitors there are few to record. A single Snow-

bunting, noted by C. H. M. Barrett, along the Anacostia River, on December 19, 1917; one American Crossbill, seen by E. A. Prohle, near Cleveland Park, on December 15, 1917; and a single Northern Shrike, observed in Potomac Park, on December 28, 1917, about comprise the list.

Perhaps the most interesting ornithological feature of this winter has been the large number of various kinds of Ducks. These have remained in the Potomac River, from the Potomac Park down to Dyke and beyond, so long as the river or a portion of it was free from ice. In fact, the Ducks have been much more numerous this season than for many years, and, off Dyke alone, observers have frequently seen flocks aggregating several thousand. When undisturbed they often approach near the shore, but habitually keep to the middle portion of the river. The species thus far reported this winter are twelve, as follows: American Merganser, Red-breasted Merganser, Hooded Merganser, American Golden-eye, Buffle-head, Greater Scaup, Lesser Scaup, Canvasback, Redhead, Ruddy Duck, Black Duck, and Mallard.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNESOTA.—Until the beginning of the second week in February, uninterrupted low temperatures prevailed all over Minnesota. The cold has been unusually severe, and there have been no intermissions, not even for a day, as is usual in January. No snow of any account has fallen, and as a result the ground is deeply frozen and the ice on lakes and sluggish streams is between 2 and 3 feet thick. The gorge of the Mississippi River below St. Anthony Falls has been daily filled with a dense mist which rose from the water's surface in great swaying wisps and floated away over the top, making the shams seem like some great, dim, and mysterious steam-vent from regions unseen. Between February 8 and 11 came a break in these arctic conditions, and for the first time since last November, melting

temperatures at noontime appeared. The scanty snow disappeared in exposed places, and on February 12 a venturesome Horned Lark was reported near Minneapolis. A considerable flock of Cedar Waxwings appeared in the outskirts of St. Paul, feeding on mountain-ash berries (Miss C. K. Carney). But on the 14th came the severest blizzard of the season, with wind 45 miles an hour, blinding snow, and, the following morning, a temperature of 10° below.

In spite of all this severe weather, there have been occasional reports of Robins seen in the vicinity of the Twin Cities—stray birds that for lack of migrating instinct, or other reasons, failed to depart with their more normal fellows.

Frank A. Bovey reported seeing a Cardinal several times during January on his grounds at Lake Minnetonka, some 15 miles west of Minneapolis. This is a rare event. From Lanesboro has come the report that the Brown Creeper and the Golden-crested Kinglet have survived the winter (Hvoslef).

A single flock of Bohemian Waxwings at Christmastime, a Shrike January 22, and a flock of 50 Redpolls February 10, all at Duluth, with Pine Grosbeaks in Carlton County about December 25 (Van Cleef), comprise all the winter visitants thus far reported.

An occasional Red-breasted Nuthatch, Junco, and Tree Sparrow has been seen in the southern part of the state.

Chickadees and all our regular winter birds are still scarce.—THOS. S. ROBERTS, *University of Minnesota, Minneapolis.*

KANSAS CITY REGION.—The outstanding feature of the season's work was the finding of three forms of the Red-winged Blackbird wintering here. The aggregate number of individuals was below normal, but the presence of *Agelaius phoeniceus fortis*, *A. p. arcticus*, and *A. p. predatorius* (formerly *A. p. phoeniceus*) is, as far as the writer knows, unusual. The three forms were present in about equal abundance, as indicated by specimens taken.

The wintering Ducks and Geese were

driven further on by the severe weather conditions of late December and early January, the last seen being Canada Geese, Mallards and Canvasbacks on the Missouri River on Christmas Day. A hybrid, apparently the common one of Mallard X Black Duck, was taken on December 8. It may be worthy of note that the water-fowl flights at this point have shown a decided increase since the passage of the Migratory Bird Law. It may not be generally known that the sportsmen of this section have opposed the spirit of this law with more effect than those of any other part of the country.

A troop of perhaps fifty Short-eared Owls spent several weeks prior to early December on an extensive tract of land recently formed by the meandering of the great river. This tract, embracing a thousand acres or more, is overgrown with typical bottom-land vegetation, bordered by thickets of young willows, and affords ideal roosting-places for these Owls. An unusual feature of their stay at this time was their feeding on the Tree Sparrows that frequented the willows in droves. Every pellet examined contained some token of the Sparrows. The fact of this unusual diet being resorted to, as well as the favorable locality being refused as a winter roost, may be accounted for by the absence of favorite rodent-prey on this new ground.

Blue Jays and Red-headed Woodpeckers have been here in greater numbers than usual, perhaps because of an abnormal crop of acorns, notably of the shingle oak.

A lone Kingfisher was noted on February 17, rattling disconsolately along the course of a frozen stream. On this date were seen the only Crossbills of the winter—a flock of five.

The usual crowd of Sparrows braved the rigors of the severe winter in the deep shelter of the Missouri River bottoms. Not so many Harris's Sparrows, however, were seen as during previous winters.

Myrtle Warblers, which have been met with nearly every winter in the timbered

bluff regions feeding on poison ivy drooping, were not present this winter.—HARRY HARRIS, *KANSAS CITY, Mo.*

DENVER REGION.—The weather conditions in this region during these two months have been most enjoyable and pleasant; there has fallen a goodly amount of snow in our neighboring mountains and foothills, but not an excessive depth in the immediate vicinity of Denver. There have been several spells of low temperatures during this time, the minimum in Denver having been 15° below zero. Notwithstanding the proximity of the cold mountains, and the spells of low temperatures, there has been a good deal of 'open water' about the Denver Region, a condition probably permitting a Great Blue Heron and a Kingfisher to stay here all winter, the first having been seen near Denver on December 25, and the latter on January 4. The 'open water' as is well known, also encourages Wilson's Snipe to remain during what would appear, otherwise, to be an unfavorable season; one was seen here on January 1, and another by Dr. A. K. Fisher on January 23. This latter day was a very mild one, and it seems strange to be able to record the occurrence, during its afternoon, of a Snowy Owl at the edge of the mountains about 16 miles west of Denver, one having been seen there by one of the writer's friends.

Dr. Fisher and the writer also saw a Mourning Dove near the city on January 23, which in this locality is an unusual record for January. Robins have been more common in the city during the period now under consideration than in any other similar period during the writer's twenty-four years of observation here; individuals of this species were seen in December and in every week since January first. Individuals of our ordinary winter bird population have been common, and this population is well reflected in the Christmas Census for Denver, as given in the January-February (1918) number of BIRD LORE.—W. H. BERSTED, M.D., *Denver, Colo.*

Book News and Reviews

TROPICAL WILD LIFE IN BRITISH GUIANA.
Zoological Contributions from the Tropical Research Station of the New York Zoological Society. By WILLIAM BEEBE, Distinguished Curator, and G. INNESS HARTLEY, Research Associate, and PAUL G. HOWES, Research Assistant. With an Introduction by COL. THEODORE ROUSSELET. Vol. I. New York Zoological Society, 111 Broadway, New York City, 1917. \$ 50. XX + 504 pages, numerous illustrations.

Mr. Beebe is to be congratulated on the privilege of heading what, so far as the reviewer knows, is the first expedition to leave this country in search, chiefly, of facts concerning birds rather than their skins. The museum man and the professional collector are obliged to bring back specimens. The former, for the exhibition halls and laboratories of the institution he represents, and which requires, furthermore, some tangible, appraisable results for the money expended, the latter, to ensure the success of his enterprise or, at least, to assist in defraying his expenses. To Mr. Beebe, therefore, belongs the credit of impressing those in authority in the organization which already owes so much to his labors, with the value of researches to the outcome of which no preliminary valuation could be attached, but which might result in securing information of high scientific importance.

We hope that the showing he and his associates make in this report (which should be considered a report of progress) will lead to the sending of many similar expeditions.

Taking a region 'about Bartica, British Guiana' whose bird-life is fairly well known, where faunal problems are not complicated by altitude, and hence where intensive collecting is not essential, Mr. Beebe and his associates devoted six months (March to August, 1915), to a study of various problems, chiefly ornithological, which presented themselves.

Specimens were collected when they were needed for identification or study, but no attempt was made to amass a collection,

each man feeling wholly free to devote his entire time to observation without the necessity (ever present in the collector's mind) of securing at least so many specimens a day.

As a result of this method, we have in this preliminary report so many additions to our knowledge of the habits of South American birds and so many suggestions in regard to further subjects for investigation, that we cannot begin to enumerate them in this review, which indeed is designed to comment on Mr. Beebe's unique undertaking rather than to detail its outcome.

We can only hope that he will return in safety from his service as an aviator in France and, with additions to his staff, be spared to continue his studies in the jungles of British Guiana.

Meanwhile we advise every student of tropical life to secure this volume.—F.M.C.

TWELVE MONTHS WITH THE BIRDS AND POETS. By SAMUEL A. HARPER. Ralph Fletcher Seymour [Chicago?]. 12 mo. 295 pages.

Devoting a chapter to each month in the year, the author pleasantly interweaves his own observations and appreciation of birds with those of the ornithologist and poet. His reading has evidently carried him far afield in both the science and sentiment of ornithology, and, combining the results of these excursions with his own, he has written a volume which contains much of interest for both bird students and general readers.

It is a little difficult to reconcile his fondness for the English Sparrow with a genuine love of the birds in whose ways we find some expression of those traits which we commend in mankind, but at best we may credit him with the courage to champion a member of the feathered race whose friends are found chiefly among those unfamiliar with other forms of bird-life.

Excellent taste has been shown in the makeup of this book, which may well

find its way to the library of the nature-lover.—F.M.C.

THE BOOK OF BIRDS, COMMON BIRDS OF TOWN AND COUNTRY AND AMERICAN GAME BIRDS. By HENRY W. HENSHAW. With Chapters on 'Encouraging Birds around the House' by F. H. KEYBARD, 'The Mysteries of Bird Migration,' by WELLS W. COOK, and 'How Birds Can Take Their Own Portraits,' by GEORGE SNEYD, ed. Illustrated in natural colors, with 234 paintings by LOUIS AGASSIZ FORTY. National Geographic Society, Washington, D. C. Royal 8 vo xiii + 191 pages, many illustrations in color and black and white.

The Editor of the *National Geographic Magazine* has here brought together the various articles on birds which have appeared in that publication and with which the readers of *BIRD-LORE* are doubtless familiar.

It is difficult to overestimate the educational value which these admirable articles have already exerted, and we cannot therefore be too thankful that they should now be presented in a form which makes them readily accessible.—F.M.C.

HOW TO HAVE BIRD NEIGHBORS. By S. LOUISE PATTESON. Photographs by the Author. D. C. Heath & Co., Boston, New York, Chicago. 12mo. viii + 128 pages; numerous illustrations.

In this book the author recounts her experiences with bird neighbors in a manner well designed to hold the attention of the boys and girls to whom it is dedicated and for whom it is written, as well as those children of maturer years who find perpetual youth in association with birds. Numerous photographs from nature add greatly to the value and realism of the text.—F.M.C.

Ornithological Magazines

THE CONDOR.—The January number of 'The Condor' contains seven general articles, two of which relate to the nesting habits of waterfowl. Munro describes the habits of 'The Barrow Golden-eye in the Okanagan Valley, B. C.,' with notes on their nests. He attributes the birds' preference for strongly alkaline lakes to the presence of certain small crustaceans which

form the principal food of this Duck. In a charming account of 'A Return to the Dakota Lake Region,' Mrs. Bailey touches on the various species of waterfowl met with, including the White-winged Scaup, which was found on the Sweet-water chain of lakes.

Squires and Hanson contribute a comprehensive review of 'The Destruction of Birds at the Lighthouses on the Coast of California' based on reports from thirty-seven stations, only ten of which report any destruction at all, and even here the destruction is slight and is confined mainly to waterfowl and shore-birds. Wetmore, in 'A Note on the Tracheal Air-sac in the Ruddy Duck,' states that further examination of birds in the field shows that this air-sac is a secondary sexual character found only in males, and that the birds habitually keep the sac inflated, even while diving.

The remaining articles comprise three local lists of rather unusual interest. Mailliard gives an account of 'Early Autumn Birds in Yosemite Valley' with a list of twenty-three species that have apparently not heretofore been recorded from the floor of the valley. He overlooks the fact that Ray collected eggs of Anna's Hummingbird in 1858 and that Muir reported Lewis' Woodpecker from the valley a number of years ago. In 'Notes on Some Birds from Central Arizona,' Swarth summarizes the results of his observations during a trip along 'The Apache Trail' between Phoenix and Globe in the summer of 1915. Among other interesting records he was able to add two species, Bendire's Crossbill and the Indigo Bunting, to the state list, making the number of species now known from Arizona 375. The concluding article, by Quillin and Holliman, contains a list of eighty-two species of 'Breeding Birds of Bexar County, Texas.' In one of the brief notes Grinnell calls attention to the fact that so far as now known the White-rumped Petrel on the California coast is Beal's Petrel (*Oceanodroma leucorhoa beali*), and that there is no record of Kaeding's Petrel (*O. l. kaedingi*) having been taken in the state.—T.S.P.

Bird-Lore

A Bi-Monthly Magazine

Dedicated to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contracting Editor, MAHEL OSGOOD WRIGHT

Published by D. APPLETON & CO.

Vol. XX Published April 1, 1918 No. 2

SUBSCRIPTION RATES

Through the National Bureau, one dollar and fifty cents a year, outside the United States, one dollar and seventy-five cents, postage paid.

Copyright, 1918, by FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE cause of nature-study has lost one of its earliest and most effective advocates in the death of Mrs. Frank N. Doubleday, which occurred in Canton, China, February 22, 1918. Under the name of "Neltje Blanchan" Mrs. Doubleday made numerous contributions to the literature of popular ornithology, botany, and horticulture. Her first and most important book, "Bird Neighbors," was published in 1898, and at once met with a wider sale than any other bird-book which had then appeared.

Mrs. Doubleday's book on "How to Attract Birds" was among the first formal treatises on this subject in which she was deeply interested. "Birds Every Child Should Know" further expressed her desire to popularize bird-study, and she was doubtless largely responsible for the attention paid birds by "Country Life in America," of which the firm founded by Mr. Doubleday is the publisher. It was natural that a person with Mrs. Doubleday's broad sympathies and active, constructive mind should offer her services to her country. Since the outbreak of the war she had been continuously engaged in relief work, and at the time of her death she was traveling with her husband in behalf of the Red Cross.

In April, 1867, Robert Ridgway became connected with the Smithsonian Institution at Washington, and the present month, therefore, marks the conclusion of

his fiftieth year in the service of the Government. A half a century takes us back almost to the date of publication (1858) of the Pacific Railroad report on the birds of North America by Baird, Cassin and Lawrence, or, in other words, to the birth of systematic ornithology in America.

It was to Ridgway that Baird, claimed by growing executive cares, handed the torch which he had lighted, and during the five decades which Ridgway has borne it, it has steadily increased in power, until today it shines without a rival in the world of ornithology.

Ridgway, in a memorial to Baird presented before the Annual Congress of the American Ornithologists' Union in 1887, and published in "The Auk" the following January, states that until the middle of 1864, when he was in his fourteenth year, he was unacquainted with the name of a single living naturalist and with only general or superficial works on natural history. At the suggestion of a lady living in his native town of Mt. Carmel, Ill., he wrote to the Commissioner of Patents at Washington enclosing a life-size, colored drawing of a pair of Purple Finches with the name "Roseate Grosbeak, *Sorex roses*."

In due time he received a reply from Professor Baird, then Assistant Secretary of the Smithsonian Institution, commending "the unusual degree of ability as an artist" shown in his drawing, which was identified as that of a Purple Finch, and offering to aid the young ornithologist by "naming your drawings, or in any other way."

It is interesting to remember that, just about twenty-five years before, Baird had appealed to Audubon for aid in identifying a bird and had received a reply essentially similar to the one just quoted. Actually, as well as scientifically, Baird, therefore, formed the connecting link between Audubon and Ridgway.

Three years later Baird called Ridgway to Washington to start the career which has made him foremost among systematic ornithologists.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 87 Grand Avenue, Providence, R. I.

ARE YOU DOING YOUR PART?

A year goes quickly in these momentous times, and before these words are in type, Spring will once more be with us, and Bird and Arbor Day in its train. We have had many pleasant programs in times past for this occasion, many happy gatherings of teachers, pupils, and parents, and, it is to be hoped, really fruitful results from the observance of this annual nature-festival.

This season our eyes are strained toward one goal, namely, winning the war, and it is both right and imperative that we turn every effort in that direction. Of all the yearly holidays and anniversary days which we are accustomed to celebrate, no day lends itself so well to the great conservation movement of the present as Bird and Arbor Day. Without vegetation, trees, shrubs, plants, grains, and grasses of all kinds on land, and marine vegetation in water, there could be no life and no means of sustaining life on this earth, for without vegetation animals must perish, a truth which is emphasized by Arbor Day instructions. Now you and I may at present seem to be very far removed, on the one hand, from any natural disaster which would cut off all life supplies for man and beast, and, on the other hand, from real extremity in the matter of food, by reason of impending crises in national and international affairs. If we are in this complacent attitude of mind, it shows how small our comprehension is of the true situation. *We must realize two facts clearly, and we must realize them now:* first, that there are just as many, and probably more, destructive agencies at work in forest and field now than before the war, since millions of human workers have left their accustomed duties to go to the front, and, second, that *the last surplus bushel of wheat* in this country has already been shipped abroad, so that we must redouble our efforts to conserve and use substitutes for what we have until another harvest.

Here is the plain statement of the case. With fewer and fewer men left to keep up agriculture and forestry, insects, field-mice, gophers and other pests are likely to increase more rapidly, while, at the same time, the actual food-supplies of the world, which must feed every living creature until more can be grown, are smaller and more unevenly distributed.

This coming Bird and Arbor Day, let us say less and *do more*. Let us put greater effort into plans for safeguarding crops and timber and make that effort count for something beyond patriotic programs. Instead of planting a tree or so about our schools, let us turn our energies to studying how to increase and conserve the food and fuel supplies in our own neighborhoods. This

is a subject for State Audubon Societies, as well as for teachers and scholars, to take up actively. Let our Audubon Societies reach out, on the one hand, to the schools and, on the other, to the homes for support in this matter. Take as a slogan: *Food and Fuel—Friends and Foes*, and, with this as a text, spread accurate information about local food and fuel supplies, and their feathered guardians and insect enemies.

The New Jersey Audubon Society, among others, publishes excellent bird-study leaflets, in which the value of birds and their status under the game-laws of that state are presented. The United States Department of Agriculture prints reams of authentic information, not only about birds, but also about insects, forests, crops, and many kindred subjects.

Not illustrated bulletins from Departments of Agriculture alone will do what is needed. Practical demonstrations and experimental observation-plots, as well as careful cultivation and inspection of areas ordinarily tilled or held in reserve must form the backbone of this movement.

Junior Audubon Societies represent a respectable army in point of numbers, and, under the leadership of their various state organizations, a mighty movement could well be organized along the following lines of endeavor:

1. Canvass a definite locality, preferably a home or town area, and learn the present condition of food and fuel supplies.
2. Study these supplies with four ends in view, viz.,
 - a. Comparison with former abundance.
 - b. Actual present location and condition.
 - c. Methods of increase and conservation.
 - d. Special agents affecting these supplies, such as birds, insects, animals, fire, frost, average rainfall, temperature, storms, human depredations.
3. Bring reports to school of home conditions, whether farming areas in rural districts or lawns and back yards in towns and cities.
4. Make charts, colored to show the location of food and fuel areas. Uncultivated or neglected areas should be shown in a special color.
5. For your Bird and Arbor Day program, present a graphic, practical report of the conditions in your neighborhood, with suggestions for improvement, illustrative material showing the benefits of conservation, and a series of comparative pictures taken from magazines or other sources, which shall point the moral of *intensive cultivation and protection of small areas*.
6. Present a set of simple instructions in forestry, arboriculture, and horticulture, suitable for boys and girls.
7. *Do your part* by engaging in active service. Children can learn the value as well as the fun of discovering waste wood about farm and dwelling, and picking it up for kindling next winter's fires. They can also help in the garden, by working a little here and a little there, for it is a happy, joyous kind of play, really, to be in a garden with the vegetables, woods, fruit-bushes and trees and all the strange feathered, winged, running, crawling, buzzing folk which frequent it. Make work a play whether indoors or out, and make duty a joy. *Do your part*, whether young or old, by discovering the opportunities to learn new methods of doing things, new combinations of food, new ways of saving, new ideas about your share and my share in this world now so rapidly changing. Move on ahead or you will be left behind.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXVIII: Correlated with English, Reading, and Agriculture

"The world is all before me; but I ask
Of Nature that with which she will comply—
It is but in her summer's sun to bask,
To mingle with the quiet of her sky,
To see her gentle face without a mask,
And never gaze on it with apathy."

" The green hills
Are clothed with early blossoms, through the grass
The quick-eyed lizard rustles, and the bills
Of summer birds sing welcome as ye pass,
Flowers fresh in hue, and many in their class,
Implore the pausing step, and with their eyes
Dance in the soft breeze in a fairy mass;
The sweetness of the violet's deep-blue eyes,
Kiss'd by the breath of heaven, seems colour'd by its skies."
—BYRON.

Although Byron is not generally thought of as a poet of nature, in these few lines he expresses much of the true nature-lover's delicate attunement to the pure and quiet joy of "the green hills," the "early blossoms," "soft breeze," and "summer birds" which "sing welcome" to the passer-by. Only a poet could express so beautifully the appeal of the fresh spring flowers, which "implore the pausing step," perhaps only a poet could have phrased the wish to see the gentle face of nature "without a mask and *never gaze on it with apathy.*"

A SPRINGTIME HERMIT

By LIZZIE THOMAS BALDWIN, Jamestown, N. Y.

One April morn, when skies were gray,
And I had wished a sunny day,
I wandered where God's acre fair
Calls birds to matins, men to prayer.

Within a darkling evergreen
A bird did sit, and there did preen
His wings. 'Twas he who soon goes north
And there his matchless hymn pours forth
In forests dim, on mountains high,
As Love's full song mounts toward the sky.

I watched. A little king dropped down;
Upon his head a ruby crown,
His royal song rose, glad and clear.
My preening bird awoke to hear.
He answered low; then swelled to theme—
An overture to Love's sweet dream.

Dear hermit thrush! My cup runs o'er
With rapt'rous song ne'er heard before.
Thou'st sung! And shall I ever say,
Ah, me! What's in a rainy day?

Suggestions for Bird and Arbor Day

By INDIANOLA WILL CUTS



[NOTE.—A resourceful teacher from Holyoke, Minn., has contributed the following successful method of arranging Bird and Arbor Day exercises.—A. H. W.]

PROGRAM

- | | |
|---|--|
| I. Songs—"The Woodpecker" | } Modern
} Music Series
} (Primer) |
| "The Owl" | |
| II. Game—"If I were." | |
| III. Poem—"I Used to Kill Birds." H. W. Longfellow. | |
| IV. Readings—(from six bird charts) | |
| V. Game—"The Farmer's Friends." | |
| VI. Comparison of adjectives. | |
| VII. Name fifty birds. | |
| VIII. Game—"I saw a," "I saw an." | |
| IX. Best story (read). | |
| X. Game—"Bird Calls, Songs and Whistles." | |
| XI. Rhymes. | |
| XII. Reading—"The Magpie's Nest." | |
| XIII. Dramatization—"Cock Robin's Wedding." | |

GET READY FOR BIRD DAY

Arrange your daily work in school for the month before Bird Day, in such a way that when the day comes your program is ready without having had any rush or much extra work.

Send out invitations. Hektograph a good number of Red-headed Woodpeckers

(Reed's "Bird Guide," or Audubon Educational Leaflets). Color these carefully and cut out. Paste a cut-out on the lower left corner of a piece of white drawing-paper or good cardboard, 3 3/4 by 4 3/4 inches. Print or write the following:

BIRD CONCERT!
AT THE SCHOOLHOUSE
MONDAY AFTERNOON

[Date]

[Time]

Bird Day in the various states is not on the same day, so be careful of the date.

Have a program for each guest. Use white drawing-paper 6 1/2 by 6 inches. On 6-inch side fold a 2-inch lap, leaving a 4 3/4 by 6-inch space under the lap, on which print or write the program.

On the lap, paste a Scarlet Tanager cut-out (Bird Guide or Educational Leaflet). Below, paste the words "Bird Day," cut from red paper oblongs 1 1/2 by 1/2 inch.

During the month preceding Bird Day, hektograph large copies of birds and let children color them. Arrange them artistically around the room as soon as finished.

Hektograph on Manila drawing paper two concentric circles, the outer, 8 inches in diameter, the inner, 7 inches, in which has been traced a Cardinal (Perry Picture Co.). It is necessary to hektograph two copies, in one the bird faces the left, in the other, the right. Color, cut out, and paste the two together. Cut two strips of Manila paper 1 1/2 by 1/4 inches, paste together, insert one end between the two circles, and paste so that the bird will be standing in the right position. Hang one in each window.

Arrange the front of the room as a stage, with three or more evergreens on each side of the stage, back of which the birds may stand. In every part of the stage where it is possible, place branches of trees to which twisted bits of pink paper have been pasted to represent pink blossoms of fruit trees. Cut the papers 4 by 3 inches with corners rounded, twist at center and paste on to bare twigs. Let the children do this.

In the song, "The Woodpecker," let the boys tap on their desks when they sing "Rap," etc.

In *Art Song Cycles I and II*, published by Silver, Burdett & Co., may be found beautiful bird songs. Typical songs may be found in "A Little Book of Bird Songs," published by Longmans, Green & Co., and also, in "Songs about Birds," published by A. W. Mumford, 536 South Clark St., Chicago.

An attractive but inexpensive way to make costumes for the "birds" is this:

Ask each child to bring an old stocking, the top of which will go over the head easily. Cut off leg to make a snug cap, then sew up, and cut, being sure that the cap comes well over the forehead. Buy rolls of cheap crepe paper in colors to represent "birds" as near as possible.

For Red-headed Woodpecker, for example:

1. Place cap on head.
2. Fit the edge of the end of roll of red crepe paper close to edge of cap. Cut it off a little below the child's neck in the back.
3. Pinat corners at front until paper fits head like a bonnet. Sew pleats, but do not let them meet under the chin.
4. Sew end of black paper onto red at back of neck. Cut off at waist-line, rounding the lower corners.

5. Place *end* of white crepe paper under child's chin. Fasten one corner to pleats on left side of red cap, pin the other corner to pleats on right side. Cut off at waist, round *the corners*.

6. Sew a short red bib over the white. Keep paper up around neck for a high collar.

7. Cover lap in back with black strip, lengthwise.

8. Make pointed bill, three-sided, of stiff paper 9 inches long.

9. Use yellow circles for eyes.

10. Leave opening at one side so the whole goes on like a bonnet.

11. Let "birds" go stocking-footed, or with stockings pulled over their slippers or shoes.

Fathers and mothers enjoy games on a program. The one described below is easily devised.

"IF I WERE A ——"

1. Use stiff cards 8 by 18 inches.

In right end mount a bird, one *well* colored by a child. Print, for example, "handsome Mr. Blue Jay" or "funny nimble Nuthatch" on their respective cards.

Have ten or fifteen such cards.

Place cards on chalk-tray.

TEACHER. "Earl, if you were a bird, what bird would you like to be?"

EARL (with his chosen card held by both hands so that each one in the room may see it). "If I were a bird, I'd be the handsome Mr. Blue Jay."

Each child, in turn, takes card to his desk, after replying to the teacher's question.

To replace the cards on chalk-tray, when all have been drawn, use this question and answer:

TEACHER. "Earl, what bird were you?"

EARL. "I was the handsome Mr. Blue Jay." (places card on tray)

THE FARMER'S FRIENDS

1. Prepare charts 9 by 24 inches.

Paste at top a picture of a bird, a Chickadee, for example. Below print its common articles of diet. Have ten such charts.

Let child with pointer stand near chart and say:

"The Chickadee is $5\frac{3}{4}$ inches long. It likes suet and bread crumbs. It helps the farmer because it eats tanker-worms, plant-lice, caterpillars, etc." (from the chart)

ADJECTIVE GAME

1. Use chart paper, 24 by 18 inches.

Let an apt child color a Bronze Grackle, a Red-winged Blackbird, and a Crow. Cut out and mount one beneath the other in a vertical row on left side of chart. Opposite Bronze Grackle print "black"; opposite Red-winged Blackbird "blacker"; and opposite Crow, "blackest." Then the child reads: "The Bronze Grackle is black; the Red-winged Blackbird is blacker; but the Crow is blackest."

Teacher covers the Red-winged Blackbird. Child reads, "The Bronze Grackle is black, but the Crow is blacker."

Have three black objects near by to compare. Vary the charts. Use tall, taller, tallest for water birds, small, smaller, smallest, and large, larger, largest, etc., for land birds. Compare height of two or three children. Six or eight charts are not too many.

It is a good idea to have fine wire nails, 8 inches apart at intervals along the top of the blackboard. Punch all charts 4 inches on each side of center. Hang on nails.

NAMING FIFTY BIRDS

4. Mount pictures of fifty birds at least (Audubon or Perry Pictures) on attractive gray mounts. In various ways draw attention to them the month before Bird Day. During the last week let the pupils see who can name all of them. On Bird Day hang them across the front of the blackboard on a wire. Let the child who named them perfectly in school point to and name them. Parents are surprised by this exhibition.

TO PLAY THE GAME, "SEE, SAW, A, AN, ETC."

5. Use cards 6 by 12 inches. Print "I saw a," "I saw an," "I see a," "I have seen an," etc. on them.

Place these, with mounted pictures, on chalk tray.

Let each child draw two cards to read, for example, "I saw an Oriole" and read them aloud. Another, "I have seen a Flamingo," etc. Parents learn the use of "see," "saw," "a," "an," etc. Ask the child why he said "an Oriole."

"BIRD-CALLS, SONGS, AND WHISTLES"

6. Child steps to front of room and says: "Chick a-dee-dee."

Next child stands by his side, says: "Chick a-dee-dee," adding "Bob-white, Bob-white." Third child stands in the line, sings: "Chick a-dee-dee," "Bob-white, Bob-white" and adds the whistled notes of the White-crowned Sparrow.

Continue until all the children who can find a bird to imitate are in line. The fifteenth child should give the fourteen sounds made before him and add a new one of his own.

RHYMES

7. Cards 18 by 12 inches (18 inch side is top). Print such a rhyme as the following, omitting the last word:

"When little field-mice go out for a walk,
They'd better look out for the hovering ——."

At center of lower edge of card punch a hole. Fasten a card-hook to picture of a Hawk. Child reads rhyme, chooses bird, and hangs it into the hole in the card when he says the word "Hawk."

Hang ten or twelve such cards on nails 8 inches apart on edge of blackboard. Stand the bird pictures in chalk-tray so that they may be easily available for selection.

There are fine rhymes in "Babes and Birds" by Jessie Pope, published by H. M. Caldwell Co., New York and Boston.

A good reading is "The Magpie's Nest" (Art Literature Reader II). Let one child represent the Lark, one the Magpie, and so on, having one for the book itself, but read each part from the book just as in a reading-class.

If you can possibly do so, dramatize "Cook Robin's Wedding" (see July, 1915, issue of "Something To Do," 120 Boylston St., Boston, Mass.)

Dress "birds" in costumes described in this article. Teach calls, whistles, etc., of birds or use some tiny tin whistles found in prize candies.

A pretty way to introduce the guests at the wedding is to have a short song about each guest, as he or she arrives. I used "Songs about Birds." One child sang several as solos. If some tut dances well, let her represent a bird whose song has light music, dancing to her place around the stage. Have an "Owl" on a ladder and a "Whip-poor-will" on a high bench, etc.

If you cannot secure the "Wedding," use one of the following playlets: "Who Stole the Bird's Nest?" (Poems by Grades, Primary); "Laura and the Birds" (Brooks'

Reader II): "The Cat and the Birds" (Brooks' Reader II); "The Tongue-cut Sparrow" (Japanese Fairy Tales I, by Teresa Williston). Little girls and boys dress in kimonos for the latter and many "birds" are along the roads.

Read "Why the Woodpecker's Head is Red," from "Book of Nature Myths" by Florence Holbrook. Let children rewrite it. Have the best story read on "Bird Day."

Make at least six beautiful reading-charts about birds with bird-pictures pasted on them.

If you have the "Audubon Bird Charts" let a child name the birds on them. These birds make fine outlines to hectograph for the children to color.

I USED TO KILL BIRDS

By HENRY W. LOWMEADOW

I used to kill birds in my boyhood,
 Bluebirds and robins and wrens,
 I hunted them up in the mountains,
 I hunted them down in the glens,
 I never thought it was sinful—
 I did it only for fun,
 And I had rare sport in the forest,
 With the poor little birds and my gun.

But one beautiful day in the springtime,
 I spied a brown bird in a tree,
 Merrily swinging and chirping,
 As happy as bird could be;
 And raising my gun in a twinkling,
 I fired, and my aim was too true,
 For a moment the little thing fluttered,
 Then off to the bushes it flew.

I followed it quickly and softly,
 And there to my sorrow I found,
 Right close to its nest of young ones,
 The little bird dead on the ground!
 Poor birdies! For food they were calling,
 But now they could never be fed,
 For the kind mother-bird who had loved them,
 Was lying there bleeding and dead.

I picked up the bird in my anguish,
 I stroked the wee motherly thing,
 That could never more lead its dear young ones,
 Nor dart through the air on swift wing.
 And I made a firm vow in that moment,
 When my heart with such sorrow was stirred,
 That never again in my lifetime,
 Would I shoot a poor innocent bird!

[Other suggestions for Bird and Arbor Day exercises may be found in preceding years of *BIRD LIFE*, in the issues of March-April. It is most desirable that great emphasis be placed this spring upon practical plans for increasing and conserving food and fuel.

supplies. An attractive exercise is to let a class or several classes illustrate the principal trees of the locality, showing branches, some of which will be in flower, and a group of other pupils illustrate the birds which nest in the respective trees. A chart representing a tree census of the neighborhood would make an excellent background for the pupils as they stand on the stage and exhibit and name the trees.—A. H. W.]

FOR AND FROM ADULT AND YOUNG OBSERVERS

[NOTE.—The Editor of the *School Department* desires to assure its readers that contributions are not delayed in publication without reason. In order to combine articles in as helpful a form as possible, or to include a certain number of articles and cuts in a certain space, it becomes necessary to hold matter over. In this section the emphasis is upon migration, late winter experiences, and school-room methods.]

THE BLUEBIRD

Hark! and look

Just over the brook,

What is it I hear—

In March's wind so drear?

Is it not my friend

The Bluebird I hear

Singing his spring song

So soft and clear?

—PAUL VOLKMAN (Age 12 years), Naperville, Ill.

THE LURE OF THE FEATHERED SONGSTERS

Many people believe that birds may be studied only in summer. They class quick, merry chirps or sweet prolonged notes with balmy May days or bright June days. These people only study and enjoy birds halfway, for is not this world still inhabited with feathered songsters during the six months of autumn and winter?

It is easier to study birds in winter, that stay all the year, as they cannot be confused with April migrants.

March 3, 1917, was a brisk, wintry day, with just enough snow on the ground to remind one of Christmas. Not many people would venture into the depths of snow-covered birdland, but, instead, went to pleasure-houses. They were unaware that the world's most lovely pleasure-ground lay open to them, and that they were even invited to this land that morning as the sun rose. Who invited them? The black-winged Crow told of the world's beauty by his lusty cawing.

A party of three, including an instructor, was lured into this land of everlasting beauty and joy.

We had the pleasure of meeting a number of the large Sparrow family. They were the Fox Sparrow, Tree Sparrow and Song Sparrow. We heard the clear, sweet song of the Song Sparrow ring out over snow-covered meadows, and felt that our trip was worth while, even if this were its only pleasure. But it was not the only pleasure nor the greatest, for after a while we heard a loud chirping and, looking up, saw a large flock of Starlings. The chirping stopped abruptly, and we then heard the song of the Starling. At length the great flock rose and sailed across the leaden sky like a black cloud. I was delighted, for it was the first time I had ever seen a flock so large.

Later in our walk we heard the Downy Woodpecker and the Chickadee. Looking up, we saw, sailing over stately snow-laden hemlocks, which overhung a rippling silver brook, a Crow, the messenger of spring. He blended oddly with the silent study in black and white, the view of nature in repose.

Farther on we saw the little friend of the north, the Snowbird, hopping over his native element and pecking happily at a withered brown bean-vine. A short distance from him we saw the female Cardinal perched on a low bush. To our great joy, she flew down from the bush to the little stream under it and drank of its cold, crystal water. All this took place just beyond a rail-fence. At the fence was a clump of trees heavily laden with the snow. We were just turning away from the trees and the scene of recent discovery when we heard the wild clear cry of the male Cardinal. We were held breathless while those true notes of nature were sung by our little friend's mate. Every chord of our minds was entirely thrilled. Those few notes of the untaught bird expressed more of nature's wonderfulness than can be written on paper. They made one feel as though being a bird were the only life worth living. This half-minute of our walk was worth more to us than a day of ordinary indoor bird-study.

The only way to really study a bird or anything in nature is to go to the woods or fields and see it as it really is, not as others see it. Those who know nothing of nature have missed half the joy of life.—EMMA MAY MACINTYRE (Age 14 years), Secretary of the "Wake-Robin" Club, *West Philadelphia, Pa.*

[To see nature as "it really is" is surely worth many days of plodding indoor study. The plea for outdoor study is more than ever worthy our attention in these strained, unnatural times.—A. H. W.]

A SPRING NOTE FROM THE TEACHER OF THE WAKE-ROBIN CLUB

Our first spring walk was taken on March 3, with two of my oldest pupils, and original members of the Wake-Robin Club. The snow was 5 or 6 inches deep, but they wished to go. I myself had been exploring the snow-white country two days previously, and had found out rare birdland secrets. I was delighted to have these pupils go. My happy hunting-grounds are the creek valleys, where there is woodland, field, swamp, meadow, and bushes. I haunt the near-by creek section particularly.

On two occasions, both snowy days, I saw seven Cardinals. I never before saw Cardinals there, and after I found them, I was attracted irresistibly to the place. I shall never forget the first one that favored me with a glimpse of his beautiful self. I was watching a flock of Fox Sparrows when the Cardinal, a male, flew out from their midst and alighted on a tall weed, about two feet from the ground, a bit of flame showing red against pure white snow. I remained transfixed until he flew. I saw flocks of Cardinals in Florida last winter, but to me this single rosy specimen, seen in depths of winter, made the most vivid, startling picture I ever feasted eye on in the bird-world.

I am learning to know the birds in this near-by creek valley quite well. Here, on these snowy days, February 19, I saw a Meadowlark, later, the Blue-bird. Last week I saw the Carolina Wren and heard that clear and wonderful song. It seems all too loud to issue from a bird of its small dimensions. I caught a glimpse of a Winter Wren.

The Chickadees and Downy Woodpeckers, Juncos, Tree Sparrows, and Fox Sparrows are in the same locality. I have seen more winter birds this year than ever before, but when I took the class out they always seemed to beat a retreat. Along a two-mile stretch of road we counted thirteen nests of the Red-eyed Vireo, and I was able to show them the nest of a Goldfinch that had withstood the storms of winter.—CLARA J. CLAIR, *Philadelphia*.

[The above record dates back to March, 1917, but we may gain all the more benefit from it by comparing it with observations made this spring. In addition to work with the children of the Wake-Robin Club, this teacher conducted a six-weeks' course in bird-study in the Philadelphia Normal School, having the students out for two hours or more each morning. It is to be hoped that sometime Miss Clair will tell us of her experiences with Hummingbirds during the nesting season.—A. H. W.]

CORMORANT IN WESTERN PENNSYLVANIA

During the spring migration, when the Ducks were returning north, Mr. Kennedy, two boys, and myself happened to be at Barmore Lake. It was a good thing we happened to be there that morning or we would have missed a rare find. As we went around a corner of a vacant summer cottage, we saw a bird located on the top of a dead stub, several rods from us. It was about three feet long and three feet from wing to wing. It stayed there awhile, and then it was a beautiful sight to see it pose in mid-air a few seconds, then flying down the lake, where it lit. We watched it swim and dive and made sure of its identification before going away. We saw it once more that morning. It was flying northwest. Mr. Kennedy said, "You had better take another look as you will probably never see another Cormorant in this part of the country."—NEVIS G. NICHOLSON (Age 12 years), *Grove City, Pa.*

[The writer of the above note says: "Last spring I had a pleasant experience which I thought might interest the readers of BIRD-LORE. I am twelve years old. Last year I listed 175 different species of birds, the rare ones being a Least Bittern, Cormorant, and

Harrow's Golden-eye Duck. Mr. James Kennedy, one of the best authorities on birds and wild life in this section, and also a Director of the "Wild Life League," was always with us when we saw these rare birds, else we could not have identified them ourselves.

This year I have succeeded in getting a Junior Audubon Society in our room at school. I think it will be successful as our teacher is quite interested in the birds." Having studied birds from the age of seven in his home township, "an area of 18 square miles," the above record of 173 species is all the more interesting and valuable. If each observer would keep accurate yearly records about his own premises even, or in his own town or county, much information, at present not verified with sufficient accuracy to be strictly reliable, might be culled and made useful for purposes of comparison in other sections. In many ways a concentrated, limited-area study has the advantage over unlimited wandering.—
A. H. W.]

A THREE-TOED WOODPECKER

Three years ago I saw an Arctic Three-toed Woodpecker and made a description of it. I did not find out its name till the other day. According to Reed's "Wild Birds of New England" this species is not very common in Maine.

I am fourteen years old and enjoy bird-study very much. BIRD-LORE is a great help.—NORMAN LEWIS, *Hampden, Maine.*

MIGRATING BOBOLINKS IN ATLANTA

In April we were daily watching eagerly for spring migrants. On the 20th a watchman reported that on the previous night he had heard the loud call ("hollering") of migrating birds at intervals, and morning showed that we had a visit from a flock of Bobolinks. They took for headquarters a field of red clover, which had been planted in winter grain the previous year. Several males at one time would sway each on top of stalks of grain, thus being above the level of the field, and each would joyfully sing his heart out. The Bobolinks were with us until May 11, but evidently the personnel of the flock changed. At first, among fifty birds, only a few females were seen; later, when the flock numbered one or two hundred, about one in ten was a female, still later there was one female to five males while just before their disappearance, when not many birds were left, there were five or ten females to every male. During this period of time there were Bobolinks in widely separated parts of the city.—LUCY H. UPTON, *Providence, R. I.*

[Readers of BIRD-LORE will be glad of this record from the pen of Miss Upton, especially since it gives data on the confusing point of the order of migration among species. In Dr. Arthur Allen's monograph on the Red-winged Blackbird, it is said with regard to that species that "the normal migration (at Ithaca, N. Y.) can be divided into seven periods according to sex, age, and nature of the birds (whether resident or migrant), as follows:

1. Arrival of "vagrants."
2. Arrival of migrant adult males.
3. Arrival of resident adult males.
4. Arrival of migrant females and immature males.
5. Arrival of resident adult females.

6. Arrival of resident immature males.

7. Arrival of resident immature females."

By the term "vagrants" is meant stray birds of either sex which may have wintered not far south of the locality studied, and which do not properly belong to the host of long distance migrants whose first appearance is generally two weeks later.

"Vagrants," it seems, appear in February, but the migrants do not arrive until March. Since the Bobolink is closely related to the Red-winged Blackbird, belonging to the same family group, the observations of Miss Upton become all the more significant in the light of Dr. Allen's authoritative statements which are based on most careful studies.—A. H. W.]

THE ROBIN

I'm glad I am a Robin,
I'm glad that I can sing,
I'm glad that spring is fresh and sweet,
I'm glad for everything.

—ELINE RUSTIN.

SCHOOL LETTERS FROM LAWNSDALE, PA.

I. ABUNDANCE OF ROBINS IN 1915

We have been doing a great deal in helping the birds. Nearly all the children in the Lawnsdale School are making bird-houses. The boys and girls in our room have at least forty-one houses put up. We have a great many Robins here this spring. I think that the Purple Martins are very scarce. In our room we account for the birds we see each day by writing them on the blackboard. We have about ten different kinds on the board to-day. There are a great many Woodpeckers around. Some of the boys and girls in our room formed an Audubon Society. They each received a button with a Robin on it. They are also getting a few pictures of different kinds of birds to color.—CHARLES HORNER.

[From season to season, the constant observer notes a difference in the numbers of some of the more common and abundant species. The Robin is particularly interesting in this connection, showing, as it is likely to do, considerable variation in abundance, at definite points of observation. How many of our readers have accurate data about this matter?—A. H. W.]

II. THE STARLING PUSHING SOUTH

I am writing a few lines about the birds. In our school-room the boys and girls have made forty-one bird-boxes and put them out. There are birds in some of them. This morning when coming to school, I saw two Robins. There are all kinds of birds in Lawnsdale.

I will name some of them. They are the Wren, Robin, Meadowlark, Blue-bird, Purple Martin, and Starling. There are many more birds besides these. I am going to join the Audubon Society.—DOROTHEA K. PETRY.

[Note the occurrence of the Starling wherever it has been observed in the United States. The above was written in 1915. A report of the number of Starlings now about Lawndale would be appreciated in this Department.—A. H. W.]

III. A GOOD SCHOOL-ROOM METHOD

We are writing about birds. There are a great many around now. Every day the girls and boys write on the board how many birds they have seen and what kind they are. We have forty-one bird-boxes. Some of them have eggs in them.

Some of us have seen birds carry food into the boxes. One boy says that he thinks he has young birds in his box. We put pans of water out for the birds to drink. Some of the boys and girls throw out crumbs of bread. —JOHN WAMBULE.

[This exercise of writing on the blackboard in the school-room the names of birds seen is excellent. It helps pupils to spell correctly, to remember what they see, to have a common interest in the birds about them, and it also stimulates competition and a desire for discovery.—A. H. W.]

HOW I FIRST GOT BIRD-LORE

I was so interested in birds that a friend of my sister gave me some old copies of BIRD-LORE. I read them so many times that I could almost tell everything in them. My mother decided to give it to me for a Christmas present, and I have had it three years now.

I am writing this so that other BIRD-LORE readers will lend the magazine to bird-lovers and so that many people will know how interesting it is.—ALBERT S. FEARING (Age 12 years).

MY BACK-YARD FEEDING-STATION

This summer I started putting out food for the birds and since then my back-yard feeding-station has been one of my greatest interests. I started in July and my first welcome visitor was a White-crowned Sparrow, and for a long time that variety of bird was my only visitor. Then competition commenced and, of course, then I began to work harder because I wanted to have more birds than my competitor, a boy living next door to me. My friend had the advantage of position. Across the street from him is a garden with many shrubs and other attractions for birds. My friend immediately took away my most common visitor, a White-crowned Sparrow with a nest, but I am glad to say not all of my birds.

Then began my worst trouble and the only trouble that discouraged me for a while, worse than even cats and rats, both of which I have been bothered with—the English Sparrow. To me one English Sparrow means no harm, although I would rather not have any, but when it comes in numbers, such as ten and up, then there is trouble. It not only keeps other birds away but the amount

of food eaten makes it impossible to keep up the food-station on account of the expense. This may sound foolish but a boy with a dollar a month allowance can't afford to spend twenty-five cents a week on food for birds. Now let me tell you that, although it is the greatest pleasure I ever had—putting out food for the birds—it, like anything else, has its cares and worries.

Finally a family of Juncos visited my friend's food-station and later visited mine. Then was the first and last time I have seen a Junco bathe. It was a young one. I guess Juncos are not much given to bathing.

Then I went to the beach, and when I got back there was not a single bird in the neighborhood. After waiting a long time I saw a Junco. Then I put out food, and in a few days there were about twenty back again, for we have counted nearly that many. Then came Song Sparrows and, once, a Towhee. Then again came the troublesome English Sparrow, and I abandoned the lunch-counter for a while. When I once again started in the Juncos and a Song Sparrow came back, and to-day the Towhees. On the whole, I think a food-station is a thing of great pleasure and advise others to try it.—Tom McCAMAST (Age 13 years), *Portland Oregon*.

[This record of practical experience ought to be of value to others—A. H. W.]

BIRD-HOUSES FOR A CITY PARK

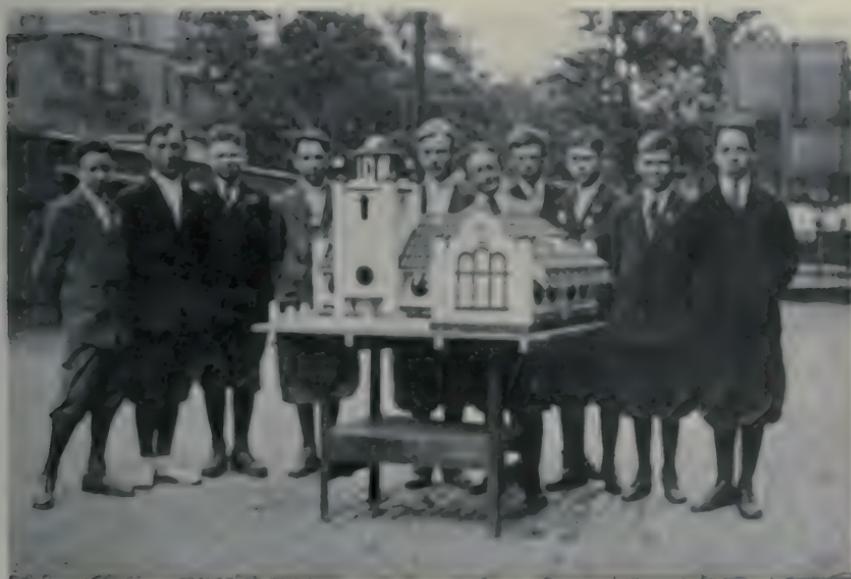
Dr. R. J. Terry, the local president of the Bird-Lovers' Club here, suggests that I send the enclosed prints.

Your magazine, to the best of my knowledge, has never printed anything from this locality.

The Martin-house shown was constructed by the several boys grouped about



BIRD HOMES FOR FOREST PARK, ST. LOUIS



A 'MISSION' MARTIN HOUSE

it. It is a replica of a Spanish mission, containing sixteen rooms of size given in U. S. Bulletin No. 100. There are over five hundred tiles upon the roof, each one of which was made from rough stock lumber.

The large group of houses were built from slabs, the waste product of a walnut lumber firm having a contract to make gunstocks for the armies of France and England.

All the houses were built to be placed in Forest Park, the home of thousands of 'house nesting' birds.—CHAS. P. COATES, *Instructor in Manual Training (Marquette School), St. Louis Schools, St. Louis, Mo.*

[Communications are printed as soon as space permits. If delays seem long the Editor of the School Department begs the reader's favor. The good work described above is in line with progress.—A. H. W.]

HOME OBSERVATIONS IN THE SOUTH

My papa loves the birds and feeds them on the window-sill every winter. We had twelve different kinds of birds that ate from our window. One day a Mockingbird came for his breakfast while mamma was playing the piano. He turned his head first to one side then the other and looked at her for a long time. I think he was trying to learn the tune so he could whistle it to his mate while she sits on her nest this spring. One day I went for a walk with papa and we met two Mockingbirds that kept scolding us. We looked in a small pine bush and saw a pile of twigs. Papa held me up and I saw four little birds in the nest, and they had no feathers on them but they were real black. About a week later we went to the nest again and when papa held me up the little

birds were covered with feathers and seemed afraid of me. Three days later we saw one of the old birds feeding the young ones, but could not find the other old bird. A few days after this we went again to look for our birds and found a new nest and the mother bird sitting on the nest but she flew off and began to scold when we went near. Papa held me up and I saw three green eggs covered with brown spots. Late this fall one morning I saw the mamma and papa and seven children birds eating holly berries from a tree in our yard. It is nearly Christmas now, and we see our family of Mockingbirds most every day.—
 WYNELL REEVES (Age 7 years), *Winston-Salem, N. C.*

[Accompanying this straightforward statement of bird records about home, is a note saying that the article was prepared solely by the young observer. It may be of interest to southern readers to know that Mockingbirds have been seen more frequently in the North this season than usual. The ability of other species to imitate sounds is a question of much interest. How many species other than the Mockingbird can you name, which imitate sounds?—A. H. W.]

NATURE-STUDY AND AUDUBON SOCIETY

We have seventy-six members in our society and most of them have been members for three years. We have a meeting once every two weeks, at which the officers take charge and different members help prepare the program.



SOME OF THE MEMBERS OF THE JUNIOR AUDUBON SOCIETY OF PEORIA, ILL.

When the weather is pleasant, we have some of our meetings out-of-doors, and we go on field-trips, six or eight at a time, with our leaders, to look for birds and listen to their songs and calls.

Our school-building is near the edge of the city, and there is a field just back of the school which has many trees and a creek running through it. Many birds live there.

We love birds and are glad to learn more about them and to help protect and feed them.—MARGARET DOUGHERTY, President, RUSSELL PLANCK, Secretary, *Columbia School, Peoria, Ill.*

[The teacher who sent this picture and letter writes: "We have a large and enthusiastic society composed of the children of the fifth and sixth grades. In a contest among the Junior Audubon Societies of the state last year, our club won second prize for their study of birds, and their efforts in protecting them. The six excellent books about birds which they received encouraged and helped them in their bird-study this year. They have been keeping close watch of the birds as they return, and are learning their songs and calls." The value of *careful study combined with enthusiasm* is told in this brief report. Distinguishing the songs and call-notes of birds is evidence of a high grade of work.—A. H. W.]

A SONG SPARROW IN JANUARY

January 1, 1917, was a "red-letter day" for me. I was putting up bird-houses with a friend of mine, when I heard a familiar song. I looked up, and on the top of a maple tree I saw a Song Sparrow. Two days later I saw it again.—HENRY SHAW, JR., (Age 11 years), *Morristown, N. J.*

["Red-letter day," the very phrase suggests the delightful discoveries always awaiting the bird-lover, like this of a Song Sparrow in midwinter. Many people have found bird study unusually attractive this last winter, because the severity of the weather in some sections made birds more than ordinarily dependent for food upon the hospitality of man. With harbors and rivers frozen solidly for weeks, flocks of Gulls and Ducks were at times practically deprived of accustomed food-supplies. In one instance, Herring Gulls came some distance inshore to pick up corn muffins thrown out by a bird-lover who happened to have nothing else at hand to offer them. The habit of Gulls and Terns of alighting on floating drift, buoys or any available foothold at sea, has become of immediate benefit to man. More than once in the present war, ships have discovered their proximity to mines by spying Gulls over them.—A. H. W.]

THE BOHEMIAN WAXWING IN OREGON

On the afternoon of February 7, 1917, I saw a rather rare visitant, the Bohemian Waxwing. While on a bird walk I stopped to observe some birds that were feeding on wild hawthorn berries, not far from Mt. Tabor Park, and while there I saw a flock of eighteen Bohemian Waxwings. I am very certain that there is no mistake as to their identity, for they corresponded in every detail to the description in Florence M. Bailey's "Birds of Western United States."

On January 24, I saw, in this vicinity, one bird that I thought was a Bohemian Waxwing, but I was not absolutely certain, as I did not know then the distinguishing marks for which to look. However, when I saw the flock of eighteen on February 7, I noted particularly the size, larger than the Cedar Waxwing, which is quite common here in summer; the white wing coverts, and broader band of yellow on the tail.

On February 9, I again noted twelve Bohemian Waxwings, probably of the

same flock noted previously, as it was in the same vicinity. I think these birds were probably migrating, and not in their usual course, as they are considered rare in this part of Oregon.—MARY E. RAKER (Age 13 years), *Portland, Oregon.*

[Bohemian Waxwings have been seen in Massachusetts this winter. A possible first record in Rhode Island was not sufficiently well established to be recorded.—A. H. W.]

A NOTEWORTHY CONTEST



A FEW OF THE CONTESTANTS WITH THEIR HANDIWORK

This photograph was taken immediately after the close of our first bird-house contest. There were nearly a hundred entries and an exhibition that would have done your heart good. The results have been permanent, I think. There was a prize offered for the boy who first reported a bird building in one of the houses which had been on exhibition. The first bird to settle was a Bluebird, and the lad who erected the house received a check for five dollars.—O. WARREN SMITH, *Washburn, Wis.*

[Two other most attractive photographs were sent by this contributor; a minister who has done much excellent work among the young people of Washburn. If there was available space for the illustrations which are received with articles sent to this Department it would be a pleasure to print them all.—A. H. W.]

OLD MOTHER ROBIN AND HER BABES

Old Mother Robin built her nest one spring, about eleven years ago, in the old pine tree in front of Grandma G——'s house. She made it of strings, grass, twigs, and mud. When she had it about the right shape, she laid four little blue eggs in it. In about two weeks there were four little birds instead of the eggs.

When the little birds were old enough to fly, she crowded them out of the nest on to the limb. One of the little birds went to the ground and sat there. The old bird flew down to the little bird and talked to him. Then she hopped a few inches away, and the little bird hopped to her. She continued this a few times, after which she went about three feet away; but the little bird did not come. She then hopped about half-way back, and chirped; still the little bird did not come. By this time she was provoked, and rushed back, and pecked him on the head. Then she flew to the fence, and the little bird flew up to her. She then flew away to let him take care of himself. —DALLAS VERNETT GIBSON (Age 11 years).

BIRDS I HAVE SEEN

Crow — March 12, 1914, in a tree on west of street, on my way to school. Color, black.

Robin — March 24, 1914, in a cherry tree between our house and the one next door. Color, brown on back and light red on breast.

Dove — March 22, 1914, on one of the buildings down town. Color, purplish blue and brown and red.

Sparrow. — March 23, 1914, in front of the hotel. Color, brownish gray.

Phoebe — March 24, 1914, at the place next door. Color, brown and black.

Woodpecker. — March 24, 1914, at the first farm east of town. Color, red and black.

Flock of Wild Geese. — April 1, 1914, flying south. Color, brown and black.

Bobolink. — April 11, 1914, on our lot back of the barn. Color, black and yellow.

Blackbird. — April 16, 1914, on the top of a barn. Color, black and brown. — LAWRENCE P. BRIGGS (Age 10 years), *Apulia Station, N. Y.* (Member of class 314.)

[The teacher of this class writes: "This is the manner in which the pupils report their observations. These different reports make up the school bird calendar.

"In this report the Blackbird I believe to be a Cowbird from the description, but as I did not see it myself I am not positive."

As a method of reporting birds, the above has certain points in its favor. It is always desirable to note the locality where one sees a bird, even rather minutely, as detailed particulars suggest the nature of its habits in perching, singing, flying or searching for food and nesting. The date of a record is also an indispensable part of an accurate report, and as careful descriptions as one can make of the color and appearance of the bird seen.

In addition to these points, the size, form of bill, head, wings, and tail, kind of feet expressed by noticing whether a bird walks, hops, clings, clutches, paddles, wades, or runs are very essential matters which in reality are often of more assistance in identification than color, since colors appear very different in changing light and shade.

A daily bird calendar and, also, a flower calendar are fine additions to any school room. Teachers everywhere will find them well worth the time and trouble given to keeping them accurately. —A. H. W.]

THE RAVEN

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 65

One July morning, in company with Edward H. Forbush and William P. Wharton, I landed on a small wooded island off the coast of Maine to visit a group of Herons said to be nesting there. Clambering up the rocky shore, we proceeded, with some difficulty, through the thick underbrush of the evergreen forest until the heronry was reached. Here the trees were more scattering, and the sun's rays, breaking through, were ripening the thousands of gooseberries that covered the network of vines below. A few pairs of Great Blue Herons were found, and their nests and young soon discovered. The main colony, however, consisted of Black-crowned Night Herons. Approaching a tree where one of their nests was located, I was surprised to find on the ground beneath, the remains of four young birds about one-third grown. The flesh had been picked from the bones, but these were in no way broken, which precluded the possibility of the mischief having been done by a predatory animal, if indeed any such existed on the island. While we stood about discussing the matter, a cry so wild and unusual rang through the damp woods that in an instant our attention was riveted on the sound. Presently it was repeated and was quickly answered from two other directions.

At once we began a search, which soon resulted in finding that the calls emanated from a family of young Ravens, now well grown, but still attended by their parents. The evidence that the Ravens had destroyed these young Herons was indeed scant. However, I believe all the members of the party, knowing something of the habits of these birds, still regard it as probable that it was the Raven family that had raided the big stick nest in the evergreen trees. That something was feasting liberally on young Night Herons was quite plain, for we found the fresh skeleton remains of at least a dozen of these birds, and a more thorough search of the colony might possibly have revealed others. This was on Bradbury Island, in the year 1914.

A few days before this, Ravens and a Raven's nest were found on Heron Island. On another occasion, in company with Arthur H. Norton, I was shown a large nest in an evergreen on No-Man's-Land Island, which we were told had been occupied by a pair of Ravens every spring for many years. Ravens may be found also on Old Man, Black Horse, and, in fact, on almost any of the uninhabited islands along the Maine coast.

In a little opening in the woods back of the Lake Hotel in Yellowstone Park, Wyoming, the garbage from the hotel tables is dumped. Thousands of tourists annually visit this dump to see the bears that come out to feed there in the



NORTHERN RAVEN

Order—Passeres
Family—Corvidae

Order—Corvidae
Family—Corvidae

National Association of Audubon Societies

evening. This garbage-heap affords another interest to the bird-student, for Gulls come up from the Lake and settle here in quest of food, and not infrequently the hoarse croak of the Raven may be heard in the trees nearby. In fact, these great black birds come at irregular intervals all during the summer to pick up such scraps of food as strike their fancy.

In August, 1916, I saw a Raven feeding her three young with scraps picked up at a garbage-heap back of a hotel on the western verge of the Glacier National Park in Montana. Although aware that she was being watched, the old Raven would unhesitatingly come to the garbage-heap, walk around until she found something that suited her taste, and then fly with it to the trees 50 yards away. Apparently she would not suffer her young to leave the shelter of the forest. The wide range of the croaks and cries made by their young was astonishing.

Anyone who may chance to be in the mountains of western North Carolina and may desire to see Ravens can usually have his wish gratified by going out to some of the remote settlements and visiting the places where cattle are slaughtered for market. Sometimes as many as eight or ten Ravens gather around a slaughter-pen and with evident impatience await their opportunity for a banquet.

From the above references it may be seen that the Raven has a wide range in the United States. In fact, there are few states north of South Carolina and Louisiana where it may not be seen, although its range is far more restricted than in former times. Many of the early writers speak of seeing Ravens in territories not now inhabited by them. For example, Thomas Lawson, Gentleman, who visited the coast country of Carolina in the year 1700, writes of seeing it there. Today Ravens rarely, if ever, occur east of the mountainous portions in the Carolinas.

Regarding the habits and manners of the Raven during the nesting-season, John James Audubon has given this description in his usual picturesque language:

"Their usual places of resort are the mountains, the abrupt banks of rivers, the rocky shores of lakes, and the cliffs of thinly-peopled or deserted islands. It is in such places that these birds must be watched and examined, before one can judge of their natural habits, as manifested amid their freedom from the dread of their most dangerous enemy, the lord of creation.

"There, through the clear and rarified atmosphere, the Raven spreads his glossy wings and tail, and, as he onward sails, rises higher and higher each bold sweep that he makes, as if conscious that the nearer he approaches the sun, the more splendid will become the tints of his plumage. Intent on convincing his mate of the fervour and constancy of his love, he now gently glides beneath her, floats in the buoyant air, or sails by her side. Would that I could describe to you, reader, the many musical inflections by means of which they hold converse during these amatory excursions! These sounds doubtless express their pure conjugal feelings, confirmed and rendered more intense by long years of

happiness in each other's society. In this manner they may recall the pleasing remembrance of their youthful days, recount the events of their life, and express the pleasure they enjoy.

"Now, their matins are over, the happy pair are seen to glide towards the earth in spiral lines, they alight on the boldest summit of a rock, so high that you can scarcely judge their actual size, they approach each other, their bills meet, and carresses are exchanged as tender as those of the gentle Turtle Dove. Far beneath, wave after wave dashes in foam against the impregnable sides of the rocky tower, the very aspect of which would be terrific to almost any other creatures than the sable pair, which for years have resorted to it, to rear the dearly-cherished fruits of their connubial love. Midway between them and the boiling waters, some shelving ledge conceals their eyrie.

"To it they now betake themselves, to see what damage it has sustained from the peltings of the winter tempests. Off they fly to the distant woods for fresh materials with which to repair the breach, or on the plain they collect the hair and fur of quadrupeds, or from the sandy beach pick up the weeds that have been washed there. By degrees, the nest is enlarged and trimmed, and when everything has been rendered clean and comfortable, the female deposits her eggs, and begins to sit upon them, while her brave and affectionate mate protects and feeds her, and at intervals takes her place. All around is now silent save the hoarse murmur of the waves, or the whistling sounds produced by the flight of the waterfowl traveling towards the northern regions."

In general appearance the Raven closely resembles a Crow, but it is larger. A Crow rarely is more than 18 or 20 inches in length and has an expanse of wings of less than 3 feet. A Raven is 2 feet long from bill-tip to tail-tip and measures 4 feet or more across when its wings are spread to their full capacity. A close inspection of the two birds reveals a certain marked difference in the shape of the feathers of the neck, those of the Crow being rounded at the ends, while those of the Raven are sharply pointed. In flight the two birds may usually be distinguished, as the Raven has a way of sailing at times to an extent rarely, if ever, equaled by a Crow. The well-known caw of the Crow is replaced in the case of the Raven by a croak so deep, so unlike any other sound in nature, that once heard it is not easily forgotten.

As indicated above, Ravens build their nests on the ledges of cliffs or in trees. These usually are bulky, and as additional materials are brought year after year, they grow in some instances to be very large affairs. The eggs range in number from two to seven. In color they are olive or greenish, thickly spotted and blotched with olive-brown. Twenty days of brooding are required to hatch them.

The Raven's food consists of a wide variety of objects, but evidently animal matter predominates. They eat grasshoppers, beetles, lizards, mice, and young birds. They are scavengers and feast upon dead animals, both large and small.

In August, 1916, while working about Malheur Lake in the deserts of southeastern Oregon, we found Ravens much in evidence. During a day's travel of perhaps 30 miles about the Lake, I saw at least a dozen individuals. Usually only one or two would be seen at a time. One that kept in front of us for some distance, alighting at intervals on the posts of a barbed-wire fence carried an object in its beak at which it would peck and pull whenever it perched. Once, just as it took wing, my companion fired a shot from his revolver, with a view of startling the bird and causing it to drop its prey. The experiment succeeded, and, picking up the object, we found it to be a section of a rabbit's backbone about 2 inches in length.

Writing of the Raven's feeding habits, Alexander Wilson said: "It is fond of birds' eggs, and is often observed sneaking around the farmhouse in search of the eggs of the domestic poultry, which it sucks with eagerness, it is likewise charged with destroying young ducks and chickens, and lambs, which have been weaned in a sickly state. The Raven, it is said, follows the hunters of deer for the purpose of falling heir to the offal; and the huntsmen are obliged to cover their game, when it is left in the woods, with their hunting frocks, to protect it from this thievish connoisseur, who, if he has an opportunity, will attack the region of the kidneys, and maybe the saddle, without ceremony."

Throughout all ages certain birds have been famous, and very often much significance is attached to their presence. They have been regarded as affecting the lives of human beings by bringing joy or sorrow. Thus the Cuckoo is the ancient marriage bird, the Eagle stood for strength and vigor, the Bittern represented desolation; and, in our own country, we have the Bluebird for happiness. The Raven, which has a wide distribution throughout the world, has more or less typified the coming of calamity. It has been one of the favorite birds of literature. In the ancient Hebrew writings we find that the Raven was the first bird that Noah sent out from the Ark. When Elijah was a refugee and was hiding by the brook Cherith, we are told that the Ravens came daily and brought him food. Despite the fact that it appears to have been useful to some of the early Hebrews, Moses wrote down in his law that this was an unclean bird.

Shakespeare was fond of referring to the Raven. Thus, when Lady Macbeth was told that Duncan was coming, she said, while laying her plans to kill him:

"The Raven himself! is hoarse
That croaks the fatal entrance of Duncan
Under my battlements."

In our modern American literature surely nothing so weird or depressing has ever been written as Poe's "Raven."

Two sub-species of the large Raven are recognized in this country: One, the American Raven, found in western United States and south to Guatemala, the other known as the Northern Raven inhabiting eastern North America.

Ravens are supposed to live to a great age.

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, 1074 Broadway, New York City.

WILLIAM DUTCHER, *President*
FREDERIC A. LUNAK, *Acting President* T. GILBERT PEARSON, *Secretary*
THEODORE S. PALMER, *First Vice-President* JONATHAN DWIGHT, JR., *Treasurer*
SAMUEL T. CARTER, JR., *Attorney*

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.

DEATH TO THE PELICAN!

During January there began a great outcry against the Brown Pelican at various points along the Gulf Coast of the United States. Those who have been showing the most active interest in starting a war on these big picturesque birds are people financially interested in commercial fisheries. The claim is being put forth that Pelicans are eating up the fish at such a rate that the birds must be destroyed if we are going to have sufficient food to feed our people and win the war against the Kaiser.

The *Evening Independent* of St. Petersburg, Fla., has championed these food conservators of the Tampa Bay country. The articles which appear in its pages tend to show that the Federal and state governments have done a very foolish thing in seeking to protect birds that are so terrifically destructive to fish. Editorially this paper says:

"It is time that the Government was informed as to the destruction that is being wrought by Pelicans in southern waters. The Pelicans are protected by a National law and therefore are thriving and increasing in number, and it will be only a few years until the people will have to choose between the Pelicans and the fish. The

Pelican is no earthly use to anybody and serves no useful purpose. The fish are needed to help supply the deficiency in food.

"One Pelican will consume 100 to 300 small fish in a day. Multiply that by the thousands of Pelicans in this section, and you have some idea what the Pelicans do to destroy fish. It is a tremendous price the Government is paying to satisfy a few sentimentalists who want to save the birds."

Captain Barney Williams, Deputy Fish Commissioner at St. Petersburg, has advanced a plan which he thinks will take care of the matter locally. His plan is to destroy all the eggs laid by Florida Pelicans for a period of five years, and then let them have one year in which to bring forth their young.

The *Evening Independent* announces its hearty approval of this plan.

At the last two sessions of the legislature of Texas, bills were introduced which had for their purpose the authorization for people to kill Gulls and Pelicans along the coast of that state, because of their alleged destruction to food-fishes. From this source fresh complaints are now coming. They claim that fishermen should be

released at the presence of the Pelican, because it greatly interferes with their business.

It is but natural that the Pelican opponents should file complaints with the United States Food Commission in Washington, and as a result the Association received the following letter under date of January 21, 1918.

Dear Sir:

We are receiving many very definite requests from the Gulf of Mexico district that the Government take steps to exterminate the Pelican.

The recommendations in this matter are very largely grounded on the following statement of apparent facts.

1. That the birds in question annually destroy millions of pounds of food fish.

2. That the birds interfere very materially with the operations of the fishermen and result in very largely reduced catches of food fish in all the fishing districts.

3. The Pelican serves no useful purpose whatever, and is not a scavenger, never having been known to eat fish that have been washed ashore, etc.

"While we are not at present considering any recommendations in this matter, we would very much like to have a full expression of opinion from your society on the subject and any data which you can provide us with regarding the Pelican, and as answer to the very definite statements which are coming to us, as before mentioned."

Very truly yours,

UNITED STATES FOOD ADMINISTRATION.
PER KENNETH FOWLER.

Upon receipt of this letter, a copy of it was sent to a number of observers who have had more or less opportunity to study the feeding-habits of these birds, and their replies, in due time, were filed in Washington. These were quite sufficient to convince the Food Administration that at least for the present there was no need for beginning a war of extermination on the Brown Pelican.

Since Mr. Fowler's letter was written, new and additional pressure has been brought to bear on the Food Administration, and the question at the present writing is a very live one. As a result the Association is now planning to go somewhat thoroughly into the subject of the

feeding-habits of the birds during the coming summer.

The following are a few of the letters collected by the Association bearing on this subject. The first three are written by men who have been employed for many years to guard Pelican colonies and who therefore have had unusual opportunities to study the fishing-habits of these birds. We feel that their letters should be published and thus be made a permanent record.

In Defense of the Pelican

"It would appear that, through the efforts of the market fishermen, the Food Commission is seriously thinking of taking steps to exterminate the Pelican as a great destroyer of food-fish.

"In defense of this grand old bird I wish to say that I am a native of Florida, have lived here continuously for fifty years, and have noted very carefully the changes of conditions along these lines. Before the advent of the railroads there were vast quantities of fish and many thousands of birds, but with the emigration to the state came along the market fishermen who have plied their trade without restrictions until there have become fewer fish and consequently fewer Pelicans.

"If the Food Commissioner could visit the fishing districts of Florida and see the vast destruction of fish caused by the fishermen, he would no doubt take immediate steps to stop this wanton waste of the best food-fish that the waters of the state afford. They drag their seines on the beaches, and I have seen, day after day, tens of thousands of food fish left on the banks to die because they were too small to sell, and the fishermen were too lazy to put them in the water again.

"My business as Inspector of Federal Reservations takes me among these men, and I have noted these conditions many times, and have several times brought the matter before the Fish Commissioner and the County Solicitor, with a view of having these people prosecuted for the very acts of which they now accuse the Pelican. It is a well-known fact that the Pelican can catch only such fish as are on the surface of the water, and, with one exception—the mullet—the food-fish of Florida are what are known as bottom-fish, and cannot be caught by the Pelican.

"At least twice each year, in the breeding-season of these birds, I visit their nesting-places and carefully note the species of fish they bring to their young. These

consist almost entirely of menhaden and other small, bony fish that they catch far out in the ocean.

"The Pelican is a harmless, very interesting and companionable old fellow—a very great attraction to the many thousands of persons that annually visit both coasts of Florida, and its extermination would not in my opinion better the fishing conditions in Florida.

"Referring again to the fishermen, I may mention that although more fish have been killed by the cold water this winter than ever known before, fishermen are making unusually large catches on the East Coast, and I have heard no complaints against the Pelican from this quarter."

(Signed) B. J. PACETTI,

Inspector of Federal Bird Reservations.

"I am sorry to hear that this question has been brought up again about the Pelicans destroying food-fish. I am not very familiar with conditions on the Gulf Coast, but I know it is not the case here. Answering these questions in order—

"1. The Pelicans here feed almost entirely on menhaden which are not a food-fish.

"2. The birds have been known to take a few fish out of set nets sometimes, if left too late in the morning. This is the only interference they have been guilty of, and this has never been serious.

"3. As to their not being useful as scavengers, one has only to pay a visit to the fishhouses during a good run of fish, and they will see the birds gathering in all the foul fish thrown overboard, which would otherwise float ashore, create a nuisance, and be a menace to health. Regarding the reduced catches of fish, this is caused mainly by the fisherman's own greediness. There has been no law framed yet that the fishermen have not broken. The chief trouble is that the size of mesh in nets has been steadily reduced until now they are catching fish unfit for market, and unless something is done soon, the fishing business will be a thing of the past, especially if the new ruling of the food control is adopted to take off all restrictions for the period of the war.

"There is more damage done to fish by one small school of porpoises than all our birds, and yet they are not condemned, and if we destroy the Pelicans, the other water-birds would also have to go, as most of them eat fish. When I first came to this country, in 1831, these waters were teeming with fish of all kinds—evidently the birds had not reduced them any at that time—but after netting started it was soon possible to see a difference.

"At present, fishing is getting to be so

poor in these waters that many of the fishermen are leaving for other points.

"In view of the foregoing I cannot see a good reason for condemning these birds at present. The fishermen are catching out the fish, and if we destroy the birds it will be a bare country indeed. There are so many people that find pleasure in seeing them. They would miss the bird life very much indeed.

"Several years ago I sent the Department of Agriculture a supply of fish gathered at the Island, and it will be on record as to what kinds are mostly used here to feed young. At that time we found they used mostly menhaden, a few thread herring, butterfish, porgies, and other sea-fish; there were very few river-fish, such as mullet, sea-trout, whiting, or others.

"I enclose clipping that bears on this question. It will be seen from this that the restrictions were the cause of the reduced catches, as the Pelicans do not go that far, and the birds were never known to catch the kinds mentioned here.

"If the Food Administration will investigate this, I can show them the reason for the reduced catches. I can show them sea-trout brought in (caught in seines), 6 inches long, which, if allowed to grow would be 24 inches in two years, and weigh fifteen pounds. Is it any wonder that the fish are giving out? We have good laws to protect the fish, but the large dealers always manage to break them."

(Signed) P. KROEBEL, Warden,

Pelican Island Bird Reservation, Fla.

"In reply to your communication I would state that from my close observation of the Pelican and his habits, I cannot understand how one could say that he destroys millions of pounds of food fish. I find that he lives chiefly on small mullets and sardines, which are not classified as food-fish in this section. How the birds could interfere materially with the fishermen is not within my power to say, since I know of no way that they could. The number of Pelicans in this section today is 30 per cent less than three years ago.

"What really is destroying the food-fish and shrimp today, more than any other known enemy, is the shrimp-prizees, that in their search for shrimp catch millions of small fish which are left to die upon the shores. This is one of the greatest enemies that we have today. In the operation of the seines, millions of fish are caught in the meshes, and while hauling them for hundreds of yards through the water, they become entangled in the seine-meshes and are frequently dead, even before the haul is complete. It will

only be a question of time when the food-fish of this section will be destroyed by the swarms, and not the Pelican."

(Signed) CAPT. WILLIAM M. SPRINKLE,
Warden, Boston Island Bird Reservation,
La.

While it is not possible to point out the positive benefit done by Pelicans, it is certain that the damage done by them is by no means so great as claimed. Pelicans feed indiscriminately upon whatever fishes are available, hence make only a minor proportion of their diet of fishes customarily used as food for man, since these fishes themselves are in the minority among fishes in general. The Pelicans' habit of feeding only in shoal water also prevents them from destroying some of the valuable fishes; in fact, most commercial fishes are caught in depths of water which are untouched by Pelicans.

Finally, there must be kept in mind the risk of disturbing the balance of nature. In the course of ages Pelicans and their living environment have become fitted to each other in such a way that the existence of neither the birds nor their prey was endangered. No one can predict what might occur were the balance seriously disturbed."

Signed E. W. NELSON,
Chief, U. S. Biological Survey.

"I am not surprised to learn that the fishermen of the Gulf region are using the Food Administration to advance their attack on the Pelican. As a nature-lover who does not reduce every living creature to terms of dollars and cents, I am, of course, categorically opposed to their demands. The unusual nesting habits of Pelicans would make it possible practically to exterminate them in a season, and before we take a step which never could be undone, and rob our coasts of their most interesting and picturesque form of life, we should be absolutely sure that we are right and that the Pelican is as destructive as it is said to be. I claim that the case against it is not proven for the following reasons:

First, on the east coast of Florida—a region with which I am familiar—fish were far more abundant when Pelicans were more numerous.

"On the coast of Peru—a region I also know from personal experience—Pelicans are more abundant than in any other part of the world, with no decrease in the food-fish of that region.

"*Second*, in east Florida waters Pelicans, in my experience, feed chiefly on inedible fish—like menhaden.

"*Third*, Pelicans feed in the main on fish too small to be marketed and a very

large proportion of which would not live to reach maturity, if they were not taken by Pelicans.

"*Fourth*, Pelicans take a fish here and another there, and cruise over a comparatively wide area, so that at the most their total catch has no appreciable effect on the local fish-life.

"It would be far more to the point if fishermen were to observe the laws designed to protect fish and not blame the Pelican for conditions which they have brought about through their own shortsightedness."

(Signed) FRANK M. CHAPMAN.

"There was a large gathering in this city of the various people interested in fish and the Food Commissioners of Alabama, Mississippi, Louisiana, Georgia, and Florida. A resolution was introduced along the lines suggested in your letter to exterminate all fish-eating birds. I was requested to answer this statement, based on the fact that for many years I have hunted, fished and cruised over a large part of the Gulf.

"My firm belief is that nature provided the bird as a valuable adjunct to the fish. An immense amount of the food for the various game-fish which thrive in the waters of the Gulf are represented by minnows and other small fish which are unsuitable for food. Many of these fish cannot capture their food when it is on the surface of the water. The various Gulls and Terns drive these small fish under the water where they are promptly used as food by mackerel, trout, redfish, and vast numbers of other game- and table-fish.

"The same applies in regard to the sardines, or menhaden, which are very plentiful in the waters of the Gulf. None of these small fish are edible, and by countless millions they furnish food to what we call food-fish. Almost without exception, where you find quantities of birds, you find quantities of bait of all kinds. Repeatedly have I seen schools of shrimp running right along the surface of the water, where it was difficult for the game-fish to capture them because they skim right along the surface, but on the appearance of a few Gulls, these shrimp would be driven below the surface and furnish food to all varieties of table-fish.

"The principal charge I have heard against the Pelican is his consumption of mullet. My judgment is that this is rather limited in comparison with his consumption of sardines, and with the wonderful reproductive powers of the mullet, the small amount consumed by the Pelican does not seriously interfere with our food supply.

"Nature itself seems to have provided that birds and fish each work to help the other, and my plan against the extermination of the bird seems to have fallen on very fertile soil, because, without a single exception, every fisherman present corroborated the statements made, and the importance of the conservation of bird-life, due, first, to their enormous destruction of insects of every character, and,

second, to the fact which I emphasize, that they are at very great assistance to the fish in driving their food where it can be readily caught.

"I hope this brief information will be of some value to you, and would appreciate corroboration of my views from your records."

(Signed) JOHN M. PARKER,
New Orleans, La.

EGRET PROTECTION THREATENED

Every year the Association collects, from its members and friends, contributions to be used for the specific purpose of extending protection to the white Egrets that are killed to get the 'aigrette' for the millinery trade. This support in the past has been sufficiently generous to enable the Association to accomplish a number of notable results. For example, the passage of the law in New York state which prohibits the sale of these feathers, as well as the feathers of other native protected birds within the borders of the Commonwealth.

Also, the Association was able to wage a campaign in Pennsylvania for the passage of a law which made it illegal to sell these trophies in that state. Similar campaigns have been conducted elsewhere, and now the laws of fourteen states prohibit merchants from dealing in these feathers. We have been able to cooperate with the State Game Protective officials in New York and elsewhere in bringing numbers of law-breakers to justice, who were forced to pay large fines for illegally selling aigrettes.

Every spring, men are employed to guard the few remaining breeding colonies of these birds, in so far as it has been possible to locate them in the southern states. This exceedingly dangerous warden work is carried on by guards hired during the spring months for the purpose. There is not the slightest doubt but what the Egrets in the South Atlantic States would today be on the very verge of absolute extinction but for the efforts of the Association.

Sometimes money is slow in coming in, and the birds not infrequently have suffered

as a result. The Association cannot hire a man and send him into the swamps to guard a colony of birds unless it has money to pay for this service, and there have been a number of instances in recent years when, through lack of funds to employ wardens, colonies of Egrets have been shot for their feathers, and the unattended young left to perish in the nests.

It now appears that a number of colonies will have to be left unguarded the present spring because of lack of funds. In several instances \$100 is enough to save a colony through the breeding season, in other cases \$50 is a sufficient amount. If the bird lovers of the country want this interesting bird spared and brought back in numbers, the Association has the machinery and experience with which to do it.

We hope that these remarks will be read by some members who may at once feel disposed to contribute something to this work.

The following record shows a list of the contributions, for Egret protection efforts, which were received between October 29, 1917, and March 1, 1918.

Contributors to the Egret Fund

Balance unexpended from 1917,	
as per Annual Report	\$87 ⁰⁰ 17
Adams, William C.	1 00
Allen, Miss Gertrude	15 00
Allen, Mary P.	15 00
Ames, Mrs. J. B.	5 00
Ayres, Miss Mary A.	5 00
Barclay, Miss Emily	5 00
Beall, Mrs. I. A.	5 00
Bignell, Mrs. Effie	1 00
Black wadler, Eliot	1 00
Bond, Miss Mary Louise	1 00
Bonham, Miss Elizabeth S.	1 00

The Audubon Societies

199

Boulam, Mrs. Horace	\$25.00	Knowlton, Mrs. Myra R.	\$2.00
Boventon, Mrs. C. H.	1.00	Kahn, Arthur K.	5.00
Brent, Miss Dorian K.	2.00	Lagowitz, Miss Harriet L.	1.00
Brook, Mrs. Robert C. H.	3.00	Lehman, Meyer H.	2.50
Brooks, Mrs. Shephard	5.00	Lewis, Edwin J., Jr.	1.00
Brown, D. J.	2.00	Lincoln, Mrs. Lowell	2.00
Burgess, F. Phillips	3.00	McGowan, Mrs. John E.	5.00
Burr, Miss Edith	2.00	Mann, James R.	1.00
Bush, W. T.	5.00	Marrs, Mrs. Kingsmill	5.00
Busk, Fred T.	5.00	Marsh, Spencer S.	1.00
Burton Conyers	10.00	Mason, G. A.	5.00
Caine, Miss Harriet	2.00	Mason, H. L., Jr.	5.00
Clark, Mrs. Louise	2.00	Montell, Mr. and Mrs. F. M.	2.50
Clarke, Mrs. F. A. S.	5.00	Moore, Alfred	5.00
Cox, John L.	5.00	Mott, Miss Marian	3.00
Cristy, Mrs. H. W.	2.00	Nice, Mrs. Margaret M.	3.00
Cummings, Mrs. H. K.	1.00	Osborne, Arthur A.	1.00
Curtis, Charles	5.00	Parker, Mrs. W. R.	3.00
Cutter, Ralph Ladd	5.00	Patton, Mrs. Margaret S.	5.00
Dabney, Herbert	2.00	Peck, Dr. Elizabeth L.	4.00
Daniels, Mrs. T. A.	1.00	Penfold, Edmund	10.00
Day, Miss Carrie E.	5.00	Phelps, Miss Frances	10.00
De Forest, Mrs. Robert W.	5.00	Rhoads, S. N.	1.50
de la Rive, Miss Rachel	5.00	Richards, Mrs. L. S.	5.00
Deater, Stanley W.	3.00	Righter, William S.	5.00
Dwight, Mrs. M. E.	2.00	Roblans, Mr. and Mrs. R. E.	20.00
Eaton, Mary S.	5.00	Saunders, Charles G.	2.50
Emery, Miss Georgia Hill	25.00	Schwepe, Mrs. H. M.	1.00
Emery, Miss Georgiana	1.00	Sexton, Mrs. Edward B.	5.00
Emery, Miss Louisa J.	1.00	Shaw, Mrs. G. H.	5.00
Emmons, Mrs. A. B.	5.00	Shoemaker, Henry W.	10.00
Emmons, Mrs. R. W., 2d	10.00	Simpson, Miss Jean W.	5.00
Emory, Charles S. (In Memo- rium)	2.00	Small, Miss A. M.	3.00
Eschere, Mrs. F. F.	1.00	Spachman, Miss Emily S.	2.00
Evans, William B.	4.00	Spalter, Mrs. F. B.	1.50
Faulkner, Miss Fannie M.	16.00	Spong, Mrs. J. J. R.	50.00
Forbes, Mrs. M. J.	3.00	Sturgis, F. K.	5.00
Francklin, Mrs. M. L.	10.00	Thorndike, Mrs. Augustus	1.00
Friedman, Mrs. Max	2.00	Timmerman, Miss Edith E.	1.50
Frost, Miss Emilie	1.00	Toussaint, Mrs. L. H.	5.00
Fugent, Stephen	5.00	Tower, Ellen M.	5.00
Gahan, Miss Ruth	5.00	Tower, Mrs. Kate D.	1.00
Gallant, Mrs. Frederick M.	5.00	Toonley, Mrs. John L.	1.00
Gardner, Mrs. E. H.	10.00	Tyler, W. G.	2.00
Goodwin, George R.	5.00	Valliant, Mrs. G. H.	5.00
Griffin, Mrs. Solomon B.	3.00	Van Name, Willard G.	15.00
Haskell, Miss Helen P.	2.00	Vermilye, Miss J. T.	2.00
Hatchway, Harry S.	2.00	Von Zedlitz, Mrs. Anna	1.00
Hedkins, Miss Augusta D.	1.00	Walker, Miss Mary A.	2.00
Herr, Miss Elizabeth	3.00	Wharton, William P.	100.00
Horton, Miss T. E.	2.00	Whitney, Miss Ellen F.	1.00
Hoot, Miss G. L.	1.00	Wilkins, Miss Laura	1.50
Hughson, Mrs. Walter	10.00	Willcox, Miss M. A.	10.00
Hunter, William T., Jr.	4.00	Williams, George F.	5.00
Jewell, William K.	1.00	Williams, Mrs. Sydney M.	1.00
Jones, Miss Ella H.	1.00	Wilson, Mrs. G. G.	1.00
Judson, Dr. and Mrs. John H.	1.00	Woodward, Dr. S. B.	5.00
Jordan, A. H. B.	20.00	Wright, Miss Mary A.	2.00
Kennedy, Mrs. John S.	10.00		
Kerr, Mrs. T. B.	5.00		
		Total	\$1,000.65

NEW LIFE MEMBERS

Enrolled from October 20, 1917, to March 1, 1918

- Abell, Mrs. Edwin F.
Ackley, Miss Adeline E.
Agnasz, G. R.
"A Friend"
Albertson, Mrs. S. W.
Anderson, Frank Bartow
Ashman, Mrs. B. I.
Bancroft, Wilder D.
Bassett, Mrs. Robert J.
Battcheller, Robert
Bemis, Albert F.
Blanchard, Miss Sarah H.
Boericker, Harold
Bourn, W. B.
Branch, Miss Ffife K.
Buhl, Arthur H.
Burrall, Mrs. E. M.
Chapin, Mrs. Charles A.
Chase, Miss Helen E.
Cushman, Miss Catherine A.
Coe, Miss Ella S.
Coe, Thomas Upham
Cole, Miss Ella M.
Colfeli, Mrs. Rebecca M. M.
Collins, Mrs. Charles H.
Comstock, Mrs. Robert H.
Coolidge, T. Jefferson
Corrigan, James W.
Cranston, Miss Louise
Crocker, C. T.
Curis, Roy A.
Dalney, F. L.
Dimock, Mrs. Henry F.
Dalhyme, Miss Margaret M.
Ellis, William D.
Emery, Miss Georgia Hill
Eustis, Mrs. Herbert H.
Everett, Edward H.
Follin, M. D.
Folson, Miss M. G.
Garvan, Francis P.
Gifford, James M.
Ghassell, Andrew
Godfrey, Miss Adelaide I.
Gordon, Mrs. Donald
Grassilli, C. A.
Hanna, H. M., Jr.
Hanna, Miss Mary
Hecker, Frank J.
Hill, Mrs. James J.
Himckley, Mrs. M. V.
Hunnswell, Mrs. Arthur
Huntington, H. E.
Hyde, Mrs. Clarence M.
Iselin, Columbus O'D.
Jaffray, Robert
Jordan, Miss Jeannette A.
Kimball, Mrs. Arthur K.
Longyear, John M.
McCormick, Mrs. R. S.
McOwen, Frederick
Miller, Charles Kingsbury
Morrill, Miss Amelia
Morris, Evingham
Morse, Mrs. Waldo G.
Mudd, Dr. Harvey G.
Olds, R. E.
Osborn, Frederick
Pagenstecker, Albrecht
Perkins, William H.
Richardson, Mrs. Charles F.
Rockwood, Mrs. George L.
Rogers, Miss Ella A.
Shoad, Mrs. Lucia W.
Silber, Thomas
Smith, Frank A.
Starkweather, Mrs. J. N.
Stone, Charles A.
Talcott, George S.
Troscher, A. F.
Tuttle, Arthur J.
Upham, Frederic W.
Upmann, Albert
Vaux, Miss Meta
Wallace, Col. Cranmore N.
Warner, Lucien C.
Weeks, Hon. John W.
Whitfield, Miss Estelle
Whitman, Wilham
Williams, Mrs. C. Duane
Winchester Repeating Arms Co.
Wood, Walter
Zabriskie, Mrs. Cornelius

During the same period there have also been enrolled 245 new sustaining members and 33 new contributors.





1. PHAINOPEPLA, Adult Male
 2. PHAINOPEPLA, Female
 3. BOHEMIAN WAXWING, Adult

4. BOHEMIAN WAXWING, Adult
 5. CEDAR WAXWING, Adult
 6. CEDAR WAXWING, Young

(One-half natural size)

L. J. G. P. P.

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XX

MAY—JUNE, 1918

No. 3

Three Years After*

SOME NOTES ON BIRDCRAFT SANCTUARY, FAIRFIELD, CONN.

By MABEL OSGOOD WRIGHT

THERE are many projects connected with all ethical movements, covering some phases of general nature-study and bird-protection, that are born of waves of enthusiasm and public acclaim and then, lacking both nourishment and practical motive, cease to be.

At the public opening of Birdcraft Sanctuary, over three years ago, enthusiasm there was and much praise for all the details of construction, but certain ultra-practical folk put the question, "Exactly what do you expect to accomplish in these ten acres that may not be compassed in any similar piece of ground, without so much preparation and expense?" Also, "Will not the nearby public in a short time tire of the limited museum exhibit and cease to come?"

To both these queries the answer was "We shall see; time only can prove." Then those three having this side of the work in charge spent a greater part of the first year in following the natural course of events in the Sanctuary, as well as taking note of the people who visited the museum, the various comments upon the work already done being a guide to what should be developed to meet the popular needs, as well as those of bird-protection.

It did not take us long to find that the general public can best be taught to name the birds accurately from seeing them at close range in the museum, for it requires a special aptitude to group markings and color scheme as shown in a flitting wild bird, even when seen through a field glass.

But when half-a-dozen birds are studied at short range through the picture groups in the cases, the novice has a series for mental comparison out-of-doors.

Straightway we added a second unit to the museum, to carry out in greater detail the seasonal scheme of the first room.

*Bird-Lover for July-August, 1915, published a paper by Mrs. Wright upon the inception and making of Birdcraft Sanctuary, owned by the Audubon Society of the State of Connecticut.



OLD ORCHARD FROM THE OVERLOOK
Photographed by Wilbur F. Smith



BIRDCRAFT BUNGALOW WARDEN'S HOME AND COMMITTEE ROOM OF
THE CONNECTICUT AUDUBON SOCIETY
Photographed by Mabel Osgood Wright

In the second unit there are three large picture groups: (1) One of Ducks and other Shore-birds of the New England coast. (2) A wood scene, with perspective glimpses of hills and meadows, against which are grouped many of the birds of prey and the chief mammals of Connecticut, shown because of the relation of some to the destruction of game-birds, i. e., a gray fox is shown stalking some Quail while the fox cub in its den is nosing the remains of a Ruffed Grouse, etc. (3) A picture group of the Sanctuary itself is used to show all the birds that have either nested therein, rested there during the migrations, or been its winter guests. The value of this group is to show students the scope of bird-life that may be found in the neighborhood, as the



A VISITOR

records kept by the warden place the display upon a scientific basis and eliminate anything like guesswork.

The arrangement of our little museum aims at doing away with the confusion that falls upon the amateur when visiting great collections, for we limit ourselves to birds common to Connecticut, and, in addition to the picture groups, we are developing three "study cases" wherein the birds are shown in pairs, or male, female and immature, and plainly labeled.

Have people tired of the exhibit? No. Those who came at first from mere curiosity, came again with interested friends. Teachers make visits a reward of merit for their Junior Classes, and automobilists leave the post-road to "take in Birdcraft." Our last annual record of visitors was 6,200 people, a small number for a city museum, but very significant for a rural, cottage affair. The use

of the ground inside the so-called cat-proof fence is confined to accredited adult bird-students admitted by personal card. To carry out the purpose of the

place, there must be a degree of quiet that cannot be had in a semi-public resort. Neither is general bird photography allowed; birds can be disturbed and driven from their haunts by rearranging the surroundings of their nests as surely as by shotguns or egg-collectors.

The record of birds seen in 1917 was as follows: Species seen, 147. Species nesting in Sanctuary, 24—with 102 individual nests, as listed below: Robin, 22; Wrens, 13; Song Sparrow, 13; Field Sparrow, 11; Catbird, 8; Brown Thrashers, 5; American Goldfinches, 2; Cedar Waxwing, 1; Bluebirds, 2; Maryland Yellow-throats, 3; Blue-winged Warbler, 1; Towhee, 3; Great-crested Fly-catcher, 1; Chat, 1; Black-billed Cuckoo, 2; Phoebe, 1; Wood Pewee, 1; Flicker,



THE THRASHER IN MOLTING TIME
Photographed by Wilbur F. Smith

4; Rose-breasted Grosbeak, 1; Screech Owl, 1; Red-eyed Vireo, 2; Chimney Swift, 2; Quail, 1 covey of 7.

One-hundred and thirty birds killed by natural causes were brought in by children. Permission having been given us by the State Commission of Fish and Game to retain these birds, they were mounted by the warden, who is a taxidermist, for the museum, and duplicates kept as "skins" for exchange.

If this great annual loss of bird-life could be more frequently saved from waste by this method, it would be possible to form small collections for school study without taking the life of a bird.

The individual birds and mammals taken in the Sanctuary are as follows (we have a state permit to destroy any bird that is detrimental to the Sanctuary), during 1917-1918:

English Sparrows, 269; European Starlings, 542. These two species destroy the nests of more useful birds and con-



THE THRASHER THAT WINTERED
Photographed by Wilbur F. Smith



A ROBIN TENANT

Three days after hatching this bird lost his wife and thereafter raised his brood alone.

Photographed by Wilbur F. Smith.

sume, not only the natural food of native species, but great quantities of the grain, berries, etc., for winter feeding.

Purple Grackles, 28; Crows, 12. These birds break up nests, we find, while the Crow we have proven to be an egg and squab thief to such a degree that, whatever good he may do under other conditions, he is an impossibility in a Sanctuary. We use the old country way of placing poison in hens' eggs, by punching a small hole in one end and stirring in the poison with a straw.



PHOTOGRAPHING A ROBIN TENANT

By Wilbur F. Smith.

Hide the eggs where we will, the Crows always find and eat them, proving equally their menace to poultry-raisers. This method would be unsafe in any but land enclosed like the Sanctuary. We also trapped: Sparrow Hawks, 4; Red-shouldered Hawks, 3; Long-eared Owls, 2; Barred Owls, 1; Screech Owls, 1; Sharp-shinned Hawks, 4; Cooper's Hawks, 3; Northern Shrikes, 14 (20 seen). (All birds of prey are caught in a trap with padded jaws, so that harmless and protected species like the Owls may be liberated unharmed.)

The Red-shouldered Hawks are always set free when caught, as the warden finds them great destroyers of rodents, and has as yet failed to see them harry the birds.



A CHRISTMAS SHEAF FOR THE JUNCOS AND TREE SPARROWS

The Northern Shrikes, next to the Sharp-shinned Hawks, have proved the most ruthless harriers of our winter birds in the Sanctuary. They also gave exhibits of their "butcher bird" habits by impaling victims on the barbs of the fence.

Valuable and precise data on the cat question has been collected during these three years, when 107 cats have been taken in the enclosed grounds of Birdcraft, 24 having worked their way between the barbs and over the top of the "cat-proof" fence! While 50 of these cats might be classed as homeless wanderers, the others were well-fed adult cats in whom the bird-hunting instinct was so dominant that they would take great risks to satisfy it. This type of cat, together with Crows, we are convinced, causes quite as great losses to poultry-raisers as all the Hawks combined.

It can be easily seen that by feeding and housing more than an average number of birds in a given area, their natural enemies are attracted and increased, so that it is of little avail to create a so-called Sanctuary unless constant protection from a resident warden is supplied.

In addition to general supervision, our warden makes his rounds early in the morning and at twilight, on the lookout for unusual happenings and new arrivals. Prolaceous mammals, and the like, must be looked for, and his catch of detrimental for the past year includes 21 rats, 1 skunk (who helped himself to eggs meant for the Crows), 1 weasel, and 17 striped snakes, we having decided to destroy these because of the harm that we have found that they did in breaking up the nests of Song and Field Sparrows, while the small Owls and Red-shouldered Hawks can be trusted to keep down such rodents as the snakes would destroy.

One lesson can be learned through our experience by those wishing to put up bird houses—do not place them at random or too near together as if your garden was a salesroom. With a few gregarious exceptions, birds like privacy, and one house should not be within sight of another. Then, too, the houses of simplest construction find the readiest tenants. A long, squared box with the proper opening at top and a few chips and shavings inside will suit a Flicker or Screech Owl as well as the elaborate von Berlepsch construction, proving that American birds, like American people, have no use for German *Kultur*.

We have found a double reason for clearing out bird-boxes during the winter. In half a dozen cases the white-footed or deer mouse has made a soft nest in them, and in one Wren box a family of ten was wintering. This house and contents, carefully mounted, is an object of interest in one of the study cases.

Among the notable birds that have adopted our home-made houses is the Great-crested Flycatcher, who was quite at home in a decayed apple stub with a bark roof.

A natural brush-heap, supplemented from time to time, is particularly



GREAT-CRESTED FLYCATCHER AND
ITS NESTING-BOX

Photographed by Wilbur F. Smith

attractive to the Brown Thrashers, who are fast becoming regular visitors to the feeding-shell in spite of alleged shyness. A pair of Thrashers made up their mind to winter with us. The female succumbed after Christmas, during the first zero weather, but the male lived on, roosting in some salt hay that packed pipes under the north porch, feeding upon cornbread, meat-scrap, and the like and sunning every day under the shelter of a bank.

On Monday, April 1, he began to sing in a broken fashion, while on the 10th he burst into *full song!* This seems to me an important record, as the



RELEASING A LONG-EARED OWL—A STUDY IN EXPRESSION
Photographed by Mabel Osgood Wright

migrant Thrashers are not due until the last week of April and rarely sing until May 1.

During the winter six Acadian Owls were recorded. One was picked up in a half-frozen state and after being thawed out, was put in a cage and fed with pieces of English Sparrows and Starlings that the warden caught for it. After a time the cage was placed in the cellar, which is light and above freezing temperature. The Owl was let fly about, so that it might keep its wing action until the weather was mild enough to liberate it safely. The cellar had been overrun with meadow mice and white-foots. Suddenly the warden discovered that the little Acadian was catching them as cleverly as the most experienced cat or human mouse-catcher. In a short time the cellar



WARDEN MOWING A TRAIL THROUGH A THICKET OF PINK STEEPLE BUSH
Photographed by Wilbur F. Smith

was entirely cleaned and when the Owl was set free in March, he had paid well for his board and lodging.

The having of a bird student as warden in Birdcraft makes it a gathering-place for those who have tales to tell of their local experiences, and allows these stories either to be proven by him or *disproved* with authority. This also helps the warden to keep in touch with local bird-life through the specimens brought



THE REDWING'S ISLAND

in for mounting and he is able to control, in a measure, illegal shooting by refusing to mount the specimens shot and reporting them to the county warden.

As an instance of establishing a local record—word was brought to him during the January zero weather that from three to five Wilson's Snipe were living in a marsh meadow one-fourth of a mile away. The first impulse was to laugh at the report, but as the boy's story was backed up by others, our warden went to investigate. The Snipe were there and a record established, the secret of the open bit of marsh being the exhaust-steam pipe from a nearby factory which kept open ground for the Snipe through this bitter winter.

First and last, Birdcraft is proving itself a place to answer truly the questions of the bird-lover and student, questions asked both by eye and tongue, and to help its visitors think for themselves. Is not this "making good"?

Little by little native butterflies and moths will appear in the study case and some of the vanishing wild flowers find their natural habitats in the Sanctuary, so that the economic relation between flowers, insects, and birds, may be made plain, but this will be another story. Nature's plan is eternity!



ONE PIECE FOR TWO—A GUCKADEE SHARES THE WARDEN'S CORN-COB.

A Blameless Cat

By WILLIAM BREWSTER

"*Sans peur et sans reproche*" might be said of her no less appropriately than it was of the illustrious Chevalier Bayard in days of old. What matters it that she catches no mice, since birds are similarly immune from her attack! She sits beside me now, this maltese-and-white pussy, gazing intently at the two dogs lying at my feet, whose eyes are correspondingly fixed on her. Just how and why she came to be so installed—nay even cherished—in a household not overgiven to favoring such a pet may interest BIRD-LORE'S readers. It happened thus.

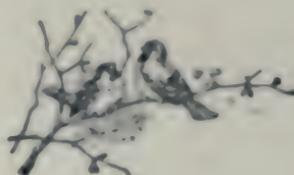
Like many another elsewhere in New England, the grassy dooryard, looked upon from southern windows of our old farmhouse at Concord, Mass., is shaded by large elms and partly enclosed within moss-grown stone walls overrun by poison ivy and fringed with barberry, elder, and other bushes. It has also bordering flower-beds and two pools of water, one deep enough to harbor fish, frogs, and turtles, the other shallow enough for birds to drink and bathe in tearlessly. From it a lane, similarly walled and leaf-screened, leads to woodlands not far away. Thus conditioned and environed, the dooryard does not fail, of course, to attract various birds and other creatures, including some ungiven to venturing equally near human habitations. Chipmunks inhabit it numerously at every season—although not seen in winter, when hibernating underground. They have troubled us increasingly within recent years by digging up and eating the bulbs of crocuses, tulips, and other early-flowering plants. These depredations became so frequent and widespread last spring that we could no longer tolerate them. The chipmunks might easily have been shot or trapped but were not, for their familiar and ever-pleasing presence was even more valued than that of the flowers they destroyed. How to safeguard the latter without losing the former was therefore the problem that must be solved. We first tried small-meshed wire netting, spread out flat over the beds, but it impeded plant-growth, and the squirrels soon learned to burrow under it. Their evident fear of prowling cats, who sometimes justified it by preying on them, was next thought of as something that might be employed to our advantage. For obvious reasons, no living cat was desired about the place, but the stuffed skin of what once had been one would perhaps serve quite as well or better. So the maltese-and-white pussy mentioned in the prelude to this narrative was purchased from the M. Abbott Frazar Company, Boston taxidermists. Admirably mounted, in an attitude characteristic of all her tribe when on the watch for prey, and having glaring yellow eyes, she was so very lifelike that to come on her suddenly amid rank herbage seldom failed to startle members of our household ignorant or forgetful of her presence there. As for the chipmunks, the merest glimpse of her sufficed to fill them with such abiding terror that for days afterward they dared not return to any spot where

she had been encountered. It might have proved otherwise with them had we not frequently moved her from place to place, always so screening her that she could be viewed from one direction only—a plan equally necessary to adopt in dealing with scarecrows, unless one be willing to have them contemptuously ignored by intelligent Crows, as happens so often in New England cornfields and elsewhere.

Thus managed, our stuffed cat safeguarded the bulbs through that entire spring, yet banished the chipmunks no further than to neighboring stone walls, along which they continued to scamper freely, or to a well-curb still nearer the house, whereon they loved to bask in warm sunlight. Her effect on birds then nesting in or near the dooryard was different and less pleasing. For whenever it became known to them that she was lurking there, Robins, Cat-birds, Wrens, Song Sparrows, Orioles, and others assembled, fluttering as close about her as they dared, uttering cries of alarm or protest which sometimes swelled into clamor so disturbing that we had to remove her from their sight.

After thus accomplishing all that had been desired of her at Concord, the inanimate puss was taken to Cambridge later in the year, and there rendered similar useful service by preventing certain birds from eating fruit which we did not care to let them have. Numerous Starlings, especially coveting that of our Parkman's apple tree, were kept away from it by the cat until at length one of them found opportunity to watch the placing of her in the tree. What he then saw must have been correctly interpreted and also promptly communicated to the other members of the flock, for they soon returned to resume their interrupted feast and thereafter took no apparent notice of the cat. All this transpired within my view. It suggested that Starlings may not only observe, but also *reason*, shrewdly. Doubtless there are many other birds no less gifted with such intelligence.

The foregoing testimony should convince at least some of those who read it that a stuffed cat may be better worth her keep than a living one—especially in times of food scarcity like these. If, during the continuance of her allotted nine lives, such an animal may occasionally have employed a dolorous voice to shatter midnight quiet, or needle-pointed claws to transfix defenceless little birds or beasts, what does it matter now? All such transgression must of necessity date back to a more or less remote past and hence need give no present concern to anyone.





The Lark

By EDMUND J. SAWYER

He little knew the modest Lark who said,
 "He sings inspired at high heaven's gate."
The bird to his own native soil is wed
 And sings because enraptured with his mate.

Far more than sky, with sun or starry train,
 Green fields, or barren brown, to him are worth.
He seeks no closer view of heav'n to gain:
 He soars but for a better view of earth.



The Whip-poor-will

By MELICENT ENO HUMASON, New Britain, Conn.

With Photographs by Leslie W. Lee

ONE evening, just before dusk, as a friend and I were scrambling over a rocky wooded ledge, after a long day's tramp in the mountains, we were suddenly surprised by a low chucking *purr*. Gazing through the dim light, at the spot whence came the sound, we saw a dusky shape quietly glide into the trees, with the planing, sidelong swoop of a bat. Stealthily it alighted on a limb almost directly above a hollow of dry chestnut-oak leaves in which lay two white spotted eggs.

So here was the Whip-poor-will, in this lonely deserted place, on this high mountain ridge at the top of the world, with apparently no neighbors to intrude.

We departed from the site as quickly and noiselessly as possible, leaving her to return in peace; then we rested on a lichen-mottled rock about 50 feet away.

It was truly dusk now. The lights in the little cottages of the valley below glittered with friendly eyes; a wagon rattled down the stony road on its homeward journey; a dog howled long at some imaginary foe in the thicket; a Scarlet Tanager uttered his deep *chip-chur-r-r*; the Wood Thrushes tinkled their evening bells; and then, close at hand, a full-throated *whip-poor-will, whip-poor-will*, many times repeated (once we counted 267 calls, without a second's intermission), betokened felicity and happy companionship on the ledge.

Early the next morning we climbed the stony path, bordered by maple-leaved viburnum and dogwood, to the abode of our newly discovered residents.

Instead of going directly to the nest of the Whip-poor-will, we made a wide detour around her, approaching her from the rear, over a large rock, which bore convenient depressions in the shape of steps.

Long grass grew in the crevices of our excellent staircase, and shiny berried Solomon's seal stretched yearningly toward the light.

Climbing, then descending this rock, we mounted another, from the farther end of which we surveyed the scene—brilliant now in the morning light—of the night before.

Three trees formed the background and wings, namely, the yellow oak, the chestnut oak, and the pignut hickory. We glanced into the 'spotlight' formed by the flickering sun. There were no eggs to be seen!

Using our glasses, what had at first appeared to be the end of the rotten limb now shaped itself into a brooding bird. Soon we clearly defined the whiskers, the shut eyes, the sagging mouth. Caught in its sleep, I declare! At the snap of a twig the 'limb' took wings, and, repeating the sound of the night before, fluttered, almost stupidly, to a branch only a few feet away from the eggs. There, the Whip-poor-will stolidly blinked at us and seemed not afraid.

My companion quickly descended the rock toward the eggs, set up his 5 x 7 camera on a tripod, took a picture of the eggs—I cannot say nest, then draped the camera with sassafras leaves, set it, and came away, carrying with him the bulb, attached to tubing 25 feet long. Then we crouched behind the staircase and awaited proceedings.

Would the Whip-poor-will venture down from her perch, we wondered, with that fierce machine staring at her, 26 inches from her brooding-place?



WHIP-POOR-WILL BROODING

Though we tried to conceal ourselves behind the rock, her eye was upon us, and though she did not fly to safer distance, neither did she budge an inch from her location.

We dropped the bulb where we were so insufficiently concealing (/) ourselves, and strolled to the ledge where we had lingered the previous evening. Immediately we were settled, in recumbent and apparently unconcerned positions, the Whip-poor-will flew back to her nest.

Fully twenty minutes after her interruption, my companion stealthily stole up the 'back stairs' again, bulb in hand, and peering, with glasses, over the edge, spotted her and snapped. Once, twice, the click resounded—I could

hear it where I was so anxiously awaiting—but the Whip-poor-will did not quiver a whisker.

For sixteen days after our discovery of the eggs, we tramped up that rocky path to our destination, the home of the Whip-poor-will, a three-mile walk each way. By this time we were exceedingly fond of her; in fact, contrary to our general custom, we had killed a six-foot blacksnake which was stealthily crawling upon her unawares, and we awaited the advent of her babies with much solicitation and joy.

The sixteenth day, the Whip-poor-will whirred up, and there, in the depression of the chestnut-oak leaves, were two little Whip-poor-will babies.



WHIP-POOR-WILL TWINS

Their beaks and heads were plentifully besprinkled with egg-shells, little particles of which were quite imbedded in their fur. Perhaps one will dispute the possibility of Whip-poor-wills bearing fur, but I can at least assure you that these infants bore no resemblance to the young of most birds. Instead of being pink, with only wisps of feathers protruding from their skin, they were completely covered with a nice soft down, which might be likened to that of a chick. Fragments of shell were scattered on the leaves about them.

After taking a picture of the youngsters, while the mother fluttered wildly about us, cackling in guttural notes, we hurriedly left the trio.

The next day we revisited the site and found that the young Whip-poor-wills were beginning to look like their mother, especially around the beak, and that

they were rather inclined to crawl out of their shallow home. A day later we again walked three miles to pay our respects to the Whip-poor-will family, but no trace of it remained save a few white chips of egg-shells and two stray feathers from the faithful bird who had reared so tenderly her 'babes in the woods.' Doubtless she had carried them to a safer retreat in the forest depths beyond.

My Nuthatch Tenants and a Pair of Red-Headed Ruffians

By R. W. WILLIAMS

TAKOMA PARK is a town of approximately 3,000 population, partly in the District of Columbia and partly in Maryland. The boundary of my front yard is the line between the District and Maryland, my home being wholly within the state. The yard is 100 feet wide and about 175 feet long. A small stream flows through a part of the premises in the rear. Neighbors, whose places are about the area of my own, have a goodly supply of shade trees, largely oaks. I have ten oaks in the yard, the majority standing in a cluster to the east of the house. In the winter I feed the birds, and during that season am the host to Jays, White-throated and Song Sparrows, Juncos, Cardinals, Downy Woodpeckers, Tufted Titmice, Carolina Chickadees, White-breasted Nuthatches, and, occasionally, a Purple Grackle. One morning in the latter part of last February, I saw at the same time six male Cardinals sitting in a small tree in the back yard. At the time of the events about to be narrated, a pair of Flickers were contentedly housed, and raised their brood, in a box on one of the oaks in the cluster.

In March last I made a bird-box out of four light boards about 15 inches long and 6 inches wide, with projecting top and inserted bottom. The three exposed sides and top I covered with bark. A hole about 1½ inches in diameter was bored rather close up under the projecting top. Sometime in the latter part of the month I nailed this box about 25 feet up on the south side of the main trunk of one of the oaks in the cluster. During the last days of the month a pair of White-breasted Nuthatches were frequently seen on and around the box, and by the end of the first week in April I was most agreeably surprised to find that they had settled themselves there for the season.

Their antics were comical. I frequently observed one or the other of them on top of the box or on a nearby limb, swinging its body from side to side for several minutes at a time, until I wondered if it possibly could escape dizziness. But they seemed never to tire of this performance and certainly were physically none the worse for it.

At first they were fairly noisy, but after a while, I suppose when incubation began, they became, and until the young were hatched they continued to be, quiet. Fearing that so unusual a tenant might desert the box if disturbed, I

was never able definitely to determine when the eggs were deposited, or, for that matter, much of anything that transpired within the box. They had not long hatched the young, however, before I discovered that fact by observing the parents carrying food to them.

Bright and happy days for the birds, old and young, ensued, until one morning before breakfast (May 9) two Red-headed Woodpeckers arrived on the scene and inspected the box. I did not attach much significance to this and contented myself, before leaving for my office, with frightening them away by vigorous gesticulations and by small sticks thrown at them. These methods seemed to suffice for the time. Later in the day, however, I received a message that the Woodpeckers were enlarging the entrance and possessing the box, throwing out the young Nuthatches—three having already been cast to the ground—and altogether evicting the parents, which, grief-stricken, were looking on from nearby stations. The red-headed ruffians were at the box when I reached home that afternoon but they disappeared at my approach. I procured my gun and took a position from which I would be sure to reach them if they returned. I had not long to wait. One of them alighted at the entrance of the box. I fired and the bird fell to the ground directly under the box. Both of the Nuthatches flew to the base of the tree and, clinging there within a foot of the ground, regarded the Woodpecker for more than a minute, with exhibitions of keen satisfaction and exultation.

I found another of the young Nuthatches dead a few feet away from the tree. None of the young birds was mutilated to any extent, from which circumstance it seems probable that the Woodpeckers were not in quest of food, but distinctly bent on mischief.

The following morning another Red-head appeared, and I promptly dispatched him. But, alas, the home of the Nuthatches had been desolated, and, while for a day or two they would sit upon the box for a few minutes and occasionally look in the entrance, they never went in, and finally abandoned the place. I shortly removed the box as the sight of it kept alive in me distressing recollections of this pathetic incident.

As I write this, some months afterward, I can add that, although the Nuthatches abandoned the box and its immediate vicinity, they remained in the neighborhood thereafter and are still here, occasionally feeding on the sun-flowers in my garden. Provision will be made for them during the coming winter, and a box will be erected for them in the spring. Red-headed Woodpeckers, beware!²

² In justice to Red-headed Woodpeckers as a race, I should say that by no means are they all so demoniacal as those above mentioned. There are good ones! had in all races, avian or human, and the race should not be condemned for the misdeeds of some individuals.

The Migration of North American Birds

SECOND SERIES

IV. THE WAXWINGS AND PHAINOPEPLA

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

(See Frontispiece)

BOHEMIAN WAXWING

The North American breeding-range of this boreal bird (*Bombycilla garrula*) extends north to northern Mackenzie and northern Alaska; west to western Alaska and western British Columbia; south to Washington and Montana; and east to northeastern Manitoba. It winters east to Nova Scotia, and south, though irregularly, to Connecticut, Pennsylvania, Ohio, Indiana, southern Illinois, Kansas, Colorado, and southern California. It is of casual occurrence in Arizona.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Wendell, Ala.	4	April 7	March 21, 1914
Fort Simpson, Mack.			April 25, 1800
Fort Amudon, Mack.	2	May 18	May 10, 1863
Dawson, Yukon			May 24, 1800

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Sullivan Island, N. Y.			May 12, 1887
Geneva, N. Y.	2	April 20	April 27, 1916
Burlington, Vt.	4	April 13	April 25, 1915
Stinch Lake, N. B.			April 28, 1905
Montreal, Quebec			April 27, 1857
Youngstown, Ohio			May 14, 1908
New Bremen, Ohio			January 22, 1910
Chicago, Ill.	3	February 28	April 18, 1911
Ann Arbor, Mich.			March 10, 1888
Ottawa, Ont.	2	March 18	March 30, 1897
Sioux City, Iowa	3	March 20	April 1, 1912
La Crosse, Wis.	5	March 18	April 5, 1905
Minneapolis, Minn.	6	April 1	April 25, 1876
Lincoln, Neb.			March 6, 1911
Funkton, S. D.			March 17, 1917
Margarit, Man.	3	March 22	April 10, 1900
Boulder, Colo.	3	April 1	April 14, 1917
Garner, Wyo.			March 7, 1870
Terry, Mont.	4	March 20	March 31, 1904
Galt, Calif.			March 14, 1911
Camp Harney, Ore.			March 1, 1876
Walla Walla, Wash.			March 3, 1881
Okanagan Landing, B. C.	3	February 28	March 22, 1907

FALL MIGRATION

LOCALITY	Number of years record	Average date of last one observed	Latest date of last one observed
Moose Camp, Kenai Peninsula, Alaska			October 8, 1903
Bethel, Alaska			August 8, 1914

LOCALITY	Number of years record	Average date of last one observed	Latest date of last one observed
Geneva, N. Y.			January 9, 1913
Dighton, Mass.			December 26, 1884
Lynn, Mass.			February 18, 1877
New Haven, Conn.			February 11, 1877
Ottawa, Ont.	4	January 3	November 11, 1885
Ann Arbor, Mich.			December 13, 1889
New Bremen, Ohio			January 1, 1910
Chicago, Ill.	8	December 6	November 20, 1906
La Crosse, Wis.	4	January 21	December 26, 1899
Spartan, Wis.			September 26, 1904
Minneapolis, Minn.	3	December 14	October 9, 1888
Sioux City, Iowa	3	February 7	January 21, 1912
Ames, Iowa			November 11, 1879
Amasa, Min.	8	November 3	October 20, 1903
Lincoln, Neb.	2	November 11	November 8, 1910
Halsey, Neb.			October 17, 1906
Manhattan, Kans.			December 9, 1879
Big Sandy, Mont.	3	November 6	October 23, 1900
Ferry, Mont.	9	December 13	October 23, 1867
Fort Bridger, Wyo.			December 8, 1841
Boulder, Colo.			November 6, 1912
Fort Mojave, Ariz.			January 19, 1871
Okanagan Landing, B. C.	2	November 7	October 18, 1901
Walla Walla, Wash.			November 19, 1881
Camp Harney, Ore.			November 15, 1871
Daggett, Calif.			December 13, 1912

CEDAR WAXWING

The Cedar Waxwing (*Bombusilla cedrorum*) breeds north to northern Nova Scotia, northwestern Quebec, northern Ontario, central Manitoba, central Alberta, and central British Columbia; and south to southern Oregon, Arizona, northern New Mexico, Kansas, northern Arkansas, and western North Carolina. It winters in most of the United States, and south to Mexico, Cuba, and Panama. It is of accidental or casual occurrence in Jamaica, the Bahama Islands, the Bermuda Islands, and England. It breeds late in the spring, and in many localities is of very irregular occurrence; hence its migratory movements are somewhat unsatisfactory to trace.

SPRING MIGRATION

LOCALITY	Number of years recorded	Average date of last bird observed	Latest date of last bird observed
Orlando, Fla.	2	May 9	May 15, 1911
Tallahassee, Fla.	3	April 27	May 8, 1903
Savannah, Ga.	6	May 5	May 14, 1915
Charleston, S. C.	3	May 18	June 3, 1910
Montgomery, Ala.			May 25, 1914
Birmingham, Ala.	3	May 5	May 26, 1910
New Orleans, La.	6	May 9	May 19, 1900
Helena, Ark.	5	May 11	May 23, 1904
Ennisville, Tex.			May 24, 1912
San Antonio, Tex.	6	May 6	May 25, 1885
Kerrville, Tex.	5	May 15	May 23, 1911
Budham, Tex.	5	May 17	June 3, 1887
Hico, Calif., Mis., Ariz.			May 6, 1902
Los Angeles, Calif.	3	May 22	May 24, 1908

LOCALITY	Number of years recorded	Average date of spring arrival	Earliest date of spring arrival
Washington, Vt.	12	May 12	March 29, 1911
Walla River, Vt.	10	May 20	April 17, 1905
St. Johnsbury, Vt.	24	April 23	February 10, 1915
Irishton, N. H.	3	May 8	April 10, 1898
Lyons, N. H.	5	April 15	March 9, 1915
Eastland, Maine	13	April 24	February 6, 1889
Phillips, Maine	11	May 24	April 10, 1905
South Lake, N. B.	17	June 2	May 9, 1889
Hudson, N. S.	3	May 30	March 25, 1890
Platon, N. S.	4	June 2	May 23, 1880
Charlottetown, P. E. I.			June 21, 1900
Montreal, Quebec	5	April 1	March 20, 1880
			January 25, 1892
Quebec, Quebec	16	May 20	April 15, 1890
Astoria, Minn.	17	May 28	May 21, 1901
Tully, Minn.	4	June 3	May 31, 1906
Indian Head, S Dak.	8	May 30	May 27, 1903
Sutton Creek, Alta.			May 14, 1903
Casper, Alta.	5	April 30	April 3, 1909
Champlain Landing, B. C.	9	June 1	May 26, 1906

FALL MIGRATION

LOCALITY	Number of years recorded	Average date of fall arrival	Earliest date of fall arrival
Charleston, S. C.	1	October 13	October 12, 1908
Kirkwood, Ga.	3	October 20	October 18, 1898
Savannah, Ga.			September 18, 1910
Tallahassee, Fla.			October 19, 1901
Montgomery, Ala.			October 20, 1913
Montgomery, Ala.	3	November 7	October 26, 1913
Helena, Ark.			November 13, 1896
Big St. Louis, Miss.	3	October 19	October 13, 1898
Gainesville, Tex.			November 17, 1885
Austin, Tex.	3	November 6	October 25, 1891
Thirty miles south of Fort Apache, Ariz.			September 11, 1873
Los Angeles, Calif.	4	September 17	August 26, 1907

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Montreal, Quebec.....	6	September 19	October 25, 1928
Charlottetown, P. E. I.....			October 22, 1921
Halifax, N. S.....	6	September 25	September 16, 1922
Scotch Lake, N. B.....			October 18, 1922
Phillips, Maine.....	5	September 21	September 14, 1929
Portland, Maine.....	7	October 2	October 21, 1914
Tilton, N. H.....	3	October 4	October 26, 1925
Durham, N. H.....	3	October 7	October 29, 1929
Wells River, Vt.....	3	September 20	October 1, 1914
Aweme, Man.....	10	September 20	October 8, 1927
Athabaska Landing, Alta.....			September 11, 1924
Okanagan Landing, B. C.....	5	September 5	September 11, 1914
Missoula, Mont.....			October 11, 1916
Bozeman, Mont.....	5	September 16	September 29, 1917

PHAINOPEPLA

The Phainopepla (*Phainopepla nitens*) breeds north to central western Texas, New Mexico, southern Utah, southern Nevada, and central California (casually to central Nevada and northern California); and south to the Mexican States of Mexico (Valley of Mexico), Puebla, and Vera Cruz. It winters locally from central California and southern Arizona south at least to the southern limit of its breeding range.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Gucson, Ariz.....	4	March 24	February 5, 1916
Tule Wells, Yuma Co., Ariz.....			February 11, 1924
Tombstone, Ariz.....			January 14, 1917*
Santa Barbara, Calif.....	3	April 24	April 5, 1918
Fresno, Calif.....	3	April 13	March 26, 1926

*Probably wintering.

Notes on the Plumage of North American Birds

FORTY-EIGHTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Phainopepla (*Phainopepla nitens*, Figs. 1, 2).—On leaving the nest, the male, as well as the female, Phainopepla bears a general resemblance to the adult female, but is browner with duller and narrower margins to the wing-feathers. The postjuvinal molt is apparently usually complete, the primary coverts being sometimes retained, and the male now acquires a black plumage which, however, differs from that of the adult in having the body feathers,

especially below, margined with grayish, the wing-coverts and inner quills with white.

With the advance of the season these markings disappear, and by the following summer young and old are essentially alike.

Bohemian Waxwing (*Bombycilla garrula*, Figs. 3, 4).—In general appearance the nestling of this species differs from the adult much as the young of the Cedar Waxwing does. In the single specimen seen (Biological Survey, No. 165, 808, Yukon River, July 20, 1899, W. H. Osgood) the wings have red tips and in their yellow-and-white markings resemble those of the average adult. It is evident that this is not always the case, since some specimens, in what is otherwise adult plumage, are without either red tips or yellow markings on the wing-quills.

According to Dwight, the postjuvinal molt "involves the body plumage and wing-coverts, but not the remiges or rectrices."

The well-developed plumage of the nestling above mentioned indicates that the first winter dress cannot certainly be distinguished from that of the adult, and also that the character of the wing-markings is individual rather than due to age. It is shown at its full development in Fig. 3, but specimens having only narrow white tips on the wing feathers, as in Fig. 4, are not infrequent.

There is no spring molt and, as with the Cedar Waxwing, the slight difference between winter and summer plumage is due to wear and fading.

In addition to its larger size, the Bohemian Waxwing differs from the Cedar Waxwing in its generally grayer underparts, the abdomen being like the lower breast and not yellow, chestnut under tail-coverts, white wing-markings and, usually, blacker throat, all differences sufficiently pronounced to be observable in life.

Cedar Waxwing (*Bombycilla cedrorum*, Figs. 5, 6).—The sexes of this beautiful bird are alike in plumage, but the young, on leaving the nest, have a smaller crest and wear a dress easily distinguishable from that of their parents. As *Fuertes'* drawing shows (Fig. 6), this nestling or juvenal plumage, is decidedly streaked with whitish. The streaks are more pronounced below than on the back, the abdomen is whitish instead of yellow, and there is less black about the bill than in the adult. As a rule the secondaries are without the 'wax' tips, but rarely traces of them appear.

At the postjuvinal or fall molt, all but the tail and main wing feathers of this plumage are shed and the winter plumage is acquired. This is similar to that of the adult, but it is probable that the size and number of the 'wax' wing-tips increase with age, while the occasional presence of these appendages on the tail-feathers possibly indicates advanced age, though it may be due to exceptional vigor of the individual possessing them.

There is no spring molt, and the slight differences between winter and summer plumage are due to wear and fading.

Notes from Field and Study

Booming of the American Bittern

With pen sketches by the author

I have read several accounts of the booming of the Bittern, which I have had the pleasure of witnessing three different times, but none of them were accompanied by satisfactory illustrations. As I have heard the notes, they sound like *chunk-chunk-a-lunk-plunk*, and at a distance very closely resemble the noise produced by driving a large wooden stake in marshy ground with a large iron mall.

At the first note—*chunk*—the bird stands erect, with the bill pointed well up. After delivering it, the body seems to echo the effort, with a slight jar. With *chunk*, the second note, the bill is dropped slightly and a little force added, and the note echoed, as it were, in the body a little harder. At *a*—the third note—the bill is dropped down a little more, the head drawn slightly back, the whole body thrown very slightly forward, and after the delivery, echoed as before with a most noticeable jar of the body. *Lunk*, the fourth note, is delivered with about the same force as the last, but with the bill down about level, and head and whole body thrown a little more forward, echoed as before by the jar of the body, which by this time becomes quite violent, accompanied by a very slight ruffling of the plumage. *Plunk*, the fifth and last note on the bar is delivered with considerably more force, and with the whole body, especially the bill and head, thrown, or jerked, violently forward, apparently as

far as the bird can reach. The echoing of the note in the body is very pronounced, with a return immediately to the first position to repeat the whole series again, and not only the second time, but, in one case (May, 1917), six times. As a rule, I think it is repeated only four times.

I had discovered a slough in the north-eastern part of Illinois, where I started a Bittern early in April, so I kept watch on the place, and one day, as if in answer to a mental wish, the bird stepped out in plain view and good light, and gave me a real entertainment, in fact, acted as if trying to outdo himself for my especial benefit. After each act he would seem to rest, at least wait two or three minutes, and then give me the next act, and so on until I tired of watching—if that could be. —Geo. W. H. von BURG, Columbus, Wis.

Spring Migration in the 'Ramble,' Central Park, New York City

Writing of one of his boyhood friends, Henry James says, in 'A Small Boy and Others,' "He opened vistas, and I count ever as precious anyone, everyone, who betimes does that for the small straining vision." In my own case I always remember gratefully as one who "opened vistas" a frail young woman in a raincoat whom I saw one very stormy day in the spring of 1917 in the bird section of the American Museum of Natural History in New York City. We were both looking at birds' nests, and being the only two persons



BOOMING OF THE BITTERN

This series of five positions is repeated six times.

Drawn by Geo. W. H. von Burg

in that part of the building, we began quite naturally to talk. I remember that I was bewailing my fate because, after having spent six very delightful weeks on a farm in the Berkshires—from the middle of March to the end of April—here I was obliged to return to my home in the city just at the time when Spring was offering her most interesting treasures to a lover of flowers and birds.

"When you have tramped the fields and woods in April," I went on, "when you have hunted down the first hepaticas, trailing arbutus, violets, bloodroot, saxifrage and wake robin—when you have heard the Song Sparrow's cheery outburst and the Red-winged Blackbird's vibrant note of spring—when you've seen the early Bluebirds perching on the dusky red berry-branches of the sumach, the ground all white with newly fallen snow, the glaucous blue of the birds making stunning contrast to the red berries against a white background—then you'll admit that it's not easy to extract much comfort from looking at dry-as-dust stuffed specimens in a museum."

She laughed sympathetically and said, "Why don't you try the 'Ramble' in Central Park for birds? I can't promise you any trailing arbutus, but you will find large numbers of birds migrating through in spring and fall."

The next morning found me in Central Park bright and early, and every morning thereafter for the month of May. Of course, I missed some of the earliest migrants, but in spite of my late start, I was able to get a list of more than seventy species of birds, one of them being that rare creature, the Mourning Warbler. The record for a single day's observation, so far as I know, was forty-five species, and the season record for the largest total observed was ninety-one by Dr. M. P. Denton.

Not the least interesting part of the daily excursion was the opportunity of meeting other bird-lovers who had discovered the "Ramble." The mere fact that you carried a pair of bird-glasses was introduction enough for these enthusiasts, and they

unhesitatingly stopped you to exchange notes about their latest find and yours. There was the Clergyman from New Jersey who came two or three times a week and insisted that the country was not nearly so good for birds as the 'Ramble.' There was the Famous Surgeon who stole away from anxious patients for an hour almost every day to refresh his own weary soul. There was the Biologist who "loved every bit of life," as she put it, and never missed a chance to study it. There was the Boarding-house Lady who came each morning after her marketing to forget her material cares by quoting Dr. van Dyke's "The Woodnotes of the Veery" and by hunting for that elusive bird. There was the Naval Reserve Man who had left Yale to enlist, who came every morning for the week that he was on leave and "hoped his boat would be ordered where there would be interesting birds to watch." There was the Park Policeman who was the first to see the Black-billed Cuckoo (on whose pronunciation we could not agree). There was the Park Gardener who never forgot to show newcomers the roost of the Black-crowned Night Heron. And, oh, there were lots of others of us, but you must come and see for yourself. And among us all was the keenest good-natured rivalry as to who should be the first to see the new arrivals from the South; and woe betide you, a newcomer, if you had seen some species which an old hand at the game had missed, or if you claimed to have seen a bird some days before it was due. So, if you would have new vistas open before you, if you want one of the best things of spring, even if you are city-bound, you have only to go to the 'Ramble' and join the bird colony.—BLANCHE SAMEK, *New York City*.

Sparrow Hawk and Starling

On March 26, 1918, back of the American Museum of Natural History, New York City, a Sparrow Hawk was seen, with an adult Starling for its victim.

When first observed, the two birds were on the ground, the Hawk on top of the

Starling, and showing every evidence of a good grip. The Starling seemed fairly exhausted but jerked around spasmodically every time the Hawk made a move, which was sometimes merely to change its position, but more often to nip the side of the Starling under its wing. The Hawk's wings were continually spread so as to prevent the Starling from overturning him.

The above actions were continued for about five minutes, when the Hawk

three feet, no injury could be seen. If there was one it was well concealed by feathers.—H. L. HARTSHORN, *Newark, N. J.*

Yellow Warbler vs. Cowbird

A Yellow Warbler's nest containing two eggs of the Cowbird was found by the writers in the Missouri Botanical Garden, St. Louis, in May, 1917. It was an unusual one for this species to build, in that a quantity of newspaper was used in its



COWBIRD'S EGGS BURIED IN THE 'CELLAR' OF A YELLOW WARBLER'S NEST

Photographed by E. S. Daniels

was frightened away by a move of the observers and, although he stayed in the vicinity of the Museum awhile, his courage was not equal to his feat of disturbance, and he did not return for his supper as long as the Starling was being observed.

The Starling, in the meantime, apparently recovered somewhat and flew to a nearby window-lodge. Its flight, although weak, was straight, so it was obvious that no flight bones were broken, and when the bird was viewed at a distance of about

construction. The nest was also not as compact as is usually built by this species, being very loosely constructed, and as we watched it from time to time, we were fearful that the nest would fall apart before the young were old enough to leave it. When first noted it was of normal size and contained one Cowbird egg, which in a few days was covered by a small piece of paper. The second foreign egg was laid at a slightly higher level. Then the Warblers began to work in earnest, rapidly building a thick false bottom to the nest and raising

the walls. The female bird laid four eggs and brought off a brood of three Warblers, one of the eggs evidently being infertile. The accompanying photograph shows the size and construction of the nest, which has been opened sufficiently to show both of the unhatched Cowbird eggs.—
E. S. DANIELS and GEO. F. TATUM, *St. Louis, Mo.*

The Evening Grosbeak in Minnesota in Midsummer

Last summer, during the months of June and July, Mrs. Lange and I occupied a forester's cabin within a quarter of a mile of the international boundary line between Minnesota and Ontario. Our cabin was located on the rocky shore of North Lake, which is one of a chain of deep, cold lakes running east and west in a general direction, and including Gunflint Lake, Little Gunflint, North Lake, and South Lake.

On July 13, 1917, we saw a male Evening Grosbeak in full brooding plumage at the east end of Gunflint Lake. The bird, when first seen, was sitting on a bare patch of gravel in front of a settler's cabin. After he had been pecking gravel or small insects for a very short time, he flew to the roof of a nearby house, remained there a few minutes, and then flew away into the timber on the Minnesota side. The bird, when first seen, was sitting only a few yards south of the Canadian line, but flew into the mixed timber on the Minnesota side. Mrs. Lange and myself stood within six feet of the bird, which displayed his plumage in the open all the time that we observed him. A week later, on Sunday, July 22, we went to the place, thinking that we might see the bird again, and that we might possibly find the nest. We spent several hours looking through the young growth of spruce, balsam, and poplar, but we saw no signs of the Evening Grosbeak.

Two settlers who live near the east end of Gunflint Lake, one on the Minnesota side, and one on the Ontario side, told me that they had seen these birds there for several years. Although we moved around

on these lakes quite a little and saw many northern Warblers and an abundance of Hermit Thrushes, this was the only specimen of the Evening Grosbeak that we observed.

I am not sure whether this is the first notice of the Evening Grosbeak in Minnesota during the summertime, or whether the bird has been found before along the international boundary. The place where the bird was seen was about 30 miles north of Lake Superior. It seems likely that the Evening Grosbeak nests very sparingly along the international border in northeastern Minnesota.

The timber in this region consists principally of spruce, balsam, birch, and poplar. There are some open spots where fire went through some years ago, but a large portion of the region still contains the original growth of timber, except that the scattered pine has been logged out.—
D. LANGE, *St. Paul, Minn.*

Pine Siskins near Edmonds, Wash.

The Canadian observer who reported Pine Siskins from British Columbia in the November-December, 1917, BIRD-LOG prompts me to send in my observations of this bird.

Each winter, for three years, I have seen near Edmonds, Wash., large flocks of Siskins, but I did not know that their appearance was unusual. On November 4, 1916, I noted a flock of about three hundred, and from that date on until March 24, 1917, they came to our fruit-farm early and late, day after day.

Possibly one reason why I observed large numbers of them so often is the presence of fifteen alder trees in a ravine just south of our house. In the Middle West I have been accustomed to think of the alder as a good-sized bush, but here alder trees are larger than the average cottonwood or birch of the East. Our alders are from 50 to 60 feet high, and some more than 18 inches through. Their spreading tops, loaded with fruit catkins, offer a tempting breakfast to hundreds of the little twitterers.

When I am outdoors caring for the chickens, I always know when the Pine Siskins are coming, for way off to the northward I hear a whir-r-r and a swish, and then the chattering and murmuring of the rover band as they whirl over the tall house and settle in the alder tops. We come and go from the kitchen or pass along the path beside the alders but nothing disturbs them. Some, like Chickadees, hang with their heads downward; others sit upright and pick at the catkins. Suddenly a well-understood signal from the leader sends them off like a gust of dead leaves. Although the birds are never silent, I have not heard anything that I could call a song. Each time that I have an opportunity to listen to them I search for words that will describe the chatter they make. As the band rises upward and then swoops downward, I think I hear a grindstone turning rapidly, and the blade held against its surface makes the same shrill, thin sound that the birds utter.

Not until December 8 last year did I see or hear a Pine Siskin. I suppose the warm sunny days, which continued up to December 1, delayed their coming. The first band was small, numbering about fifty. They stayed some time in the alder tops and all the while sent forth their persistent twitter. Although I have examined flocks of these birds with a strong glass, I have not seen other species with them.—
MRS. EUGENE D. LINDSAY, *Edmonds, Wash.*

How We Made a Bird-Bath

A natural cavity in the rock in front of our house, on the coast of Maine, filled with rainwater, was an ideal place for sailing small boats. Two generations of children had called this 'The Puddle,' and here we blissfully poked our boats about with sticks, and wet our feet.

How often we had watched the Robins, Song Sparrows, and 'Wild Canaries' drinking there in the days when bird-study was almost unknown and only a few birds were familiar to us. When we grew up and

graduated from puddle-boats to real boats upon the sea, the birds continued to drink there, but we noticed that the rocky sides were too steep to permit their bathing comfortably, although they made desperate efforts to get in all over.

I conceived the idea of filling the cavity with cement, nearly to the top, where the sides were more slanting, and this scheme my brother carried out. We made a fine, smooth, white floor, about 3 inches from the top, after filling the cavity solidly, pressing it closely into all the cracks and crevices on the sides to prevent the water getting down underneath. Before the surface dried, each member of the family made an impression of the right hand in cutting our own initials beside it, and our 'date crack' cut in the year. When this bath was flooded to a depth of 2 inches, it was so pretty that we were delighted.

A Robin was the first bird to christen the pool, and he seemed to appreciate it. Before he bathed, he rushed from one end of the pool to the other, then turned around and rushed back. This he did repeatedly. After he had waded about to his heart's content, he took a good bath. If birds ever sit down, that is what this Robin did, and he was apparently well pleased with himself as he sat half submerged, soaking in the cool water. He took ten minutes for his bath.

With a garden hose and a broom we keep the pool clean and filled with fresh water. The birds love it and in warm weather flock to it in large numbers. We put in the cement floor in August; sometime in the second week and after that date we counted thirty-three different kinds of birds that bathed in it. There were others that drank only. Of these were a family of American Crossbills. A male and four females would come, dipping and twittering from a nearby piece of woods, alight in a large spruce tree by the pool, assure themselves that there were no prowling cats about, and then drink quickly and be off. It was noticeable that Mr. Crossbill usually drank from a small rock-pool near the large one where his wife and daughters regaled themselves, and that sometimes he

sat in the tree and watched operations. (It may have been that he had visited it before unattended.) At such times he was the first to take flight, and the family, after a few hurried sips, trailed off reluctantly behind him. Excepting the Thrushes, these Crossbills seem to be the most timid of all the birds who visited the pool. They came and went in numbers and usually made two trips a day to drink.

The Thrushes patronized the pool late in the day, and in the chilly twilights of September we frequently saw a Hermit Thrush taking a bath.

Last summer it was not unusual to see Song Sparrows and Warblers splashing about together, seeming to agree that 'the more the merrier.'—MAUD STANWOOD, *Hartford, Conn.*

Notes from London, Ont.

It is some two years since any notes have appeared in BIRD-LORE from London, Ont., and the following items may, therefore, be of interest to BIRD-LORE readers.

The bird-lovers of our city have organized under the name of the McTearns Ornithological Club. Our organization as well as our meetings, is very informal, but an increased interest in birds is already apparent.

CARDINAL.—It is not many years since this bird was of very rare or accidental occurrence in this vicinity. We now look upon it as one of our permanent residents and a very welcome addition indeed. During the winter 1916-17 one of our Club members had eight feeding at his place.

REDPOLE.—It is a long time since Redpools have been as common as they were during the winter 1916-17. They were noted on every trip taken in the country between December 15 and March 21.

NORTHERN SHRIKE.—When taking the Christmas Census for 1916, one of these

birds was found just west of the city at the 'Coves.' This was the first one recorded for about three years. It remained all winter, and about March 21 began to sing. It had a great variety of notes, and we were very much delighted at the opportunity afforded of hearing this rare visitor in song. Strange to say while making the Christmas Census for 1917, a Northern Shrike was found in the exact locality favored by the one last year, and we are led to wonder if it is not the same bird.

LEAST BITTERN.—One of these birds was noted on May 30, 1917, in a fringe of willows bordering a small pond. This is only the second or third time this bird has been reported from London. It was under observation for some minutes at a distance of 30 or 40 feet, and, with the aid of field-glasses, identification was not difficult.

PRAIRIE WARBLER.—This was a new record for our county and was also made on May 30, 1917. The song, which we did not recognize, *see, see, see, see, see*, beginning low and becoming higher and louder, first drew our attention. We approached very cautiously, but the bird seemed to ignore our presence and continued singing and feeding in a small dead tree by the edge of the same pond. We got within 12 or 15 feet of it, so that every mark was clearly seen, even to the chestnut patch on the back.

On this trip we also saw a Gray-checked Thrush and heard it sing, and recorded an Olive-sided Flycatcher, calling from the top of a tall tree, a Philadelphia Vireo, and Wilson's Warbler, all of which are rather rare migrants with us.

A note from the 1916 season that might be of interest is the nesting of the Golden-crowned Kinglet, a bird which very seldom stays with us during the summer.—C. G. WATSON, Secretary, *London, Ont.*

THE SEASON

VII. February 15 to April 15, 1918

BOSTON REGION.—During the month following February 15, seven snowstorms delayed the advance of spring, until the earliest birds were ten days overdue. Between March 18 and 20 the first group of migrants arrived in full force—Red-winged and Rusty Blackbirds, Bronzed Grackles, Song Sparrows, and Bluebirds. Two days later there began a remarkably heavy flight of Fox Sparrows and Juncos, with a few Cowbirds—the Fox Sparrows appearing at their normal date, the Juncos, migrating earlier than usual, hurried forward, evidently, by the general movement of birds toward the north.

Cold weather again delayed migration until, on April 2, Vesper Sparrows entered this region and were soon present in full breeding numbers. Another period of low temperature followed with a fall of 6 inches of snow on April 12, some of which still remains on the ground (April 15).

So far the present spring has been, on the whole, the kind of spring we New Englanders must expect—a slow yielding of winter, with periods of summer weather, during which the birds appear suddenly in large numbers, alternating with days of storm and cold, when migrating birds are at a standstill.

The failure of other Sparrows to move north during the favorable weather chosen by the Vesper Sparrows is to be noted; there are very few Field and Savannah Sparrows and Purple Finches here even now (April 20), and no Chipping Sparrows. Flickers are in great abundance. A possible explanation is the menace of Starlings to the southward of this region.

There was a prominent winter migration of Robins late in February; as usual the resident Robins appeared about our houses the latter part of March.—WISSOR M. TYLER, M. D., *Lexington, Mass.*

NEW YORK CITY REGION.—The weather of late February and March was about

normal though with perhaps even more high wind than usual in March, especially on Sundays. The early migrants arrived at just about their average times. The first Bluebirds came well before the close of February, but the first real spring Sunday was March 3, when migrating Song and Fox Sparrows, Robins, and Bluebirds were much in evidence, the first Grackles were seen, and a Marsh Hawk and a Duck Hawk seen up the Rahway Valley were probably migrating. Later March migrants arrived with similar promptness, and Ducks (Black Ducks, Pintails, etc.) were plentiful on inland waters.

The Northern Shrike dwindled greatly in numbers in the latter part of the winter, the last was seen on March 28 (W. DeW. Miller, at Plainfield, N. J.).

Fox Sparrows were perhaps less than ordinarily numerous, and certainly disappeared northward in a great hurry.

Early April was cooler than is usual in this region, and the migration slowed up noticeably, so that birds were everywhere about the city found scarce on Sunday the 7th, though the first Yellow Palm Warblers were noted on that day on Long Island and in New Jersey, and a Robin was observed gathering nest-material (J. T. Nichols, on Long Island). During the following week, a five-day storm, with a great deal of northeast gale, hail, and (during most of two days) heavy snowfall, kept the migration practically at a standstill.—CHARLES H. ROGERS, *American Museum of Natural History, New York City.*

PHILADELPHIA REGION.—The temperature of February averaged about normal, while that of March was somewhat warmer than usual, from the 18th to the 22d being especially springlike. Early migrants arrived about on time: Killdeer, February 16; Mourning Dove, March 17; Flicker, February 27; Red-winged Blackbird, Rusty Blackbird, and Purple Grackle.

February 24, Fox Sparrow, March 7, Robin, March 7; Bluebird, February 24.

The Northern Shrike was last noted February 16. Long-eared Owls were last observed at their winter roost March 3.

During the second and third weeks of March there were a good many Ducks on the Delaware River. On March 17 a flock of about two hundred and fifty were observed, composed of Mergansers, Pintails, Scaups, Black Ducks and several Redheads. Again this spring the Wood Duck has been a common sight at some points.

A great Blue Heron was seen February 12 and an early Brown Thrasher March 31.

Taken as a whole, February and March offered very few unusual sights to the bird student.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—Of all the months, February and March offer, generally speaking, least to attract the ornithological observer in the vicinity of Washington. Most of the interest in winter residents has waned, and but few spring migrants put in their appearance. This year, however, these months have been unusually interesting by reason of the large numbers and great variety of Ducks that have frequented the Potomac River.

In our last report mention was made of the thousands of Ducks of various species that occurred on the river during the winter. Species seen in February and March, additional to those reported in December and January, are Green-winged Teal, Pintail, Baldpate, Ring-necked Duck, and Shoveller, making a total of 17 kinds of Ducks observed thus far this season. Of these the most numerous have been the Greater Scaup, Lesser Scaup, Golden-eye, Canvas-back, Black Duck, and Redhead. The Baldpate, in recent years, has been one of the rarer Ducks, and there are apparently only two previous definite records for the earlier part of the year, these being February 11, 1890, and March 31, 1912. Six individuals of this species were seen by Mr. Raymond W. Moore at Belmont, Va., on March 30.

The Shoveller, for which no previous definite spring dates have been obtained, was observed on the Anacostia River on March 24 by Lieut. Ludlow Griscom; and 12 individuals were seen at Belmont, Va., on March 30 by Mr. Raymond W. Moore. A few species of Ducks remained considerably beyond their normal time of departure, such as the Mallard, the usual date of departure of which is March 17, but which was seen at Dyke, Va., on March 31. Two lingered beyond their previous known latest dates: the Green-winged Teal until March 31 (latest previous date, March 25, 1917); and the Canvas-back until March 30 (latest previous date, March 25, 1881).

The severe winter gave place, about the middle of February, to much milder weather, and indications point to an earlier spring than we have had in this region for the past two or three years. Its effect is already noticeable on the bird-life, although some of our common species, like the Carolina Wren, Red-headed Woodpecker, Golden-crowned Kinglet, Winter Wren, and Red-breasted Nuthatch, are more than ordinarily scarce. A number of the early migrants have occurred considerably ahead of their schedule. The American Coot was seen at Belmont, Va., on March 9, its earliest previous record being March 14, 1910; the Phoebe appeared on March 3 (average date, March 10); the American Pipit on March 10, at Kensington, Md., (average date, March 21); Purple Grackle on February 13 (average date, February 20); Vesper Sparrow on March 11 (average date, March 24); Chipping Sparrow on March 18 (average date, March 26); and the Catbird, seen along the Anacostia River by Mr. C. M. Shaw on March 14 (average date, April 22). A very few Robins have remained all winter, but only in the most sheltered places. The first certain migrants appeared on February 13.

The following notes on other species may also be worthy of mention in this connection: Horned Larks and Prairie Horned Larks, mostly in small flocks containing both forms, were reported by Mr.

Francis Harper as common throughout February at Camp Meade, Md. A large company of Fox Sparrows, numbering some 150 individuals, was observed at Falls Church, Va., March 15, 1918, by Mr. J. N. Gabrielson; and a small flight of Red-tail Hawks, numbering 20 individuals, was noted at the same place by the same observer on March 6, 1918. The Great Horned Owl, which is regarded as a rare bird in this vicinity, was found by Mr. Raymond W. Moore at Kensington, Md., several times between March 6 and 10, probably nesting in that vicinity. A single Bronzed Grackle, a bird of rare and irregular occurrence in this vicinity, was seen in the grounds of the Agricultural Department on March 18, and, possibly the same individual, on one or two subsequent dates in the same vicinity.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OHIO REGION.—The 1918 season opened with the arrival of Crows, Bluebirds and Robins on February 14, which is the earliest date in the history of this region. There was no further movement until a Killdeer appeared on the 22d. On the first day of March there was a considerable movement of Crows, Bluebirds, Robins, and Song Sparrows, followed two days later by the first Meadowlark, Bronzed Grackles, and Mourning Doves. During this period of unseasonable warmth the resident Woodpeckers, White-breasted Nuthatches, and Tufted Titmice began their courting.

The next migration movement occurred on March 13, with the arrival of the Rusty Blackbird and Towhee, and a decided increase of the Meadowlark and Bronzed Grackle. On the 16th the Red-winged Blackbird and Mourning Dove became common, and the Migrant Shrike and Cowbird arrived. The next day Bluebirds became common and the Fox Sparrow arrived. The rest of March witnessed the usual scattering arrivals of Field Sparrows on the 20th, Phoebe on the 21st, and Belted Kingfisher on the 23d, with an increase of earlier arrivals.

The largest wave thus far began on March 31 and extended to April 8. The Turkey Vulture and Vesper Sparrow came on the 31st, Pectoral Sandpiper on the 1st, Swamp Sparrow and Bittern on the 2d, Yellow-bellied Sapsucker on the 3d, Wilson's Snipe and Brown Thrasher on the 3th, Chipping Sparrow on the 4th, House Wren on the 5th and Purple Martin on the 8th, and a decided increase of species which had arrived earlier.

While the weather of the latter half of February and nearly the whole of March was unusually warm and bright, the migrations, after the first arrivals on February 14, were late and slow. Ducks were conspicuous by their almost entire absence, and Woodcock and Wilson's Snipe were not found until it was unusually late for them. Vesper Sparrows usually come in a great swarm on the first day, but even at this writing they are less common than usual.

The exceptionally hard winter brought about almost an extinction of the Bobwhite. Until December there were numerous coveys on all sides of town. Now only a single pair can be located in the whole region.—LANDS JONES, *Oberlin, Ohio*.

MINNESOTA REGION.—The third week of February was a continuation of our unusually severe winter, a temperature of 14° below being recorded on the 16th and 21st. But from this time began a remarkably mild and beautiful spring, broken by only a single setback which occurred March 9, when a terrific blizzard, with a very heavy snowfall, swept the entire State. But warm days followed immediately, and this snow quickly disappeared, except up north, and a spring, a week or ten days ahead of the ordinary, was ushered in to continue until the present date. Robins appeared in numbers in the vicinity of the Twin Cities in the middle of March and reached the "Range" country above Duluth, where much snow and ice still lingered, by the end of the month. On March 25, the ice went out of the Mississippi River for some distance above St. Anthony Falls (Minneapolis).

ten days or two weeks ahead of time, and that day several Herring Gulls were seen crossing up and down the gorge, looking for food among the floating ice-masses. On March 31 a nest of the Horned Lark, containing young birds just hatched, was found at Cambridge, Isanti County, some forty miles north of Minneapolis, by Lawrence Lofstrom. This bird will nest as soon as the ground is bare of snow, regardless of temperature, and many of the earlier nests are destroyed by freezing weather and snows.

By the end of the first week in April, the ice in the large lakes in the latitude of Minneapolis was adrift and rapidly breaking up. Farther north it was still intact. The intense cold and absence of snow the past winter caused ice to form on all still or sluggish water to the thickness of nearly three feet. The quiet manner in which this great ice-sheet became honeycombed and disappeared was most fortunate. Thick, solid ice, loosened from the land, and heavy winds sometimes work terrible havoc along the shores of our larger lakes.

On March 17, at Minneapolis, Robins were passing by in large companies. Bluebirds had paired and were examining possible tenements. Phalaropes were similarly occupied; flocks of Rusty Blackbirds were making music in the groves; male Red-wings were conspicuous in the swamps; Song Sparrows were everywhere; a few Hermit Thrushes were silently searching the coverts, Flickers were beginning their busy love-making, and the bushes were full of Juncos and Tree Sparrows. From this time on the regular procession of the earlier migrants that move on a temperature rather than a fixed schedule, arrived in the usual order but a week or so ahead of time, in correspondence with the earlier season: Fox Sparrows, April 5-9; Pied-billed Grebes, April 9; and on April 14, Yellow-headed Blackbirds, a Migrant Shrike, a Kingbird, Lesser Yellowlegs, Myrtle Warblers, and many Coots, also, on the 14th, many Blue-winged Teal, Snowgeese, Pintails, Baldpates, and Gadwall in a large slough, some ten miles from

Minneapolis, where they were feeding and seemingly mated.

By the middle of April, vegetation was fairly started, hepatica, bloodroot, Nuttall's pasque flower, the catkin-bearing trees, and the hazelnut being in full bloom.

Up in northern Minnesota conditions are still, at this date, much more wintry. Piles of snow yet remain in sheltered places, the nights are cold, and the Duluth Harbor is piled high with thick masses of winter ice driven in from the frigid waters of Lake Superior. Only the hardier migrants, like the Robin, the Song Sparrow, and the Red-wing have ventured thus far.—THOS. S. ROBERTS, *Zoological Museum, University of Minnesota, Minneapolis.*

DENVER REGION.—We are told that there is no accounting for taste; sometimes I think that there is no accounting for the seasonal distribution of our birds. I had anticipated an early return of our birds this season because of the mild local weather conditions in the West. Yet, Hawks were not early in getting here but, rather, were a little behind the usual schedule, for it was not until April 7 that many Red-tailed, Ferruginous, Rough-legged and Sparrow Hawks were seen in the southern outskirts of the city. On the other hand the first Sage Thrasher I saw was on time (April 7), though one of my friends reports having seen one nearly a month earlier. Last year at this time there were many Townsend's Solitaires in the various parks of the city, yet I have utterly failed to see even one since last autumn. At the present writing (April 15), all the species and subspecies of Juncos wintering here have left, except the Gray-headed, which is an unusual situation, since they linger ordinarily well on toward the end of April. It is always a matter of interest to note each winter that, while a few Meadowlarks remain in the rural districts about Denver, it is seldom or never that one is seen in winter in our parks, or within the city proper; this species reached the vicinity of my home about April 1, a date close to

the average of the past eight years. I had anticipated and expected seeing them two weeks earlier. The American Rough-legged Hawk and the Northern Shrike were prompt in leaving on time, while the Mountain Bluebird was late in arriving, both in the outskirts and in the parks and city. All these remarks are based purely on my own personal observations and records, which might easily conflict with those of someone who had more time and opportunity for field work. The gist of all these remarks is that birds which I had looked for early arrived on time, or perhaps a little late, while species which I thought would leave for the North early, departed as usual, hence my opening paragraph.

While driving about in the outskirts of the city on April 3, during a fairly heavy snowstorm, I was surprised to see several different flocks of Robins, at different times, migrating *northward*, despite the storm. It is probable that the storm was

purely local, producing little, if any, effect on the birds as they traveled north. A heavy, extended snowstorm does otherwise; on April 9, 1913, the weather in Denver was ideal, and we had our usual number of Robins in our parks, but that night there occurred a heavy snowfall extending over a large area adjacent to Denver, and the next day was clear and cloudless. The city was found, at daylight, to be full of Robins. They remained all day in the city, began leaving shortly after sunset that night, and one could hear them calling, as they winged away, until late in the evening—in fact I heard them from my sleeping porch until nearly midnight. The next day Denver's Robin population was again at its normal level.

The mild weather here in March seemed to accelerate the nesting of three species: the Pine Siskin (March 22), the House Finch (March 24), and the Robin (April 1).—W. H. BERGOLD, *Denver, Colo.*

TO AN UNSEEN SINGER

(Acrostic)

Why do you tempt me when I may not come?
Have you no heart beneath that liquid voice,
Insistent singer? Do you e'en rejoice,
Persisting when the sleeping world is dumb?

Persuade me not to try to find your home!
Oh leave me to my work, for tho' my choice,
O Temptress, were to follow you, the price
Restrains me. Go, whence-ever you may come!

Would you be quieted, or louder call
If I should tell you that I toss, awake,
Lest nigg to catch your song across the brake—
Losing e'en that, and sleeping not at all?

—JOSEPH GAVIT



Book News and Reviews

THE BIRDS OF LOUISIANA. BY STANLEY CLAYTON ARTHUR, Ornithologist, Department of Conservation. Bulletin No. 5. Department of Conservation, State of Louisiana, New Orleans, January, 1918. 8 vo. 72 pages, photographs and line cuts.

The present paper has been prepared, the author states, "In response to numerous requests from schools, nature teachers, bird lovers, and others. It is based in part on original observation, and also upon the lists of Louisiana birds by Beyer and by Kopman, and upon Howell's 'Notes on the Winter Birds of Northern Louisiana.' "

It treats of 368 species and subspecies from a somewhat general point of view, there being practically no exact dates of arrival and departure of the migratory species. Brief descriptions of plumage and notes upon numbers and haunts make it a popular exposition of the Louisiana avifauna rather than a scientific treatise upon it. As such it should reveal to the residents of the state the wealth of their bird life and the responsibility resting upon them for the conservation of the water-fowl which winter in their waters.
—F. M. C.

TALKS FROM BIRDLAND. BY T. GILBERT PRATSON. Illustrations by CHARLES LEFFERTSON BULL. Doubleday, Page & Co., Garden City, New York, 1918. 12 mo. 237 pages, 46 line cuts and half-tones.

In story form Mr. Pratson here recounts, sometimes the individual experiences, at others the more generalized history of a number of well-known birds. The method followed, while not obviously intended to convey reference book information concerning the species treated, seems much better designed to hold the attention of youthful readers than a more formal presentation of the same facts.

We especially like the local color of the stories from the South, in which Mr. Pratson achieves a success that suggests that he may later give us the feathered counterpart of Brer Rabbit.

Mr. Bull's drawings add much to the attractiveness and value of the book.—
F. M. C.

The Ornithological Magazines

THE AUK.—The January issue opens with an obituary notice of Dr. Edgar A. Mearns, by Dr. Chas. W. Richmond, accompanied by an excellent portrait of this indefatigable ornithologist who was one of the school that bridges the gap between the older and younger men who have devoted themselves to their favorite study.

Mr. Richard C. Harlow's 'Notes on the Breeding Birds of Pennsylvania and New Jersey' is to be commended to the attention of oölogists, as it contains information that is really worth publishing. The earlier breeding of the Virginia Rails of inland marshes, as compared with those of the salt marshes, is interesting. May it not be that the sea-breezes are responsible for a cooler and later season?

In 'Uncolored Prints from Havell's Engravings of Audubon's "Birds of America,"' Mr. Henry Harris calls attention to the part played by Mr. Havell in the production of the plates of this monumental work, and two of them, in half-tone, are shown.

Mr. Horace W. Wright writes on the 'Labrador Chickadee (*Penthestes ludsonianus nigricans*) in its Return Flight from the Fall Migration of 1916,' and Mr. H. Mousley, in a brief sketch, records 'The Breeding of the Migrant Shrike at Hatley, Quebec, 1916.' An annotated list of 'The Birds of Walla Walla and Columbia Counties, Southeastern Washington,' is begun by Mr. Lee R. Dice.

'A Revision of the Races of *Toxostoma redivivum* (Gambel),' by Mr. Harry C. Oberholser, reduces them to three. Mr. Oberholser also has a fourth instalment of his 'Notes on North American Birds.'

The account of the 'Thirty-fifth Stated

Meeting of the A. O. U.,' from the pen of Dr. T. S. Palmer, marks a new era in the fortunes of the Union. Our previous Secretary, Mr. John H. Sage, who has faithfully served in this capacity ever since the infancy of the organization, has been elected to the presidency, and we may well hope that his mantle has fallen upon as willing shoulders.

Among the many items that may be found among the closing pages of this issue, special attention should be directed to the list of members 'called to the colors' which doubtless will be much extended if our Secretary is given the names of those who should be added to this honor roll by those who can furnish the information.

The April issue of 'The Auk,' while lacking in illustrations, contains a large amount of information. Many readers will be interested in 'The Evening Grosbeak (*Hesperiphona vespertina*) in Maine, with Remarks on its Distribution,' by Mr. Arthur H. Norton. This striking and irregular wanderer from the Northwest is a bird that always justly excites the imagination of field observers.

Mr. Frederic H. Kennard discusses 'Ferruginous Stains on Water-fowl,' and shows that a difference in feeding habits accounts for some species being stained and others not, for 'diggers' have stains and 'croppers' do not. The stain itself is oxide of iron, occurring in the water where the birds gather to feed.

'A Study of the Yellow-billed Cuckoo,' by Clara K. Bayliss, is a picturesque account of the growth and habits of young birds in a nest under observation; 'The Description of the Voice of Birds,' by Dr. Reuben M. Strong, contains some useful hints concerning this most difficult subject; and 'Ipswich Bird Notes,' by Dr. Charles W. Townsend, adds something to his earlier list of the birds of this part of Massachusetts.

Mr. Harry C. Oberholser, in 'Notes on the Subspecies of *Numenius americanus* Reichenstein,' reaches the conclusion (earlier advanced by Dr. L. B. Bishop) that this Curlew is represented by two races,

americanus and occidentalis. We must confess we are far from being convinced that the question is correctly settled, in spite of the array of localities, dates, and figures presented. Mr. Oberholser also presents a fifth instalment of 'Notes on North American Birds,' and a compilation entitled 'Third Annual List of Proposed Changes in the A. O. U. Check List of North American Birds.' However, let not the rank and file despair, for the A. O. U. committee has never yet failed to reject less than about 25 per cent of all proposed changes.

Mr. Richard C. Harlow continues his list of the birds of Pennsylvania and New Jersey, and Mr. Raymond L. Dice continues his on the birds of southeastern Washington. 'A New Species of Loon (*Gavia meridionalis*) from Northeastern Siberia' is described by Dr. J. Dwight.

The various departments closing the issue are full of valuable items of information, and the list of those A. O. U. members called to the colors is much extended.—J. D.

THE CONDOR.—An interesting memorial, by W. K. Fisher, of Lyman Belding, one of California's pioneer naturalists, forms the opening article of the March number of 'The Condor.' It is accompanied by an excellent portrait and a bibliography of 48 titles contributed by Joseph Grinnell. This is followed by an account of the habits of 'The Salt Marsh Yellow-throats of San Francisco,' by G. W. Schussler. Attention is called to the fact that the practice of truck gardeners of cutting wire-grass in the vicinity of Lake Merced for binding vegetables probably results in the destruction of numbers of eggs and young and forces the birds to nest in the inaccessible tufts in the lake or in the thickets higher up toward the banks. The continued article by Mrs. Bailey on 'The Return to the Dakota Lake Region' is devoted mainly to the birds along Phalarope Slough and those observed from the farmhouse.

Ray contributes an interesting account of the birds of the Tahoe region entitled,

'Six Weeks in the High Sierras in Nesting Time,' and shows that some of the birds begin to nest the middle of May when snow is still on the ground. A month later (June 12) nests and eggs of Mountain Chickadees, Sierra Creepers, Williamson's Sapsuckers, Blue-fronted Jays, and Sierra Juncos were found at the base of Pyramid Peak, at an altitude of 8,000 feet, when the region was covered with deep snow. Under the title 'The Scarlet Ibis in Texas,' Sell reviews the mass of data relating to the local occurrence of this species and accounts for no less than nine mounted specimens said to have been obtained in the state. If these records are authentic, the bird is evidently not so rare in Texas as has been supposed.

The Subspecies of the Oregon Jay have recently been examined by Oberholser and Swarth independently, and the differences in the conclusions reached by these two ornithologists are commented on briefly by Swarth. In 'Bird Notes from Forester Island, Alaska,' made in 1917, Willett adds fifteen species to the island bird list, including the Pink-footed Shearwater and Brandt's Cormorant, recorded for the first time from Alaska. As a result of field work in 1917, in Mono and Inyo Counties, in the region east of the Sierras, Grinnell is able to add seven birds to the California list. Two of these, the Inyo Slender-billed Nuthatch (*Sitta c. lanusoides*) from the Panamint Mountains, and a Hermit Thrush (*Hylocichla g. pallioides*) from the White Mountains, are described as new subspecies, positive evidence is produced for the first time of the breeding of the Broad-tailed Hummingbird in California, and the Rocky Mountain Pigmy Owl, White-breasted Woodpecker, Chestnut-bellied Longspur and Mountain Towhee are species new to the state.—T. S. P.

Dr. HOENSTRO.—This recent addition to the list of ornithological magazines is the organ of the Ornithological Society of La Plata. It takes its name from *Furnarius rufulus*, the Oven-bird, one of the most characteristic and well-known species of Argentina.

Thus far only the first number of 'El Hornero,' dated October 1, 1917, has reached us. It outlines the admirable aims of the Society it represents for the protection of birds and for arousing an interest in them in Argentina and the neighboring countries, and contains a number of technical and popular articles.

Roberto Dabbene, the well-known Curator of Ornithology in the Museo Nacional at Buenos Aires, and president of the Society, presents a summary, with illustrations and a key, of the Swifts of Argentina, and also contributes a paper on a collection of birds from the island of Martin Garcia in the Rio de la Plata. M. Doello-Jurado writes at length on the birds of Puerto Descado off Patagonia. His extended notes on nesting-habits are accompanied by excellent photographs.

Under the title 'Formacion del "Gabinete del Rey,"' Felix F. Outes gives some most interesting historical data concerning the earliest notices of South American birds and bird collections. Manuel Selva discusses in a suggestive manner a classification of birds based on haunts and nesting habits, and there are shorter notes by Pedro Serié, Hector Ambrosetti, and Roberto Dabbene which, together with several pages of news items, show that 'El Hornero' is not lacking in material for its pages.

We wish this magazine and the Society of which it is the organ every possible success.—F. M. C.

Book News

Students of the coloration of birds will be interested in an article by Dr. W. H. Longley, entitled 'Studies upon the Biological Significance of Animal Coloration,' which appeared in 'The American Naturalist' for May, 1917 (pp. 257-285).

'The Bluebird,' published at Cleveland, Ohio, announces that on and after April 1 its yearly subscription price will be increased to \$1.50, that single copies will be 15 cents, and that no free copies will be distributed.

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

Published by D. APPLETON & CO.

Vol. XX Published June 1 1918 No. 3

SUBSCRIPTION RATES

Five dollars the annual volume, sent by first class mail, with a copy outside the United States, one dollar and seventy five cents, postage paid.

COPYRIGHTED, 1918, BY FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WHEN the Birdcraft Sanctuary and Museum was evolved under the direction of Mabel Osgood Wright, some three years ago, we unreservedly expressed our belief that, in its field, the enterprise was one of the most important practical steps to promote an interest in the study of birds with which we were familiar.

It required, indeed, very little imagination to see the bright future which lay ahead of this novel attempt to combine a museum of dead birds with an exhibit of live ones. Nevertheless, we read with much satisfaction Mrs. Wright's report of the development of this enterprise and of its growing hold upon the locality in which it is situated.

Birdcraft, having passed the experimental stage, is now a convincing demonstration of what may be accomplished with a comparatively small outlay in any suburban community.

It was not necessary to acquire square miles of territory—ten acres were enough—nor was a large and imposing edifice essential. A modest building, enlarged as circumstances required, has answered every purpose.

Herein lies Birdcraft's chief value as an object lesson—it was not planned on a scale which prohibits duplication.

What we now hope to see is the adoption of the Birdcraft idea throughout the country. Here is a mark for every public-spirited nature-lover, Audubon Society, and bird club to aim at. One is not re-

quired to advocate the adoption of a theory, for the greatest doubter must admit that Birdcraft has passed the theoretical stage.

Here is an abiding place for the local natural history society, and a focal point in every phase of community life which has to do with nature. The value to any organization of a home where its interests may be developed and its possessions deposited is too well known to require comment. But we perhaps do not at first realize how greatly any group of people who are aiming to secure the support and cooperation of their neighbors for the common good, is strengthened by having an actual exhibit of what they stand for.

The influence of the Birdcraft idea on children cannot well be overestimated. The very fact that, as Mrs. Wright says, it is a "rural, cottage affair" is all in its favor. A visit to a neighboring city with its great museum may be out of the question, but a local, village museum is always within reach. And the chances are that, so far as its collections go, more information will be gained from the small local, than from the large general institution.

So far as we are aware no large museum in this country has solved the problem of making its exhibits speak. Infinite care has been devoted to labels and no pains spared to word them intelligently and print them clearly. But too often it happens that he who runs does not read and, at the best, the average mind soon tires in its search for information. Herein, in our opinion, lies the very essence of Birdcraft's success. Its exhibits are not expected to tell their story merely through the printed, but also through the spoken word.

No Birdcraft then will be complete unless it includes, besides its specimens, stuffed and living, a caretaker, warden, or curator, call him what you will, who can and will speak with authority and sympathetic understanding of the student's difficulties, concerning the museum and sanctuary of which he has charge. Incidentally, such a position offers wide opportunity for an intensive study of bird-life.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

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

AWAKE TO THE TIMES

A familiar precept says: "Do the duty that lies nearest thee." Never was this admonition more needed than now, when duties of many kinds crowd upon one, jostling one's accustomed habits of action, upsetting, as it were, for the moment, all preconceived ideas of personal preference and estimates of service. From all sides come instructions as to what to do, how to do, when to do, where to do, and from all sides, too, come appeals so urgent that only the selfish, indifferent, and idle can hear them and shirk the responsibility they impose.

For the instant, one is swept from the familiar moorings of everyday routine, helplessly groping for some stable anchor. The kaleidoscopic changes in world-issues from day to day grow in number and intensity until one is forced to "speed up" every mechanism of mind and muscle, to keep abreast of the whirling destinies of the nations. Once wide awake, however, to the fact that, shaken as we are to the very foundations of life, a sublime reconstruction of society is in the making, we look forward with hope to new ideals and a new goal. It is useless to try to prop up the old life so rapidly vanishing, or to attempt to understand the onrushing events, which outline daily more clearly the new life ahead, by means of processes now outgrown.

The day has come when one and all must *act together, think together* and *bridge over together* the old and the new. Are you personally awake to the times?

The scope of readjustment necessary to accomplish this personal reconstruction is very broad, so broad, indeed, that it reaches out to the small interests of life as well as embracing the larger. In the storm of events of world-wide bearing through which we are passing, there may seem to be little place for bird-study and smaller need for effort in Audubon Society work. It is a mistake, however, to get the idea that people are too busy to pay attention to the birds or to nature in general either in the field or along educational lines. A moment's reflection will convince anyone of the importance and benefit of pushing steadily ahead in all of these undertakings. Two items from the front are as good as more proof that bird-study and bird-work are of value *now*. It is stated, on authority, that Canaries, kept in the trenches, detect the onrush of the loathsome and poisonous gases, which are a constant menace to millions of lives, before any human being is aware of the danger, and that thus these tiny songsters act as a safeguard, not only to soldiers, but also to civilians in their neighborhood.

Of quite as great service, also, are the migrating and nesting birds, of which a member of an important commission, visiting the front, wrote: "In the lull of the booming artillery I heard the birds singing in the few remaining trees of the vicinity. It was the sweetest music that ever fell on my ears."

This observer also made the statement that from an eminence where thirty-eight villages were visible before the war nothing is to be seen now except shell-holes and ashes, dotted here and there with patches of green containing rows of white crosses. Far below the surface of what once could be called the *earth*, but which now bears no resemblance to soil, are soldiers in trenches, some of whom have not had even a day's furlough in fourteen months. What must the songs of wild birds, as well as of Canaries, mean to these dauntless heroes! What, too, must be the strength of the instincts of those feathered travelers from afar, who, returning to their accustomed haunts, find only here and there a stub of a tree, still struggling to put out leaves, where they may rest and break forth into song. The thought of the birds' constancy and cheer in those areas of utter desolation, where only soldiers remain, living like the cavemen of old, fills one with wonder and gladness.

Recently, at an Audubon Society mass meeting in Tremont Temple, Boston, especial emphasis was laid upon the relation of birds to gardens, orchards, crops, and forests, and the unusual opportunity now before us of making this relation better understood and more widely appreciated.

Without multiplying instances further, let the facts be accepted that birds are of probably greater value than before the war, and that there has never been a time when bird-study and bird-work were more needed, both objectively and subjectively, than now. In this connection three matters make a particular appeal at the moment of writing:

First, is the *immediate need* of establishing the most practical relations between birds and man in agriculture. Thousands of home gardens are being made, in addition to the cultivation of thousands of extra acres for cereal crops. Birds can do much to help and somewhat to harm if left to themselves. An intelligent gardener, horticulturist, farmer or forester will study the birds which find their food and make their nests in his especial precinct, and after observing at first-hand their habits, will seek to take advantage of their helpful methods and to protect his fruits or crops in case he discovers any harmful practices on their part.

To aid him, as well as to stimulate healthful competition in bird-study in the graded schools, the scheme of charting the food-supplies grown within stated areas, such as towns or counties, might very profitably be undertaken.

Charts of local areas should form the basis of county and state charts. In order to make the survey successful and the charts of value for purposes of actual comparison, the following points are suggested for the consideration of teachers or directors of Junior and Adult Audubon Societies.

1. Prepare correct outline maps of the state in which you live, having as many maps as there are counties in the state.
2. Prepare county maps on a scale corresponding to that of the state maps.
3. Indicate in different colors, on both state and county maps, the distribution of the principal food crops of the state, such as grains, potatoes, hay, sugar, garden vegetables, etc., adding, also, forested areas, water areas, and orchards and forests. Study the distribution of minerals and indicate the location of mines or veins of minerals.
4. When these maps have been carefully worked out in as complete a manner as possible, superimpose each county map, in its proper position, on a state map and study the result.
5. Take up towns and villages in the same manner, with reference to county maps, drawn to sufficiently large scale to be easily seen when hung on the wall.
6. Study these charts in detail, until you are clearly informed as to the natural resources of the state as a whole.
7. When the resources of your own state are exhausted, try comparing them with those of adjoining states.
8. So far as possible, determine the birds which are distributed in the various parts of any particular county, keeping a record of the habits and occurrence of each species with reference to gardens and cultivated areas throughout the state. Note particularly the differences in distribution of forested, wet and dry, cultivated and uncultivated areas.
9. Make a state, county, and town or village record of the average annual rainfall, snowfall, and extremes of heat and cold, and of humidity and aridity.
10. Study soils, learning to recognize different degrees of fertility by means of analyzing the composition of soils, and make a village or town chart, showing the location of fertile and infertile areas. Look up a few facts about the difficulty of "clearing" land and of the rapidity with which neglected farms or gardens go back to a state of nature. If possible, assemble such village or town maps by counties, and then groups of county maps by states. Where possible, use modeling clay to make topographic maps instead of ordinary charts.
11. In a general way, gain an idea of the humid and arid areas in the United States and Canada, noting the location of forested areas, large bodies of water, average rainfall, snowfall, and extremes of temperature. Isothermal (equal heat) and isohyetal (equal rainfall) charts are full of interest and are not difficult to understand.
12. With this knowledge as a background, review the migration and nesting distribution of our native birds. Try to find out some reasons why birds frequent the particular areas where they are most commonly found.

Reference to the following works will be helpful:

- Life Zones and Crop Zones of the United States*, by Dr. C. Hart Merriam, Bulletin No. 10, Division of Biological Survey, U. S. Department of Agriculture.
- Laws of Temperature Control of the Geographical Distribution of Terrestrial Animals and Plants*, by Dr. C. Hart Merriam, *National Geographic Magazine*, Vol. VI, pp. 229-238.
- The Geographic Distribution of Animals and Plants in North America*, Yearbook of the U. S. Department of Agriculture for 1894, pp. 203-214.
- Useful Birds and Their Protection*, and also, *Game Birds, Wild Fowl and Shore Birds*, by Edward H. Forbush, Massachusetts Department of Agriculture.
- Consult the bibliographies in Chapman's *Handbook of Birds of Eastern North America*, and *Color Key to North American Birds*, Weed and Dearborn's *Birds in Their Relation to Man*, and also, Yearbooks of the U. S. Department of Agriculture, as well as bulletins and reports published by State Departments of Agriculture.

A second matter of unusual, indeed, of pressing importance at this time, is bird legislation. Scarcely a state is safe from the influence of various classes of selfish or ignorant and wilful people who want laws sufficiently lax to enable them to shoot, trap, or destroy birds and their eggs without penalty. Nowhere, apparently is the feminine public as yet educated to the necessity and desirability of eliminating the plumage of birds from hats.

To destroy birds for the purpose of using their plumage as trimming for hats, or neck-scarfs and capes, is becoming more and more a crime against which every reasonable person should enter a protest. This spring, women of all ages and classes are appearing in hats decorated with wings, quills and elaborate feather-garlands *ad nauseam*, to say nothing of a superabundance of ornaments in the similitude of aigrettes, which are too inartistic to adorn the hat of anyone who has regard to her appearance.

There is a warning we should all heed now, in the terrible and apparently unending destructiveness of war, and that is, that part of the depravity underlying such appalling waste comes from the ENCOURAGEMENT OF CRUELTY AND UNLAWFUL PRACTICES in the economic world, of which every purchaser of a bird's feather on a hat, as well as of garments made in sweat-shops or by child-labor, is as much a part as the owners of stores or factories dealing in these articles or conscienceless dealers who profit by the plunder of natural resources at the ultimate expense of the public.

The trade in bird's plumage is absolutely unjustifiable, involving, as it does, not only the destruction of a valuable natural resource, but, also, cruel practices which debase the ignorant or lawless creatures who are tempted to them for a pittance.

Far greater progress has been made in raising the standard of conditions in factories than most people are aware of. It is easy to find practically ideal conditions in such places, and it is not difficult to point to very fair conditions, but in the matter of traffic in the plumage of birds, aside from that in ostrich plumes, nothing in favor of it can be said. It is a lasting disgrace to every woman that such a traffic exists. Will the girls of this coming generation put the stamp of disapproval upon it and banish forever the plumage of wild birds from their wardrobe?

Why not at this critical juncture lend our influence toward finding a means of support for the thousands upon thousands of refugees and crippled soldiers, who from now on will be forced to a restricted livelihood, by offering to adorn hats with simple but artistic ornaments which they could make? If we create such a demand, we might relieve an unlimited number of cases of destitution and assist materially in lightening the burden of the Red Cross and other relief societies, and even of governments. Everyone must have a chance to live, and we must learn to help more than ever before those who have been made helpless. The decoration of a woman's hat might become an insignia of noble service instead of a disgraceful badge of perverted vanity. Shall we redeem the

past by renouncing forever the traffic in bird's plumage and by substituting for it one which will bring hope as well as financial return to thousands who need our assistance?

One further matter is urgent, and that is the training of nature-study teachers. Aside from the fact that many teachers have gone into government or relief service, there is an increasing need for well-trained instructors in nature-study. More than ever, the appeal of Nature comes now as a source of stable, safe, and sure comfort. In our present overwrought condition, everyone needs the cheer and healthful influences of outdoor life and associations.

It will be wise, therefore, to make provision for this need by assisting teachers to take special training in bird- and nature-study work. Realizing this need, many of our summer schools are offering uncurtailed courses, in the face of large deficits. Will our State Audubon Societies not take up this matter and find out ways to enable teachers to attend these schools?

This suggestion has been made before. It should not be overlooked.

A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XXXIX: Correlated with Home Gardening, Civics, History and Field Observation

In a quaint old volume entitled "Annals of Salem," there are many references to the difficulties of getting a sufficient supply of food raised to save the pioneer population from distress in the early days when our country comprised but a thin fringe of seaboard colonies along the bleak Atlantic. Governor Endicott wrote to Governor Winthrop in 1631 with reference to dismissing Court until the "corn be set": "Men's labour is precious here in corn setting time, the Plantation being yet so weak."

Corn became so scarce, owing to insect pests, frosts, and droughts, that "many families in most towns had none to eat, but were forced to live of clams, catuas, dry fish, etc." In those early days the raising of wheat was an experiment, although the annalist observes that Massachusetts promised to become a wheat-growing colony. Then, as now, in times of food shortage, "human selfishness was on the alert for gain, and benevolence cast into the background," for the ignoble profiteer was not an uncommon member of society.

Gray squirrels were said to "devour the corn exceedingly," but no mention seems to be made of Crows. Some of the farmers dug trenches around their fields to protect the corn, and more especially, wheat and barley, from ravages of cankerworms. Under date of July 30, 1770, cankerworms were extensively destructive, even penetrating houses, rooms, and beds. "To hinder this annoyance, houses were tarred." Several decades earlier, the Bishop of Lausanne

"gravely pronounced sentence of excommunication against the multitudes of caterpillars which desolated his diocese." The annals continue: "None of our countrymen have believed in such means as efficacious. They have devised measures to destroy them all they could and then waited for their disappearance."

There was a general impression that cankerworms ran out in seven years. At any rate "after 1834 their numbers were smaller," and the apple-tree eventually furnished their favorite food.

So destructive were some of these pests that fasts were held from time to time on account of caterpillars and "palmer worms." That the numbers of these insect foes were alarmingly great seems evident from the current reports of those who journeyed from one locality to another. Even making due allowance for exaggerated descriptions, it is hardly likely that anyone would write: "This summer multitudes of flying caterpillars arose out of the ground and from roots of corn, making such a noyse in the aire, that travellers must speak loud to hear one another, yet they only seized upon the trees in the wilderness," unless great numbers of locusts were present.

The struggles of our forefathers to establish an adequate and increasing food-supply, we, in our day and generation, shall never be able to realize. Without proper and time-saving implements, or sufficient fertilizing material, and probably with very little if any idea of intensive cultivation, their labors in productive agriculture were rigorous and more often than not, unrewarding. How ample to them would seem the food-supply of to-day, and how simple and easy the requirements for food-conservation laid down by our wise administrators!

It is interesting to find references to nesting and transient birds in these forgotten annals of olden times. Writing to the Countess of Lincoln in 1631, Governor Dudley said: "Upon the 8 of March from after it was faire daylight untill about 8 of the clock in the forenoon, there flew over all the towne in our plantacons soe many flocks of doves, each flock conteyning many thousands and some soe many that they obscured the light, that passeth credit, if but the truth should bee written." Doubtless the "doves" mentioned were Passenger Pigeons, lost to us and to all who come after us. The migration of birds was little understood in those early days, so it is not surprising that the appearance of such large flocks of Pigeons was thought to portend some great event.

How great the changes are that have come to our land since its pioneer settlement, we can grasp more clearly by studying graphic charts than by reading statistics. In the editorial of this number entitled, "Awake to the Times," is a suggestive outline by means of which fairly accurate comparisons of present conditions can be made. When you have a general idea of these conditions, a mental picture, as it were, of the resources of your home state and adjoining states, add to it, from a study of early American history, such facts as will show

the progress made in agriculture, horticulture, farming, forestry and the conservation of natural and cultivated resources. Some very startling discoveries will be made in the course of this study and some very hopeful signs. We have reached a point now, where everyone's duty is to become well informed as to the sources of the world's food-supply, and measures to increase and conserve it.

SUGGESTIONS

1. Look up the meaning of *isothermal* and *isohyetal*.
2. Consult the Century Dictionary under the words *palmer* and *palmer-worm*.
3. Turn to the Bible under Joel 1:4 and 2:25, also Amos 4:9, for further references to *palmer-worms*.
4. What is a *lined moth*? What harm does it do to apple-trees in June? What is its larval form?
5. See, also, in Century Dictionary cuts under *corn-moth* and *beet* [section 6, cut of common yellow *beet-moth* in its larval stage].
6. Study the most common insect pests of our gardens and grain fields, learn whether they are native [indigenous] or introduced, and, also, what species of birds destroy them.
7. Which grains are native and which are introduced?
8. Why is corn of unusual value and usefulness in the United States?

The following lesson on the Blue Jay is an admirable outline to take up at this season. Similar lessons have preceded this and it would be well to refer to them again as well as to work out some lessons of your own. With the bulletins which are available through the federal and state Departments of Agriculture, no one need be at a loss to determine the common insect pests of this country. Make a special effort to correlate bird-study with the study of insects and vegetation. May every home-gardener succeed this season and every home-garden yield a store of knowledge as well as of food?—A. H. W.

Suggestive Lessons in Bird-Study

THE BLUE JAY

By WILLIAM GOULD VINAL

The Rhode Island Normal School

1. FIELD OBSERVATIONS

There is only one practical use to which you can put these suggestions. Make them the purpose for wood excursions, not for the class, but for individuals and small groups. No one should try to teach what he does not know, but there is a great deal about a Blue Jay that one can know. You must catch the spirit before the lesson—and a single excursion into the woods of autumn or winter will give it, for the Blue Jay is a permanent resident. You ought to hear his notes ring through the silence of the October frost! Stand still and see if you can discover his business.

1. In what sort of a locality do you discover him?
2. Describe his method of flight.
3. Does he walk or hop?
4. What does he eat?

5. How do the other birds like him?
6. How does the Jay break off an acorn?
7. How does he open the acorn?
8. Where does he hide the acorns?

[Birds' nests are more easily found in winter than in summer, and this is really the time to study them, as one can collect and observe them carefully without disturbing the tenants.]

9. Where do you find the Blue Jay's nest?
10. In what kind of a tree?
11. How high is it from the ground?
12. Where is it in the tree, on a branch or in a fork?
13. Is the nest easy to find? Why?
14. Of what material is it built?
15. How is the material arranged?
16. What holds the nest together?
17. In the spring try to find a Blue Jay building his home. Do both parents work at the nest-building?
18. When do they commence to build their nest?
19. How does the Jay get twigs?
20. Where are the twigs obtained and how carried to the nest?

This is a kind of nature test. It differs from most school studies in that the test comes right at the beginning of the subject. It is a test of the power to observe nature. Again, it gives the child an experience of his own. He has something interesting for conversation. His own experience is really the only kind of a subject for him to write about. It gives him an opportunity for self-expression, something different from the phonograph method by which someone else's ideas are repeated. Do not let him put on smoked glasses or stuff cotton into his ears after he has observed these twenty points. It would be like planting twenty seeds in a garden and never looking at them again. Some naturalists have been observing the Blue Jay for fourscore years or more, and there are still new Blue Jay sounds and tricks to hear and see. Here, again, is the difference between book-study and nature study. A test in the former ends the study, but in the latter it is simply opening the way for a lifelong examination, besides being a great deal more fun. By the latter method, one's failures are not proclaimed, and his successes are a point in pedagogy for other subjects.

2. BLUE JAY EXPERIENCES. (A Character Study)

As I do not know the Blue Jay experiences of other people, I shall have to tell about mine. They started on a farm in South Scituate, Mass. The Blue Jays were stealing the corn, and that was an unpardonable sin on the farm. There are four more chapters of this story of which I will simply give the titles. An Old Shot Gun, Concealed in the Bushes, Imitations of the Blue Jay's Call, A Tread Blue Jay. This paragraph would not have to be written had I been given the opportunities that boys and girls have to-day for bird-study.

Right here I want to say that I do not belittle the opportunities of the farm. One has to *know things* to succeed on the farm. He must plant, harvest, prepare, and use. In the city it is a little money, a store, and a can-opener. If the city boy or girl wishes to share in the experience of the great out-of-doors, he only needs to step into the parks and use his senses. Thus he may acquire some real knowledge by observation, a fundamental principle in education.

As a farmer-boy I knew the Blue Jay, his haunts and his failings, and could call him

to any tree. What I needed was a teacher, someone to organize, direct, and guide (not stuff) my observations.

The most notable Blue Jay experience that I recall was when I had a class on a field trip. We went to a field to watch some Purple Grackles. One of the Grackles flew to a large elm tree, carrying a white grub which he had excavated from the ground. Just as the Grackle landed, a Blue Jay flew down, snatched the grub, and flew to another limb, where it proceeded to beat the worm against the tree. When this juicy morsel had been devoured, the Jay flew again, this time to where its nest was located. This whole picture was run off in about two minutes. The incident showed the thieving instincts and "check" of the bird, but at the same time his fondness for grubs. We had his character in a nutshell.

The Blue Jay is also a big tease, at times a bully. The house across the street has a picket fence along the side of the lawn. One day in the fall we saw a cat sitting peacefully on the upper ledge of the fence. Suddenly, two Blue Jays appeared on the scene.



A CANADA JAY CALLER

Photographed by Mr. Wm. G. Vinal

They flew back of the cat and perched three or four feet away, from time to time swooping down at it, being perhaps within a foot above it. The starting point was a maple tree that shaded the fence. Now and then the birds would call *jay-jay-jay*. The whole performance seemed to be a game, and was seen at two different times and several months apart.

In September, 1916, I went on a trip to New Brunswick. It was a "camera hunt" which is much more fun than shooting with a gun. The trail led twenty-four miles from the nearest house and settlement, right into the woods on the headwaters of the Miramichi. Our party found quarters at an old abandoned lumber camp. On a falling trip up the Little Dugavon one day, we cooked our noon meal at the junction of two streams. From our continual allowance we had made some balsam. It was considered rather valuable, since we had "toted" our provisions on our backs, carrying enough

for a week which is quite a lug. I had forded one of the streams to get some dry wood for the fire, and, upon turning toward the place where our provisions were spread out, I saw a bird making away with our golden hannock. I decided that if it tasted as good to the bird as it did to me, he would return, so I hid in the tall grass and focussed my camera on a tin cup which held the disputed food. I did not have to wait long before he came back. Without following even woodsman etiquette, this feathered messmate tried to stand on the rim of the cup, which upset both of our plans, blurring the picture I tried to make. Such little unexpected or unplanned incidents, however, only add to the excitement. This was the first time that I had ever seen the bird, but I remembered its picture and knew that it was the Canada Jay. On returning to civilization we learned that the lumbermen call it the Moose bird. In some parts it is called Meat Hawk, Carrion bird or Whiskey Jack. Kennicott suggests that its Indian name, *Wiss-lu-chon*, was probably contorted into Whiskey John and thence to Whiskey Jack.

Many of the strange noises we heard in camp, near sundown, were undoubtedly not bears or wildcats but the Moose bird. We later made friends at camp. I would place bait on one of the lumber-camp stools and sit eight feet away on another, ready to shoot with the camera. As the picture shows, the bird had no fear of the revolver. The bird ate a little and then would carry off a large piece. He gave a sort of whining tone as he returned from one tree and then another.

Picking up an acquaintance with city Blue Jays is easier than one would suppose. Last spring one sunflower seed was planted near our grape arbor. The Blue Jays came regularly to get the sunflower seeds. To take a picture I placed the camera near the grape arbor and had a thread leading into the house. When the Jays came I pulled the thread. Next year we plan to have a row of sunflowers by the arbor for the Blue Jays.

My last experience was in a Providence park, while taking the picture of a Blue Jay's nest. An old gate was used for a ladder, and after I had climbed up into the tree, a Jay came and perched overhead. Soon I saw another Jay coming down the path. Both Jays had a sort of military bearing, with their blue uniforms, white collars, and black belts. The patrol of the branches, however, was more alert than his mate below, and I was not called upon to explain my presence in the tree.

3. BLUE JAY ECONOMICS. (Debit and Credit Account)

My early impression of Jay morals was that they were not as 'true blue' as the bird's dress. I am not so sure now but what the Jay had a right to some of the corn. Audubon pictures a Jay sucking an egg and writes: "I have seen it go its round from one nest to another every day, and suck the newly laid eggs." Barrows, however, in "Michigan Bird-life," says that these robberies are restricted to particular Jays and are not general. Forbush, in "Useful Birds and Their Protection" says that "Jays eat the eggs of the tent caterpillar moth and the larvae of the gipsy moth and other hairy caterpillars." He concludes that it should not be allowed to increase at the expense of smaller birds. Prof. F. E. L. Beal, in the bulletin entitled, "The Blue Jay and its Food" (published by U. S. Department of Agriculture), says: "Jays do not eat the seeds of the poison ivy (*Rhus radicans*) or poison sumac (*Rhus typhina*)." The Blue Jay helps in forestation by planting seeds of various trees, such as nuts and the like. Thus, on the whole, and aside from the enjoyment we get from his beautiful color, his neighborliness and cheery call, we may say that there is a great deal to be added to his credit account, and that he is a good friend to man.

4. THE BLUE JAY IN LITERATURE

What facts do the different poets tell us about the Blue Jay?

Could you appreciate what they write if you had not heard and seen the Jay?

Pick out the words that describe him.

Thus is what a few writers think the Jay says:

Flagg: *Dilly-dilly.*

Hoffman: *Djay djay, tee-ur tee-ur leerr, too-wheedle too-wheedle*, which suggests the creaking of a wheelbarrow.

Matthews: *T-aa-y j-aa-y, ge-ru-l-lup, ge-ru-l-lup heigh-ho.*

Samuels: *Wheco-wheco-wheco.*

Seton: *Sir-rattle, sir-rattle, sir-rattle.*

"Blue Jay,

Clad in blue with snow-white trimmings."

—FRANK BOLLES.

The Blue Jay

"Blows the trumpet of winter."

—THOREAU.

"The brazen trump of the impatient Jay."

—THOREAU.

"The Robin and the Wren are flown, but from the shrub the Jay,
And from the wood top calls the Crow through all the gloomy day."

—BRYANT.

"Proud of cerulean stains
From heaven's unsullied arch purloined,
The Jay screams hoarse."

—GISBORNE.

"He who makes his native wood
Resound his screaming, harsh and rude,
Continuously the season through;
Though scarce his painted wing you'll view
With sable barred, and white and grey,
And varied crest, the lonely Jay!"

—BISHOP MANT.

FOR AND FROM ADULT AND YOUNG OBSERVERS

COMMUNICATION FROM CANADA

Would you care to hear from a rural school in Ontario which, through a circular received from the United States, got into touch with the Audubon Association and has now a very interesting Junior Audubon Society?

We began our meetings in the spring of 1916, using the leaflet supplied when in the classroom, and following our own bird friends when time and weather permitted working outside. All the pupils in the school who were old enough (twenty-six) became members, but we had a faithful and interesting following among the younger pupils.

Last spring we held a meeting in our classroom, to which parents and friends were invited. The room was decorated with evergreens, bird-houses, a collection of nests made in the late fall, and our colored bird-pictures.

The program consisted of solos and duets, both vocal and instrumental, choruses, readings, and an address by our president (a boy of thirteen), outlining the nature of our Society and the work covered. Several pupils had colored the drawings provided with the leaflets, and prizes were given publicly for the three best.

The parents and friends have, as a result, taken more interest in us and the subjects of our study.

Our 1917-18 meetings have proved more enjoyable than those of the previous year, and we are planning a public meeting for this coming spring which we feel sure will add to the interest taken in our feathered friends.

As teacher of the school I very much appreciate BIRD-LORE. The children find it most interesting.—AMELIA LEAR, *Courtice, Ontario, Can.*

[The writer of this admirable report says: "In many ways I feel a stranger to the Association (Audubon) and its ideals, but hope to become better acquainted by the close of 1918." It has been suggested before in this Department that an exchange of greetings and reports of work and common interests of study between schools in this country and other countries would be helpful and especially stimulating. Will some Junior Audubon Society in the United States enter into correspondence with the school in Courtice?—A. H. W.]

NESTLING CHIPPING SPARROWS

Some Chippy Sparrows built their nest in a potted tree next to the house, and a few weeks ago they flew from the nest. It was in the morning, and as I walked past their nest out they flopped.

I was afraid they would be hurt or even killed but they were not. I then sat down to watch them. One of them hopped up into my lap and as it seemed so tame I had its picture taken with the other two. There were four in all, but we could not find the other one. The one that sat on my finger was so tame that I could feed it bits of bread.

When I went in I set it down in the shade of a bush, and when I came back it was gone.—HELEN GREW.

[It is characteristic of many young nestlings which are just ready to fly that a slight disturbance will cause them to spring prematurely out of the nest. When this occurs, it is an extremely difficult matter to return them to the nest, but it is often possible by patient care to place the nestlings where the parents can easily find and feed them. A young Baltimore Oriole was picked up and brought to the writer recently, and although quite a distance from the place where it was found, it was returned to a bough near the spot where it was first discovered and after twenty minutes of "cheeping" on the part of the little orphan, the male bird arrived with food.—A. H. W.]

INTERESTING EXPERIENCES

I thought that you might be interested to know how a female Red-eyed Vireo once proved to me her courage and devotion.

I was out one afternoon with a party, assembled for the purpose of study-

ing birds, when we ran across the Vireo's nest, about five feet from the ground in a small tree. We moved a little closer, and focused our glasses upon the bird, and there she was sitting upon the nest. The leader of the party moved still further toward the tree, and although he did not wish to frighten or disturb her, he did want to test her courage. I do not believe that he was more than twelve inches from her before she flew away. Her courage, in my mind, was remarkable, and the sense of duty which she showed in guarding and caring for those eggs is a good lesson by which human beings may profit.

Just the other day I witnessed a sight about which I have often read.

The leader of the party about which I have just spoken called my attention to a female Oven-bird in the grass near where we stood. Upon approaching she flew away, keeping about a foot from the ground and spreading her right wing while she did so. I was then informed that she was making out to be wounded, so that we should follow her and so draw our attention from her young ones. Sure enough, there were the young birds in the grass, with only a few feathers on.

It is interesting to note such incidents as these, and I think that one can have great success in observing birds with a bird-bath. I simply purchased a large, inexpensive pan, and put it in a place which I had dug in the ground to fit it. Then I sprinkled a little gravel in the bottom, put a few stones around the edge, and filled it with water. I had fixed the pan so that one end was shallower than the other. Soon I observed the birds bathing in it. They would very timidly hop first upon the stones on the edge, and then, gradually becoming more courageous, they would plunge into the water. It is very amusing when a particularly large Robin takes a very long bath and uses the whole tub, splashing about, while four or five smaller birds are impatiently waiting on the edge for this most important individual to complete its toilet.—W. W. HALL, JR. (Age 13 years), *Buckhill Falls, Pa.*

It is always a pleasure to receive observations which have been made at first-hand in the true spirit of inquiry. Concerning the fear of brooding birds, Mr. Herrick explains to us in his study of the 'Home Life of Wild Birds,' the different stages of timidity and courage through which parent birds pass while nesting. In studying the habits of birds always be careful not to disturb birds which are about to nest or which are just beginning to brood. Later, as they become more attached to the nest and eggs, they usually show less fear.—A. H. W.]

SLATE-COLORED JUNCO

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 66



THE coming of autumn brings many changes in the bird world. The Orioles and Tanagers depart. The Warblers leave and other familiar birds of summer disappear.

Then comes the White-throated Sparrow, the Tree Sparrow, the Sapsucker, and other visitors from the North. Among these new arrivals, but not the first to appear, is the Slate-colored Junco. In thousands of dooryards they are rarely seen until the first fall of snow. Upon looking out of the window some morning one may see a dozen or more little birds flying about in the shrubbery or hopping around the doorway, looking for seeds or stray crumbs. Other small birds have this habit at times, but by the follow-

ing signs you may know the Junco:

It is very nearly the size of an English Sparrow, with this difference, its body is not so large and its tail is slightly longer. Its general color is dark gray, except the belly, which is white. The bill is flesh-color, and when it flies white feathers are shown at the sides of the tail. This description fits no other bird. Bear these points in mind, and you cannot miss recognizing the Junco when he comes to visit you.

This little bird of the winter has many friends. Coming as it does at a season when other birds are few, and visiting the dooryard, as it frequently does, there is small wonder that many people know it and hail with pleasure its appearance from year to year. 'Snowbird' it is often called.

After the summer birds, and the migrants that are with us only for a time, have departed, and the bird-life has settled down to the usual scant winter population, the Juncos appear more in evidence than when they first arrived late in September. Then you will find them associated in flocks numbering from ten to fifty or more along the roadside skirted by thickets or in overgrown fence corners. Fields grown up in shrubbery and the borders of woodlands are also favorite haunts for these small winter neighbors. Here you will see them hopping about on the ground or alighting on limbs or stakes. Always they seem to be in such places that upon the call of danger they can dart, by a short flight, into the friendly cover of shrubbery or trees.



R. BRUCE HORSFALL
1917

SLATE-COLORED JUNCO

Order—Passeres
Genus—Junco

Family—Emmelineae
Order—Columbidae

National Association of Audubon Societies

As they feed they continually utter quiet little notes of contentment, which, upon being alarmed, change to sharp hissing sounds that I have known people to think were caused by the bird snapping its bill.

Like all birds that spend the winter where snows fall, there come times when these Juncos are hard pressed for food, and probably never a winter passes without many of them dying from exposure and lack of food. Thus one may see very good reason exists why people should put food where they can readily find it. These birds will often eat bread-crumbs, but small seeds are what they prefer. The kind of bird seed one may buy at a store is good for hungry Juncos, but seeds raised in the garden will answer the purpose just as well. I will name some of them: sunflower seeds, poppy seeds, millet, oats, cracked wheat, and cracked corn will readily be taken by them. A little trouble and a very little expense is all that is necessary to tide the Juncos through a time of famine and keep them alive and well until better times arrive.

It should be borne in mind that all small birds are in constant danger of being captured and killed by Hawks, Owls, cats, and other creatures that prey upon them. When weak from lack of food, the little Junco is in poor condition to escape its enemies. I recall one February when snow fell heavily for two or three days and was followed by a sleet that left a crust over the top of the snow; also it broke down and buried the weed-stalks which still held their store of seeds. Throughout the whole country there was practically no food for the Junco.

One evening, upon returning late to the house, I caught sight of a small bird that flew up to roost on the top of one of the pillars supporting the wide veranda of my home. On the little projection, perhaps three inches wide and protected from the wind, it crouched down to spend the night. An hour later I came out with a light and approached close enough to see that my little visitor was a Junco. I put some cracked wheat on the wide veranda railing close by and hoped the bird would find it when it awoke in the morning, but the wind increased in violence and more sleet fell during the night, so I am sure not a grain of it was left for our little visitor when he opened his eyes at daylight.

It so chanced that the next evening, just as I came up the steps, the Junco alighted on the veranda railing and attempted to fly up to the top of the pillar, but it was now so weak that it was unable to gain its perch, and fell to the floor. Cautiously I advanced, thinking to secure the bird and feed it in the house. It flew out in the yard, however, and was soon lost in some low shrubbery. The next morning its feathers were scattered over the veranda. A cat had caught it and brought it there to eat.

John James Audubon, writing of the Junco as he knew it in Louisiana, said: "Although the Snow-birds live in little families consisting of twenty, thirty, or more individuals, they seem always inclined to keep up a certain degree of etiquette among themselves, and will not suffer one of their kind, or indeed any other bird, to come into immediate contact with them. To prevent intrusions

of this kind, when a stranger comes too near, their little bills are instantly opened, their wings are extended, their eyes are seen to sparkle, and they emit a repelling sound peculiar to themselves on such occasions.

They are aware of the advantages to be derived by them from larger birds scratching the earth, and in some degree keep company with Partridges, Wild Turkeys, and even Squirrels, for the purpose of picking up such food as these animals may deem beneath their notice. This habit is more easily observed in those which frequent the farm-yards, where the domestic fowls prove regular purveyors to them. The report of a gun, or the unexpected barking of a dog,



JUNCOS FEEDING ON WINDOW-SHELF
Wyncote (Pa.) Bird Club.

causes the little flock to rise and perch, either on the fences or on an adjoining tree, where, however, they remain only for a few minutes, after which they return to their avocations. They are particularly fond of grass-seeds, to procure which they often leap up from the ground and dexterously seize the bending panicles.

It is a true hopping bird, and performs its little leaps without the least appearance of moving either feet or legs, in which circumstance it resembles the Sparrows. Another of its habits, also indicative of affinity to these birds, is its resorting at night, during cold weather, to stacks of corn or hay, in which it forms a hole that affords a snug retreat during the continuance of such weather, or its recurrence through the winter. In fine weather, however, it prefers the evergreen foliage of the holly, the cedar, or low pines, among which to roost. Its flight is easy, and as spring approaches, the males chase each other on wing,

when their tails being fully expanded, the white and black colours displayed in them present a quite remarkable contrast.

"The migration of these birds is performed by night, as they are seen in a district one day, and have disappeared the next. Early in March, the Snowbird is scarcely to be seen in Louisiana, but may be followed, as the season advances, retreating towards the mountains of the middle districts, where many remain during the summer and breed."

Near the close of Audubon's narrative he makes this significant statement:

"Their flesh is extremely delicate and juicy, and on this account small strings of them are frequently seen in the New Orleans market, during the short period of their sojourn in that district."

This, of course, was written many years before the Audubon Law, which protects these birds, was enacted by the legislature of Louisiana.

The Junco passes the winter in suitable locations throughout eastern United States from the Gulf of Mexico on the south to southern Canada on the north. In summer it is distributed generally from New England northward throughout Canada as far west as Alaska. They also breed in the upper parts of the Catskill Mountains and along the ridge of the Appalachian Mountains south to Georgia. On many of the mountains of western North Carolina I have found these birds a most abundant species in summer. In fact on some of the mountains one may encounter more Snowbirds on a day's tramp than all other species combined. Blueberries are very common in these mountains, and in summer the Snowbird varies its usual diet of insects with these wild fruits.

The nest is built in a depression in the ground, often on the side of some little bank or among the mingled roots and sod of an upturned tree. If, during the summer, one comes upon a Junco with a little worm or the larva of some insect in its bill, he need only wait a few minutes and the bird will probably betray its nest by going to feed its young. I have often had this experience. In fact, the Snowbird's nest has been, for me, one of the easiest to find. In every instance I have found it by watching the birds going to it. The nest itself is usually well hidden, and the small amount of dried grass and moss of which it is composed blends so well with the surroundings that one would hardly expect to discover the little cradle with its four or five speckled eggs or young.

In the spring the Junco has a song. It is not very loud and is not very long, but hearing it, as one usually does, when few other birds are giving voice to their happiness, it makes a strong appeal to the ear of the bird-lover.

The Slate-colored Junco (*Junco hyemalis*) is the common Junco with which most people are acquainted. In the southern Alleghany Mountains, and breeding as far south as northern Georgia, there is a race of Juncos (*J. h. carolinensis*) that is slightly larger and its markings are a little different from the common Junco. Still another race, the Montana Junco (*J. h. montanus*), is found in the Rocky Mountains, breeding from southern Alberta to Idaho and passing the winter in Arizona, Texas, and Mexico.

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, 1274 Broadway, New York City.

WILLIAM DOTCHER, *President*

FREDERIC A. LUCAS, *Acting President* T. GILBERT PEARSON, *Secretary*
THEODORE S. PALMER, *First Vice-President* JONATHAN DWIGHT, JR., *Treasurer*
SAMUEL T. CARTER, JR., *Attorney*

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 SUMMER OUTING FOR BIRD-STUDY

Our readers have noted, from time to time, mentions of the progress of our new Experiment Station in applied ornithology at Amston, Conn., where research work is conducted in attracting, protecting, and increasing wild birds, and in the propagation of the so-called game species and wild water-fowl. This summer, further experiment will be tried, a combination of educational and recreational lines.

This great estate, owned by Charles M. Ams, and representing an investment of over a quarter of a million dollars, covers three square miles of beautiful country, a charming glacial lake over a mile long, with good boating, bathing, and fishing. Bird-life is varied and abundant. Many bird-boxes are occupied by Bluebirds, Tree Swallows, Wrens, and other species. There is a convenient breeding colony of the rather rare Henslow's Sparrow near one of Bank Swallows. Herons and wild Ducks frequent the lake, and last summer there was on the latter an old white-headed Bald Eagle.

Mr. Ams, who is a Life Member of the Association, and is willing to share the pleasure of his estate with the reputable fraternity of bird-lovers, has given to the Association the use of the Audubon

House as headquarters, and has equipped Amston Inn on the property, where guests can be cared for. Last summer, visitors were informally received and shown about by Herbert K. Job, who is in charge of the work, residing for the season at the Audubon House with an assistant.

This season, Mr. Job, with his family, will reopen the Audubon House about June 1, for the entire summer. The Inn will also be open, at a uniform rate of \$2 per day for room and board, or 75 cents for a single meal. At the Audubon House are collections of mounted birds and bird-skins for study and reference, also a small working ornithological library. Visitors are invited to make use of these and of the Audubon House for study or social purposes. Work in attracting birds, and the breeding and rearing of many kinds of game-birds will be under way. The water-fowl pond, with some fifteen species, gives unusual opportunity to study native wild Ducks. Visitors for the day or for stay at the Inn are welcome, and will be shown the work.

Beginning on Saturday, July 6, a definite Summer School session will open, with classes and evening lectures by specialists. The formal session will con-

tissue three weeks, and courses are offered in general bird study, applied ornithology and field photography.

A moderate charge will be made, uniform for all, and students may take one or all the courses, and be admitted without further charge to all lectures. The Inn is

simple and unpretentious, the rooms small, but everything is fresh and neat, and the food is good. A prospectus with full detail will be furnished on application, either to the Association at 1974 Broadway, New York City, or to Mr. Job at West Haven, Conn.

STINKING LAKE A BIRD SANCTUARY

The long fight to end the killing of wild fowl on Stinking Lake, and thus make of it a bird sanctuary, has been won! Stinking Lake is located in northern New Mexico, and, for hundreds of miles in every direction, probably no region exists that harbors such a large number of breeding wild fowl in spring, or offers such opportunities for gunners in autumn.

Several years ago the United States Bureau of Biological Survey sent a representative there to study the bird-life, and the question at that time was brought up of making it a United States Federal Bird Reservation under the care of the Department of Agriculture. This was found inexpedient for the reason that the lake lay within the boundaries of the Jicarilla-Apache Indian Reservation, and therefore was not a part of the free public domain from which bird reservations have always been carved.

Last fall the matter was brought to a head by the action of a company of sportsmen, centering in Colorado Springs, and organized under the distinctly misleading title of the "Jicarilla Wild Game Sanctuary Association." This club took steps to secure from the Indian Service the exclusive shooting privileges on Stinking Lake. In return for this favor they offered to build a fence to keep the cattle away from the breeding-grounds of the birds, and employ a guard throughout the year. They were to shoot a month in the autumn (which meant the entire time of the fall shooting season until the lake freezes over), and they obligated themselves to shoot only twenty-five Ducks a day, which, or may add, is five more than the law of New Mexico allows.

The writer, after entering a protest with the Interior Department and receiving no satisfactory response, went to Washington and had a conference with Mr. Alexander T. Vogelsang, Assistant Secretary of the Interior, and the official who has oversight of several branches of the Interior Department work, including the Indian Service. To him was submitted a request that the lake be not leased, and that, using his authority, he should prohibit all shooting on the lake. It was found, however, that he had been so thoroughly convinced of the philanthropic intentions of these Colorado sportsmen that he had already given his consent for the leasing of the lake to them.

After an extended visit, during which certain facts, with which he was more or less unfamiliar, were drawn to his attention, he readily agreed to reopen the case. Later, he stated that, upon reflection, he had changed his former position in the matter, and, as requested by the Audubon Association, would in future allow no one to shoot on this territory. He asked the writer to make suggestions relative to the season and bag-limit, which the Indian Service could insert into regulations regarding shooting on other small bodies of water within the boundaries of this Indian Reservation. This request was, of course, promptly complied with.

In the meantime, pressure continued to be brought to bear on the Interior Department from the West. The Jicarilla Wild Game Sanctuary Association sent a representative from Colorado on at least two occasions to plead their cause. The State Game Warden and another state official from New Mexico visited Wash-

ington and worked toward the same end.

On March 29, 1918, there was filed with the Indian Service the following memorandum:

"WHEREAS, The Jicarilla Wild Game Sanctuary Association has submitted to the Bureau of Indian Affairs a proposed lease for the Stinking Lake in the State of New Mexico, and,

"WHEREAS, Protests have been filed against the granting of said lease; and,

"WHEREAS, Pending the controversy which has arisen, no action has been taken by said bureau relative to said lease; and,

"WHEREAS, an adjustment and compromise had been reached by all interests heretofore opposed to the granting of said lease, and concerned therewith; and,

"WHEREAS, The undersigned, H. L. Hall is the duly authorized representative of the Chama Rod and Gun Club; and,

"WHEREAS, The undersigned Theodore Rouault is the duly appointed, qualified, and acting Game Warden of the State of New Mexico, and the duly authorized representative of the New Mexico Game Protective Association; and,

"WHEREAS, Francis Galpin is the duly authorized representative of the Jicarilla Association; and,

"WHEREAS, The above named persons are the duly authorized representatives of all the interests concerned in the matter of said lease and desire to submit the adjustment which they have reached in connection therewith; now,

"Therefore, the said representatives herewith submit for the consideration of said bureau a form of lease which has been agreed upon between them, and for which favorable consideration is most earnestly and respectfully requested.

(Signed) F. GILPIN

H. L. HALL

THEODORE ROUAULT, JR."

The above statements were not correct in at least one particular, as the National Association of Audubon Societies had not withdrawn its opposition, and these gentlemen were so informed.

Mr. Gilpin came to New York for a conference with the writer in the hope that the one remaining obstacle might be removed. He proved to be a very broad-minded gentleman, greatly interested in conservation, and in the end stated that if he could not secure this concession from

the Government he was quite willing to contribute toward the maintenance of the warden which the Audubon Association hopes soon to see placed on Stinking Lake.

After this the end came speedily. Mr. Cato Selts, Commissioner of Indian Affairs under date of May 2, 1918, wrote the following letter:

My dear Mr. Gilpin:

This will refer further to the question of granting a permit to the Jicarilla Wild Game Sanctuary Association for the privilege of establishing a shooting preserve on Stinking Lake, on the Jicarilla Indian Reservation.

I have carefully considered this matter, and in view of the circumstances, I do not deem it advisable to permit any shooting whatever on Stinking Lake, and have accordingly notified the Superintendent. There is enclosed a copy of instructions to the Superintendent as to the steps to be taken with regard to the granting of shooting privileges on other lakes on this reservation.

The letter of instructions to which he refers follows:

Mr. Chester E. Faris,
Supt. Jicarilla Agency.

My dear Mr. Faris:

The question of granting a permit to the Jicarilla Wild Game Sanctuary Association for the privilege of establishing a shooting preserve on Stinking Lake has been carefully considered, and it has been decided to deny the privilege requested by that Association.

In view of the exceptional natural advantages afforded for the breeding of wild birds on Stinking Lake, I do not deem it advisable to permit any shooting whatever on this lake, and you are hereby directed to prohibit all shooting, either by whites or Indians, and you are requested to exercise every precaution to enforce this ruling.

You are hereby authorized to grant permits to responsible parties for shooting privileges on other lakes on the reservation, such shooting to conform with the Federal law as to the season for shooting birds, and to conform with the State Law in respect to the bag limit which may be taken. It is not deemed advisable to grant any preferred privileges to any parties or associations in the premises.

In this connection you are requested to submit your views and recommendations

as to the promulgation of regulations which may be deemed suitable for the governing of the shooting privileges under permits to be issued by you as instructed above.

Sincerely yours,

(Signed) CATO SELLS, *Commissioner.*

Approved: April 30, 1918.

Alexander T. Vogelsang,

First Assistant Secretary.

The Biological Survey, ever helpful in such matters, already has a man on the ground trapping such predatory animals

as are injurious to the breeding wild fowl and will, this summer, have a man investigating further the bird-life of the region.

Stinking Lake is now a bird sanctuary and is the only one of the first importance over a vast area of our southwestern country. Its value as a breeding-place for Ducks and as a haven of refuge for them during migration can hardly be over-estimated.

A BIRD HOSPITAL

By DR. W. W. ARNOLD

For a number of years my attention has been directed to the large numbers of maimed birds ever present here in Colorado Springs, and greatly augmented after the migratory waves of bird life in the spring time and early autumn. That it was within my power to extend to these unfortunate a remedial hand did not grasp my mind until one day a tender-hearted lassie brought to me a Nighthawk with a broken wing, and with tearful voice shot at me the question, "Doctor, can't you make this bird's broken wing well just as you do the broken arms of the little boys and girls?" This opened a door into a new world in which I have now been reveling for several years, deluged with delights and surprises foreign to ordinary mortals, and solving the mystery of eternal youth.

A commodious aviary was erected, answering the purposes of a general hospital, where the aerial voyagers, arrested in their journeys to and fro across the country by some unfortunate accident, are cared for as tenderly as though to many children. When recovered from their disabilities, these feathered patients are given their liberty, returning to their accustomed haunts in life, and taking up again their numerous activities in behalf of the welfare and happiness of mankind.

These feathered patients very quickly adjust themselves to the novelty of the shut-in life of the hospital, and, by the time the repair processes are completed, have become contented and gentle.

The intimate relationship established

with the birds, while ministering to the relief of their various disabilities, reveals phases and secrets of bird-life obtainable in no other way and flashing with constant surprises.

The varieties of feathered patients brought to the hospital represent about all the bird families of the Pikes Peak region,



STURBY, A BLACK HEADED GROSBEEK
Wing and leg broken by gunshot. Wing recovered, foot amputated. Has been in the hospital four or five years.

found in summer and winter, from the rare and fairylike Calliope Hummingbird, the common Tern, a rare visitor of the region, to the Raven and Golden Eagle.

A very satisfactory percentage of the injured birds recover and are sent back



WESTERN MEADOWLARK
Gunshot wound of wing. Recovered.



ONE DAY'S WORK BY THE MURDEROUS CAT



YOUNG CALLOPE HUMMINGBIRD. THIRD RECORD FOR COLORADO. THE SMALLEST PATIENT



RED-SHAFTED FLICKER
Wing broken by contact with telephone wire. Recovered

into their native haunts to resume their blessed services in behalf of their greatest enemy—*Man*.

The task of collecting the unfortunate cripples is gladly assumed by the children of the city and adjacent regions, who bring to the hospital every disabled feathered brother found. I endeavor to show my appreciation of these humane services by visiting the schools, taking with me some of the recovered patients, and recounting their life histories to the children, thereby impressing upon the hearts of the children a tremendous interest in bird life and a burning desire for its protection.

The character of this delightful work naturally brings us in contact with the lost darlings of the home nest in the spring and summer, so an orphanage was demanded and provided, where scores of fledglings are tenderly cared for during the season. This work of rescuing injured helpless birds from the claws and jaws of the heartless cat and the preferable ending of existence by starvation is my recreation, an antidote to *arteriosclerosis*, and has

proven a mine of such inexhaustible pleasure that I am fain to recommend it to everyone seeking to round out his life in fullest measure of usefulness and enjoyment.

There should be hundreds of bird hospitals scattered over our beloved land, for millions of birds perish annually from accidents of different kinds, when a large percentage might be restored to normal condition if afforded care and treatment in one of these hospitals.

It is better, of course, that the conduct of the bird hospital should be in charge of a person familiar with minor surgery, but almost any intelligent boy or girl can quickly become proficient in the adjusting of broken wing- and leg-bones and in providing the food necessary and appropriate for the healthy sustenance of the different varieties of feathered patients. My records show an average of twenty-five or thirty patients on hand all the time, constantly augmented and decreased, according to the seasonal movements of the armies of birds.



THREE ORPHANED AND STARVED BABY PHOEBES

TO STOP THE SALE OF GAME

An important bill is pending in Congress, having for its object the prohibition of the sale of game in the District of Columbia. It is rather a significant fact that, in more than forty states of the Union, restriction exists on the sale of native wild game. It is perfectly apparent to anyone that as long as there is an open market for Quail, Wild Turkeys, Woodcock, Prairie Chickens, and Wild Ducks, just so long will these various game-birds be hunted with the greatest energy by men who, as a class, have little regard for game laws, and whose desire is to make money by marketing the products of their skill with firearms.

Stopping the sale of game is therefore one of the most important principles involved in the subject of wild-life preservation. In Washington, however, game can be sold openly in the markets, much as it could throughout the country during those days when wild Pigeons used to be sold for six cents a dozen.

No congressman, it seems, has been sufficiently interested in the subject to introduce a bill in Congress to restrict this traffic. Recently, however, Representative Graham, of Illinois, launched such a bill. Much credit is due Mr. W. P. Bolton, of New York City, for his persistent efforts in behalf of this measure. On April 23, 1918, a hearing was given on the bill before the District of Columbia Committee. Among others who appeared in behalf of the bill was Herbert K. Job, representing the National Association. Reports of what took place that day all indicate that the Committee will shortly report the bill for favorable consideration.

Now the question is, will it be possible to get it up for a vote before Congress adjourns. With all the war measures crowded in for attention, there is a possibility that it may be side-tracked until another session of Congress. However, the bill will be pushed if necessary for years until success comes.

THE PENNSYLVANIA PLUMAGE LAW

A letter to "all licensed taxidermists in Pennsylvania," bearing the date of Feb. 17, 1918, has been issued by Dr. Joseph Kalbfus, Secretary of the Pennsylvania Board of Game Commissioners.

In this letter attention is called to a recent change in the laws of that state in reference to the sale of the plumage of wild birds. Under the old law the President of the Board of Game Commissioners had the right, at his discretion, to permit a taxidermist to sell mounted specimens of birds, whether legally or accidentally killed in that state. There was also no law against the sale of feathers of foreign birds, unless belonging to the same family as birds protected in the state. Dr. Kalbfus now serves notice that such sales, either by taxidermists or milliners, are no longer legal.

"The new law," he writes, "forbids the sale of feathers taken from wild birds, with-

out qualification, so that at this time you would have no right to sell, or offer to sell, or have in possession for sale, a Crow, or a Hawk, or a Blue Jay, or a Kingfisher, or any other bird without first securing permission to do so by the President of the Board of Game Commissioners of Pennsylvania, and such permission will not be granted, except in instances where the Commonwealth itself may be benefited, as, for instance, a sale to a public museum, or to public schools, or for educational purposes."

The new law prohibits absolutely the sale of the feathers of all wild birds in Pennsylvania. The contention of Dr. Kalbfus, expressed in a personal letter, that this places Pennsylvania in the lead of all states in the Union in the matter of suppressing the feather traffic, most assuredly is borne out by the facts in the case.

There was a time, before the National Association of Audubon Societies began its campaign to suppress the sale of feathers in Pennsylvania, when this state was a hotbed for the wholesale millinery interests of this country that had been driven out of New York state by the Audubon Law. This was not so many years ago either, and Pennsylvania is certainly to be congratulated on the advanced stand it has taken on the matter of bird protection. No small part of this is due to the long educational work of Dr. Kalbfus, who for nearly two decades has occupied his present position as Executive Officer of the Board of Game Commissioners of Pennsylvania.

Summer Schools for Bird-Study

The Association will cooperate with the following colleges and universities in presenting courses in bird-study during the summer of 1918:

Dr. Eugene Swope, of Cincinnati, Ohio, Field Agent for the Association, will give a four-weeks' course in bird-study at the University of Florida, located at Gainesville.

Dr. J. M. Johnson, of Brooklyn, will conduct a four-weeks' course at the Summer School of the South, Knoxville, Tenn.

Miss Belle Williams, of Columbia, S. C., will have her bird-work at the Winthrop Normal and Industrial College, Rock Hill, S. C., for a month.

Miss Mary Bacon, of Athens, Ga., will give a course in bird-study at the University of Georgia during the summer session, from July 1 to August 3.

Mr. Ralph Hubbard, of Boulder, Col., a member of the faculty of the University of Colorado, will give a course in bird-study again this year.

Mr. Edward Fleischer, of the Brooklyn Institute of Arts and Sciences, will teach bird-study in the Adelphi College, Brooklyn, during the summer session, from July 8 to August 16.

Mr. J. Bowic Fernchough, of Baltimore, will give the bird-course this summer at

the University of Virginia, University P. O., Va.

Game-Law Enforcement in New York

The State Conservation Commission, with headquarters at Albany, during the present administration has been doing a wonderful work in its various lines of service. Particularly may be noted with satisfaction the energetic way in which it is enforcing all the bird and game-protective laws.

Its accomplishments are brought forcefully to the attention of the public each month by the issuance of a bulletin containing a detailed account of all arrests for violation of the conservation laws, with the amount of fines paid where convictions resulted. By examining the one for March, 1918, for example, we find that there were 134 arrests and 127 convictions for the month. The fines paid in these cases amounted to something over \$4,000.

The character of the offenses included illegal killing of deer, Pheasants, song birds, fur-bearing animals, and rabbits. Others were for violating the fish laws. Those who have watched the fight to suppress the traffic in the feathers of wild birds will be interested in learning that the law against the sale of aigrettes is being rigidly enforced. During March there were six arrests for this offense, and convictions resulted in every case.

First State Cat Law

What is believed to be the first state law passed for restricting cats was recently enacted by the New York State Legislature.

The wording of this new statute is as follows:

Cat hunting or killing birds. Any person over the age of twenty-one years, who is the holder of a valid hunting and trapping license, may, and it shall be the duty of a game protector or other peace officer to humanely destroy a cat. At large found hunting or killing any bird protected by law or with a dead bird of any species protected by law in its possession, and no

action for damages shall be maintained for such killing.

"This act shall take effect immediately."

Another Bird Sanctuary

Mr. Frank Bond, of Washington, D. C., who for fifteen years or more has been an active member of the Audubon Society, and who by virtue of his position as Chief Clerk in the General Land Office has been able to exert great influence in the establishment of bird reservations, under date of April 4, 1918, forwarded to this office the following letter:

"I know you will be glad indeed to be advised that yesterday I received a letter from the office of the Engineering Bureau, Chief of the Ordnance, War Department, which stated:

"I am instructed by the Acting Chief of Ordnance to inform you that no hunting of birds or game of any kind is permitted on the United States reservation known as the Aberdeen Proving Ground in Harford County, Maryland.

"The above prohibition on hunting was issued with the idea of accomplishing the results desired to be secured by you."

"Thus, as you will understand, is action taken similar to that which was taken by the Panama Canal Commission. While it does not create a game or bird reservation, strictly speaking, the same purposes are accomplished I think, and we are to be congratulated upon our efforts in this direction."

A New Bird-Fountain

In recognition of the services rendered by our little feathered warriors, the Los Angeles Audubon Society, on April 18, 1918, unveiled and dedicated a handsome bird fountain in the Exposition Park.

Mrs. F. T. Bucknell, president of the Society, in making the presentation to the birds, said: "The little warriors of the air are fighting for us against enemies as ruthless as the Kaiser." Continuing, Mrs. Bucknell said, in part:

"To our birds, divided into great battalions of battle against enemies of the crops, we make the first dedication. This fountain is for the use of the battalion which protects our wheat crops for the boys in France. It is for the battalion

which guards the cotton crop which is used for surgical purposes and for gunwads. It is for the battalion which saves our forests from which we get the lumber to build great ships and air-planes.

"The birds have been officially recognized by the United States Government for their valuable aid to agriculture and horticulture. This fountain is placed here as our personal recognition of their value."

The fountain is made of artificial stone. It is five feet in height, with an octagonal base six feet in diameter. Two Pelicans are so moulded as to form the shaft support for the center basin.

The bowl is three inches deep and twenty-six inches in diameter. Within the bowl, as if just alighting, is an American Bittern with a tiny fish in its beak. The water flows from the mouth of the fish into the bowl and overflows into the octagonal basin, which is three-quarters of an inch deep and raised four inches from the ground.

Bird Day in South Carolina

The following proclamation has been issued by the Governor of South Carolina:

WHEREAS, MAY 5 is a popular day for Bird Day throughout the United States, and

WHEREAS, Science proves that insectivorous birds are the destroyers of noxious weeds and insects that injure our food and textile crops; experience proves that game-birds may be made a valuable adjunct to our food-supply; and sentiment proves that song-birds minister to our happiness, and

WHEREAS, It is especially important that we educate our children and protect our birds in order to foster our resources in time of war:

Now, therefore, I, Richard I. Manning, Governor of South Carolina, do hereby designate Monday, May 6, 1918 (since May 5 falls on Sunday) as Bird Day for the current year in South Carolina, and request the Superintendents and Teachers of the Public Schools of the State to observe said day and to devote it to the formation of Bird Clubs among the children of our schools for the purpose of co-operating with the State Game Department in the protection of these feathered friends of mankind.

Given under my hand and the seal of the State this twenty-first day of April of the year 1918 A. D.

RICHARD I. MANNING,
Governor of South Carolina

"Bobbie in Birdland"

"We have just given with success the play 'Bobbie in Birdland.' Our costumes for this were especially effective. They were made by the Household Arts and Home Economics Department of our

school, and they, together with the bird-notes made by our boys behind the scenes, made the birds seem very real. I wonder if there are not other Audubon Clubs which would like to rent these costumes in presenting the same play. Our town, which had never taken any very great interest in birds before, was thoroughly aroused on the subject. The children are all imitating the birds."

(Signed) Mrs. F. C. Bivins,
Durham, N. C.

NEW LIFE MEMBERS

Enrolled from March 1 to May 1, 1918

Adams, Joseph
Ainsworth, Mrs. H. A.
Bailey, Mrs. Charles
Ball, Miss Susan L.
Battles, Miss C. Elizabeth
Brownson, Mrs. Willard H.
Bushnell, Mrs. Harriet L.
Cate, Mrs. Isaac M.
Cooper, Mrs. Theresa B.
Dantz, Mrs. C. N.
Elaer, Albert C.
Emerson, Mrs. G. D.
Fortmann, Henry F.
Garrett, Mrs. P. C.
Golpeke, Miss A. C.
Golpeke, Miss Marie
Gribbat, Mrs. John
Hamilton, Mrs. H. R.
Hamilton, Mrs. W. P.
Hansen, Miss Emilie L.
Henderson, William
Hubby, Miss Ella F.
Iselin, Mrs. C. Oliver
James, Ellerton
Lauder, Miss E. S.

Loosching, Birchard
Loring, Miss Helen
McCormick, Mrs. R. E.
McKim, LeRoy
Minshall, Miss Helen
Morgan, J. P., Jr.
Mott, Mrs. John B.
Noric, Mrs. F. I. Brossie
Parsons, Mrs. J. D., Jr.
Perkins, Mrs. Gilman H.
Pope, Willard
Powers, Thomas H.
Procter, Mrs. Wm. C.
Rogers, Miss Julia
Sarmiento, Mrs. F. J.
Shepard, Mrs. Elizabeth D.
Short, William
Sloano, Henry T.
Smith, Francis H.
Strong, Mrs. J. R.
Vello, Charles D.
Whiting, Miss Gertrude.

During the same period there were also enrolled 154 new Sustaining Members and 12 new Contributors.

CONTRIBUTORS TO THE EGRET FUND

March 1 to May 1, 1918

Previously acknowledged	\$1,600 65	Brown, T. Hassal	\$10 00
Allen, Miss Edith H.	1 00	Brown and Nicholas Bird Club	10 00
Allen, Miss Mary P.	2 40	Campbell, Donald	3 00
Anonymous	433 00	Chittenden, Mrs. S. B.	2 00
Auchincloss, Mrs. E. S.	5 00	Christian, Miss Susan	10 00
Ayres, Miss Mary A.	5 00	Cohen, Judge William N.	2 00
Balson, Mrs. Caroline W.	1 00	Davis, Miss Lucy B.	3 00
Bainbridge, Mrs. M. H.	5 00	Detroit Bird Protecting Club	3 00
Barnes, R. Magoon	10 00	DeNormandie, James	3 00
Bates, Clifford L.	5 00	District of Columbia Audubon	50 00
Baxter, Miss Lucy W.	5 00	Society	50 00
Bird Lovers' Club (Brooklyn)	2 00	Douglass, Mrs. Charles	5 00
Bliss, Miss Lucy B.	4 00	Durham, J. F.	2 00
Bridge, Mrs. Lidian E.	10 00	Embury, Miss Emma C.	5 00

Ewing, Mrs. H. F.	\$2 00
Fenton, Miss Ida J.	2 00
Flint, Mrs. Alton	1 00
"Friend"	5 00
Gault, B. T.	2 00
Grausch, Miss Josephine	2 00
Gross, A. J.	3 50
Gualter, Mrs. H. L.	4 00
Hager, Donald S.	1 00
Hager, George W.	3 00
Hartkopf, Anton G.	10 00
Hedgeman, Miss Edith M.	3 00
Homesford, Richard S.	10 00
Hunter, Mrs. W. H.	2 00
Hunter, William T., Jr.	1 00
Jackson, P. T., Jr.	25 00
James, Mrs. Walter B.	10 00
Johanson, Mrs. Eldridge R.	10 00
Joiner, Ada L.	2 00
Knowlton, Mrs. Myra R.	10 00
Marshall, Mrs. E. O.	1 00
Milwaukee Downer College Students	15 00
Moore, Robert Thomas	50 00
Murray, J. Irwin, Jr.	1 00
Netherland Society for Protec- tion of Birds	5 00
Ogdenheim, Myron H.	1 00
Parker, Edward L.	50 00
Petty, E. R.	5 00
Phonony, Charles G.	3 00
Porter, Mrs. William M.	5 00
Putnam, Mrs. A. S.	1 00
Randolph, Evan	5 00
Ross, Mrs. James C.	2 50
Reeves, Dr. William C.	10 00
Rick, Master Howard L.	5 00
Robbins, Miss N. P. H.	3 00
Robbins, Mr. and Mrs. R. E.	10 00
Rosse, Mrs. Henry E.	10 00
Rossell, Mrs. William D.	2 00
Savage, A. J.	5 00
Seattle Audubon Society	50 00
Shepard, Mrs. Elizabeth D.	50 00
Stanton, Mrs. T. G.	2 00
Stratton, Miss Mary S.	10 00
Tate, J. M., Jr.	1 00
Tracy, Miss Anna E.	1 00
Vanich, Miss Bernice	1 00
Wadsworth, Mrs. W. Austin	3 00
Whitney, Thomas H.	1 00
Total	\$1,341 25

Letters from Young Bird Students

The class is studying about birds. I will tell you how the bird I am thinking of looks. It is the Chicken Hawk. He is the color of the trees and you cannot see

him very well. He makes a funny noise, and he keeps flying around in a ring by the chicken-coop and comes nearer every time he goes around. I would like to know how you are protecting the birds this year.—**HAROLD WARNER, Cleveland, Ohio.**

We have been studying about birds for three days. I know some winter birds. They are the Hawks, Sparrows, Snowbirds, Crows, Bluebirds, and Doves. I would like to know how you protect the birds in the winter. I have read in the *Press* a story of a Crow, and will now tell it to you.

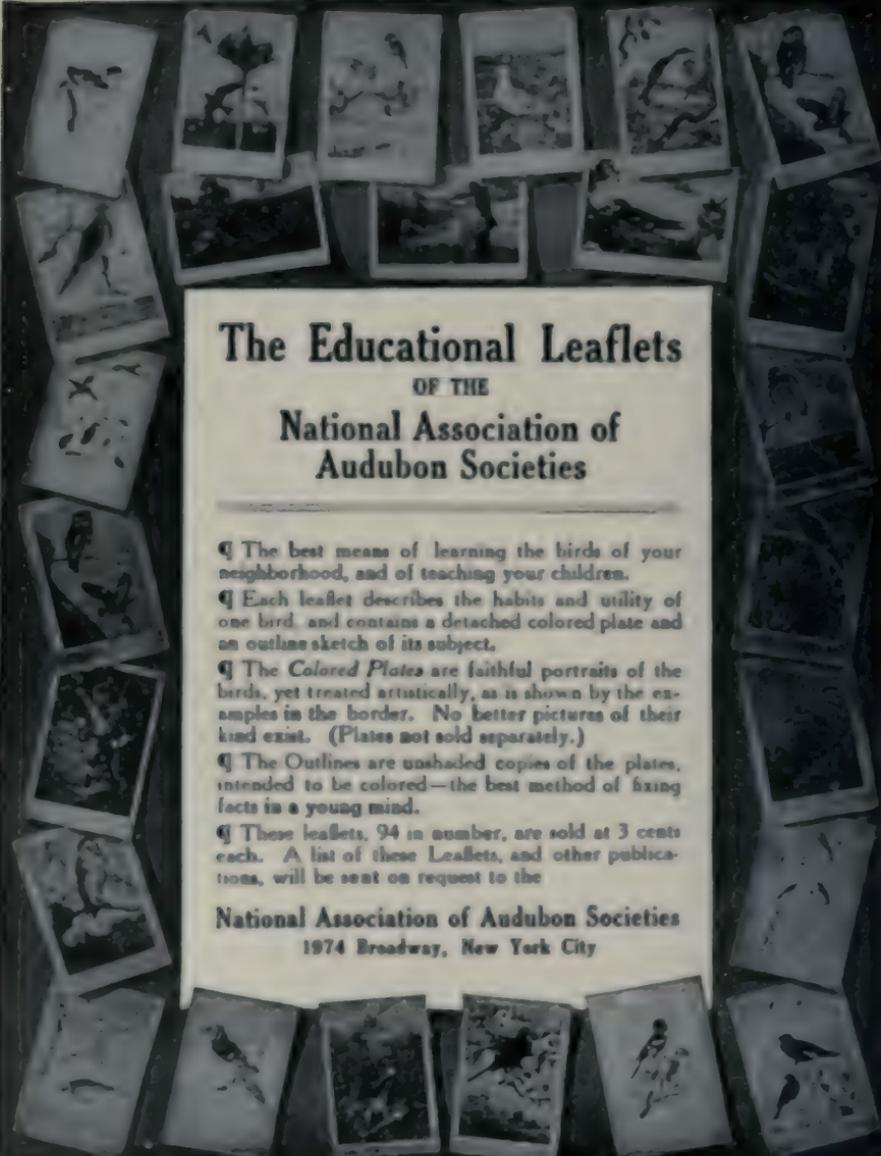
There was a little girl who had a birthday. Her aunts gave her some books, and her father and mother gave her some nice gold beads. Then she was happy when she saw them and she laid them on the table and went out into the barn and while she was there the Crow hid them.—**ELEANOR SMITH, Cleveland, Ohio.**

For the last three days we have been studying about winter birds. I was talking about the Snowbird. Its wings and tail are black and its back is brown. Under its wings is a white patch and it has a red dot on its head. Will you please tell me how you take care of the winter birds? What is the Snowbird fed on? What do the Eagles, Sea Gulls, and Hawks get fed on and when will you have the next bird pictures out?—**RAYMOND HARNER, Cleveland, Ohio.**

Many people think that birds have no love for each other, but they do. Once there were some birds and they were picking something from the ground, but one could not get anything because his bill was crossed and he was the biggest because the other one had fed him so well.

I would like to ask you a few questions about birds. What do you do to protect the birds? What kind have you? We have been studying about birds for three days and I am very much interested in them.—**EDITH A. SCHERLY, Cleveland, Ohio.**

JOIN THIS ASSOCIATION
AND
HELP THE CAUSE OF BIRD-PROTECTION!



The Educational Leaflets
OF THE
**National Association of
Audubon Societies**

¶ The best means of learning the birds of your neighborhood, and of teaching your children.

¶ Each leaflet describes the habits and utility of one bird, and contains a detached colored plate and an outline sketch of its subject.

¶ The *Colored Plates* are faithful portraits of the birds, yet treated artistically, as is shown by the examples in the border. No better pictures of their kind exist. (Plates not sold separately.)

¶ The *Outlines* are unshaded copies of the plates, intended to be colored—the best method of fixing facts in a young mind.

¶ These leaflets, 94 in number, are sold at 3 cents each. A list of these Leaflets, and other publications, will be sent on request to the

National Association of Audubon Societies
1974 Broadway, New York City

SUBSCRIBE TO THE MAGAZINE
BIRD - LORE

COLORED PLATES ONE DOLLAR AND A HALF A YEAR



1. NORTHERN SHRIKE. Adult
2. NORTHERN SHRIKE. Young
3. LOGGERHEAD SHRIKE
(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. XX

JULY—AUGUST, 1918

No. 4

Notes on the Nesting of the Nashville Warbler

By H. E. TUTTLE, Lake Forest, Ill.

With photographs by the Author

IT WAS mid-June at Lake Forest, Ill., and a heaviness hung in the air laden with the sweetness of the clover fields. My bird-season was drawing to a close. I was strolling along a steep side hill, where birches and azalea bushes made the walking difficult when, from between my feet, there fluttered forth a little green bird which flew swiftly into the tops of the birches and disappeared without a note of protest. To make assurance doubly sure I looked for a nest and presently found it—a grassy cup set in a bit of moss under a bunch of drifted leaves and crisp twigs. Wintergreen leaves and the withered ends of the spring's arbutus carpeted the immediate surroundings. So well hidden was it that I had to remove the roof of dead leaves, better to take my pictures.

When the five eggs had hatched, I returned with an umbrella tent which I set up within a yard of the nest and inside of which I installed my camera. Even as I did so I had my second glimpse of the bird and knew it for the Nashville Warbler. Leaving the tent to convince her by its lifelessness of the innocency of my intentions, I wandered down the side hill to an open glade where the Towhee nested under the dead bracken, and the Indigo Bunting among the young sprouts, and where the tiresome lay of the Chestnut-sided Warbler rose like a fountain day and night. An hour later I revisited the blind and discovered the Nashville quietly brooding. Slipping under its fat side, I was soon inserting a plate-holder, and shortly after took a ten-second exposure of the bird. I made other exposures of equal length, and in only one out of four did she move, and this was because a young bird underneath tried to change its position. A lazy little song from the birch tops, which caused the little green bird on the nest to jerk her head up quickly and fly away, led me to believe that Nashville *père* was not overmuch interested in his growing family.

In a few moments his better half was back with a bunch of green cater-

pillars, all cut into short lengths—or so they seemed—and delivered them to the open mouths that greeted her. The shutter clicked, but she no longer minded that, for as an extra precaution I had clicked the shutter incessantly



"THE NASHVILLE QUIETLY BROODING"

until she ceased to jump at the sound, before I had inserted the first plate-holder. Of course there were lots of failures—plates were fogged, the Nashville moved too quickly, or the light was poor—but there were good pictures, too, a reward for sitting hunched up under an umbrella with one knee crooked

about a sapling in order to stay on the hillside and endure in silence the friendly ants which crawled down the back of my neck, not to speak of mosquitos whose number was legion. The nest was in deep shadow during the greater part of the day, and, in consequence, I attempted slow exposures when the bird brooded and, of necessity, faster shots when she stood on the edge of the



"DELIVERED THEM TO THE OPEN MOUTHS THAT GREETED HER"

nest or fed the young. Once the sun struck so full on the small birds that I had to erect a little sunshade of dry leaves to shield them from the heat.

The Warblers (for though I could not identify him positively, I am sure the male must have shared in providing the larder) delivered food on an average of every three and a quarter minutes, with an occasional interval of five minutes or longer. The nest was cleaned every third or fourth trip. I find only one unusual habit scribbled into my field notebook, "Sometimes the

bird pokes its bill deep into the grasses of the nest's bottom, poking and showing hard against the lining until I can plainly hear the impact." The Nashville's chestnut crown, so prominent in the descriptions of the bird-books, is a more or less concealed patch, like the Kingbird's, or perhaps the male alone shows it to advantage and I was wrong in supposing that he shared in the domestic duties. I never saw a real touch of brown, or even a suggestion of it, except once, and then before I could make sure the bird had flown, this, too, although my observations were made at a distance of twelve inches. The Nashville was not an expert at broken winged tactics when driven from the nest, but soon desisted and flew into a nearby bush, where she lisped a monotonous protest. There were few disturbances in the bird-life of the birch hillside. Once, at a most awful outcry among the denizens of the open glade, I lifted the tent flap, whereat a big Red-shouldered Hawk vaulted upward from a low birch tree and left for fresh woods and pastures new.

I used the blind at intervals during three days, and then, having secured as many pictures as I wanted, I picked up my tent and wandered out of the birch thickets into the dusty road. The nesting season was over as far as I was concerned, and, in spite of the mosquitos and exploring ants, I was sorry. But before many days I paid a farewell visit to the Nashvilles. Where the azaleas gave way before the ranks of the white birches, there was desolation wrought. Whether a stray cat, curiously following the trail of a man, had in the stillness of the nighttime scooped Nashville mother and half-fledged young from the depths of their grassy nest, only the birch trees know.



THE BLUE JAY'S WHEATLESS DAY
Photographed by Ansel B. Miller, Springs, Pa.

How I Mothered a Pair of Hummingbirds

By P. GREGORY CARTLIDGE. Oregon City, Ore.

THE trees, shrubs, and vines about my Oregon home grow in such profusion that many species of wild birds have chosen my garden for their domain. This not only affords me the pleasure of studying them, but the opportunity to protect them and otherwise to advance their welfare.

One lovely afternoon in June, as I sat sewing at my open window, enjoying the fragrance from the rose-garden and the contented twitter of fledglings, suddenly the 'S.O.S.' of bird distress sounded from a nest near me in the honeysuckle vine on the porch. I looked cautiously about, to see if some prowler could be annoying, but saw none; hence I attributed the incessant squeaks (I know of no better word for the noise) to baby-bird hunger and went to another part of the house where the distressing cries were inaudible, to remain until their impatient wants were satisfied.

But it was not long until I returned to my delightful window and found the cries even more nerve-racking than before. Something was wrong, but what? I went out on the lawn and stood peering up at the nest, when suddenly a wee mite of a dark something tumbled to the ground near me. I tenderly lifted it and held it in the palm of my hand. It was a tiny Hummingbird, no larger than a bumblebee—just a wee little somber bit of life that I might easily crush between my fingers.

The warmth of my hand soothed but did not quiet it, and with a feeling of helplessness I climbed to the nest to replace it, and there another little mite, hardly as large nor as strong as the one that had fallen, but with squeaking abilities second to none, peered up at me and opened its tiny beak so very wide I knew it must be ravenously hungry. But where was the mother? What could be keeping her away from her nestlings?

It did not occur to me until some time later that perhaps I could feed the birds—I was willing to attempt anything to stop the noise. Knowing that they liked nectar, I thinned some honey with water and was ready to begin. Never had I seen so small a beak before. I was not a little puzzled to know how to feed them. After some strenuous moments spent in experimenting, from which the birds emerged wet and sticky, I was on the verge of giving up in despair, when I chanced to spy some toothpicks. They more nearly resembled the mother's beak than anything I had yet tried, so I made a final attempt with them. The result was pleasing indeed.

What a feast that meal was! Surely the birds had never been so hungry before! When they were both thoroughly satisfied I replaced them in the nest, hoping the little mother had not returned in the meantime and, finding them gone, needlessly suffered the pangs of bereaved motherhood.

For awhile the birds were content, but not long. Then I did not know what was best to do. The shadows were lengthening on the lawn, and the breeze

that had been so soft all afternoon was wafting the chill from the far-off snow-clad peaks. Something surely had happened to the mother. Never had she neglected them before.

I then tried to run away from the cries of the birds, as I had done before, but I found myself listening anxiously—the farther away I got the more intently I listened. At last I realized that I could not leave them so, and returned to the nest and fed them again. But I earnestly hoped that the mother would appear before feeding-time again came round. How vain was that hope—she had gone on her last errand of love!

Twilight was falling fast as I went into the rose-garden for flowers, and, passing a climber that had fallen on one of my choice shrubs, I again attempted what I had failed to accomplish that morning—to tie the rose up to the pergola. I had worked but a few moments when I found the explanation for the neglect of the wee bird babies. There, entangled in the string, was the mother bird, a sacrifice to mother love! She had come to the sweet-flowering shrub to get nectar for her precious little ones, her buzzing wings had tangled in the string, and her little body was cold and rigid.

Just at dusk I loosed the moorings of the small but beautifully made nest on the porch, and took the little ones into my home. But just what to do with them was perplexing. I sought my books and turned to the chapter on Oregon birds. But it told me nothing of the fine art of mothering such delicately organized life.

At length, left to my own initiative, after feeding, I placed them in the nest on the mantle in the study, and covered them with softest cotton. There they would be safe, if they lived—but would they live?

Very early the next morning I hastened to the nest, expecting to find two lifeless forms. Carefully I lifted the cotton, and beheld two wide-open beaks greeting me and sending in a hurry call for breakfast.

This was the first order, and it was by no means the last. I cannot count the many meals they had that day. They averaged one about every fifteen minutes until darkness fell. The imperative way they had of announcing the lunch period was not to be disregarded. And what appetites they had! So greedy were they that neither would wait for the other to be fed, so I was compelled to take both of them in the palm of my hand and alternate the doses until each was satisfied.

But honey became an expensive diet, and someone suggested that brown sugar was good enough "for those ugly bugs." So I tried sugar and water, and, to my surprise, they liked it better than honey.

As the weeks passed, the meals became less frequent but greater quantities were required. The birds began to develop rapidly, and the little nest soon became too small. Then I gave them a new home—a shoe-box filled with cotton—and they were as happy in their new quarters as birds could be.

By this time they began to be very interesting. They would stretch their

little necks and eye me from a dozen different angles; at other times they would snuggle down in the cotton and go to sleep. But when they surveyed me, I studied them. One discovery made at such a time startled me extremely. Holding them to the light to enjoy their coloring, I noticed, for the first time, that their little bodies were translucent—I could see into them, if not entirely through them. The sunlight X-rayed them, making the fragile bone-structure visible.

They were very active now and, in exercising their little wings, learned to make a tremendous humming noise, which warned me that they needed a cage. I made one, some 6 feet square, of ordinary wire window-screening, not at all ornamental but excellent for them; and, by the end of the first six weeks, they frolicked to the limits of their little world.

The days as they came and went found my chief delight in these birds, so when two months had passed—busy, busy months in which my attention had been so centered that duties in other directions had suffered—I determined to devote less time to them. By making little grooves in beeswax and filling them with sweets, I tried to teach them to care for themselves. But it was a mistake; they would not touch it. Gathering deep flowers, honeysuckles and the like, I hoped further to entice them, but this, too, was a failure. Having provided for them in this manner, I often left them for an afternoon, in an effort to teach them self-reliance. But on my return, the first step on the porch told of their utter dependence on me, for I could hear their insistent demands for refreshments. Although my needlework, music, and household cares were neglected in my desire to raise these helpless little creatures, I did not begrudge the time devoted to them; I enjoyed the experience in a way I cannot relate.

It was interesting to watch the birds develop. The larger of the two became a most beautiful bird. As he dashed wildly to the corner of the cage and hovered momentarily over some flower I had placed there, vibrating his wings rapidly, he seemed to diffuse an iridescent glow; becoming calm, his little body radiated soft coppery tones with each quiet movement. The smaller bird was not so bold in her coloring or conduct; she was by nature modest and retiring. Although somber and delicate, she was, perhaps, as beautiful.

When they had been three months in my home, they seemed fully developed, and I thought how happy they would be if free, for their wild tendencies had never been tamed though I cared for them so constantly. True, I found them submissive at feeding-time, but when hunger was appeased I became a strange monster, and when allowed a flight through the rooms, feeding-time must come again to recapture them. Was it right, I asked myself, to imprison these little creatures, now mature, when they could provide for themselves—if they ever could.

Having made up my mind, I chose a beautiful day in September in which to free them, a splendid time in western Oregon, for flowers still bloom and nectar is still plentiful. I chose the morning, for many hours would pass before

twilight fell, and, if in need of help after their first view of the world, perhaps they would come home to me.

And so the last little meal of which they partook from my hands was a very ceremonial affair. Often I paused for a loving caress and told them of the big strange world they would soon enter and how very much I should miss them. Little Dick seemed to sense what I said, and I fancied looked alert and eager for the adventure awaiting him. His little companion seemed thoughtful, anticipating imaginary troubles ahead. Did she shudder at the contact with the world? Did she long to stay with me? Was she thinking this little home good enough for her?

At last, the impressive meal over, I partially enclosed them in my hands and went to the rose garden—down to the very shrubs where the mother had last sought sweets. With joy I noted them as perfect, as beautiful as she was. Then musing, "Farewell, little friends, you have a mission in life as well as I; my usefulness to you is past," I tossed them lightly to the pergola, and simply said, "Go!"

Scarcely realizing their new strange freedom they nestled for a moment on the sweet climber, then, with a wild humming sound as he dashed to the right and the left to get his bearings, Dick disappeared. I never saw him again. Then, suddenly, the little female followed, and when she too was gone, I waited anxiously an hour or more for their return. Never had I listened more intently to the sounds of the air, but there was no message for me.

Feeding-time came and went; the second one came—and, oh joy! with it came the call! Quickly I ran into the yard and found that the little one had come home. Perched on the clothes-line, pitifully crying, I found her. And when I raised my open hands, she fairly fell into them and nestled contentedly once again. How lovingly I held her! And what a big feast I gave her! Then, reluctantly, but hopefully, I again opened my hands to the heavens, and this time she dashed happily away to the mysteries of her own little world.



The Black-billed Cuckoo

By C. W. LEISTER, Ithaca, N. Y.

With photographs by the Author

THE Cuckoo is a bird of mystery. He glides from place to place through the trees with an ease and quietness that is uncanny. Along with this unbirdlike characteristic, he is a ventriloquist. Often you hear his repeated *kuk-kuk, kuk-kuk*, but it is very difficult to tell how far away or in what direction to find him.

Sitting on a branch, he moves his head slowly from side to side; his sharp eye soon sees the caterpillar eating the leaves. There is a quick bob of his beak, and the caterpillar disappears down his throat, with a gleam in his reddish eye, and the Cuckoo is ready for another victim. Always hungry, and with caterpillars forming the principal part of his diet (the more hairy they are the better he seems to like them), he is one of the most valuable birds we have.

Unlike the European representative of the family, it is not customary for the American Cuckoo to lay eggs in the nests of other birds, but they have been known to lay in other Cuckoos' nests, and, very rarely, they have parasitized other birds. Due to this parasitic habit, so widely mentioned, the Cuckoo is well known throughout the country and for some peculiar reason, probably that he is supposed to utter his call-notes before a storm, he is commonly called 'Rain-Crow' or 'Rain Dove.'

I was eager to study this interesting bird, so, when I found a nest of the Black-billed species in a small clump of wild cherry and young elm trees, I resolved to watch the nest and take some photographs.

The nest contained three dull bluish eggs, and the female had been incubating them for they were quite warm. But she had doubtless heard my approach and quietly slipped from the nest. The next day a make-believe camera, made up of three sticks and an old oil can, was set up nearby, so that



YOUNG BLACK-BILLED CUCKOO

The *quillo-oh-oh-oh* remains silent until the bird is nearly ready to leave the nest, then opens within a few hours.

the old bird would get accustomed to it and not notice the camera that was to be substituted later on.

In a few days all the eggs had hatched. The young grew rapidly on their diet of tent caterpillars, and several photographs were taken of the adults feeding them. When the old bird returned to the nest and found me nearby, she would fluff out her feathers, droop her wings, and flutter around through the branches, appearing three times her normal size and *kuck-kucking* her alarm all the while.

Young Cuckoos are peculiar-looking little fellows, for instead of their feathers growing out gradually, as is the case with other birds, they grow out enclosed in a quill-like sheath. After a time these sheaths break open, and in a few hours the young bird is fully feathered. I wanted very much to watch this process but was disappointed, for when the young were almost old enough to change, they seemed to get the wanderlust and would not stay in the nest. They scrambled to the edge, hung there for a time, and finally dropped to the ground. One was more precocious than the other two and caused the most trouble. I found him under the nest several times by following up his call. I took a picture of him in his suit of quills and placed him back in the nest. When I came back the next day it was empty.

The young also have peculiar spots in the roof of the mouth. These disappear after a time, and no one knows whether or not they are connected with some body function.



BLACK-BILLED CUCKOO FEEDING YOUNG

Note the apparent pattern of marking occasioned by the sunlight and shadow

Bird Walks

By CHARLES B. FLOYD, President of the Brookline Bird Club, Brookline, Mass.

AMONG the most successful and popular activities of the Brookline Bird Club are the frequent afternoon walks in the field. They were first undertaken to interest the members and to teach them where to find birds and how to study and identify them. During the spring, autumn, and winter these walks have been conducted every Saturday afternoon, and during the height of the migration in May, twice a week, for several years past. They give an opportunity for the bird student, whether he knows much or little about birds, to observe them in the open and to impart or to receive knowledge of bird ways.

Besides these afternoon walks, all-day trips are planned for holidays to more distant places, as Ipswich, Mount Greylock, and Cape Ann. Members of the Club who are interested in flowers, trees, ferns, mosses, or other branches of nature study are sure to find congenial company on these excursions and much to study besides birds.

A small committee is appointed each year by the president to arrange a schedule of walks. This committee selects the leaders and arranges all the details relating to the meeting-points, transportation, probable expense, and whether or not a supper shall be taken, and a printed notice covering these details is sent each member every three months. In making up such a schedule the committee considers the possibilities of each location at the particular time chosen and also what birds in all likelihood may be found and what the walking conditions may be. If possible, the walk is so planned that if any of the members wish to leave before the tramp is completed they will find themselves within reasonable distance of a car-line.

A leader is selected who is thoroughly familiar with the territory over which the walk is to extend and who has a good knowledge of the favorite haunts where particular birds may be expected. While the leader cannot, of course, guarantee the presence of any special bird at a certain time and place, much of the success of the walk depends upon him, and he should have the cooperation of all those who accompany him. The functions of the leader are to select the exact ground to be covered, keep the party together, identify, if possible, whatever is seen, and to make sure that everyone observes the birds that are found during the trip. He should also keep a record of the birds seen and of everything of interest in connection with their observation.

People have various ways of searching for birds in the field. Some prefer to select a likely spot and wait for whatever Fortune may send along. Others walk along, quietly following up whatever birds are flushed or heard singing. It requires some tact on the part of the leader to keep the trampers from advancing too fast while others are loitering needlessly, and he must be alert to restrain any over-eagerness of this nature. All should have an opportunity to see the

birds found and have their field-marks and distinguishing characteristics pointed out if they do not already know them. Slow, quiet walking, no quick movements, modulated voices, eyes and ears alert, are the instructions that should be given before the start. Formality should be done away with, and the opportunity taken for self-introduction and acquaintance-making among the members on the walks.

Having noted how the schedule is prepared and the duties of the leader, let us now refer to the bulletins for a sample year and see how the program is worked out. We will begin with the walks in quest of winter birds, both residents and visitors.

For the winter water-birds like the Scoters, Old-Squaw, Bufflehead, Goldeneye and Scap Ducks, Red-breasted Mergansers, Loons and Grebes, Squantum, Devereaux, Nahant, Lynn, or the beach at Swampscott furnish a wide range of possibilities. Here, too, the Snow Bunting and Horned Lark may be found, and perhaps some of the rarer winter visitors like the Iceland Gull, Dovekie, Murre, Red-throated Loon, or Purple Sandpiper. There is always the chance, too, that even rarer birds will appear, which adds zest to the hunt though wintry winds sweep in over the ocean. When, perchance, a Kumlien's Gull, Snowy Owl, Rough-legged Hawk, or Goshawk is seen, the bowl of happiness runs over.

For the winter land-birds one walk may be as good as another, though thickets of berry-bearing trees and shrubs offer the greatest attraction. The red cedars, sumac, bayberries, box elder and hawthorns each have their devotees, attracting the Evening and Pine Grosbeaks, Siskins, Redpolls, and Waxwings, while the stubble-fields and weed-patches draw Sparrows, Juncos, and Goldfinches. The common insect-eating birds—Chickadees, Creepers, Golden-crowned Kinglet, Hairy and Downy Woodpeckers—are to be found in every favorable place, but there is always the possibility of finding a Shrike, a rare Hawk, a Winter Wren or Mockingbird, or even an Acadian Chickadee or Orange-crowned Warbler. A list of the summer birds that have occasionally wintered here is interesting, including besides the Robins, Meadowlarks, Song Sparrows and Bluebirds, Bronzed Grackles, Hermit Thrushes, Brown Creepers and Baltimore Orioles.

When the spring walks are planned, they are arranged with the dates of various arrivals in mind so that the migrants may be found before they pass along on their northward journey. Since they remain longer in some places than in others on their migration, and since the weather may retard or hasten them, some of the rarer ones may be missed entirely. Walks near small streams that are well bordered with underbush, or near marshy land where the sun can beat down and arouse the insects as well as warm the air, will be found to contain more birds than the exposed locations. Walks are taken at this season to Arlington, Belmont, Wellesley, and the Felsway. When May arrives with its rush of Warblers, few better places can be found than the Parkway, and,

strange as it may seem, the Public Garden in Boston. In the Garden alone splendid lists of birds are made each year, including a number of the rarer species that drop in during the night to rest and feed for a few days.

In the Parkway near Longwood is a sheltered spot where a few large red oaks grow, and, nearby, hawthorns and other small trees with a profusion of shrubbery. The Warblers seem to be especially attracted to this spot. Apparently, the swelling buds exude a sap that attracts the insects, and they in turn make easy foraging for the northbound Warblers. Standing here in an open spot last spring, Cape May, Tennessee, Nashville, Blackburnian and Bay-breasted Warblers were in sight at one time, while most of the commoner species, including the Water-Thrush, were in the immediate vicinity. When such a favorable locality is discovered it is well to approach it quietly and then remain in one place and identify the birds as they pass.

To see certain species that are only found locally or in favored spots it is, of course, necessary to take special walks, and trips have been made in search of Golden-winged Warblers, Prairie Warblers, Prairie Horned Larks, Crested Flycatchers, Chats, and Orchard Orioles.

When the weather is sufficiently warm, suppers are carried so that more time may be spent in the field and an early start for home will not be necessary. The evening songs of many birds can be enjoyed while the party stops to rest and eat supper and to wait for the nocturnal birds—the Whip-poor-will, Nighthawk, Woodcock, and Owls. A marsh haunted by Bitterns, Great Blue, Little Green and Night Herons, Rails, Gallinules, or Marsh Wrens, is an interesting place at this time, for their activities are greatest at dusk.

During June, July, and August, when the nesting season is in full sway, fewer songs will be heard, and at this time, too, many of the club members are away. This is the season for acquiring an insight into the family cares and problems of the birds, and much of interest and profit can be learned. But great care should be used at all times in approaching nesting birds, that they may not be frightened from their eggs or young.

August brings us to the beaches for the first of the returning migrants, the shorebirds or waders. Although the spring is the best time to look for the Plovers, Sandpipers, and other waders, as they, like the land birds, are then in the adult breeding plumage, without the confusing coloring of the immature birds to puzzle the observer, more varieties of shorebirds are to be seen in August and September. The weather, too, is cooler along the beaches than in the woods or open fields, and it is more comfortable for tramping. Duxbury, Marshfield, Ipswich, and Nahant beaches may furnish surprises at this time.

October and November with their clear, cold nights bring great waves of returning migrants and splendid, comfortable walks can be enjoyed. A special watch should be kept for those birds which only make their appearance during the fall migration, using another route during the long spring journey. Connecticut and Orange-crowned Warblers, Pipits, Longspurs, and Ipswich Spar-

rows may be found, and a study of the call-notes of the migrating birds at night is of great interest. At this season, too, the ponds are visited for the freshwater Ducks, and Jamaica, Fresh, and Spy Ponds and the Chestnut Hill Reservoir are eagerly scanned for Teal, Mallard, Black, Pintail, Red-head, Baldpate, Ruddy and Wood Ducks, Coot, and Mergansers, and occasionally even a Canvasback, Shoveller, or Ringneck is revealed. Even after the ponds are mostly frozen over, some of the Ducks remain in the small open spaces and may then be observed at very close range and even photographed.

With the final freezing of these ponds the last of the migrants leave for the south, and only the winter residents are left behind with which to begin another year of bird-study. But each year brings new names to the list of birds and new facts concerning the old familiar friends, and so the interest never wanes though seasons change.

Spotted Sandpiper Colonies

By J. W. LIPPINCOTT, Camden, N. J.

With a photograph by the Author

THAT the Spotted Sandpiper sometimes associates with others of its kind and may be found breeding in a restricted area, is an established fact, but I believe, however, that this habit is the exception rather than the rule with these birds.

In the spring of 1913, I discovered Spotted Sandpipers nesting in colonies in two widely different localities: one in the city limits of Camden, N. J., the other in the wilds of Pike County, Pa.

There lies in the city mentioned a piece of marshland, about 20 acres in extent, which has defied the encroachments of the contractor and builder. Though surrounded on all sides by city improvements, this low meadow probably presents about the same appearance it did fifty years ago. A tidal ditch, an extensive mud-flat, on which for some reason vegetation does not grow, and a slight elevation, sparsely grown with weeds, and comparatively dry, are some of the features which make it an ideal spot for the Spotted Sandpiper.

A short time after the birds arrived this spring, they seemed to develop a particular liking for the elevated portion of the marsh, and whenever this spot was invaded, several Sandpipers flew up from the weeds and, with shrill pipings, circled off to the flat. Suspecting that they were nesting, I made a careful search of the surroundings, but failed to locate any nests until the last week in May, at which time incubation had already commenced.

After locating the first nest, I discovered three others within a week, and later on two more. Five of the nests were located within a space of one-fourth acre, placed among weeds of rather a scattered growth. The other nest was built in a thick growth of short grass and was the best constructed

nest of any observed, probably because of the abundant nesting material near at hand. All nests appeared to be composed of material, scraped together, lying in the immediate vicinity of the nest. If in the weeds, the nest was built of old weed-stalks, if in the grass, dried grass became the nesting material. After the young left a nest, the first rain completely obliterated all signs of it, and the site could only be located by the mark which had been placed by it. The first young were seen out of the nest the second week in June, and I continued to see young birds in various stages of growth until July 15, at which



NEST OF SPOTTED SANDPIPER WITH ADDLED EGG AND TWO YOUNG

The egg led to the discovery of the young which were not seen until I bent over to examine the egg.

time I saw the last young bird, which was unable to fly, running about on the mud flat, the favorite feeding-ground for all the birds. The Sandpipers continued to occupy the marsh until the middle of August, when they all suddenly deserted it.

It is interesting to note that, with one exception, every clutch of eggs hatched. This set of eggs was apparently deserted because of the dampness of the site chosen. This, I think, is a very good percentage for the vicinity of a city, where nest tragedies are the rule. Of course, I am unable to tell just how many young were destroyed after they left the nest, but I observed quite a number of young birds after they were able to fly.

The third week in June I spent in Pike County, Pennsylvania, and while there discovered the other colony of Sandpipers mentioned. It was located on what was once the bottom of a lumberman's 'splash dam pond'. The water had been drawn off early in the spring, leaving the ground littered with dead trees, sticks, and other refuse. Here the Sandpipers made no pretense of nest-building, simply placing their eggs in a hollow among the sticks. During my short stay I located three families in different stages of development, the young of one family being almost ready to fly. I think that there were at least a dozen pairs of birds occupying this locality, but lack of time prevented me from any very careful search for nests. Strange to say, the young birds seemed to be just as far advanced as the young of the Camden colony, although the season is much later (about two weeks) in the mountains.

Two localities could hardly present a wider difference in appearance. Over one blows the breath of the city, laden with smoke and nauseating odors from neighboring chemical plants, over the other blows the breath of the hills, permeated with the ozone and the fragrance of the woods. This interesting little Sandpiper, however, seems to be content whether he is teetering about on the banks of a sluggish drainage-ditch or flitting from stone to stone in the bed of a rushing mountain stream. A safe breeding place and plentiful food-supply are the important factors in his choice of a nesting-site.





NIGHTHAWK FLUTTERING AWAY FROM NEST ON THE ROOF OF THE BELL TELEPHONE BUILDING, HARRISBURG, PA.

The Migration of North American Birds

SECOND SERIES

V. THE SHRIKES

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

(See Frontispiece)

NORTHERN SHRIKE

The Northern Shrike (*Lanius borealis*) breeds in Canada, north to northern Ungava (Quebec), southern Keewatin, northern Mackenzie, and northwestern Alaska; south to southern Alaska, central Saskatchewan, southern Ontario, and southern Quebec. In the United States it is only a winter visitor, ranging as far south as Virginia, Kentucky, Texas, New Mexico, Arizona, and central California.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Godbout, Quebec	2	April 15	April 4, 1880
Carlton House, Sask			April 23, 1887
Fort Liard, Mack			April 4, 1888
Fort Resolution, Mack			April 24, 1868
Fort Simpson, Mack	2	April 22	April 16, 1904

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Waverly, W. Va.	2	February 6	March 20, 1884
Washington, D. C.			February 10, 1887
Easton, Pa.	2	April 4	April 14, 1888
Morristown, N. J.	6	February 27	March 14, 1884
New York City, N. Y.			March 19, 1888
New Haven, Conn.	5	March 20	April 18, 1881
Portland, Conn.			April 4, 1872
Providence, R. I.	5	March 20	April 23, 1887
Boston, Mass.	15	March 17	April 8, 1871
Tilton, N. H.			April 1, 1885
Ellsworth, Maine	3	April 10	April 15, 1871
Scotch Lake, N. B.	4	April 1	April 15, 1874
St. Joseph, Mo.			April 7, 1888
Chicago, Ill.	10	March 15	April 6, 1866
Charle, Ohio			April 2, 1890
Detroit, Mich.	7	April 14	March 17, 1881
Ottawa, Ont.			April 18, 1887
Kodiak, Iowa	1	March 10	April 2, 1899
Grinnell, Iowa	6	March 23	March 11, 1882
La Crosse, Wis.	2	March 20	March 11, 1881
Lanesboro, Minn.	5	March 25	March 11, 1881
Fort Snelling, Minn.			April 24, 1861
Omaha, Kans.	6	March 12	April 19, 1881
Falls City, Neb.	3	March 13	March 25, 1888
Vermilion, S. D.	2	March 20	March 28, 1888

SPRING MIGRATION, continued

LOCALITY	Number of years recorded	Average date of last one observed	Latest date of last one observed
Las Vegas, N. M.			February 7, 1902
Fort Whipple, Ariz.			February 6, 1865
Boulder, Colo.	2	March 15	March 10, 1910
Camp Floyd, Utah			March 18, 1859
Fort Bridger, Wyo.			April 6, 1858
Bismarck, Mont.	3	March 30	April 3, 1912
Canyon City, Nev.			March 25, 1868
Oranogan Landing, B. C.	6	April 11	April 20, 1912

FALL MIGRATION

LOCALITY	Number of years recorded	Average date of last one observed	Latest date of last one observed
Fort Simpson, Mack.			November 5, 1903
Fort Resolution, Mack.			October 9, 1859
Montreal, Quebec	5	November 10	December 2, 1866
South Lake, N. B.	8	October 26	October 3, 1913
Ellsworth, Maine			September 17, 1913
Phillips, Maine	5	November 11	October 19, 1900
Durham, N. H.	2	November 7	November 4, 1900
St. Johnsbury, Vt.			November 11, 1912
Harvard, Mass.	5	November 14	October 22, 1913
Black Island, R. I.	3	November 7	November 3, 1913
Hartford, Conn.	7	October 29	October 20, 1906
Geneva, N. Y.	5	November 10	November 1, 1900
Morristown, N. J.	7	November 15	October 29, 1902
Erie, Pa.			September 21, 1892
Emporium, Pa.	10	November 10	October 24, 1912
Washington, D. C.	4	October 31	October 1, 1891
Water Sulphur Springs, W. Va.			November 4, 1887
Masson Hill, Va.			November 11, 1887
Flower Mills, Ont.	3	November 5	October 19, 1888
Indrust, Mich.			November 1, 1901
Oberlin, Ohio	8	November 29	November 8, 1891
Waukegan, Ind.	3	November 21	November 1, 1887
Chicago, Ill.	7	November 9	October 12, 1906
St. Louis, Mo.			November 2, 1906
La Crosse, Wis.			October 18, 1901
Missoula, Mont.			November 2, 1905
Grinnell, Iowa	6	October 29	October 18, 1886
Kankakee, Iowa	9	November 9	October 23, 1900
Amos, Mass.	16	October 9	October 1, 1902
Fort Pierre, S. D.			October 21, 1855
Lincoln, Neb.			October 27, 1900
Omaha, Kans.	11	November 3	October 13, 1893
Bismarck, Mont.	4	October 27	October 19, 1912
Fort Hall, Idaho			October 12, 1872
Henry's Fork, Green River, Utah			October 2, 1870
Boulder, Colo.	3	October 29	October 21, 1912
Las Vegas, N. M.			December 22, 1884
Oranogan Landing, B. C.	6	October 1	September 19, 1908
Shulwater Bay, Wash.			November 18, 1894
Canyon City, Nev.			November 5, 1881

LOGGERHEAD SHRIKE

The Loggerhead Shrike (*Lanius ludovicianus*) as a species occupies practically all of the United States and Mexico and southern Canada. It separates, however, into six subspecies, all but one of which occur in North America. This one, the Mexican Shrike (*Lanius ludovicianus mexicanus*) is confined to Mexico. The distribution of the North American forms is as follows:

The Southern Loggerhead Shrike (*Lanius ludovicianus ludovicianus*) is resident in the southeastern United States and breeds north to eastern North Carolina, northern South Carolina, central Georgia, central Alabama, central Mississippi, and northern Louisiana; west to Louisiana; and south to the coast of the Gulf of Mexico and to Florida.

The Migrant Shrike (*Lanius ludovicianus migrans*) breeds in the northeastern United States and southeastern Canada, north to New Brunswick, Prince Edward Island, southern Quebec, southern Ontario, Michigan, Wisconsin, and Minnesota; west to Iowa, eastern Kansas, and eastern Oklahoma, south to Arkansas, western Tennessee, Kentucky, western North Carolina, and southern Virginia, and east to Virginia, Maine, and New Brunswick. It winters south to the Gulf States, west to Texas.

The White-rumped Shrike (*Lanius ludovicianus excubitorides*) breeds in central western North America, north to southern Manitoba, central Saskatchewan, and central Alberta; west to Alberta, Montana, southeastern Oregon, Nevada, northeastern and southeastern California; south to Tepic and Durango in Mexico, and east to central Texas, central Oklahoma, central Kansas, North Dakota, and South Dakota. It winters south over all Mexico to the Isthmus of Tehuantepec in the state of Oaxaca.

The California Shrike (*Lanius ludovicianus gambeli*) breeds in the Pacific Coast region, north to southern British Columbia, south to northern Lower California, and east to central eastern California, central Oregon, and Washington. It winters south to southern Lower California and through western Mexico to the state of Morelos.

The Island Shrike (*Lanius ludovicianus anthonyi*) is resident on the Santa Barbara Islands in California and on Santa Margarita Island, Lower California.

Only three of these subspecies are migratory, and these three in spring, autumn, and winter become so intermingled with other races or with each other that it is often difficult to separate their migration notes. In the following tabular arrangement records of the White-rumped Shrike are marked with an asterisk (*); those of the California Shrike with a dagger (†); and all the others refer to the Migrant Shrike.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Portland, Conn.			April 11, 1900
Auburn, N. Y.	5	April 2	March 18, 1884
Syracuse, N. Y.	7	April 1	March 24, 1886
Rutland, Vt.	4	April 3	March 24, 1907
Phillips, Maine	9	April 3	March 29, 1914
Scotch Lake, N. B.	4	April 19	March 28, 1902
Montreal, Quebec	8	April 4	March 23, 1887
Winstar, Ohio	10	April 1	March 9, 1902
Oberlin, Ohio	23	March 20	March 2, 1901
Ann Arbor, Mich.	12	April 7	March 2, 1888
Lastwood, Ont.	12	April 1	March 15, 1887
Chicago, Ill.	19	March 25	March 8, 1906
Waterloo, Ind.	10	March 31	March 19, 1894
Kankak, Iowa	12	March 13	February 23, 1890
Grinnell, Iowa	8	March 27	March 18, 1888
Madison, Wis.	9	April 3	March 19, 1902
Lansboro, Minn.	8	April 1	March 15, 1889
Osage, Kans.	18	March 24	March 8, 1898
Valentine, Neb.*	3	April 17	April 11, 1915
Rapid City, S. D.*	3	April 17	April 8, 1909
Rushburn, Man.*	11	April 24	April 2, 1897
Awesee, Man.*	16	April 27	April 3, 1900
Qu'Appelle, Sask.*	5	May 5	April 3, 1903
Yuma, Colo.*	6	April 26	April 23, 1908
Cheyenne, Wyo.*	2	May 3	April 29, 1889
Missouri, Mont.*			March 19, 1916
Flagstaff, Alta.*			April 6, 1915
Chilhowick, R. C. I.	1	April 26	April 9, 1888

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Raleigh, N. C.	4	March 21	April 1, 1915
Brownsville, Tex.*			March 2, 1892
Laredo, Tex.*			April 20, 1890
San Antonio, Tex.*	5	April 18	April 20, 1890

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Scotch Lake, N. B.	3	October 13	October 22, 1910
Orono, Maine			September 6, 1892
Phillips, Maine	6	August 17	August 27, 1906
Rutland, Vt.	2	October 14	October 28, 1915
Syracuse, N. Y.			September 4, 1886
New York City, N. Y.	3	September 23	October 22, 1904
Ottawa, Ont.	2	September 10	October 4, 1907
Chicago, Ill.	4	October 3	November 11, 1906
Osceola, Ohio	4	September 24	October 31, 1897
Lansboro, Minn.	7	September 18	October 19, 1892
Grinnell, Iowa	5	September 25	October 26, 1889
Kankak, Iowa	4	October 12	October 29, 1893
Awesee, Man.*	4	September 23	October 8, 1899
Valentine, Neb.*	4	September 6	September 10, 1914

FALL MIGRATION, continued

LOCALITY	Number of persons recorded	Average date of last one observed	Latest date of last one observed
Osage, Kans.	14	August 29	September 11, 1913
Missoula, Mont.			October 14, 1914
Pumpkin Butte, Wyo.			November 18, 1919
Fort Laramie, Wyo.			September 6, 1911
Yuma, Colo.			October 2, 1910
Denver, Colo.	3	September 24	November 2, 1908

LOCALITY	Number of persons recorded	Average date of fall arrival	Earliest date of fall arrival
Laredo, Tex.	16	September 6	September 8, 1899
Brownsville, Tex.			October 6, 1897
Raleigh, N. C.			August 24, 1886

Notes on the Plumage of North American Birds

FORTY-NINTH PAPER

By FRANK M. CHAPMAN

Northern Shrike (*Lanius borealis*, Figs. 1, 2) — In nestling plumage the Northern Shrike is brownish gray above, paler and with dusky wavy markings below; the prominent black cheek-stripes of the adult are dusky and the lores are grayish. The wings and tail are dusky black, the wing-coverts, inner wing-quills and central tail-feathers being tipped with rusty.

At the postjuvinal molt the wings and tail are retained and the rest of the plumage replaced by the first winter dress. This bears a general resemblance to that of the adult female. Breeding plumage is acquired by a limited amount of feather change about the front part of the head and by loss through wear of the brown wash on the back and dusky markings below. The young male now differs from the adult male mainly in the brownish wings and tail.

At the postnuptial (second fall) molt these, with the rest of the plumage, are shed and the second winter or fully adult plumage gained. The female passes through a similar series of plumage changes, but it is always more or less barred below and in first winter dress is decidedly brownish above.

Females and males in first winter plumage (Fig. 2) may be known from the Loggerhead or the Migrant Shrike by their larger size, brownish upperparts, and wave-marked underparts; adult males, by their larger size, paler upperparts, and grayish, not black, lores and forehead.

Loggerhead Shrike (*Lanius ludovicianus*, Fig. 3) — The nestling Loggerhead has the brownish wash and dusky wavy markings of the Northern Shrike. These are especially noticeable on the underparts, but they practically disappear with the postjuvinal molt which, according to Dwight, involves the tail and the rest of plumage but the wing-quills. First winter plumage is practically indistinguishable from that of the adult. The prenuptial molt is restricted to the front parts of the head, and, as the season advances, the plumage shows the results of wear. Unlike the Northern Shrike, the male and female are alike in plumage.

*Fig. 1 represents the fully adult male; Fig. 2 the young of both sexes in first winter plumage.

Notes from Field and Study

Summer Records of Winter Birds in the Upper Peninsula of Michigan

During a residence of several years in the upper peninsula of Michigan the writer had the opportunity of observing some entirely new facts in regard to the habits of some of the northern species of birds. The northern peninsula has been very little studied by ornithologists, but it offers a rich field for consecutive effort in bird-study. It seems to be a converging point for eastern, western, northern and southern species. The following observations upon the northern species were made in Luce County.

EVENING GROSBREAK.—The Evening Grosbeak is common usually every winter, arriving mostly about November and lingering into May. But some individuals have different habits or habitat. On July 18, 1911, a flock of a number of males, females, and young of the year were seen. The birds allowed close observation. On Aug. 15, 1912, seven were seen, six being in one flock. Aug. 10, 1913, two were seen. July 14, 1915, two, and on July 20, were again seen.

RICHARDSON'S OWL.—On July 10, 1913, a young Richardson's Owl was captured alive. Its plumage was carefully examined and compared with identified plumage of the same species. Measurements were also made and they corresponded perfectly. On the night of Aug. 12, a bird, supposed to be of this species, was heard.

REDPOLL.—The Redpoll is usually credited with being a winter visitor from November to April. It is quite true that the greater number do come at this time, but during a long residence I seldom failed to find a few birds in July or August. The following are some dates of arrival: Aug. 5, 1909; July 16, 1911; Aug. 12, 1912; July 15, 1913; July 21, 1914; and young of

the year were seen on Aug. 31. Flocks of fair size were seen June 9 and 21, 1912, and May 17, 18, 20, 21, 26, and 27, 1914.

The records of the Evening Grosbeak seem particularly interesting as it seems certain that the birds nest somewhere in the middle west.—RALPH BEEBE, 600 Hillger Avenue, Detroit, Mich.

A Santa Barbara Hummer

This beautiful little Hummingbird chose for her home a crape myrtle tree in a Santa Barbara rose-garden, and all who have been in Santa Barbara in the winter and spring know what a feast of beauty that meant. There, while building her dainty nest—an inch and a half in diameter, perfect in architecture, gray in color and decorated with lichen,—she probably knew that she would have daily song-recitals of Mockingbirds such as would make mortals despair in their vain efforts.

I was much surprised to find the bird so confiding that I was able to put up my camera, focus it 4 feet from the nest, and give one-second exposure without her moving. The nest was about 5 feet above the ground. When the two little birds came, I was anxious to get a picture of the mother feeding them, which she did very quickly, standing on the edge of the nest and running her long bill most energetically away down their throats.

When the mother was away foraging, I covered the camera with green leaves, focused it upon the nest, then drew a thread, which I had attached to the shutter, into a room that looked down upon the nest, and there awaited the mother's return at dinner-hour. I am sure that she carried a watch, for dinner was always served promptly between 1.30 and 2 o'clock.

She was frightened on seeing the camera, and for some time surveyed it suspiciously from her perch on a telephone wire. Then, knowing that her little family's life

depended upon her, she bravely flew all around the camera, examining it critically and lighting upon the edge of the nest, and gave them the feast for which their wide-open mouths began to plead at exactly the dinner-hour. I pulled the thread just as the mother lit upon the edge of the nest. In another exposure I caught her feeding the young bird (one had disappeared when very small), but as the light was poor, an exposure of one-fiftieth

time arrives, let intelligent instruction in our homes and schools go hand in hand with enforced laws. Warnings are posted to protect forests, and might it not be well to have such warnings, or at least suggestions for the protection of birds, placed in our schools and libraries?—OSCAR R. COAST, *Santa Barbara, Calif.*

The Black-chinned Hummingbird

I had an enjoyable experience last summer, at Eugene, Ore., with a Black-chinned Hummingbird, which will, perhaps, be of interest to other bird-lovers.

One day, early in May, we spied a pair of those living jewels darting about the loganberry bushes. The next day, the female came often about the bushes, but we never again saw the male. I have been told that he never shares in any of the domestic affairs of his kind—builds no nest—feeds no young. Certain it is that this one shirked all responsibilities.

Little lady bird chose a most uncommon location for her nest, selecting a bush that grew close beside the walk, where we passed a dozen times a day, within 6 feet of the kitchen door. No attempt was made to shield or hide it, but, rather, it was placed on the very outer stalk.

Thinking to encourage her to remain where we might watch the process of nest-building, my friend hung bits of cotton-batting and silk threads in the bushes. These the bird used almost exclusively. I doubt the wisdom of her choice, for, when a long rainy spell set in, the tiny nest was soaked, and became so heavy as to be almost dislodged from its frail support on the stalk.

But, when newly made, a more dainty bird-home cannot be imagined. A silver dollar would easily cap the top. John Burroughs tells us we should not attribute any artistic sense to birds. I do not question that high authority, but I am glad this Hummingbird's "inherited instinct" prompted her to cover the outside of her nest with gray-green moss or bits of lichen.

The tiny home-builder was so industri-



A SANTA BARBARA HUMMER

of a second gave little detail. Unfortunately, confidence and want of suspicion in building her nest so near the earth (and the untaught small boy) brought a sad tragedy, as a boy took the nest and bird, and they were both found on a path not far distant—the bird dead.

Surely, through the splendid work of the Audubon Society and nature-study in the schools, together with many charming bird-books, we may hope that our birds, our trees, and our flowers may soon be appreciated as blessings that will need no protection of the law, but, until that

ous that in a few days the nest was completed, and, directly, two pure white eggs lay like pearls in a velvet jewel case. They were scarcely larger than navy beans.

Now began an anxious season, at least for us. The rain and cold continued. Scarcely any sunshine ever reached the nest, on the north side of the house. Sleet and hail beat upon it. For days the cotton was a soggy mass, and, worst of all, little Betty Flewster, as my friend had nicknamed her, would be gone from the nest several hours at a time. Repeatedly we said in despair, "Those eggs will never hatch."

But Lady Betty knew her business better than we, though we had declared her a "greenhorn," both in the choice of location and later, in the care of her eggs, for in just two weeks from the day the first egg was laid, my friend called to me excitedly, "The first egg is hatched! There's a bird in the nest!" The next morning the other egg was hatched.

Such funny little birdlings, no larger than yellow jackets, with no hint of a feather on their wrinkled bodies, except three greenish barbs on each wing.

For several days they were too weak to raise their heads and were blind as little kittens. We wondered how the mother bird succeeded in feeding them during that stage, but could never happen to be present at mealtime. Perhaps they, like little chickens, require little or no food for the first three days.

Later, when they were stronger, and eyes open, we had several glimpses at the feeding process. Perched on the edge of the nest, the old bird thrust her bill, seemingly full length, into the gaping mouths and went through a pumping, ramming process that seemed certain to pierce their little bodies. Of just what the food consisted, we were never able to determine, but of whatever nature, the birdlings thrived on it.

Gradually the wrinkled bodies grew plump, the little greenish barbs on each wing showed where feathers would later appear. Their backs were first hairy, then

glossy, golden green with minute feathers. When fully grown, they closely resembled the mother.

I had always supposed that Humming-birds were very shy, but we found this one quite approachable and very curious. After an hour of quiet, patient maneuvering, my friend succeeded in persuading the bird to sip honey from flowers in her hand, and later fed her with jelly, while sitting on the nest.

I made several unsuccessful attempts to get pictures. The kodak excited her curiosity and some fear. Again and again she circled around it, coming closer each time, till finally, having several times tapped it daintily with her bill, she seemed satisfied it meant no harm, so settled calmly on her nest.

All during the nesting-time, Lady Betty seemed to consider the berry-bush her special property, and waged instant and furious warfare on all intruders, big or little, bee or bird. 'Twas quite funny to watch her when she discovered a bee in the flower she wished to visit. Instantly she became a little fury. Her feathers stood out, and the humming became double-quick and so loud that the invader fled in terror. Even the Swallows who were housekeeping in a bird-house nearby, appeared to respect her rights, and quickly withdrew when that fiery dart hurled herself at them. I, too, have flinched when it seemed aimed straight at my eyes.

I know of no way to attract Humming-birds to build near about our homes, but when those tiny creatures favor you as we were favored, consider it time well spent to watch them closely.—ELLA GETCHELL, *Willmar, Minn.*

Birds and Bees

For three seasons now we have had rather unusual bird tragedies in our garden. Although our house is set on a lot of only about one-half acre, we have occupants in the Wren, Bluebird, and Martin houses, and there are Red-headed Woodpeckers in the soft maples. In our back yard we have a great many colonies of bees, and a day in

May when the blooming apple trees resound with their murmuring hum of industry, combined with the rich plaintive warble of the Bluebirds, the joyous gurgle of the Martins and the incessant singing of the Wrens thrill the heart of a nature-lover.

One day in the summer of 1915, when the oldest of the Woodpeckers left the nest and hopped and flew from fence-post to tree, I noticed he was getting rather near some prosperous colonies of bees, and, thinking to turn him back, I approached carefully, but he flopped down onto the entrance of a very strong colony, and in less than a minute they pounced on him. I removed him with all haste possible, first covering him with a burlap sack to stop the advance of the enemy, but he soon expired in great agony. He was a seething, hissing mass of angry bees, and practically covered with bee-stings. So infuriated were the bees that those who had lost their stings (for a honey-bee can sting only once) were clinging to the feathers and biting with their mandibles. The movement of their wings rubbing against the feathers made a noise not unlike escaping steam. I did not feel so grieved about him, as his parents had often snapped up my virgin queens when they left their hives for their nuptial flights, costing me \$1.50 per snap. I felt that the Woodpecker family deserved some punishment for their treatment of royalty, though it was rather a severe revenge.

Last season, when the Bluebird family left their home, two out of the five young ones met the same fate as the Woodpecker. In crossing the garden the young birds hopped onto the doorsteps of the beehives, when the occupants rushed out by the dozens and pierced the dainty visitors with their deadly stings.

In the winter months of 1916-17 we spent considerable time constructing a fancy Martin-house to take the place of the old soap-box home which had collapsed in a winter storm, and erected it with due ceremony in the garden near the grape-vines when spring came. Our labor was rewarded by the Martins accept-

ing it, on their arrival in April, and we enjoyed hearing their gurgles of approval. Sometimes there would be twenty or more inspecting all the rooms and sitting on the roof having a friendly chat. Martins have a way of visiting all the houses in the neighborhood before accepting one for nest-building. Later in the season we noticed that the birds had difficulty in alighting on the house, due to the bees pursuing them. As soon as the Martins would circle about the house, an army of bees would follow, but the birds always kept ahead of them and didn't seem to notice them while in the air. But when they would alight on the house, the bees appeared to settle on them, and they would fly away with frightened squawks. Only one pair remained in the house, and only by rushing through the air and popping into the opening, without alighting outside, were they able to keep house at all. They managed fairly well until the young needed constant feeding, when the battle for existence began. There were never less than a dozen angry bees hovering about the entrance and whenever a parent bird would leave the house, more joined in the pursuit. In returning the birds would sometimes make several attempts to enter before being successful, so persistent were the bees. Finally the Martins became discouraged and fed the young only early in the morning and late in the evening, when the bees were quieter. The birds would make several trips in the morning, and I could hear the clamoring of the young as they were fed. Then, when the angry hordes gathered, the parents disappeared, and I saw no more of them all day until just about sunset, when they would return and make a few hurried trips, remaining with the young at night. One of the young birds sat with his head just showing in the doorway of the house, chirping hungrily, for three days, but the parents never came near, except as stated above, and finally they failed to appear at all. The chirping of the young grew fainter and fainter, and on the fourth day all was silent about the house, though several angry bees kept up the unceasing watch.

This fall the house was taken down and three dried skeletons gave mute evidence of the unequal conflict that was waged under the summer sky.—JOHN G. PARKER, *Hartland, Wis.*

The "Stake-Driver" Again

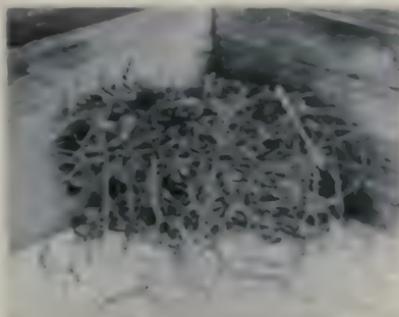
I, too, have read several accounts of the booming of the American Bittern, including that of Mr. von Burgh in your May-June number. Permit me to add an important detail not mentioned in Mr. von Burgh's well-written description. After confounding with the "plunk" position, the bird rests for some time, then, as though a new thought had suddenly occurred to him, he begins to pump in air, apparently, for his next performance. With his beak in nearly normal position, he "gulps," his throat begins to swell, and his beak rises to the "plunk" position (as shown in the sketch). Another "gulp," at a higher key than the first, increases the size of the throat and raises the beak to the "plunk" position. Other gulps follow, successively nearer together, successively in a higher key, and with ever higher angle of beak, the throat constantly enlarging to an immense size. The sound suggests to the listener 60 feet away the filling up of a jug with water. When the beak is more nearly vertical than shown in Mr. von Burgh's first drawing, and the neck is relatively as large as that of the throat of the *kyuaku* before popping, the real stake-driving begins. The bird seems to have tapped it in before beginning the hard echo-raising blows!—HENRY TURNER BAILEY, *Cleveland, Ohio.*

A Unique Wren Nest

It seems that birds, copying after man, have been developing in an inventive line. At least one pair of House Wrens at Quincy, Ill., have come as far as the Iron Age and are constructing their nests with an idea of having them fireproof.

Recently the University of Illinois Museum at Champaign was the recipient of an interesting Wren nest. It was found

by Miss Jessie Brackensick, of Quincy, in an angle of the top sill and braces under the roof of a chicken-house. In the fall of 1915 a tangle of rusted chicken-netting was thrown behind the shed, and the following spring a pair of House Wrens in search of nesting material found that the wire would break easily into pieces just suiting their purpose. They used this wire to the practical exclusion of all other usual materials



WIRE-WOVEN WREN'S NEST FITTED INTO LOCATION SIMILAR TO THAT OF ORIGINAL.

Photographed by Walter A. Gollitz

and formed from it a very solid but rather bulky nest. To smooth the cavity somewhat, the birds used a few grass stems and long black horse-hairs, also one small mass of cobweb. This completed the list of materials. The Wrens have used this same nest for two seasons and probably would have occupied it again this year had it not been collected and donated to the Museum.—WALTER A. GOLLITZ, *Champaign, Ill.*

The Blue Jay Will Murder

While reading the war news, the murderous cry of a Blue Jay was heard, and, at the same time, the pitiful notes of a pair of Robins came to my ears. Upon investigation I found that the Jay had hustled a young Robin out of its nest in an adjacent tree and as soon as it struck the ground was pulling shreds of flesh from its breast. When driven away, the Jay called out a defiant note, as though it were part of its daily duties to kill and devour young

Kolins. For many years we have known that the old squawker Jay was guilty of stealing the eggs of other birds, but we have never before been positive that he was a murderer, and can only wonder if the Blue Jay is a Prussian blue Jay!—G. S. YOUNG, *Alma, Mich.*

From Sunset to Sunrise with the Martins During the Flocking-time

For a week previous to Labor Day, great numbers of Purple Martins were strung along the telegraph lines and hovering near certain abodes in North Evanston, Ill., near Sheridan Road. On Labor Day it was decided to watch these thousands of birds. Arriving at the scene at 4 o'clock in the afternoon, great numbers were seen wheeling in the air. Following them, we came to a woodland where vast numbers of Grackles had darted into safety. On viewing this spot from quarters, we found that the Martins were descending in great companies. Though the air was literally filled with birds, and the greatest uncertainty seemed to prevail in their wheeling and soaring, yet at a certain moment a command was seemingly given, for all at once they began to take refuge for the night in the tops of trees.

The woodland occupies nearly a square block, and is a dense undergrowth of elder below young trees, mostly elms. To say that the trees swayed with the weight of the birds will perhaps give some idea of their numbers. The sight was such that we marveled that people did not come from far and wide to see it, yet so intent are human beings in pursuit of their own particular plans that party after party motored by without one pausing to look. As the stock exchange sounds from the gallery like the buzz of a million bees, so did the whirl of wings and bird exclamation thrill and stir the air. Emigrants of every nation, all babbling in a corner of Ellis Island, could scarcely have caused such a din, yet underneath was a sense of law, order, and definite plan.

Feeling that this was a rare opportunity, two of us ardent bird-lovers decided

to camp out all night to observe the actions of the birds during the night. But so keen is the instinct of self-protection that, despite all the other sounds, the moment that human footsteps were heard, the fluttering would begin, birds would fly from their perches, and a general commotion followed. Observations, therefore, had to be made outside the copse. At daybreak, between 4 and 4.30, the vast horde began their preparation for leaving. The sound produced by their wings could be only compared with that of a huge thrashing machine running at top speed.

There must have been some 10,000 birds falling into line leaving the wood. So accurate, so definite was each plan that one could almost imagine he heard the roll called as the birds departed. These performances continued each day until the first cold spell, when the last company departed.—W. CONROY EVANS, *Evanston, Ill.*

Swallows Flocking

The accompanying photograph was made in the middle of October and shows a flock of Swallows on Black River Bay, which is an arm of Lake Ontario in Jefferson County, N. Y. This flock was made up largely of Tree Swallows, but included also Barn and Bank Swallows, while the most interesting member of all, to me at least, was a single Rough-winged Swallow, for I have not found this species at all common in this part of the state.

This picture was made on the very edge of a large marshy stretch known, locally, as the 'Dexter marshes.' The extensive flag- and reed-beds of this locality make it a favorite place for Swallows and Red-winged Blackbirds to congregate and rest while the birds are assembling in late summer and early fall. Incidentally, the plentiful growths of wild rice among the patches of arrowhead and pickerel weed bring many wild Ducks to the same marshes.

I have seen the Swallows rise in a mass from the place of their night's rest and on investigation have found a considerable

section of the cattail bed bent down in a continuous littered mass, as though it had been the bed of some great bird instead of that of hundreds of tiny individuals closely huddled. The Swallows all leave these sleeping quarters soon after daybreak, but often, instead of leaving the marsh entirely, they will resort to some tree or cluster of trees and here rest for an hour or two before scattering over the neighboring country

never seen these birds here or anywhere else in this north country in numbers which compare with the swarms of Swallows I have observed near the Hackensack meadows near New York City. No doubt northern New York is too far toward the northern limit of the Swallows' summer range to ever witness flocks of these birds of the size they form as they progress farther southward, adding to their numbers



A SWALLOW WAY-STATION
Photographed by E. J. Sawyer

to feed through the rest of the day. It was at this time, or about 7 or 8 A.M., that I rowed my boat to within several yards of the birds assembled on a few low willow trees, landed and made the picture here shown. These birds were remarkably tame, allowing me to approach to within 5 or 6 feet of them and to thrust my camera, as it were, almost in their faces.

Although the flocks of Swallows in these marshes may well be called large, I have

as they go.—E. J. SAWYER, Watertown, N. Y.

A Scene from the Home-life of the Chestnut-sided Warbler

The nest here shown was found at Ithaca, N. Y., on June 15, 1915. It was on a hillside covered with 'slash' from old lumbering operations. This had since grown up to a tangle of scrub second

growth and raspberry bushes. The nest was in one of the latter, about 3 feet from the ground. It was well built. The foundation was made of coarse grasses and rootlets, lined with finer grasses and fibers. It was not so bulky and much finer than that of some of our other Warblers. When we came up the mother bird flew away, revealing four downy young about three days old.

After taking a position near the nest, I found that a blind would not be needed to

Both birds shared in the work of feeding the young and keeping the nest scrupulously clean. At first, until the male became accustomed to the camera, the female was somewhat overworked, because she had to feed the young and keep them warm, too. He made up for his not working somewhat by singing almost continuously from a favorite tree nearby. The food brought to the young consisted mostly of plant-lice and the larvae of leaf-eating insects.

C. W. LEISTER, Ithaca, N. Y.



THE WHOLE CHESTNUT-SIDE FAMILY

Photographed by C. W. Leister, Ithaca, N. Y., June 20, 1919

watch and record the activities of the Warbler family. The young were quite small, and the mother bird soon came back and began brooding them. Her parental instinct quite overcame her fear of the camera and of man, allowing me to come within 3 feet of the nest and set up the camera. With the male bird it was quite different, for he would not come near the nest unless I partly concealed myself in a clump of bushes 10 to 12 feet away. A string was stretched from the camera to the hiding place, and most of the pictures were taken by pulling it.

The Bandit.—A Street Scene from Birddom

Walking in Virginia Park one morning I witnessed the following amusing little scene in bird-life, illustrating the audacity and impudence of the omnipresent English Sparrow.

A Robin was working hard to get a worm out of the ground. After much picking, pulling, and jerking it finally succeeded, and, raising its head high, it held the worm in its bill ready to enjoy a well-earned meal.

Meanwhile a pesky little Sparrow, sitting about 3 feet away, had watched the efforts of the Robin with interest, and no sooner did he see the dainty morsel in its bill, than the little pirate darted like an arrow toward the Robin, plucked the worm from its bill and flew swiftly about 20 feet away, to enjoy its booty undisturbed.

The Robin, on the other hand, was so completely taken by surprise by this bold attack that it stared motionless for several seconds after the robbing bandit, and then started unafraid to dig for another worm.—C. BONNIC, *Detroit, Mich.*

The Wren, a Housebreaker

Late in March a pair of Bluebirds took possession of a box on a slender pole in the corner of our kitchen-garden and April 18 began to build their nest. The next day our Robins began to build on a platform on the southern end of the front porch. Late in May a pair of Chippies came house-hunting and finally chose a very bushy place in the crimson rambler, high up in the rose-trellis on the front porch. About the same time a Wren came to the box belonging to a small boy some 200 feet away. The Wren came into the yard occasionally but was promptly chased out again by either the Bluebird or the mother Robin, and sometimes quaint little Mrs. Chippy joined in the chase.

June 1, the Bluebirds went away with their four speckled babies, and then the Wren came oftener to the yard and garden. Several times I saw him fly from the grape-arbour into the rose-trellis but supposed he went there for the aphides which were abundant on the crimson rambler. After the mother Chippy had been sitting for several days, I noticed one afternoon as I sat on the porch with my sewing, that she was not on her nest. When three-quarters of an hour had passed without bringing the Chippy to her nest, I investigated. In the nest were two cold eggs. One was all right, the other had a small, clean-cut hole in it, and a third one lay on the ground broken. I suspected the Wren, but felt almost ashamed of myself for doing so.

The last of June the Bluebirds came back for a second nesting, and after looking over the new box put out for them, decided that they liked the old one better, and the mother bird set to work to re-line the nest. One morning after I knew there were eggs in the nest, I heard the Wren scolding softly in the garden. The Bluebirds were away. I stepped out on the upper back porch to see where he was and found him on the wire running between the two Bluebird boxes. I threw a stone at him but did not frighten him at all, and he went on into the Bluebirds' nest-box. As I turned away to go down and drive him off, he came to the door of the box and threw out an egg. I rushed downstairs and out to the garden where I could reach the wire, gave it a sharp pull, setting the box to swaying, and the little Wren tumbled out and flew away. On the ground beneath the box lay three broken eggs, and the nest was empty. Now I know why the other birds dislike the Wren and chase him away when he comes to the yard. I should like to ask BIRD-LORE whether this is a trait of the Wren family or is this particular Wren a degenerate member of the family?—MRS. ARTHUR F. GARDNER, 155 *Maple Avenue, Troy, N. Y.*

A Family of Brown Thrashers

The Brown Thrasher is usually a shy uncompanionable bird, displaying none of the friendliness for people so notable in the Robin and Phoebe. He is frequently seen about thickets and roadside undergrowth, which afford ample means of concealment. He flits shyly about at a safe distance from the observer, protected by intervening brushwood, and as he is seldom seen at rest, it is not easy to observe him closely.

The presence of a pair of Thrashers about a brushwood in my field led to the discovery of a nest deep among the dead branches, and it contained three newly hatched young. Desiring an acquaintance with this interesting family, I frequently visited them during the day. The old birds remained at a distance until I was within

4 or 6 feet of the nest, then the mother darted into the brush and covered the young while the male flitted about the other side of the pile, trying to decoy me away from the nest. This was repeated at intervals during several days, while the birds gradually grew a little less timid at my presence. The mother always took the nest while the male, when I allowed him to draw me to the other side of the brush

with a piece of apple which, after a tentative taste, he would peck eagerly as I held it, even allowing my hand to touch his breast or back. The photograph was taken just in time, as the next day the young birds were gone from the nest, and thereafter, though I occasionally saw the old birds, I could never again approach them.
—MARY GALLOWAY, 357 Hubbard Avenue, Detroit, Mich.



TAMING A BROWN THRASHER

would sit motionless on a twig, manifestly afraid but determined to stand his ground if only he could keep me away from the nest. After repeated visits he would permit me to come gradually nearer till I stood within 2 feet of him. Hoping to induce him to eat from my hand, I offered him grain and angleworms, but though he would not stir till my hand almost touched him, he refused to be conciliated and would peck at my hand and hiss his desire that I should go. I won him at last

The Language of Robins

Early in the summer, a pair of Robins nested on a corner of our front piazza, which was in constant use, and many times the mother bird acted as if we had no right there. Perhaps she knew by that time it was a very public place to rear a family. However, she stuck to the home nest, and when four baby birds came, she took good care of them. They grew so fast and crowded so far over the nest that we often wondered where she found room to stay there at night to protect them. After they were feathered, one little fellow tumbled down on the porch-rug, and though he seemed almost large and strong enough to take care of himself, we put him back in the nest. They cried so for food that the parent birds were kept busy finding worms and insects to satisfy them.

One afternoon, when I was preparing the strawberries for supper, I found a number of soft ones and decided to give them to the young birds myself. I stood on a chair which raised me high enough to reach the nest and also to see the fun. All were so hungry and evidently all liked strawberries for they raised up, opened those big mouths, and I never could tell which of them got anything, for they all grabbed at each piece I held out.

I suppose the old birds were not far away and heard the noise and chatter, for soon, from the pine tree whose branches hung near the porch, came another kind of chatter—a shrill, quick, *chi, chi, chi, chi, chid, cho,—chi, chi, chi, chi, chid, cho—* repeated again and again till the youngsters heard and noticed it and then, hungry as

they seemed, every bird quieted *at once*, *shut their mouths*, and lowered themselves in the nest, till only four quiet little heads seemed to be in it. I tried and tried, but could not get one of them to take another bite. I could not even pry their mouths open.

I do not understand the language of birds, but it seems there must be something of the kind. I really think the mother bird said, "Don't take another thing from that girl," and they did not. Call it what you will, I never saw such prompt obedience.

After a few days they were gone. I did not see them leave the nest, but saw the parent walk ahead, about 2 or 3 feet, and *carry one bird at a time* after her till she had taught them to walk from the porch, back behind the garden, where they had their flying lessons in the apple orchard.—
ROSE M. FOUNTAIN (Chatham, N. J.)

Our Summer Visitors.—A True Story of Some Nova Scotian Birds

They arrived unexpectedly, having given us no notice of any kind. The first intimation we had of their presence was the sound of a great chattering outside of the front door. "Whoever you are," we thought, "your tones are not cultivated, and you are inclined to be quarrelsome." We opened the door, and there they were, perched on a fir tree branch nearby, and looking very belligerent, a pair of Kingbirds, dressed in black and silver grey, with topknots on their heads and white rings around their tails. They had actually built a nest, almost on a level with our eyes, and we had never noticed them. We knew they belonged to the Flycatcher family, as we had seen them or some like them, the year before, and watched them darting and circling after insects. Now we were to have a great opportunity of getting acquainted, and not a day passed on which we did not observe them more or less.

Sometimes there would be a fearful commotion, and we would look out to see them chasing a Robin from the tree, or fighting each other with their sharp beaks. Woe

to any small bird who approached too near; he would be routed without ceremony. Robins appeared to be their chief enemies, and one day, hearing the usual riot, we saw two Robins and the pair of Kingbirds in pursuit of each other around the tree. The perpendicular red line in their foreheads showed very plainly, as it always does when they are angry. The Robins, however, had the best of it this time. As soon as they were driven off on one side of the tree, they would dart back to the other side. This game was kept up until another Kingbird came to the rescue, and the three succeeded in driving their enemies from the lawn.

About this time the nest contained eggs, as we judged from the birds' behavior, the male always watching the nest when the female went in pursuit of food, which she did at short intervals. He sat nearly always on the same branch, so that he could look into the nest, and waited patiently till she was on her way home, when off he went, and she would settle on the nest in a business-like manner. Sometimes he lingered, and she chattered away to him, while he listened in a dignified way, and said nothing.

What conversations they had when the young birds were hatched? Sitting on the edge of the nest together, and turning their heads first on one side and then on the other, with such an air of pride!

Frequently the little ones must be fed with insects. From an upstairs window we could look right into the nest, and many a poor dragonfly we saw dissected alive, a leg to one and a wing to another. Sometimes one had the whole insect and the rest opened their wide mouths in vain. One poor baby bird was neglected, perhaps purposely, for they seldom gave it a mouthful. At last its poor little dead body was found on the lawn; whether murdered by unnatural parents, or by some marauder in their absence, we never knew. There were very few mosquitos in the garden that year, and we believed the Kingbirds were our deliverers. Making a circling flight, they would snap up a June bug, a butterfly, or a bee, hardly ever missing,

and return to their perch without a second's pause.

At last 'Tag-rag' and 'Bobtail' (as we called them, from their disheveled appearance) were taught to flap their wings, to sit on the edge of the nest, and, after much exhortation and example from their parents, to get out on the nearest twig; then to make little flights of a few inches over each other's back, then to fly from branch to branch; father and mother all the time going back and forth over the route they wished the little ones to take, chattering in a peculiar language they had never used before.

They were evidently suspicious of the big setter who often occupied the top veranda step, and who seemed as interested in the show as anyone; and at last the male bird, his forehead blazing red, flew right into the dog's face. But Dick stood fast, and the birds continued the training.

Thus far had their education gone one evening when we bade them good night; and the next morning, hearing the same peculiar note, we looked out to find they had accomplished the flight to a nearby tree, and before noon they had worked their way out of our neighborhood. Only

once more did we behold them, a few days later on a tree in the garden, and we greeted 'Tag-rag' and 'Bobtail' with real pleasure.

Soon after, a pair of Cedar-birds came and took away every thread of the nest, to build one for themselves, although it seemed rather late in the season for them to rear a family.—*Mrs. M. B. Deu Bissay, Bridgewater, N. S.*

Robin Nesting on Ground

On May 8, 1918, I discovered a Robin's nest built flat upon the ground, in a clump of clover. It was located in an orchard, in which there were numerous good nesting-sites in the trees, some of which held other Robins' nests.

The nest was of the ordinary Robin architecture, with the usual mud, etc., and contained four eggs, three of which hatched, and, so far as I know, the young were successfully raised.

While I have before found the Robin to nest within a foot of the ground, upon rail-fences, I have never before heard of it building right upon the ground, like a Vesper Sparrow, for instance.—*ASSEL B. MILLER, Springs, Pa.*

THE SEASON

VIII. April 15 to June 15, 1918

Two contributors to this department of BIRD-LORE have been "called to the colors"—Charles H. Rogers, reporter for the New York City region, and also editor of the Department, is now in camp in Georgia, and Dr. Winsor M. Tyler, reporter for the Boston region, is now a Captain in the medical service and is stationed at Newport. Wherever they go and whatever be their duty we may be sure that their interest in bird-life will prove a welcome source of relaxation from the strenuous demands of their profession.—*F. M. C.*

BOSTON REGION.—The season, delayed by cold and rainy weather, made little

progress during the latter half of April. On May 1, it was scarcely more advanced than the extremely late season of 1917. The spring remained backward until May 7, when a few days of summer temperature stimulated such a rapid growth of vegetation that, on May 11, judged by the blossoming of the horse-chestnut trees, 1918 was three weeks in advance of 1917. Ten days later the country had assumed almost the appearance of summer, the full-grown leaves casting dense shade. Thus in two weeks a backward spring was transformed into summer.

During the last days of April, there came an unusual flight of Yellow Palm Warblers with the Myrtle Warblers, both

in song, the former, in numbers far above normal, exhibited a marked habit of catching flying insects on the wing. The extreme heat following May 6 brought a heavy flight of delayed summer residents and transients comprising many species but surprisingly few individuals. For ten days birds were in active migration, but they passed northward so rapidly and inconspicuously that many observers reported that there were no birds to be seen after May 17; there was so little evidence of migration.

In this hurried migration, the Redstarts lagged noticeably behind. Tennessee, Cape May and Bay-breasted Warblers, although present, did not occur in such numbers as they did a year ago, all four Vireos were rare.

The Yellow Warbler is commoner than it has been for the last few years, but is found chiefly along the borders of woodland and meadows instead of in gardens. Is this merely a local condition? By the first of June, the song period of many resident birds had begun to wane, owing doubtless to the cares of nesting.—WASSON M. TYLER, M.D., *Lexington, Mass.*

PHILADELPHIA REGION.—The temperature for April was slightly above normal. The noteworthy features of the month were a local scarcity of Phoebes—only one noted April 19; the abundance of Wilson's Snipe from the 14th to the 30th and of Yellowlegs from April 20 to May 29. Mr. William Evans, of Marlton, N. J., informed me that his Martin-house was occupied by only about half the number of birds present last spring, and that some houses in his neighborhood, which were well tenanted a year ago, had none at all. However, several places visited in southern New Jersey seemed to have their full quota of Martins.

Six Blue-winged Teal, two Upland Plover and a small flock of Pipits were observed at Salem, N. J., April 28.

Weather conditions for May were almost the exact opposite of those last year, the average temperature being five degrees

above normal. The unusual warmth, together with frequent rains, caused vegetation to grow rapidly, and by the end of the month it was said to be two weeks ahead of the average. The trees were in full leaf by May 12. Thick foliage made birds difficult to see, and favoring weather caused migrants to pass through without stop. These facts may account, to some extent, for the unprecedented scarcity of some birds, especially Warblers. Observers far and near all tell the same story: "Very few Warblers seen," "Warblers very scarce," "Very unsatisfactory Warbler season," "Have not seen a single Magnolia Warbler," "Hardly any Black-throated Green or Magnolia Warblers." The writer spent some time of each day in the field from the 1st to the 20th of May, and the totals for the season for some of the more common species are: Black-throated Blue, 1; Magnolia, 0; Chestnut-sided, 3; Black-throated Green, 3; Redstart, 6; Canada, 0. Black and White, Yellow, Myrtle, Yellow Palm, and Black-poll Warblers were apparently as numerous as usual.

Miss Anna Deeter, of Reading, Pa., writes that Myrtle Warblers and Rose-breasted Grosbeaks were more than ordinarily common this spring, and that the Warbler season was disappointingly short, practically ending May 19. Here at Camden, the latest transient (Black-poll Warbler) was noted May 31.

With the exception of the House Wren and the Maryland Yellowthroat, the breeding birds seem about as abundant as ever.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—So far as bird migration is concerned, April and May are the most interesting months of the year about Washington. Of this period the weeks between April 15 and May 20 are, in normal seasons, the most important. The height of the spring migration, individuals and species both considered, is ordinarily from May 10 to May 15.

The present spring has been, on the whole, an unusually good season for birds, and both species and individuals have been

numerous. Notwithstanding this, some birds have been remarkably scarce. This is notably the case with all the Swallows, the Carolina Wren, the Solitary Vireo, Least Flycatcher, Blue-gray Gnatcatcher, Vesper Sparrow, Solitary Sandpiper, and the Lesser Yellow-legs, the last mentioned of which has entirely escaped observation. It would be interesting to determine whether this scarcity is merely local or more or less general, as some species affected are transients, others are summer residents.

On the other hand, a number of species have been more than ordinarily numerous; notably the Tennessee, Kentucky, Bay-breasted, Blue-winged and Wilson's Warblers, Baltimore Oriole, Scarlet Tanager, Rose-breasted Grosbeak, Olive-backed Thrush, Bob-white, and Bonaparte's Gull. The first-mentioned of these is usually a rare bird during the spring migration, but this year it has been one of the common Warblers.

A few birds this season have appeared in great numbers for a short period, apparently representing waves of migration that affected but a species or two at a time. Conspicuous among these have been the Purple Finch, Scarlet Tanager, Kentucky Warbler, and Indigo Bunting. The duration of their greatest abundance, however, has been usually but a day or two.

In point of time, the spring migration this year has been about normal, though, as is often the case, somewhat irregular. The remnants of the great flocks of Ducks that wintered on the Potomac River lingered rather long in their winter haunts, a few species longer than ever before. The Baldpate, the latest previous spring record of which was March 31, 1912, was seen by Lieut. Ludlow Griscom on April 14, and the Pintail, by the same observer also on April 14 (latest previous date, April 1, 1842); the Canvasback remained until March 31, which is the latest definite date, although there is an old record for some time in April, 1843. Mr. C. R. Shoemaker also reported the Red-breasted Merganser on April 12, which constitutes our only

definite spring record for the species. Another water bird, the Virginia Rail, was observed on May 11, more than a month beyond its previously recorded latest date, April 6, 1890. Some of the other birds which remained beyond their usual time, a few of these equalling or approaching their latest records, are: Junco, seen on May 2; Savannah Sparrow, May 11; Wilson's Snipe, May 11; Golden-crowned Kinglet, April 2; American Coot, May 11; and Bonaparte's Gull, May 13.

Likewise a few were rather late in putting in their spring appearances, such as the Blue-gray Gnatcatcher, which came on April 16 (average date of arrival, April 7); Tree Swallow, April 14 (average date, April 7); Solitary Sandpiper, May 5 (average date, April 28); and the Rough-winged Swallow, April 11 (average date, April 6).

Early arrivals were, however, more numerous, several of them being considerably beyond previously known dates. The Louisiana Water Thrush was observed on March 31 (earliest previous date, April 1, 1910); the Bank Swallow on April 4 (earliest previous date, April 10, 1904); Lincoln's Sparrow, April 21 (earliest previous date, May 3, 1880); and the Nashville Warbler, April 21 (earliest previous date, April 26, 1885). A single Indigo Bunting was noted on April 18, four days ahead of its previous earliest record, April 11, 1911, but no other individuals were seen until April 20. Two of our rarest spring birds also appeared earlier than ever before: the Philadelphia Vireo on May 6, the earliest previous date of which is May 12, 1900; and the Prothonotary Warbler, which Lieut. Ludlow Griscom and Mr. Francis Harper saw at Dyke, Va., on April 28, two days ahead of its earliest previous published record, April 30, 1911. Other early birds were: the American Osprey, April 6; Barn Swallow, April 6; Henslow's Sparrow, April 14; Yellow-throated Vireo, April 18; Northern Water-Thrush, April 21; Crested Flycatcher, April 21; Tennessee Warbler, May 5; and Bay-breasted Warbler, May 6.

The appearance of two birds very rare

about Washington deserves mention here. Bachman's Sparrow was observed at Kensington, Md., by Mr. Raymond W. Moore on May 2. This is a species which seems but recently to have reached the District of Columbia, for no observers reported it until within the past few years, and it is still very rare. The Caspian Tern was seen at Plummer Island on May 5, by Mr. A. Wetmore, which is its second known local spring occurrence.

Another interesting manifestation of bird life during this spring, to which the good weather has doubtless contributed, is the rather unusual song activity, particularly of certain species. This has been especially noticeable in the Olive-backed Thrush, the Rose-breasted Grosbeak, the Kentucky Warbler, and many of the other Warblers. Even on the warmest days their singing has continued throughout a much greater portion of the afternoon than is commonly the case. This has aided much in making daily observations, and is doubtless partly responsible for the excellent records of numbers of species and individuals noted that many observers have made during the 1918 migration season in the vicinity of Washington.—HARRY C. OBERHOLSER, *Washington, D. C.*

MINNEAPOLIS, MINN., REGION.—The unusually mild weather and the early spring awakening of March and the first half of April was checked by a cold spell that lasted from April 16 to May 1. Heavy frosts and freezing temperatures prevailed throughout the state, and on the 23d the thermometer registered 15 degrees at Duluth, with snowfall along the Canadian boundary. This put a check on both vegetation and bird arrivals. Then followed a week of very warm weather, May 8 being the hottest May Sunday on record in Minneapolis—86 degrees at noon. Following this came another interval of chilly weather, terminating May 14 with heavy frost and ice at Minneapolis and 28 degrees up at Lake Superior. From this time on continuous warm weather prevailed.

After the comparative drought of March

and April more than the usual amount of rain fell in May, which, with the hot days that ushered in and completed the month, caused the waiting vegetation fairly to spring forward and burst into a rapid luxuriance that quickly more than made up for the delay caused by the frosty weather. So, by early June, vegetation was some days ahead of the normal schedule, and by mid-June, white water lilies, tiger lilies, and linden trees were in bloom nearly two weeks ahead of time.

The following are the dates of blooming of a few of the common flowers at Minneapolis: April 27, marsh marigold and wood anemone; May 2, greater bellwort and rue anemone, May 5, nodding trillium; May 6, first plum and crab apple trees; May 12, puccoon (hoary and long-flowered), spiderwort, three flowered geums, ginger root; May 16, showy orchis; June 6, great-blossomed pentstemon and pale larkspur.

In regard to the birds, it seems to be the general consensus of opinion of observers in the vicinity of Minneapolis that there has been something seriously amiss with the customary spring movement this year. Day after day the usual waves of migrants filling the tree-tops and thickets were waited and watched for, but as the season waned, it became all too plainly apparent that the pitiful representation of species ordinarily abundant was all that we were to see. In only a few instances were there anything like the normal numbers. All the various species were no doubt present but in many cases so sparingly and so widely scattered that they easily eluded observation, and it was only by comparing notes with several observers that their presence was made known. The always abundant Warblers, like the Myrtle, Palm, Tennessee, Nashville, Black and White, Blackpoll, and Maryland Yellow-throat were far below the usual number. Others less common, like the Canadian, Blackburnian, Black-throated Green, Magnolia, Cape May, Wilson's Blackcap, etc., were represented by only one or two individuals, or not at all, after much watching in favorite haunts. The

same is true of the Sparrows, Flycatchers, Kinglets, Thrushes, and other groups of smaller land-birds. Of the water-birds the writer can speak less definitely as opportunity for thorough observation was limited, but it was noted that the always common Spotted Sandpiper was almost absent.

Since the end of the migration, considerable time has been spent in the field and it is plainly evident that our land-birds at least, with but few exceptions, are greatly reduced in numbers this year. Meadowlarks, Song Sparrows, Chipping Sparrows, Scarlet Tanagers, Catbirds, and Robins, are possibly nearly as numerous as usual, but the woods and fields are for the most part strangely silent and deserted. Of course it is not intended to give the impression that there are no birds, for all species are represented, but the bulk of bird-life, as far as individuals are concerned, is far below what it has been of late years, to say nothing of thirty or forty years ago. Why this should be so is still a mystery but the fact remains that but a small portion of the birds that left the vicinity of Minneapolis last fall returned this spring. Reports from other localities are awaited with much interest.—THOS. S. ROBERTS, *Zoological Museum, University of Minnesota, Minneapolis.*

DENVER REGION.—The bird-lover who lives in the usual haunts of the Mockingbird and hears each year the wonderful exuberance of its nesting-song, can feel with me the pleasure I have had over a great influx of Mockingbirds to this region during this season. It is now more than twenty years since I have seen so many of these birds in the neighborhood of Denver. As I write, I hear one singing lustily in the adjoining park—a rare treat. I have always believed that we would have many more with us regularly if they were not searched for and disturbed so persistently during the nesting-season. As soon as a pair or two appear in a neighborhood, everybody seems to desire a young bird for a pet. No suitable locality within a radius of twenty-five miles of Denver has

failed to show a Mockingbird since the arrival of the first wave of May.

There has been a singular absence of Warblers this season, perhaps I overlooked them, but at any rate the only migrating Warblers I have seen this spring were Macgillivray's and Virginia, and during the same time I did not see even a single White-crowned or a Gambel's Sparrow or a Bronzed Grackle. I have always seen these species in the neighborhood of my present home, without making any special effort. There has been an unusual number of Bullock's Orioles, House Wrens, and Plumbeous Vireos. The nesting of the House Wren in my vicinity last year and its recurrence now, lead me to hope that it will become a regular breeding bird in our park. Nighthawks reached us about on time (May 24), and again a Poor-will visited Cheesman Park, the second in eight years, coming on May 29. Our Wood Pewee was the last of the Flycatchers to appear in Denver, arriving May 23.

I have often wondered what would become of an escaped Canary, and I have had an answer this spring, for a male has been living in the vicinity of my house for several weeks, singing lustily, and getting its own living of weed and dandelion seeds as cleverly as our native House Finch, with which it has consorted much of the time.

I had looked forward with a great deal of anticipation to the time of the sun's eclipse (June 8), in order that I might note the behavior of birds on the approach of, and during, the transitory night. To our great disappointment, the afternoon was cloudy, and we were not treated to that rare phenomenon which comes with a total eclipse and an unclouded sky, the sudden and awesome change from day to night. Nevertheless, during totality (ninety seconds) the mountains and plains were covered by a striking and weird semi-darkness, and as it approached, the Horned Larks became more visible, and the Nighthawks took up their crepuscular ways, only to roost again on the fence posts, when sunlight once more prevailed.—W. H. BERTOLD, M.D., *Denver, Colo.*

Book News and Reviews

IN AUDUBON'S LABRADOR. BY CHARLES WESLEY TOWNSEND, M. D. Houghton, Mifflin & Co., Boston and New York. 12mo. xiv + 154 pages, 64 half-tones, 1 map.

Dr. Townsend tells us that ever since his boyhood he has longed to follow Audubon's footsteps in Labrador. This volume, therefore, not only marks the realization of an early ambition, but it serves also the dual purpose of conveying much interesting and valuable information regarding the region to which it relates and of being an illuminating and always sympathetic commentary on the explorations of the great ornithologist.

Doubtless there is no one better qualified to write a book of this nature than Dr. Townsend. A boy's imagination, stirred by Audubon's graphic description of his voyage, was doubtless further stimulated by contact with George C. Shattuck, one of Audubon's young companions, afterward a well-known Boston physician under whom, many years later, Dr. Townsend served as house officer at the Massachusetts General Hospital. Add to these circumstances a keen interest in bird-life and the strong touch which comes from personal experience, and it is evident that Dr. Townsend, so far as Labrador is concerned, is Audubon's lineal representative.

Dr. Townsend does not confine himself to birds, but writes also of plants and of people; and always there is an historical background in which, so comparatively little has the scene changed in its major features, the past is brought singularly near the present.—F. M. C.

BIRDS OF LEWISTON-AUBURN [MAINE] AND VICINITY. BY CURRY ELLA MILLER. With an Introduction by PROFESSOR J. Y. STANTON. Lewiston Journal Co., Lewiston, Maine. 12mo. 80 pages; 2 half-tones.

This is a thoroughly well annotated list of 101 species in which the author's

enthusiastic love of birds finds frequent expression. Her remarks, therefore, are not confined to mere statements of manner of occurrence with dates, etc., but show a keen appreciation of the songs of birds and a discriminating interest in their ways.—F. M. C.

THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL. BY GILBERT H. TRAFTON, Instructor in Science at the State Normal School, Mankato, Minn. Houghton, Mifflin & Co. 12mo. xii + 288 pages.

Professor Trafton, drawing on his own wide experience, here writes a book for teachers on methods of teaching science. The book has six major headings as follows: I, The Pedagogy of Science Instruction; II, Biological Science; III, Agricultural Science; IV, Hygiene; V, Physical Science; VI, Outline of Science Instruction.

There is no padding, but a wealth of practical suggestion and information based not on theory but on practice. We should say that no teacher of elementary science could fail to profit by an examination of this volume.—F. M. C.

The Ornithological Magazines

THE CONDOR.—Five general articles and a number of short notes make up the varied contents of the May number of 'The Condor.' In a brief account of 'The Short-eared Owl in Saskatchewan,' Goelitz describes the nesting of the bird on the open prairies and the finding of several nests, one of which, containing nine eggs, is reproduced from a photograph. One of the most interesting articles in Bradbury's 'Notes on the Nesting Habits of the White-throated Swift in Colorado,' well illustrated with five views of nesting-sites and one photograph of a nest and four eggs collected June 24, 1916, near Hot Sulphur Springs, Colo. This paper and Hanna's article on the Swift in the number

for January, 1917, are substantial contributions to our knowledge of the nesting habits of this characteristic species of the mountains of the West.

Mrs. Bailey's paper on 'A Return to the Dakota Lake Region' is continued with an account of the 'Birds of the Unbroken Prairie.' The type, locality, early history, and name of Costa's Hummingbird are discussed by the present reviewer, who shows that the species was described from a specimen collected in all probability at Magdalena Bay, Lower California, and that the bird was not taken in California until twenty years later, and its eggs not until nearly half a century after the discovery of the species.

In an interesting review of 'The Distribution of the Subspecies of the Brown Towhee' (*Pipilo crissalis*), based on a study of 383 specimens, Swarth shows that the three forms of this bird in California (*Pipilo c. crissalis*, *P. c. carola*, and *P. c. senicula*) occupy well-defined areas which are outlined on an accompanying map. It is rather remarkable that, although this Towhee is so characteristic of the coast region, no specimens from Lake Napa, San Francisco, San Mateo, or Santa Cruz counties seem to have been examined in the preparation of the paper. In view of the recent discussion concerning the scarcity of the Brown Towhee on the San Francisco peninsula it would have been interesting to have had some explanation or mention of the local rarity of the bird in this part of its range.

The brief notes include Hunt's ingenious reconstruction of certain evidence of the presence of a Short-eared Owl near the University campus at Berkeley (an addition to the species of the local list) and Bryant's summary of the contents of 18 stomachs representing 12 species of Hawks and Owls from California.—T. S. P.

Book News

In the May issue of the New York Zoological Society's 'Bulletin,' William Beebe, writing on 'Animal Life at the Front,' says that "In spite of the months

and years of constant noise and flames, gases and dangers, wild birds have shown an astonishing disregard of those supreme efforts of mankind. They soar and volplane, they seek their food, quarrel with one another, carry on their courtship, mate and rear families in close proximity to the actual fighting and exploding shells. In fact, their numbers have increased near ruined villages where they nest in the shattered houses and in cathedrals still smoking from devastating bombardment."

The Twenty-seventh Annual Report of the Royal Society for the Protection of Birds, presented at the general meeting of March 12, 1918, recounts the efforts of the Society in combating the popular but thoughtless desire to increase our food supply at the expense of our bird life at a time when birds are of exceptional importance to our agricultural interests.

Fortunately, the efforts of the Society were warmly supported by the public, to which it appealed through a special leaflet, entitled 'Birds, Insects and Crops.' The Society remarks with much truth, "Undoubtedly this was a duty which should have been fulfilled by the Government departments entrusted with agricultural and educational interests and with public money for such purposes, but since these had systematically neglected it, a Society with an income less than that of many an individual salaried official had to come to the rescue."

The spring and summer, 1918, issue of the 'Audubon Bulletin' of the Illinois Audubon Society contains 48 pages filled with interesting matter relating chiefly to birds and bird conservation in Illinois. The address of Miss Amalie Hanning, the treasurer of the Society, is 1649 Otis Building, Chicago.

The Department of Fish and Game of the state of Alabama, has issued its usual 'Bird Day Book,' a pamphlet of ninety-six pages containing selections in prose and verse on the beauty and value of birds.

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

Published by D. APPLETON & CO.

Vol. XX Published August 1, 1918 No. 4

COPYRIGHTED 1918 BY FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

At last migratory birds have been accorded full national citizenship. No longer at the mercy of this state or of that, no longer the victims of laws made with a view to their destruction rather than protection, they are now wards of the Federal Government. And, within the limits of the United States, have certain clearly defined rights which are legally as effective in Florida or Maine as they are in California or Oregon.

Furthermore, these rights will be maintained in the interest of the birds, not of their enemies. The species classed as game-birds will still have to contribute their share to gratify the love of sport which for many generations will doubtless continue to be an inherent human attribute. But their contribution will be made with due regard to maintaining the source of supply and not to gratify the selfish thoughtlessness of the passing generation.

When on July 3, 1918, President Wilson signed the "Enabling Act" making effective our treaty with Canada for the protection of migratory birds, he completed the structure which for the past third of a century the friends of birds have actively been endeavoring to build. Only those familiar with the history of bird legislation and who have been engaged for a more or less prolonged period in the fight to secure for our birds a satisfactory legal status, can begin to realize the significance of the victory which places their care in the hands of the National Government.

For years, it is true, certain of our states, have recognized the claims of birds to the protection of the law. But such

protection extended only to the limits of the state that gave it while in the neighboring state the bird could, perhaps, not only be legally killed, but a price might actually be placed on its head!

With every state making its own laws—or failing to make any—uniformity of treatment of the subject of bird conservation was out of the question. The first man to give public expression to the inadequacy of state game laws was George Shiras III, who, on December 5, 1904, introduced the original 'Migratory Bird Bill' into Congress. The ideas it embodied were too novel to be immediately accepted, but, at least, they were presented for the consideration of the public, to live or die on their merits.

Bird-protectors were quick to see the far-reaching importance of Federal legislation; while those sportsmen who think only of the number of days of shooting they can crowd into each year were equally quick to realize how materially it would restrict their activities. Federal bird legislation, therefore, soon developed many enemies as well as many friends. Each side fully understood the nature of the struggle and was determined to fight to a finish. Fortunately the cause of the birds has never lacked for earnest and effective leaders. Shiras was succeeded by Weeks and Lacey and McLean, and finally a bill bearing the latter's name was passed on January 22, 1913, and approved by the President on March 4 following.

Beaten in Congress, the enemies of the birds soon attacked the constitutionality of the law. This question was finally brought before the Supreme Court which gave no decision but called for a rehearing.

Meanwhile in January, 1913, the allies of the birds, represented by Senators Root and McLean, had taken the initial steps toward the passage of a migratory-bird treaty which should embody the provisions of the Shiras-Weeks-Lacey-McLean law. It is the "Enabling Act" making this treaty effective which has become the law of the Nation to be administered by the Biological Survey of the United States Department of Agriculture.

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.

PRACTICAL CONSERVATION OF BIRDS

The Superintendent of Public Schools in Wilmington, N. C., writes: "We are endeavoring to make our entire county, New Hanover, a Bird Conservation County. On two sides we have the sea, and on the other, the Cape Fear River. A number of migratory birds spend the winter here. We want to continue our work through the schools, and to make it effective and permanent."

In direct connection with the suggestions in the last issue for making state, county and village census-maps of bird-populations, for purposes of study and comparison, is this practical plan of setting about systematically to conserve bird-life within a single county. There could be no better way to make a real beginning in conservation than to start all the schools within a limited area in a study of the different species of birds found there throughout the year, together with the best methods of attracting and protecting them. Results are bound to come more rapidly in this way, for *concentrated effort* is an essential point in any successful undertaking.

Think what it would mean in any state, if individual counties or towns determined to find out more accurately the kinds and numbers of birds present, the kinds of food preferred by them, the enemies and dangers about them, and the laws governing their relations to man! Within a short time the public would become far more wide awake to the conditions most favorable to birds and man alike, and measures of protective control would be supported without the opposition, now so unhappily and disastrously raised by ignorant or unprincipled politicians. A recent Danish paper mentions the wholesale exportation of Gull's eggs from neighboring islands, due to the unusual demands made by the war. Just how far such utilization of a natural resource can be safely allowed, responsible persons in authority should know definitely. In our own country, the national food-administrator, recognizing the value of birds to man, particularly through their relations to agriculture, has urged upon everyone the importance of conserving bird-life. We have the opportunity now, as at no other time within our memory, to make use of every natural resource to its fullest value. Instead of minimizing the necessity of bird-study, the critical moment has arrived when we should strain every nerve to gain any advantage which birds can help to give us.

It is gratifying to receive reports that birds seem unusually abundant this season. At the moment of writing, in northeastern Vermont, Bluebirds are

calling with much the same frequency that they did before their sudden decrease. Laughing Gulls were seen along the shores of Rhode Island in early June, while the Prairie Warbler was recorded not far inshore. Such species as these, whose numbers or distribution are varying, are singled out simply as interesting examples of beneficial species which show a rapid increase or decrease, according to favorable or unfavorable conditions.

Is it not possible to take up careful limited area studies more generally, not only in schools but also in clubs and communities, so that town by town, county by county and state by state, we shall have a continuous link of thorough investigation? In order to aid this movement, State Audubon Societies would do well to get into closer touch with each Junior Audubon Society within their limits. Not infrequently, appeals come to the School Department for information as to how and where to get material, lectures, and organized assistance in forming a bird club or Junior Audubon Society. Why not send a circular of information to each school in the state from the head office of the State Audubon Society and thus establish, not only acquaintance but a working relation, between such isolated centers of interest? The 'endless chain' idea might well be applied to bird-study and bird-conservation.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XL: Correlated with Music, Basket-making, and English. Summer Bird Music. Part III

The season has come when most people fail to take the keen interest in bird-study which they do in spring or even during June, yet there is very much to see and to hear throughout July and August, and those who really wish to become thorough students of bird-life should not neglect midsummer observations.

From any single vantage-point a list of twenty or thirty species may be listed, provided the locality is a favorable one. Should one do no more than to follow these thirty or less species, a great deal could be learned about their daily activities, which would throw light on the habits and movements of many other species. The following random list of birds seen or heard from a piazza on a rainy July morning illustrates the value of hot-weather bird study. The environment of the locality was possibly more than ordinarily favorable, since it combined a salt-water inlet with a somewhat shaded roadside bordering on a thin fringe of woodland. One or two old apple trees, several large locusts, a few cherry trees, cultivated once, perhaps, but now run wild, shrubs and roadside weeds made up in general the vegetation. One large locust alone offered sufficient opportunity for observation. On its bark, the White-breasted Nuthatch and Downy Woodpecker and the smaller Black and-white Creeper were

busily engaged, uttering their various calls from time to time. At this season of the year, the Creeper gives two songs, one far less rasping than its common *wee-see, wee-see, wee-see*. Should there happen to be a bevy of young Creepers about, their notes might so much resemble those of a soft-toned Chipping Sparrow as to deceive one unaccustomed to them.

Flitting about in the highest branches of the locust were Baltimore Orioles, mostly silent except for a lisping call-note or brief chatter, in striking contrast to their full-throated, ringing whistles uttered in mating-time. Dropping in with them for a brief survey of the available food-supply on and in the weather-worn locust were a late-nesting pair of Chickadees, than whom no bird friends are more dear or constant. Just how frequently the *peewee* song of this species is given as compared with its *chick-a-dee-dee* note throughout the year, would be an interesting point to observe. Heard in the evergreen woods of more northern localities against the high, flute-like notes of the White-throated Sparrow, the Chickadees' plaintive song takes on a distinctly minor character, but here by the shore, in the open covers of the locust, the ear noted only major cadences.

The Yellow Warbler shows brilliantly against the soft, waving, green leaves of the locust in the sunlight, but on this wet morning one would never have suspected that it had any color aside from green. For a week or more during midsummer, the penetrating song of this Warbler suddenly stops, when only the keenest eye can detect the molting bird tucked away in some shady nook, moping and evidently far from its normal vivacity. The Yellow-throated, Red-eyed and occasionally a White-eyed Vireo frequented the locust and neighboring shrubs, although the presence of all three on this particular morning cannot be affirmed. It is always a pleasure to train the ear by timing the number of phrases given per minute by the different Vireos. Should one luckily discover their nests, there is an added pleasure in detecting minute differences in the shape and construction of them as well as in the materials used in making them. The call-notes of young Vireos, either in or just out of the nest, add another point of interest to these leaf-frequenting species.

In the lilacs and syringas under the locust, Catbirds abounded, singing less and less and uttering their notes in more whispered tones with the advance of summer, while from the woods to the west the call of the Wood Thrush was heard most frequently in the early, dewy morning or toward dusk. Now and then the note of an Oven-bird might be heard, although, after early July, this species is seen much oftener than heard. If not too busy a thoroughfare, it may even be found along the roadside, where overshadowing trees are thickest. Goldfinches, now setting about mating and nest-building, gave deliciously sweet call-notes, as they kept unremittingly at their task of selecting a suitable site for their home and a suitable food-supply. Back and forth on undulating wing, these beautiful songsters constantly engaged the eye as well as the ear of the observer.

With Chimney Swifts and Barn Swallows twittering and gyrating overhead,

an occasional Kingbird, or, possibly a Red-shouldered or Sharp-shinned Hawk, the air above seemed full of life as well as trees and shrubs. The Kingbird is especially attractive when poising high up or breaking forth into infrequent, musical though brief song. It is likely, however, to confuse one who is unaware of its appearance in midair or its song.

The Scarlet Tanager and Crested Flycatchers are a delight during the summer months, and the Purple Finch also, if one is so fortunate as to be in its vicinity. The Tanager's fragile nest is rather easily discovered, and, like the Goldfinch, the brilliant and attentive male makes a picture not soon forgotten, as it carries food to the young, or, in the latter instance, to the female as well. One must not forget the humble Sparrows either, for without the familiar songs of the Chipping and Song Sparrows, a summer bird-chorus would seem thin and lacking in quality. Up on the dry pastures, Grasshopper Sparrows give their indistinct buzzing notes, and occasional flight-songs of more musical value, but by the salt-water inlet which I am describing, the Chipping and Song Sparrows most commonly represent the great family of fringilline birds.

Wrens find this environment congenial, especially House Wrens, which chatter and scold on the slightest provocation. When a big Carolina Wren chanced that way on its rather erratic wanderings, excitement prevailed, for its notes awaken even the careless onlooker of Nature. The Wood Pewee is one of our most delightful summer birds. When Phoebe has become silent and is secretly getting off its last brood, the Wood Pewee is pursuing household duties with unflinching care and charm. A Pewee's nest is almost as beautiful a structure as a Hummingbird's. Forget an aching neck if the opportunity comes to watch one in the making or the using.

Around the honeysuckle and creepers about the locust, Hummingbirds came regularly. They seemed to have each desirable flowering plant or shrub located, so constant were their visits. In contrast to these minute rapid creatures were the slow, big Herons on the inlet at low tide, whose raucous notes are familiar to all who visit the neighborhood. Sometimes an early migrating Great Blue Heron chanced in the inlet. With Kingfishers and a flock of Laughing Gulls, an occasional Tern or Herring Gull, and Spotted Sandpipers, the water side of the road was equally attractive. Indeed there is always so much to see and to learn, one can hardly afford to give up bird-study because of hot weather. When early fall comes, conditions change and migrating birds of many species confuse the observer. It is wise to improve each day in July and August.—A. H. W.

For and From Adult and Young Observers

MEANS OF SECURING INTEREST IN BIRD-STUDY

As a first step in securing interest in our spring bird-study, I suggested to my fifth-grade pupils that they form a Junior Audubon Club. Having seen

some of the sample pictures and leaflets, they were glad to do this and became enthusiastic when I allowed them to choose a name for the club by voting, as well as to elect their own officers. Interest in the club did not lessen, because of the regular meetings for which a program was arranged by the president who secured the material and selected the pupils who were to take part. Short



NOVEL BIRD HOUSES

accounts of these meetings were kept by the secretary. On one occasion we were guests of another club which entertained us quite pleasantly.

A number of stuffed birds loaned by the Science Museum introduced to the children birds of different families and gave them an idea of the relative sizes of various birds which could not be obtained from pictures. The study of these birds formed a good foundation for the outdoor excursions which followed as soon as the weather permitted.

After considering bird-houses from the standpoint of the birds' comfort, measurements for houses which might be tenanted, were suggested and the method of construction was discussed. Meanwhile the children placed out nesting material for the early builders. A few of the houses, which were made at home, are pictured here. The results were purposely practical rather than ornamental. One lad made a house from an old China teapot which was quite ingenious if not altogether a work of art. It is hoped that next year the construction of practical bird-houses may be included in our manual training work.

We correlated our bird-work with drawing by cutting birds out of paper and also by drawing them, following this by coloring them. The cover of the secretary's book was also designed by one of the pupils. Several phases of our bird-work formed a basis for written as well as for oral work in language. In literature Celia Thaxter's poem "The Robin" took on added meaning after they had actually heard a Robin singing during a spring shower. The children became familiar with the calls and songs of some of our common birds through the entertaining medium of the victrola. This trained them to listen for bird-

songs more carefully and more intelligently. The games suggested in BIRD-LORE were always enjoyed, as well as was the spare time when BIRD-LORE was the popular reading. Always when it was a case of attention to a lesson or watching or listening to a bird from the windows, our little feathered friends won out. But was not this the enthusiasm I had been striving for? That they might learn to know and to love

"The bluebird balanced on some topmost spray,
Flooding with melody the neighborhood;
Linnet and meadow-lark, and all the throng
That dwell in nests and have the gift of song."

—SUSAN C. DOWD, *Springfield, Mass.*

[Several points in this admirable outline of work are important to notice particularly. One is the correlation of bird study with drawing. Another is the systematic organization of the Junior Audubon Club which is so actively and interestingly managed. Profit also by the advice that pictures of birds are deceptive in the matter of size. It is unfortunate that the illustrations in many bird-books give so little idea of the relative sizes of different species, since size is an especially good field mark.—A. H. W.]

BIRD-HOUSES

We want to make friends with the birds because they eat insects and make life more pleasant. We can attract birds to our homes by making bird-houses, and by putting out bread for them in the wintertime. You can have a Bluebird come to your bird-house or a House Wren.

You must have no cracks in the wood where drafts may come in. The hole must be sandpapered so the bird will not catch any of its feathers. The roof must come beyond the back so the water will run off the roof.

The house must be made so it can be taken apart to be cleaned. Lots of birds do not like perches because English Sparrows can get on and chat and bother the birds inside.

If you are going to put your bird-house on a pole, paint it white; if on a tree, paint it a dull color.—WILFRED BEAUMIER, *Springfield, Mass.*



AL BOY AND HIS BIRD-BOX

AN AUDUBON LIBRARY EXHIBIT

Because these boys in the picture are more interested in birds than they ever were before, and because they read BIRD-LORE in the children's room of the public library where this exhibit was held, we are sending the picture to you.

There was no prize at all, and yet many boys responded.

All the books and articles from magazines were utilized, and yet many boys tried original models.



BIRD-BOXES MADE WITH AND WITHOUT MODELS

Now we are looking for simple bird-baths. Each one of these boys, and many others, have gardens of their own and Mr. Fullerton told them that each garden needs a bird-bath. Most models are too elaborate.

There never have been so many beautiful birds here before! Can it be because boys everywhere, who used to shoot them, are now their protectors? —A. H. THOMPSON, *Whiteston, L. I.*

[More birds than usual at this season of the year are reported in parts of Rhode Island and elsewhere. It is to be hoped that continued protection of birds in the South will increase their numbers in the North.—A. H. W.]

MY FIRST BIRD TENANTS

When, on June 1, I reached Sorrento, Maine, where I was to spend the summer, I was delightfully surprised to find that many summer birds had already arrived. The Robins had begun to build their nests, and some had laid their eggs. That same day about ten Tree Swallows came and inspected the bird-boxes I had made and put up the year before. They seemed to be specially attracted by a box which was made out of a hollow log which I had gotten at a nearby sawmill. By night it was plain that one pair had decided

to build in it. The next day they began to bring bits of grass and straw, although it already had sawdust in the bottom of it. The nest was lined with feathers. I could easily make these observations, as the roof of the box was hinged on. I did not put my hand in the box or disturb the nest in any way, but just looked in, never leaving the top open for more than a minute. Every day one egg was laid until there were four. Then one day, when I looked in I saw that the red squirrels had made a visit. The eggs were broken and the nest destroyed. I half expected something of the kind, for I had seen the squirrels around the box and been obliged to drive them away. Another of my boxes was inhabited by Tree Swallows. I never saw the young birds, but when I cleaned out the box in the fall, I could find no traces of broken eggs, so I think that brood was successfully raised.

I also made a bird-bath by digging a shallow hole of the right size and shape, and coating the sides of it with cement. Robins, Chipping Sparrows, White-throated Sparrows, Song Sparrows, Juncos, and a Yellow Warbler visited the bird-bath this summer.

I had a self-filling food-box outside the window on the side of the house. Song Sparrows came to it mostly, but I saw a few Chipping Sparrows in it.

Before I left last fall I took down the boxes, cleaned them out, and put them up again for the birds to use for shelter this winter. I also tied suet to the trees for them.

I saw sixty-eight species of birds last summer. Among them, at Washington, D. C., were a Yellow-bellied Sapsucker, Black-throated Green Warbler, Yellow-billed Cuckoo, Black-throated Blue Warbler, Black-poll Warbler, White-breasted Nuthatch, Tufted Titmouse and Brown Creeper. At Sorrento, Maine, a Blue-headed Vireo, Great Blue Heron, and Sandhill Crane (?).

My earliest record for this year is a Robin which I saw at Yonkers, N. Y., on February 2. Four Robins were seen the following week.—GIEFFORD EWING, (age, 13 years), *New York City*.

[Bird-work of this kind should be more and more encouraged. The list of birds given for Washington, D. C., is not dated, but is probably a migration rather than a nesting list, since most of the species mentioned nest farther north. The record of a Sandhill Crane in Maine is improbable for several reasons. First, no record of this species for that state is known; second, this Crane has become extremely rare in most localities where it was formerly common; and, third, its normal range is not along the Atlantic seaboard in the vicinity of Maine. It is quite likely that a Green Heron, American Bittern or Black-crowned Night Heron was seen by the observer. A good rule to follow in studying birds is to look up the *normal range* of a species when first identifying it, and in case of a doubtful record, to consult as many reliable lists as possible to discover its regular occurrence. Learn what *not* to expect in any locality.—A. H. W.]

A FEATHERED PATIENT

Perhaps you would like to hear about something that happened yesterday. I was going through a field when I saw a Robin lying on the ground. I ran

quickly and picked it up and looked at it. It had a broken wing. I brought it home, but did not know what to do to help it. After awhile I thought perhaps Doctor Michaud would be able to fix the wing. I took the bird to him and asked him but the doctor said he could not. He told me to take the Robin and leave it in the woods so the cats would not get it. I did this and I soon saw three Robins come with the Robin that had the broken wing. I felt better because I thought they would take care of it.

We have an Audubon Class in School, and like to have things read out of BIRD-LORE.—GERARD DUBOIS (age, 10 years), *Sacred Heart School, Bathurst, N. B., Can.*

[Bird hospitals are among the latest advances in protective work for our feathered friends. It would be a good thing if someone in every community knew how to save a bird with a broken leg or wing.—A. H. W.]

A TRUE BLUEBIRD STORY

More than threescore years ago, two little girls, Jane and Phoebe Waite, lived in a rural district in New York. In summer they often went berrying. Late one afternoon they discovered a Bluebird's nest in the cavity of a tree, containing three baby birds. After admiring them, Jane and Phoebe decided the babies would make most desirable pets. They carried them home carefully and showed them to their mother. Mrs. Waite was shocked at the thoughtlessness of her little daughters. Kindness to birds and animals had always been a principle in the household. Although twilight was deepening, the mother bade her children take the little birds back to the nest. They found the parent birds in great distress. When the baby birds were safe in the nest, the mother and father Bluebird manifested so much joy and love for their babies that Jane and Phoebe sat down and cried, realizing how nearly they had been to causing a tragedy in the home of their bird friends. You may be sure they never carried away any more baby birds.—MRS. D. BERLIN, *Wimbledon, N. D.*

[Frequently boys and girls or even adults, pick up nestlings with the idea of caring for them for a time. Unless the birds are injured and helpless, it is a far better way to leave them with their parents, and to observe their habits at a safe distance. Nearly everyone who has vines about a porch will discover there a Robin's nest or a Chipping Sparrow's. These familiar species readily adapt themselves to rather close contact with people. It is not difficult to become intimate with many shyer species, and the joy of such acquaintance can only be appreciated by those who experience it.—A. H. W.]

A BIRD STORY

One day when I was out in the back yard, I saw a Wren and her young ones. She was up in a tree and her young ones were on the ground. I was near the tree. The babies thought that I was a tree, so they hopped up on my legs as if they were trees. The mother of the baby birds did not like it at first, but

when she saw that I was not going to hurt them, she stopped scolding. Then she called her young ones to her and they flew away and I went into the house. This story I tell you is true. — DAVID LOVELAND, (age, 8 years), *Lincoln, Neb.*

The little boy's mother adds: "I saw the two baby Wrens alight on his legs, one on each leg, as he was standing still, eating cherries from the tree in our back yard. David is a member of our Twentieth Street Audubon Society and is much interested in birds." This is a valuable observation with reference to the actions of young birds. — A. H. W.]

MY FRIEND, JIM CROW

Doubtless, when you read the title of my story, some of you will say, "She is not very careful in her selection of a friend." However, in spite of the bad reputation of this bird family, I will not change it, for, judging from my personal acquaintance with these birds, I know that, like some human beings, Crows are not as black as they appear. Their intelligence and cleverness cannot help but win the admiration of those who know them well.

I have had the pleasure of taming three Crows, but I shall tell only of some of the experiences with the one that I had for over two years, the one which was so faithful that he refused to associate with any of the Crow family who tried to coax him away, but remained with me during two cold winters.

Our acquaintance began when he was pushed out of the nest, a baby Crow, so young that all he knew was to open his mouth wide and call for food as soon as I appeared. He was so helpless, he could not even walk, but would flap his wings and call until his hunger was satisfied with a liberal supply of bread and milk.

After a time, he was able to travel, and would follow me about, but began to depend more upon himself to find food.

He was my faithful attendant to and from school, or to the village, watching from the pine tree in the yard, and flying to meet me at noon and night when I returned home. If there was any special work to be done, Jim was there to superintend it and nothing seemed to escape his bright eyes, as he sat with his head cocked on one side, closely watching.

He was fond of bright colored objects, and nothing of the kind was safe with him, for sad to relate, Jim was a thief.

One time, on returning from a neighbor's, I found he had entered an open window and was sitting on the sewing machine with a silver thimble in his bill. Before I could rescue it, he swallowed it. Thinking about what the owner would say [for she was not as fond of Jim as I], I grasped him by the throat and choked him until he spit out the thimble. With an angry squawk, he flew away, refusing to notice me for a long time.

One kind of work, in which Jim was especially interested, was the washing, and at this time he required watching, for no sooner were the clothes pinned to the line, than he was after the clothes pins, which he carried away to some hiding place, sometimes tucking them under the shingles on the roof, sometimes in trees near the house, where we afterward found them. If discovered at this mischief, he would *ku! ku!* as if it were a good joke.

Mother failed to see the humor of it, and one washday, saying "Old fellow, we'll see!" pinned some of the clothes to the line with common pins, thinking there would be no more trouble. But Jim was equal to the occasion, and a little later, a row of pins was discovered on the ground beneath the clothes-line.

Members of the family were not the only victims of Jim's thievish pranks—even the cat did not escape. One day, Jim spied her playing with a mouse, and the temptation to

got it was too strong to resist, but how, was the question. He strutted back and forth in front of her, talking all the while in Crow language, but keeping well out of reach of her claws.

This plan not seeming to succeed, he resolved to try another. Quickly slipping behind her, he seized her tail in his bill, pinching it till the poor cat released the mouse, and angrily turned to strike at him. Jim was too quick for her, however, and, with the mouse in his possession, flew to a nearby tree, where he sat and watched the disgusted-looking cat below him.

Like other Crows, Jim was interested in certain branches of agriculture, but, unlike them, he turned his attention to the onion bed, watching carefully the putting out of a large bed of onion sets — but that was not all! As father put out row after row, Jim was following quietly behind him, pulling out set after set, so that when father turned to look at his work, every set lay on top of the ground. As this was the first offense of its kind, it was overlooked, and after Jim was driven away, the onion sets were again put in the ground as before. Several days later, when father went to look at his onion bed, he found the sets up, nicely piled in little heaps on the top of the bed.

This was too much for the patience of any man to endure, and Jim was condemned to death, but so strong a plea for his life was made, that the sentence was changed to imprisonment until the garden was well started.

These were only a few of his many pranks, and yet Jim did not spend all of his time in mischief.

He was an accomplished mimic. He would say "hello" so plainly and laugh so much like a person as to deceive anyone. His imitation of the cackle of a hen was so perfect that he deceived some of the family who hunted in the woodshed, from which the sound came, to find a nest. No nest was there, but finally Jim was caught at his joke, and upon being discovered, showed his appreciation of it by giving a loud "ha! ha!"

In only one attempt as an imitator was Jim a failure. In his case, the motto, "Keeping everlastingly at it, brings success," did not prove true, for he did his best to gobble like a Turkey, though in vain. I have seen him, an hour at a time, follow the Turkeys about, trying to learn how to gobble, but he never succeeded in adding this to his list of accomplishments.

In the early part of the second winter of his stay with me, Jim met with a misfortune, which seemed to sober him and cause him to lose many of his bright, cute ways. One day he failed to appear, and he was found on the hill, caught in a rabbit trap, one leg nearly severed. Not a few tears were shed, for fear he would die, but with care, the wound healed, and Jim, though a cripple, still followed me about.

The next spring, however, Jim disappeared, and in spite of all our efforts, he could not be found, but in a few days we learned his fate. He had been found in another trap, by a trapper, who mercifully ended his suffering.

So because of my affection for this member of the Crow family, I cannot help but have charity for others, regardless of the questionable traits which they possess.

This is a true account in every detail. I am sorry I have no photos to illustrate some of the amusing incidents. — MILDRED H. MURPHY, *Treadwell, N. Y.*

If birds are kept as pets, as in this case, it is wise to select a species like the Crow, whose habits cannot be too thoroughly investigated. Personal experiences with the clever and highly intelligent Crow prove more conclusively than argument the value of intimate study of this much discussed and too often misunderstood bird. In this connection look up the bulletins on the Crow published by the U. S. Dept. of Agriculture. — A. H. W.]



TWO SCENES IN A ROSE-EREA-TED GROUSE'S HOME
Photographed by A. A. Allen

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, 1074 Broadway, New York City.

WILLIAM LUTHER, *President*
FRANKLIN A. LORAIN, *Acting President* T. GILBERT PEARSON, *Secretary*
THEODORE A. PALMER, *Past Vice-President* JOHNSTON DWIGHT, JR., *Treasurer*
SAMUEL T. CARTER, JR., *Attorney*

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
\$500 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 DEED:—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 ENABLING ACT BECOMES A LAW

The Enabling Act to make operative the treaty between the United States and Great Britain regarding migratory birds of Canada and the United States, after a final, bitter, two days' fight in the House of Representatives, recently was passed. On July 3, 1918, it was signed by President Wilson and is now a law. Thus ends the struggle to secure Government control of migratory birds which began away back in 1904 when the first migratory bird bill was introduced in Congress by Representative George Shiras 3d, of Pennsylvania.

No complete history of the long struggle that has since ensued for the support of this measure will here be given, but briefly it may be stated that, although the bill advocated by Mr. Shiras did not become a law, others were inspired to follow his example in the succeeding sessions of Congress, and the McLean bill finally was enacted, and signed by President Taft March 4, 1913.

In the minds of some people there was doubt as to the constitutionality of this measure. At least two Federal judges took this position in cases that were brought before them. One case finally went to the Supreme Court. This body, apparently unable to agree, referred the matter back

to the United States Department of Justice with the suggestion that it again be brought before the Supreme Court at a later date.

In the meantime a movement had been set on foot to secure a treaty between this country and Great Britain, covering the protection of migratory birds in Canada and the United States, the opinion being given by lawyers of high standing that after a treaty covering the principles involved in the McLean Law should be consummated, it would take the place of the McLean Law and would not be subject to revision by the Supreme Court. This treaty was finally ratified by the Senate August 29, 1916. But this did not end the matter, for until Congress should pass an 'Enabling Act' there would be no funds available for enforcing the provisions of the treaty, nor would any department of the Government be authorized to administer it. This Enabling Act, which has been hanging fire in Congress for the past two years, is the one which has just become a law.

This new statute gives authority to the Department of Agriculture to employ wardens and to make and execute regulations for carrying out the provisions of the

treaty. Automatically it takes the place of the old McLean law, and the machinery created under that law, therefore, comes to an end.

In the history of this country there has never been a conservation matter before Congress which has attracted such wide attention and has brought to its support such vast numbers of organizations and individuals connected with conservation as has this one for Federal protection of migratory birds.

Bitter opposition, cunningly marshaled, and effectively hurled against the movement has time and again blocked its progress. The writer, who has been intimately associated with practically all the moves that have been made by friends of the measure the past fourteen years, is in position to know of the real forces which have been behind it. Offhand I can name at least sixty organizations and several hundred people who time and again have worked arduously for this Government control. I hope someone with an impartial pen will write the complete story, and thus permanently record the efforts made by public-spirited men and women to help win this fight.

To my mind, towering above all others, stand three men whose names we should always hold in grateful remembrance. First, George P. McLean, United States Senator from Connecticut, who, by his great influence collected the forces in Congress and passed his original migratory bird bill. Although a Republican and operating in a Democratic Congress he was able later to guide to a successful conclusion the ratification of the Migratory Bird Treaty, and finally, at the very last moment, when the Enabling Act was about to be passed, his watchful eye fell upon two very harmful amendments that had been injected by the Conference Com-

mittee, and by prompt action he secured their withdrawal.

Second, John B. Burnham, President of the American Game Protective Association. He, more than any other man outside of Congress, has been responsible for the success of this vast campaign. He organized the first important hearing given on the bill in Washington, and for six years has made the matter his chief work in life. He visited Canada and, more than any other person in this country, was responsible for getting a correct understanding of the principles involved before the Canadian authorities and securing their coöperation. Mr. Burnham has led to a successful conclusion the most important measure ever enacted in the world for the protection of migratory birds.

Third, E. W. Nelson, Chief of the Bureau of Biological Survey. Through him and his assistants invaluable aid has been furnished the workers for this measure from the very beginning, and his aid to Senator McLean, Mr. Burnham, and other workers has been of the utmost importance.

If time permitted, other senators and congressmen should be mentioned, who at various times have rendered most valuable aid. Especially should be included Congressman Charles M. Stedman, of North Carolina, without whose splendid efforts in the House of Representatives the Enabling Act would not have been passed at this session of Congress.

The National Association of Audubon Societies has, of course, always been actively interested in this work, and through the home office, field agents, affiliated societies, and general membership has time and again labored to bring pressure to bear on Congress, and to arouse the public sentiment of the country to a better appreciation of the importance of the measures involved.

A JUNIOR CLASS IN THE MOUNTAINS

The Robin Junior Audubon Class, which comprises pupils from the three district schools in the valley of the Catskills, held its fourth annual meeting on April 19, 1918.

The afternoon session was given to the exercises. The entertaining school had decorated the room attractively with greens, flags, and Liberty Loan posters.

Good work was reported of winter feeding and bird-observations. One pupil had noted twenty-one varieties of birds this spring, another twenty-one, others less. Calendars had been kept up. Recitations were given and compositions read on the subject of birds and their service to us. The second part of the program was given to patriotic exercises, reviewing work that had been done already, and suggesting farther effort, in Red Cross work, food-saving, gardening and buying of Thrift

Stamps. On a poster showing our soldiers going "over the top" for us had been lettered "Give Them Wheat—Eat Potatoes," and this suggestion was emphasized. At the close of this brief address the whole society took the pledge: "I promise to serve my country in her time of need!"

Admirable compositions on patriotic service were read by the pupils. After election of officers, the exercises were followed by games and refreshments—
LEILA ALLEN DIMOCK.



JUNIOR AUDUBON CLASS FORMED BY MRS. A. W. DIMOCK, PEENAMUSE, N. Y.

ELGIN, (ILL.) AUDUBON SOCIETY'S ANNUAL EXHIBIT

The Elgin Audubon Society held its second annual exhibit from April 19-22 in the parlors of the Young Women's Christian Association building, during which time it is estimated that at least 2,000 interested visitors availed themselves of the privilege of examining the hundreds of specimens.

Besides numerous bases and collections

of native birds, there were interesting groups of birds from Mexico, Australia, South America, Europe, and India. Through the influence of one of our members, who is on the staff at Field's Museum, Chicago, we had the loan of a very fine collection of fifty-three bird-skins.

The part that bird-study is taking in the schools was shown by the display of bird



PART OF A LARGE COLLECTION OF BIRD-BONES AND MOUNTED BIRDS SHOWN
AT THE ELGIN (ILL.) AUDUBON SOCIETY EXHIBIT

Photographed by Henry Gronman



BUTTERFLY COLLECTION. ELGIN (ILL.) AUDUBON SOCIETY EXHIBIT

Photographed by Henry Gronman

houses, paintings, and short essays on birds—all work done by the school children.

The exhibit was not confined to birds, but included a beautiful collection of sea-shells collected from all over the world, loaned by Field's Museum, Chicago, several collections of well-mounted and classified moths, butterflies, insects, shells, fish, fossils, minerals, fungi, and plants. A collection of hornets' nests, varying from the size of a peach to that of a half-bushel basket, were arranged on a tree, together with several nests. There were photographs of birds taken by some of the members, and a group from the Laysan Islands taken by Homer Dill, curator of Iowa State University. There were three collections of eggs, one of which bore a sign saying they were collected over twenty years ago, before the value of bird-protection was realized, and that it was now

against the law to rob the nest of any bird except for scientific purposes, for which a license has to be procured.

Hill's nursery of Dundee contributed a box of bushes attractive to birds, the National Association of Audubon Societies sent quantities of free literature which was distributed, and the local book stores furnished samples of all their bird books and bird records for the victrola.

On the walls were many signs calling attention to the value of protection of our feathered friends, and the aims of the Audubon Society.

Thirty seven new members were added to the club which brings the membership to 110.

The Elgin Society justly feels its annual exhibit was a great success, and that out of it has come, and will continue to come, an added interest and appreciation of all wild life.

BIRDS AND CATS

The nesting season of the birds has arrived. Whether or not there will be the desired increase in birds this season depends very largely on the protection which will be received by the adult birds during the hatching period, and the young birds until they can fly and have learned to shift for themselves.

One of the greatest menaces to the bird-life of the country today is the house-cat. There are very few cats which, if given the opportunity, will not kill a mother bird on the nest or a helpless fledgling fluttering around on the ground. The great tragedy is as likely to occur in the clematis along the porch, or in the flower-garden, as it is in the remote places frequented by the so-called 'wild' hunting house-cat.

This is no attempt to indict the cat. We have great sympathy for and appreciation

of the affection between Tabby and her owner. We are simply asking that at this crucial period the birds be given all benefit of the doubt.

We earnestly ask the owner of every house-cat during the next three months to assume the responsibility of seeing that the cat will not be given an opportunity to kill birds.

The country is at war. To win the war we must have food. It is common knowledge that the birds are a tremendous factor in the protection of the food supply from insects. Cats, if unrestrained, especially at this season, will tremendously weaken that protection. The logic is simple. The birds are trying to do their bit. Let us all help them.—Issued by the COMMISSIONERS ON FISHERIES AND GAME for the State of Massachusetts, May 15, 1918.

REPORT OF JUNIOR AUDUBON CLASSES

Despite all the distracting influences the past year, the formation of Junior Audubon Societies has gone steadily on as heretofore. The systematic plan of supplying children with first-class material for doing simple elementary work in bird-study is appreciated by school men and women in every state in the Union and in Canada.

One evidence of how the Junior Audubon work holds in a school where it is once established is shown by the many teachers in the grades who have formed a Junior Society every season for the past five or six years. Usually the classes move on so that the teachers have a new set of children each year, but their interest in the work causes them to encourage each group coming under their care to organize for bird-study. In many other instances, where a Junior Class has been formed in one of the lower grades, the children have insisted on reorganizing year after year, although the class continually passes on to the care of different teachers.

This year, as heretofore, immense numbers of bird-boxes have been built, and around thousands of schoolhouses birds have been fed in winter. Many attractive programs have been rendered, and the local interest in bird-preservation kept alive and stimulated by the little folk at school.

For the school year ending June 1, 1918, classes were formed and members enrolled in the different states and Canada, as shown in the following summary:

Summary for Year Ending June 1, 1918

State	Classes	Members
Alabama	3	147
Arizona	4	74
Arkansas	1	31
California	197	3,678
Colorado	48	1,487
Connecticut	324	7,008
Delaware	3	51
District of Columbia	1	33
Florida	91	483
Georgia	30	938
Idaho	57	1,579
Illinois	247	7,285
Indiana	109	2,000
Iowa	118	3,021

State	Classes	Members
Kansas	65	2,909
Kentucky	29	851
Louisiana	7	212
Maine	37	856
Maryland	46	1,421
Massachusetts	329	8,210
Michigan	196	5,099
Minnesota	261	6,875
Mississippi	16	484
Missouri	100	2,658
Montana	66	1,620
Nebraska	78	1,995
Nevada	—	30
New Hampshire	92	2,221
New Jersey	174	4,885
New Mexico	3	92
New York	891	24,448
North Carolina	48	1,245
North Dakota	30	958
Ohio	815	18,227
Oklahoma	26	814
Oregon	90	2,216
Pennsylvania	460	14,169
Rhode Island	19	548
South Carolina	24	901
South Dakota	34	889
Tennessee	26	693
Texas	45	1,209
Utah	37	820
Vermont	37	797
Virginia	75	215
Washington	214	5,330
West Virginia	39	1,200
Wisconsin	161	3,981
Wyoming	5	147
Canada	381	8,793
China	1	15
Totals	6,071	159,083

Never in the history of our country have school children been called upon to contribute to so many projects, and so continuously, as of late. The campaign in the schools for War Saving Stamps, for membership in the Junior Red Cross, seeds for war gardens, and other war activities, have been tremendous. Giving continually to these most worthy causes has had a very decided effect on the enrollment of the Junior Audubon members. Scores of teachers have reported that they found it absolutely impossible to collect the 10 cents necessary for the Junior fees.

In one large school building in the Middle West, a teacher who had asked that the children in the various grades bring their

Audubon fees to send in on a certain date, found when she went to collect them that the children had brought their money, but that at the last moment the principal of the school had instructed them to give this money to the Red Cross.

This is only one of many instances of a more or less similar character. As a result of these causes, enrollment of the Junior members showed a marked falling off from the year previous when the number reached the high-water mark of 261,654.

This work with the young people was made possible by the following contributions:

Unnamed Benefactor	\$20,000 00
Mrs. Russel Sage	2,500 00
General Coleman duPont	1,000 00
George Eastman	1,000 00
Mrs. Frederick H. Alma	250 00
Mrs. E. B. Dane	200 00
James H. Barr	100 00
Mrs. T. J. Emery	100 00
Richard M. Hoe	100 00
Edward L. Parker	100 00
Mrs. Elbridge Torrey	100 00
H. O. Underwood	100 00
Miss Edith G. Bowdoin	50 00
Miss Mary Drummond	50 00
Albion E. Lang	50 00
F. W. Wodge	50 00
Miss Mary Mitchell	50 00
Mrs. Bradley L. Pickman	50 00
Miss Mary I. Corning	25 00
Mrs. Denning Duer	25 00
John R. MacArthur	25 00
Mrs. John C. Phillips	25 00
W. E. Roosevelt	25 00
Mrs. Ezra R. Thayer	25 00
Mrs. William H. Reed	20 00
John D. Williams	20 00
Miss Louise W. Cate	10 00
F. Coit Johnson	10 00
Mrs. C. R. Sanger	10 00
Miss Rosina C. Boardman	5 00
John I. D. Bristol	5 00
Total	\$26,080 00

New Life Members

Enrolled from May 1 to July, 1918.

Baldwin, S. P.
Dunbar, F. L.
Harriman, Mrs. J. Low
Huntington, Howard
Lancashier, Mrs. J. H.
Lippitt, Mrs. C.

Merriam A. Ware
Rosenow, Mrs. Charles C.
Spauld, Mrs. J. B.
Warren, Mrs. E. Walpole
Watson, Mrs. Henry C.

During the same period there were also enrolled 114 new sustaining members and 23 new contributors.

Contributors to the Egret Fund

May 1 to July 1, 1918

Previously acknowledged	\$2,641 25
Anderson, F. A.	5 00
Anderson, Miss M. R.	5 00
Andruschew, Mrs. H. D.	5 00
Audubon Society of Skaneateles	5 00
Baldwin, Mrs. Robert F.	25 00
Baldie, Elizabeth, Caroline and Clement M.	5 00
Bishop, Miss Abigail H.	5 00
Broad, S. A.	2 00
Brewster, Mrs. Benjamin	10 00
Carroll, Elbert H.	10 00
Case, Mrs. James B.	10 00
Cochran, J. D.	5 00
Conner, Miss M. A.	5 00
Curtis, Clara K.	2 00
Cushing, Miss Margaret W.	1 00
Everts, Miss Mary	5 00
Garst, Julius	5 00
Henderson, Alexander	2 00
Hessenbruch, Mrs. H.	5 00
Hopfel, J. C. G.	5 00
Lang, Henry	5 00
Levy, W. Charlesworth (In Memoriam)	5 00
Lewis, Mrs. August	10 00
Luttgen, Walter	5 00
Mansfield, Miss Helen	2 50
Marsh, J. A.	5 00
Mason, Mrs. George G.	10 00
Moss, Mrs. A. Henry	5 00
Pennoyer, Mrs. P. G.	5 00
Potter, Hamilton F.	5 00
Radt, Charles	5 00
Redmond, Miss Emily	10 00
Richard, Miss Elvane	10 00
Rosler, Mrs. Edward	2 00
Sampson, Miss Lucy S.	1 50
Stewart, Mrs. Edith A.	10 00
Turnbull, Sarah A.	2 00
Upham, Miss F. Annie	1 00
Wagner, W. A.	5 00
Walker, Mrs. A. H.	5 00
Warfield, Mrs. W. S. Jr.	5 00
Watrous, Mrs. Elizabeth	1 00
Whiteside, T. H.	5 00
Willis, Miss Adeline	15 00
Wright, Mrs. William P.	5 00
Total	\$2,000 25



1. ISLAND HORNED LARK
 2. RUDDY HORNED LARK
 3. BLEACHED HORNED LARK
 4. PRAIRIE HORNED LARK, Summer
 5. PRAIRIE HORNED LARK, Winter
 6. HORNED LARK
 (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. XX

SEPTEMBER—OCTOBER, 1918

No. 5

The Oven-bird in Minnesota

By THOMAS S. ROBERTS, M.D., Minneapolis
With photographs by the Author

SOME years ago, while strolling quietly, on the last day of September, by a long since abandoned and overgrown wood-road that skirted one of the back bays of beautiful Lake Minnetonka, I startled from the path a small, dull-colored bird. It flitted silently to a tangle of fallen branches not far distant in the thick underbrush. Following carefully, and peering intently, glass in hand, I soon discovered the unknown, creeping cautiously away. Its prettily banded head and its dainty, mincing walk disclosed at once its identity. Carefully it went over the soft, new-fallen leaves, availing itself now and then of a half-buried log or branch as a convenient pathway, until, believing itself concealed behind a little tuft of faded ferns and twigs, it paused, ever eyeing me intently through the netlike interstices of the tangled growth that intervened between us. Without the glasses it was entirely invisible, but with their aid the suspicious little eye, with its lighter setting, revealed the whereabouts of its always anxious owner. Thus we stood for some time, silently studying each other. Golden-crown wearied first, or, becoming reassured, resumed his pretty walk, this time more openly and rapidly, until at last he took wing and, by short flights from bush to bush, passed out of sight and away from the fancied danger. His crown was bright and his plumage fresh, suggestive of springtime, but the fall woods, with their eddying leaves and odor of decay, were silent and, despite his presence in their midst, no longer reverberated with his ringing crescendo or knew his wonderful flight-song. These fading woods and shortening days and chilling winds that make life hard and dangerous, warn him that it is time to hie himself away to that far southern home where, with spirit tamed and pipe not attuned, he awaits in silence fresh promptings to begin life anew. When the warmer suns and softer winds of the late vernal season have again made green and joyous and fragrant the wooded hillsides in the Northland, he will come once more with quickened pulse and swelling breast and instinct wild that will send him madly chasing in hot pursuit amid the

bursting trees, impelled by a spirit of ecstatic love that finds vent ever and anon in as joyous and triumphant and melodious an outburst as the wild woods know.

Such is the Oven-bird or Golden-crowned 'Thrush' or Accentor or 'Teacher Bird,' as it is variously called. A plain, modest little bird, shy and suspicious in the presence of man; a lover of the deep woods, from the protecting shades of which it rarely ventures; often heard, seldom seen, except by the initiated; a graceful walker instead of a hopper; and possessed of a voice and exuberance of spirit during courting-time that marks it among its fellows. Difficult as it



NEST OF OVEN-BIRD AS FOUND. BUILT, IN THIS INSTANCE, OF FINE GRASSES

may be, time is well spent by the bird-lover in making the intimate acquaintance of this phantom bird of the woodland depths.

The Oven-bird comes to southern Minnesota about the end of the first week in May, sometimes a little later, less frequently a little earlier. Two April records in 1884, one from Red Wing and one from Lanesboro, are very unusual, and that same year it was not reported from Elk River until May 10. The 'teacher' song commonly comes from the budding spring woods just as they are thickening sufficiently to cast their first faint shade upon the newly opened bellworts, wood anemones, and yellow violets below, and usually on the very day that the rich notes of the Rose-breasted Grosbeak and Baltimore Oriole and the cheery song of the House Wren are first heard in the land. The main

Warbler wave is still a little way behind, though spring must be well assured before the Oven-bird ventures to appear. If the data at hand are to be relied upon, its progress northward is unusually slow, for ten days or two weeks elapse before it reaches the Canadian boundary. It is an abundant breeding bird everywhere in the wooded portions of the state. Farther northward many individuals penetrate the fur countries, even to Hudson Bay and westward to Alaska, while eastern Canada and Newfoundland are the summer home of the far travelers through the eastern states. The courting season is as brief as it is ardent, for during ordinary seasons mating is accomplished, nests built, and eggs deposited by the third week in May, in the vicinity of Minneapolis.



THE SAME NEST, OPENED TO SHOW THE TWO EGGS OF THE OWNER AND THREE OF THE COWBIRD.

The nest is always on the ground, more or less buried beneath fallen leaves and withered grasses, and is usually in a little opening in the forest or along a trail or abandoned wood-road. As Frank Bolles says in his pretty poem about this bird:

"To the forests, to the leaf beds,
Comes the tiny oven builder

"Daintily the leaves he tiptoes;
Underneath them builds his oven,
Arched and framed with last year's oak leaves,
Roofed and walled against the raindrops."

The nest is constructed of dead leaves, dry grasses, and slender weed-stalks, sometimes almost entirely of one or the other material; the lining is fine grass, rootlets, and hair. It is completely roofed over, spherical or short cylindrical in outline, and is entered by an opening in one side, thus resembling a miniature Dutch oven, whence the common name of the bird. As it forms only a slight and inconspicuous mound above the general leaf-bed, it is almost impossible of detection unless the bird is flushed from the nest. Seeming to realize her security, the mother bird is a very close sitter and will not fly until almost stepped upon. Then, if the eggs are near hatching or there are young in the nest, she will often flutter out and run away over the ground with trailing wings and complaining note, feigning injury, in the hope of enticing the intruder from her treasures in a vain chase after herself. This same ruse is also resorted to for some days after the young have left the nest, if their retreat be intruded upon.

The eggs are three to six in number, commonly four; they are white with chestnut and lilac-gray markings, sometimes small and evenly distributed, at other times more or less aggregated about the larger ends, forming irregular blotches and occasionally wreaths. The acuteness of the Cowbird as a nest-hunter is shown by the frequency with which its eggs are found beside those of the Oven-bird. Indeed, in my own experience it has been an unusual thing to find an Oven-bird's nest without one or more of the parasite's. Two or three alien eggs, besides an equal number of the owner's, are often found. A friend reports finding an Oven-bird incubating two eggs of her own and three of the Cowbird, but when a fourth Cowbird's egg was deposited the affront was too great, and she deserted the nest. As many as five in one nest have been reported.

The ordinary song by which the Oven-bird commonly announces his presence in the woods is an emphatic, ringing series of notes, beginning low and deliberately, increasing in pitch, intensity, and rapidity of utterance until it ends with a vigor that sends the last notes echoing among the tree-tops. Mr. Burroughs' happy rendering of this song long ago in "Wake Robin" has ever since met with the approval of nearly all writers and has given to the species its name of 'teacher-bird.' When one of these birds starts to sing in the quiet of the deep woods, it is at first difficult to locate him, as the song has a marked ventriloquous character, caused, perhaps, by the great increase in intensity as the song proceeds. To quote Bolles again:

"Strange, ventriloquous his music,
Far away when close beside one;
Near at hand when seeming distant;
Weird his plaintive accrescendo."

But the Oven-bird has another very different utterance which is its true song—its love or passion song. It is known to but comparatively few, though some observers believe that in proper season and place it is to be heard as often

as the crescendo call. It has been stated that it is delivered only at nightfall and above the tree-tops, but this is not quite true, for it may be heard in deep, damp woods in the height of the love season at any hour of the day, as the impetuous lover pours it out in snatches of variable length as he goes dashing about under the forest canopy. When thus delivered it may either be preceded or followed by the 'teacher' call; most frequently, however, these fragments are given alone. It is always uttered on the wing, and it is probable that in its



THE OVEN BIRD AT HOME

full development it is always an accompaniment of a soaring flight above the tree-tops. Lynds Jones says ('Warbler Songs,' 1900): "I have seen the Oven-bird suddenly vault into the air, mounting to the tree-tops on quivering wings, then dart back and forth in a zigzag course swift as an arrow, and finally burst into a song as he floated gently down. The song seems to swing once round a great circle with incredible swiftness, but perfect ease, ending in a babbling diminuendo as the performer lightly touches the perch or ground with half-rigid wings held high." I have seen the Oven-bird, early in July, thus disporting itself of an evening above the cathedral-like, terraced spires of the tall

spruces on the west shore of Lake Itasca, mingling its dashing melody with the wonderful, serene anthems floating down from the Hermit Thrushes perched aloft in the great pines. Ernest Thompson Seton ('Birds of Manitoba,' 1890) states that "this lark-like song may be heard at almost any time of the night in the grove where a pair of these birds have settled for the love season;" and Bolles relates:

"When the Whip-poor-will is clucking,
When the bats unfurl their canvas,
When dim twilight rules the forest,
Soaring towards the high star's radiance,
Far above the highest tree-top,
Singing goes the sweet Accentor.

The middle of July closes the song-season, and thereafter the Oven-bird is rarely observed.

Most of the Oven-birds leave during the month of September, and by the close of that month only stray individuals, like the one mentioned at the beginning of this article, are to be encountered. They are then wending their way leisurely to their winter abode in Mexico, Central America, the West Indies, and southern Florida.



TERRACED SPIRES OF THE TALL SPRUCES ON THE SHORES OF LAKE ITASCA



RED-BACKED SANDPIPER

A Day's Sport with the Red-backs and Greater Yellow-legs

By VERDI BURTCH, Branchport, N. Y.

With photographs by the Author

OCTOBER had arrived with its reds, golds and browns; the day was warm and mellow. It was the thirteenth of the month, and the most of the birds had already passed on to the southward. The soft, muddy shores of the marsh, where a month ago numbers of Solitary, Least, Semipalmated, and Pectoral Sandpipers, Yellow-legs, Killdeers, Semipalmated Plover, Green Herons, Mourning Doves, Grackles, Cowbirds, Red-wings, Robins, and a host of Song, Swamp, and Savannah Sparrows were feeding was now almost deserted. Only in the early evening did it show signs of its former activity, when the Red-wings, Cowbirds, and Grackles stopped there to get a lunch before retiring to their roost in the cattails. But during the day only a few Pectorals and Yellow-legs that had escaped the gunners were seen.

It was much too nice a day to loaf around home, so, taking my Graflex, I mounted my bicycle and rode two miles down the lake to a small marsh which is cut off from the lake by a long gravelly bar. Earlier in the season this marsh is very beautiful, with its great masses of yellow water-lilies and floating algae all through the center, and sedges, cattails, great burr reed, sagittaria, sweet flag, and water plantain reaching out from the shores into the shallow water. But at this time the water was low, leaving wide, muddy shores which were covered with the stranded algae and various water-weeds.

As the shooting season was on and most of the shore-birds were gone, I

hardly expected to see any birds, or, at most, one or two watchful Yellow-legs or Pectorals. But, as I neared the swamp, three Red-backed Sandpipers were feeding along the shore of a little shallow lagoon. Dismounting, I worked my way slowly through the bushes and cattails on the border of the swamp and obtained my first shot when they stood in a row facing me from the opposite side of the little pond. They had seen me, however, and began to move off, slowly. Cautiously following and expecting them to fly every moment, I made two more shots as they were in retreat and was rather surprised that they did not fly. As they were now well aware of my presence, I crossed boldly in the open and sat down on the clean gravel of the bar where I could watch their every move. They went calmly on with their feeding, working back and forth in front of me, probing in the mud with their long, black, slightly curved bills and seemingly ignoring my presence. However, when they passed they would shy out around me, watching me closely from the tails of their eyes. I had been seated but a short time when I heard the soft, musical whistle of a Greater Yellow-legs, and it came wheeling down from the upper air and alighted gracefully on the beach some ten rods away. There it stood, bowing with quick little jerks and eyeing me suspiciously for a



MARSH HAWK



GREATER YELLOW-LEGS

moment, and then flew away, to alight farther up the beach, then, seeming to gain confidence it began to work toward me. Never having been able to photograph this wary bird, and expecting that it would fly away, I wasted

several plates on long shots, but it came steadily on and joined the Red-backs scarcely a rod away from me. Many times before had I tried to photograph a Yellow-legs but without success, and now as it mingled with the Red-backs I had my chance. It was not a question of getting near enough, but rather of catching a good pose and of getting one bird out alone or all of them in the same plane so they would all be in good focus. Always active, with little jerky moves, the Red-backs went about probing in the soft mud or

wading out in the shallow water and sometimes swimming a little. The Yellow-legs was more deliberate but always moved with infinite grace. One of the most graceful moves of a bird is the stretching of the wings by a Yellow-legs or Solitary Sandpiper, and some day I hope to catch it on a photographic



MARSH HAWK PURSUED BY RED-WINGED BLACKBIRD



GREATER YELLOW-LEGS "MAKING RINGS OF RIPPLES IN THE QUIET WATER"

plate. Before noon I had used all of my dozen plates, and when I left the beach the birds were quietly feeding.

When I came back with plate holders reloaded, they were still there, and I took my position on the bar without disturbing them. The Red-backs always kept close together, so all show in each of my pictures, except one. This time they all came along the beach toward me, hesitating as they drew near, then made a detour out into the water, filing past in front of me and so close that I could hardly rack my lens out far enough to get them in sharp focus.

The Yellow-legs kept mostly to the little lagoon close inside the bar where it scampered zigzag after the minnows or pollywogs, or probed in the muddy bottom, causing rings of ripples in the quiet water.

As the shadows lengthened across the clear waters, I used my last plate, but still I was loth to leave. I had spent more than seven hours with these interesting birds, and made twenty-four shots, and, as development afterward proved, had bagged fifteen beautiful pictures, and my game was still alive to enliven the shores of other lakes and marshes, and let us hope that they reached their winter homes in the far South without accident.

A Tragedy

By LOUISE FOUCAR MARSHALL, Tucson, Ariz.

THE House Finch bride stood for a moment on the fig tree before taking a drink from the bucket of water under the dripping faucet. Perhaps it was a Hummingbird, poised before a rosebud, or a Wren slipping in and out of the rose-vine, that persuaded her to fly over and investigate. A little spot at an intersection of the trellis, hidden by rose-leaves, seemed an ideal building-site. She started immediately to homestead it by bringing in a few sticks which she arranged for the bottom of her nest, unmindful of the fact that the trellis was but eight inches from the porch window, and that her nest, just at a convenient height, had no protecting leaves to shield it from full view from within the porch.

The next morning (March 28, 1917) she came again, and with little twigs built up half of the skeleton framework of her cuplike nest. She worked until noon, alone and untiringly, her mate sitting on the fig tree singing his delight. Then they disappeared until evening, when she came to see if all was well. The next morning she was at work again. The place seemed more enchanting than ever, for there were strings cut at various lengths hanging all about the trellis, and wonderful buds of cotton-wool on the rose-thorns, even a few stray horsehair and downy chicken feathers were miraculously convenient. She toiled until noon finishing the framework, now using sticks, strings, and horsehair. Before bedtime she came to see that nothing had been disturbed.

The third day she worked from morning till night, strengthening the frame-

work with twigs and string, stuffing the little cracks and hollows with wool and feathers, covering every rough twig. Many times during the day she would slip into the nest to try it, that it should be the right shape and size and height. This seemed an important part of her work, for after these trials she would remedy some defect, working and weaving with the materials already in the nest. She now evidently considered the nest finished, as she came but few times during the next few days, then only putting in a few downy feathers or adjusting the cotton-wool lining. She built her nest entirely alone, her mate coming no nearer than the fig tree, where he sat singing incessantly while she was at work.

On the morning of April 3 she came early and sat quietly on the nest, her mate as usual singing lustily from the nearby fig tree. About 7.30 she hopped from the nest, calling loudly for her mate, every fiber of her body aquiver with excitement. He came like a shot, embraced her with great fluttering of wings and excited twitterings, and then they looked into the nest. Wonder of wonders! A pale bluish green egg with a few dark brown spots and lines at the larger end. She went on to the nest, twittering snatches from lullabies, while he went back to the tree to tell the world of the great event. Was there ever so much excitement, tenderness, and romance contained in such a little scrap of flesh and blood! In about an hour they both left, returning two or three times during the day to look at the wonderful egg.

The next morning she was on the nest again, and at 8.15 she called her mate to see the second egg; and after sitting for a half hour upon the eggs, twittering and crooning, she left with her mate, returning from time to time to admire her eggs. The next day at about 9.15 the third egg was laid, and the program of the previous days repeated. The fourth and last egg, which was a trifle smaller than the others, was laid the next morning at 8 o'clock.

Each time that she laid her egg she called her mate with excited, urgent chirps. Always he came like the wind from his perch nearby; always they met with fluttering of wings, twitterings, and embraces before flying up to the nest to inspect the eggs; always, after the inspection, she would sit on the nest for about a half hour, whispering and twittering, while her mate was announcing the good news to the bird-world and singing his gratitude and joy to his little bride.

After the fourth egg was laid she settled down to incubate, calling her mate every few hours, and then with a distinctly different note asking for food. She always hopped off the nest to meet him whenever he came to feed her. If he saw anyone approach the rose-vine, or when within the porch we would come near the window, he would allay her fears with encouraging messages and she would answer with brave little chirps.

On the afternoon of April 8 a severe windstorm came up, with a downpour of rain and hail. She was exceedingly frightened at the violence of the wind and the large hailstones striking her nest and herself. She called anxiously;

her mate came and sat beside the nest during the whole storm, sat in an unsheltered spot in the very teeth of the gale, bruised by the hailstones and wet to the skin. After the storm was over and the sun came out again, he perched in the tree, drying his feathers, she called to him; he tried to sing his little roundelay, but only two notes came. The next morning his cold, lifeless body lay beneath the fig tree. The rain and hail and cold had proved too much, and his love and devotion to his mate had cost him his life.

It took some time before the little bride realized that she was now a widow. In the morning she began calling, insistently, impatiently, then anxiously, and finally hopelessly. Whenever she saw a scarlet-capped Finch come to the drinking bucket she would call to him and fly into the fig tree voicing her hunger and sorrow. Many, many times during her days of incubating did she fly out with her tale of hunger and grief, but never was there a response from the passing males. A little food-shelf with canary seed and bread-crumbs was hung near the nest, but only twice was she seen to eat anything. Every day she grew weaker and more dejected. Could she hold out until the eggs were hatched?

Ten days had passed since she began incubating, and there seemed no hope for those four eggs, for they had often been chilled, as the weather was unusually cold; and did not Coues say that eggs were usually kept at a temperature of 100 degrees and hatched in about ten days? Fortunately she had not read about it and stayed on her eggs until the thirteenth day, when one little bird emerged from the shell; the next day two more came out to gladden the little mother's heart, for she who was always so chatty, always twittering and bubbling over with joy, had become sad and silent, and even when the little birdlings came her broken heart could whisper no welcome, only feed them and keep them warm.

On the second day after the little ones were hatched she met another mate on the fig tree by the water bucket, a somber, joyless mate. Perhaps he, too, had suffered until his voice was silenced, or perhaps his sense of duty or his bereavement impelled him to feed the widow and orphans. For two days he silently fed both mother and babies, and then during the night something happened,—for in the morning the nest was empty—no trace of birdlings or mother. No doubt she, too, shared the same fate as her family, for she never returned. The falling rose-leaves have filled the nest, and the rose-vine is deserted.





NEST AND EGGS OF BLACK DUCK

Photographed April 11, 1914, at Ponkapog Pond (about 10 miles from Boston), Mass.

Some Notes on the Ruffed Grouse

By H. E. TUTTLE, Simsbury, Conn.

OVER the ridge that brimmed the glade a hen Partridge was hurrying. She did not walk with noiseless step nor did she keep a constant watch for possible enemies. Her footsteps on the dry leaves rustled loudly, her head swung forward and back as she walked, like a barnyard fowl. Twice she stopped, but only for a moment, then the noise of pattering footfalls began again as she ran toward a laurel thicket that flanked the glade. The glade was a bowl-shaped hollow, free from underbrush, with here and there a good-sized chestnut tree. On one side was the laurel thicket, interspersed with birches, behind which rose the steep sides of the bowl. One might have said that it was an amphitheatre set for a play, and not have greatly erred.

The only spectator was lying flat beneath the low-spreading fronds of a young hemlock which grew near the laurels, halfway up the bowl. He held a bit of cord gripped tight in his hand, and in spite of his difficult position on the hillside he did not move. He had lain there four hours. Had you been there to see, you would have noted, on following up the length of cord, a bunch of leaves supported by a three-legged branch. The bunch of leaves was a camera, the three-legged branch a tripod.

The Grouse had reached the laurels and had stopped within their shade to reconnoitre her position before traversing that last ten feet in the open, to the spot that had claimed her sole attention for the past half month. The nest with her ten eggs lay in the hollow at the foot of a little rotted stump. It faced the open woods, and in front stood the three-legged bunch of leaves, with its baleful glass eye glaring down into the hollow. The bunch of leaves, like a Cyclops, had stood guard over the nest for a week, and the hen Partridge had begun to regard it as a natural part of the scenery. She was a bit timid still; sometimes as the cord tightened she spread her tail and with ruffs extended hissed into the glass eye, while, unknown to her, the spectator under the hemlock frond was hoping and praying that she would step back into focus.

This time she stepped out of the laurel thicket with just a touch of defiance in her pose. The watcher from where he lay lost sight of her after she went under the stump, so that his shots were in a large part lucky, if they were in any way successful. He saw her disappear under the stump, threw a loop of slack down the cord in the hope of provoking a new pose, then drew it tight. The shutter clicked, and the Grouse ran out from the stump and roared up in flight.

I had been trying for two days to secure a picture of the Ruffed Grouse as she approached her nest. It was quite easy to snap the brooding bird, that merely involved leaving the camera for an hour, to return at the end of that time and pull the shutter by means of a long thread. I had secured some good pictures in that way a week previous. This new game, although it included

mosquito-bites and personally conducted tours by ants, was more fraught with failures, but more exciting.

I was very much surprised when I first saw this hen return to her nest, her footsteps were so noisy. She was not at all the 'each-step-taken-with-care' kind of bird that I had always pictured. She reminded me very much of a broody



RUFFED GROUSE
Photographed by H. E. Tuttle

Plymouth Rock. (Later observations have persuaded me that individual birds differ very greatly in this. One Grouse that I watched and photographed last spring approached her nest so cautiously that I was unable to detect her slightest footfall until she had approached within ten feet of the spot where I was hiding.) I watched her for an hour one day as she budded a poplar tree, climbing parrot-like from limb to limb with the aid of her stout beak, nearly losing her footing on more than one occasion as she reached for a catkin high

above her head. I watched how, when the camera was pointed a little to the left of the nest, she invariably entered on the right, and vice versa. She apparently appreciated the territory swept by the lens.

Once when I had seen her approach as far as the laurel thicket and had heard no further footsteps for half an hour, I pushed aside the hemlock branches to see, if possible, what had frightened her. There was a rush of air through stiff wing-quills as I showed myself, and a Red-shouldered Hawk left the dead limb where he had been sitting, to wing his way swiftly out of the woods. At another time I surprised a fat woodchuck within a yard of the nest. Whether he intended harm or not I do not know, for he beat a hasty retreat before I could satisfy my curiosity. I watched this Grouse in her efforts to overcome her fear from 11 o'clock in the morning till 3 o'clock in the afternoon, and out of four shots got one good picture. She was not absent from her nest during this entire time, for in order that the eggs should not get cold and that she might acquire confidence, I allowed her to brood at intervals. The weather was warm and the eggs were due to hatch in a few days. (It seems necessary to note here that all the eggs hatched in due course of time.)

I have, in the not very remote past, walked the crisp autumn hillsides with my gun held in readiness, and, though a poor shot, have enjoyed my occasional kills with the pleasure of an amateur and the ensuing repertoire of a veteran; but birds are scarcer now, and the Ruffed Grouse, even in districts where it could for years wage an equal battle in the fight for existence, must inevitably go the way of the Heath Hen and the Prairie Chicken, unless, in addition to laws adequate to protect it and an honest effort to enforce them, there is a will to abide by the closed season which shall become part of the traditions of every man who calls himself a sportsman.

As the bird disappears from the coverts that knew it of old, the salt of shooting loses its savor, and there is little pleasure in exchanging the roar of its wings as it bursts from cover and rockets upward through the birch-tops, or bores its way, bullet-like, through a tangle of underbrush, for the fading colors of a reminiscence. For the Ruffed Grouse is an inspiration; his spring drumming wakes the old desires toward a life in the open, and the roar of his wings among the dry leaves of the November woods quickens with secure delight the hearts of wayfarers on the upland trails.



The Migration of North American Birds

SECOND SERIES

VI. HORNED LARKS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

The Horned Larks are among the most puzzling as well as most interesting of North American birds. They are the only native Larks in North America, but have not the usual gift of song that has made famous some of the European members of the family. All the American Horned Larks belong to a single species and exhibit geographic variation to a degree shown by few birds. No less than twenty-three subspecies of *Otocoris alpestris* inhabit America, and they range as far south as Bogotá in Colombia, and north to the Arctic Ocean. All but five of these forms occur in North America proper, and there are others to be described. The distribution of the North American races is as follows:

The Horned Lark (*Otocoris alpestris alpestris*) breeds in northeastern North America, north at least to Hudson Bay; west to Hudson Bay; south to the southern end of James Bay and to Newfoundland; and east to Labrador. It winters west to Manitoba and Nebraska, south to Louisiana and South Carolina; and is of casual occurrence in Greenland and the Bermuda Islands.

Hoyt's Horned Lark (*Otocoris alpestris hoyti*) breeds in middle northern Canada, north to the Boothia Peninsula; west to the valley of the Mackenzie River; south to Lake Athabaska; and east to Hudson Bay. It winters south to Nevada, Kansas, Ohio, and Long Island, N. Y.

The Pallid Horned Lark (*Otocoris alpestris arcticola*) breeds in northwestern North America, north to northern Alaska; west to western Alaska; south to southern Alaska and central British Columbia; and east to Yukon Territory. It ranges in winter south to Oregon, Utah, and Montana.

The Saskatchewan Horned Lark (*Otocoris alpestris enthymia*) breeds north to central Saskatchewan; west to eastern Montana, eastern Wyoming, and eastern Colorado, south to northwestern Texas, and east to central Kansas, central Nebraska, and central North Dakota. In winter it ranges south to southern Texas, and casually west to Utah and Arizona.

The Prairie Horned Lark (*Otocoris alpestris praticola*) breeds in the northeastern United States and southeastern Canada, north to southwestern Quebec and central Ontario; west to western Manitoba, eastern North Dakota, and eastern Kansas; south to central Missouri, central Ohio, and Long Island, N. Y., and east to New Brunswick. It winters south to Texas and South Carolina; casually southwest to Colorado and Arizona.

The Texas Horned Lark (*Otocoris alpestris giraudi*) is a permanent resident in the coast region of Texas and northeastern Tamaulipas.

The Desert Horned Lark (*Otocoris alpestris leucolaema*) breeds in the



BREEDING AREAS OF THE AMERICAN RACES OF THE HORNED LARK

- | | |
|----------------------------|------------------------------|
| 1. Arctic Horned Lark | 13. Bleached Horned Lark |
| 2. Oregon Horned Lark | 14. Montezuma Horned Lark |
| 3. Transalpine Horned Lark | 15. Rocky Horned Lark |
| 4. Mexican Horned Lark | 16. Striped Horned Lark |
| 5. Texas Horned Lark | 17. Merrill's Horned Lark |
| 6. California Horned Lark | 18. Desert Horned Lark |
| 7. Sonoran Horned Lark | 19. Saskatchewan Horned Lark |
| 8. Sonora Horned Lark | 20. Prairie Horned Lark |
| 9. Magdalena Horned Lark | 21. Horned Lark |
| 10. Idaho Horned Lark | 22. Hays's Horned Lark |
| 11. Colorado Horned Lark | 23. Pallid Horned Lark |
| 12. Mojave Horned Lark | |

interior of the western United States, and north to southern Alberta; west to western Montana and western Nevada; south to south-central Nevada, southern Utah, southern Colorado, eastern and central southern New Mexico, and central western Texas; and east to central northern Texas, central Colorado, central Wyoming, and central Montana. In winter it ranges south to south-eastern California, Sonora, Chihuahua, and southern Texas.

The Montezuma Horned Lark (*Otocoris alpestris occidentalis*) breeds in central New Mexico, west to central Arizona. It ranges south in winter to northern Sonora, northern Chihuahua, and central western Texas.

The Chihuahua Horned Lark (*Otocoris alpestris aphyra*) is resident in the southeastern corner of Arizona, the southwestern corner of New Mexico, and southeast through Chihuahua to Durango and southern Coahuila.

The Scorched Horned Lark (*Otocoris alpestris adusta*) breeds in central southern Arizona and winters south to northern Sonora and northern Chihuahua.

The Bleached Horned Lark (*Otocoris alpestris leucansiptila*) is resident in the southwestern corner of Arizona, the northeastern corner of Lower California, and north through the extreme western edge of Arizona, and the southeastern border of California to southern Nevada.

The Mojave Horned Lark (*Otocoris alpestris ammophila*) breeds in southern California from the Mojave Desert north to Owens Valley, and winters south to the Mexican Border.

The California Horned Lark (*Otocoris alpestris actia*) is resident in middle and western California, north to San Francisco, and south to the Pacific side of northern Lower California.

The Magdalena Horned Lark (*Otocoris alpestris enertera*) is resident on the Pacific side of central and southern Lower California.

The Island Horned Lark (*Otocoris alpestris insularis*) is resident on the Santa Barbara Islands, Calif.

The Ruddy Horned Lark (*Otocoris alpestris rubea*) is resident in the middle portion of the Sacramento Valley in central northern California.

Merrill's Horned Lark (*Otocoris alpestris merrilli*) breeds in the northwestern United States, and north to south central British Columbia, west to central Washington and central Oregon; south to northeastern California, and east to northwestern Nevada, central Idaho, and northwestern Montana. In winter it goes as far south as central California.

The Streaked Horned Lark (*Otocoris alpestris strigata*) breeds in western Washington and western Oregon. It ranges south in winter to northern California and east to eastern Washington and eastern Oregon.

The accompanying map shows more graphically the breeding ranges of the various North American Horned Larks. Some of the western races seem to be strictly resident; but most of the others are more or less migratory, and several subspecies thus may be found at the same season in one locality. Owing to

great seasonal and other variation among the Horned Larks, their migratory movements are in most cases impossible to trace except by the examination of specimens.

In the following tables records of the typical Horned Lark are marked (*), Hoyt's Horned Lark (†), the Pallid Horned Lark (‡), the Prairie Horned Lark (||), and the Desert Horned Lark (¶). All the other records are not with certainty subspecifically determinable.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Greensboro, Ala.*			January 20, 1892
Kirkwood, Ga.*			January 20, 1893
Charleston, S. C.*			January 20, 1893
Raleigh, N. C.*			February 20, 1895
Raleigh, N. C.	4	February 3	February 20, 1895
French Creek, W. Va.			February 15, 1891
Washington, D. C.	13	February 25	April 3, 1889
Philadelphia, Pa.	5	March 1	March 12, 1791
Hackettstown, N. J.			March 21, 1916
New Haven, Conn.*			April 15, 1882
Portland, Conn.*	3	March 24	March 20, 1890
Providence, R. I.	11	March 9	March 21, 1900
Woods Hole, Mass.	3	April 15	April 20, 1890
Harvard, Mass.*	5	April 6	April 17, 1900
Boston, Mass.	14	March 26	April 16, 1909
Pearl River, La.*			February 22, 1895
Athens, Tenn.	7	March 26	April 26, 1909
Lexington, Ky.	2	March 24	April 8, 1906
Chester, Ohio*	6	March 2	April 1, 1899
Oberlin, Ohio†	3	February 18	February 24, 1904
Plymouth, Mich.*	3	February 25	March 10, 1895
Austin, Tex.	2	March 27	April 11, 1894
Lincoln, Neb.†			February 4, 1899
Cando, N. D.†			April 22, 1893
Chilliwack, B. C.‡			April 29, 1889

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Scotts Lake, N. B.	17	March 6	February 7, 1908
Plyton, N. S.	3	April 10	March 21, 1894
Montreal, Quebec	9	March 8	February 23, 1914
Godbout, Quebec	4	April 9	March 16, 1888
Paradise, Labrador			April 29, 1913
Fort Simpson, Mack.‡			April 28, 1904
Fort Simpson, Mack.†			May 10, 1904
Forty-mile, Yukon¶			May 10, 1898

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Fioravak, Labrador			October 12, 1912
Scotch Lake, N. B.	6	November 2	November 27, 1913
Montreal, Quebec	10	October 30	November 15, 1908
OTTAWA, Ont.	8	October 24	November 11, 1898
Listowel, Ont.	4	November 19	November 24, 1900
Ft. Simpson, Mack.			October 3, 1860
Indian Head, Sask. †			November 25, 1890

LOCALITY	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Boston, Mass.	9	October 22	October 7, 1909
Harvard, Mass. *	8	October 25	October 19, 1907
Woods Hole, Mass.	5	October 23	October 7, 1889
New Haven, Conn. *			October 29, 1888
Princeton, N. J.			November 12, 1905
Washington, D. C.	9	December 5	October 29, 1889
Washington, D. C.			August 11, 1889
French Creek, W. Va.	2	October 24	October 12, 1891
Raleigh, N. C.			December 7, 1889
Raleigh, N. C.	4	December 9	November 21, 1888
Charlton Co., Ga.			November 30, 1907
OTTAWA, Ont. *			September 27, 1890
Isle Royale, Mich. *			September 13, 1905
Plymouth, Mich. *	3	November 15	November 13, 1891
Merlin, Ohio *	4	December 9	November 14, 1896
Lexington, Ky.			November 12, 1904
Athens, Tenn.	7	October 16	September 29, 1904
Okanagan Landing, B. C. †	6	September 11	August 25, 1907
Challiwack, B. C. †	2	August 28	August 28, 1889
Lincoln, Neb. *			December 24, 1908
Goldings, Tex. †			November 3, 1889
Austin, Tex.	3	October 9	October 8, 1893

Notes on the Plumage of North American Birds

FIFTIETH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

In its distribution and geographic variations the Horned Lark is among the most interesting of North American birds. The facts that it is the only American member of a family of some 200 species, and that, in spite of its plasticity, none of the American races have become specifically distinct from each other or, as a group, from the Old-World species, leads us to believe that the Horned Lark has reached this country in, geologically speaking, comparatively recent times.

Nevertheless, it has become widely distributed, and where local conditions are suited to its peculiar needs as a terrestrial bird, it thrives in widely varying climatic surroundings from the cold, moist Arctic tundras to the burning deserts of Mexico.

It is common even on the Andean plateau of Bogotá, Colombia, though between this distant locality and southern Mexico no form of the species is known. And here we have an ornithological index of climatic changes, the significance of which strongly tempts speculation. With birds which vary geographically as much as do the Horned Larks, the problem of field identification becomes difficult and its solution is apt to be far from satisfactory. Fortunately, however, many of these forms are restricted to certain areas, and while in the winter the more northern races invade the ranges of those to the south, the student may, at least in the nesting season, name the bird seen by the locality in which it is found. I make no attempt, therefore, to describe racial differences but refer the student to the map accompanying Dr. Oberholser's paper. As the race which will doubtless come to the attention of the largest number of BIRD-LORE'S readers, I describe the plumage changes of the Prairie Horned Lark.

Prairie Horned (Shore) Lark (*Otocoris alpestris praticola*; Figs. 4, 5.) In nestling plumage a Horned Lark looks more like the chick of some gallinaceous bird than the young of a passerine species. Or, expressed technically, it suggests a precocial rather than an altricial bird. This juvenal plumage is brownish above, the feathers being tipped with buffy spots, the breast is paler, with an admixture of black, the throat and abdomen whitish, the former being sometimes slightly tinted with pale yellow.

The postjuvenal (first fall) molt is complete. The first winter plumage resembles Fig. 5. Male and female are much alike, but the former has more black on the forehead and usually fewer streaks on the breast. There is no spring, or prenuptial molt, and the summer dress is acquired by wear which more clearly reveals and more sharply defines the black areas of the breast and head.

With the fall molt feathers are acquired with fringes which partly conceal these areas. There is now little or no difference between young and adult birds, but the latter, as a rule, have fewer streaks on the breast.

As the frontispiece shows, the Prairie Horned Lark (Figs. 4, 5) is a slightly smaller bird than the Horned Lark (Fig. 5), from which it further differs in having the forehead postocular region and line over the eye white instead of yellow, and there is less yellow on the throat.

The character of the variations of the other races of this species are indicated by the remaining figures in our plate, from the bleached race of the desert to the deeply colored ones of more humid regions.

Notes from Field and Study

Memories of the Passenger Pigeon

The last flock of Passenger Pigeons that I remember seeing was about 1886-7. It was in the late autumn, after the leaves had fallen from the trees. There were about 120 birds in the flock. They lighted in the top of a large beech tree, and, finding that the beechnuts had fallen out of the hulls, dropped in rapid succession from branch to branch till all had reached the ground. I never have seen more intense activity or seeming system in feeding than those birds displayed. They worked in a wing-shaped group, moving nervously forward in one direction around the tree, gleaming the entire not-covered space as they went. Those falling to the rear of the flock, where the nuts were picked up, kept flopping across to the front so as to get the advantage of the unpicked ground. A few that wandered apart in search of scattered nuts kept sniffling about and tilting as they picked them up and then hurried back to the flock as if they feared that the flock would soon be through feeding and off on the wing. This restless, voracious activity was continued till the flock took fright and burst into the air, to fly away and disappear as a small cloud. Will they ever appear again?—HIBBARD J. JEWETT, Xenia, Ohio.

Notes from Canandaigua, N. Y.

There appeared in the Brigham Hall grounds, May 18, 1917, a bird seldom seen north of New Jersey—the Blue-gray Gnatcatcher,—a male in fine plumage.

This Gnatcatcher is a tiny bird, not much over 4 inches in length, having an exceedingly long tail, which has white outer feathers. Like its Kinglet relatives, it had the same habit of flitting nervously from twig to twig.

We noted his flycatching habit of tak-

ing insects on the wing with wonderful dexterity, and saw that, at all times, he kept his tail sticking up in the air. The Blue-gray Gnatcatcher, seemingly, is a bird of the tree-tops, for he remained in them most of the time he was under our observation. At times, he was not unwilling to show off his delicate, trim body, which was whitish underneath and blue-gray above, by coming down among the lower branches and to the shrubbery. It was then we could plainly distinguish the narrow black band over the forehead and eyes.

The Gnatcatcher sang its rather feeble but exquisitely finished song, many times. The call-note was heard, too. It is 'isee, isee, isee', and sounded a bit like the squeak of a mouse.

Its dainty coloring, sweet, whispered song, graceful posture, and constant motion would be sure to attract attention at any time.

Former Canandaigua records of this uncommon summer visitant, given in Eaton's 'Birds of New York,' are of two birds secured June 3, 1886, and one seen April 25, 1906.

This year's record would seem to prove beyond a doubt that the Blue-gray Gnatcatcher was seen by the same observer, Dr. H. C. Burgess, at Brigham Hall last season. Because amateurs see rare birds not seen by experienced observers, they say: "Oh, no! You could not possibly have seen that." Dr. Burgess detected the presence of the bird again this spring and spread the good news by the telephone, so that many bird-lovers, including the 'experienced' observers, were given opportunity to be convinced that the Blue-gray Gnatcatcher was really in our midst. It remained three days.

A pair of Red-bellied Woodpeckers made their first appearance in Canandaigua the latter part of December, 1916, and spent the winter. They visited two feeding-stations in the city. The male

was found dead on our Main Street, having perished in a sleet storm March 16, 1917. The female was about until late in May.

On February 16, 1917, the European Starling made its first appearance in our city in below-zero weather. It was found in an exhausted condition on the porch of the home of A. F. Wilbur, Gibson Street. It was feeding on woodbine berries. Bread-crumbs were thrown on the porch floor. It partook of these freely. It remained all day. The following morning, with mercury at six below zero, it breakfasted at the same place. After satiating its appetite it flew away and was seen no more.

Carolina Wrens (May 23), Saw Whet Owls, a young Golden Eagle, and an American Three-toed Woodpecker (May 20 to 23) were rare birds observed by Ernest H. Watts and Addison P. Wilbur about the grounds at Sonnenberg, Mrs. F. F. Thompson's estate at the edge of the city, during the spring migration.—*GEORGIA B. GARDNER, Casandaigua, N. Y.*

Mockingbird in Iowa

One day, about the middle of May, my husband and I were visiting Cottonwood Cemetery. It was a sunny afternoon, and a number of us had gathered there to clean up the grounds for Decoration Day. As I was wandering about the grounds I was attracted by a bird singing on the top of a tall pine tree close by. I supposed the bird to be a Thrasher and sat down to listen to his song, but soon discovered that it was no Thrasher this time. Becoming more interested, I ventured nearer, and after a long wait I found that my bird was a Mockingbird, trilling, warbling, whistling and calling like a Jay, a Crow, and mocking many other birds. Being a bird-lover, I stood spellbound as I listened to the wonderful medley of song, and after seeing the bird and his manner of flight, color, etc., I was convinced that it was a southern Mockingbird, and no doubt had a nest in the pine and a mate sitting, but I could not discover the nest. On Decora-

tion Day morning we visited Cottonwood Cemetery, and what was my surprise and delight to again see and hear my beautiful bird. Although he seemed much excited and nervous, he stayed by and bravely sang. He sometimes gave an alarm-call but soon seemed to gather courage and try to assure himself and mate that all was well in spite of the commotion going on, the beating of the drum, the shrill music of the life, the marching of men, women, and children, and the parting salute of the rifles. I have heard since that the young birds have hatched and are now out of the nest. I hope to be able to go to see the family again before they leave us. I claim the honor of being the discoverer of these Mockingbirds, the first I have ever heard or seen.—*MRS. JOHN FREEMAN, Lake City, Iowa.*

Feeding the Blue Jays

Since the days of John J. Audubon the Blue Jay has been considered a thief, robber, and undesirable citizen, but its beautiful plumage and modest habits make it really attractive.

Last winter a pair of Blue Jays afforded a great deal of amusement and taught me many things of interest. Having observed two Blue Jays flitting about in the trees, and listening to their shrill screams, which was a real pleasure to me, and thinking they might appreciate a change in their place of boarding, on October 14 I put a small shelf on the sill of my window and placed on it a few peanuts. On October 18 the Blue Jays visited the food-shelf for the first time and ate or carried away all the peanuts. They continued to frequent the shelf as long as any feed was placed on it. The birds were just social visitors, frequenting the food-shelf at irregular intervals and becoming rather tame. Snow began to fall on the evening of November 12. The next day there were about two inches of snow on the ground, and it was very cold. Early in the morning I placed about a dozen peanuts on the food shelf and noticed that the Blue Jays, first one, then the other, then both, came

to the food-shelf. In a short time the peanuts were all gone and I put out more. I continued to feed them until they had eaten, as I supposed, a pint or more of peanuts. I noticed that each bird flew away with one or two peanuts in its bill and soon returned. Thinking that there must be something wrong with the birds' appetites, I went out to observe where they went when they flew away and what they did

One day I tied several peanuts on a string and left them on the food-shelf. The first Blue Jay to arrive took the string of nuts and flew away to a nearby house-roof and ate them. No other birds found the food-shelf until December 20, when a Red-bellied Woodpecker began coming for feed, but it was always shy. Nuthatches found the shelf late in January.—A. J. DADISMAN, *Morgantown, W. Va.*



BLUE JAY AT THE FOOD-SHELF

with the peanuts. I found that the birds were working diligently, carrying the peanuts away and hiding them. They hid them under the snow, on the ground under a few leaves, under some weeds close to the side of a house, under loose shingles on a house-roof, and under leaves in an eave-trough. I scraped away the snow where I saw one of the birds hide a peanut and found several which had been hidden. When there was no food on the shelf the birds would search out the peanuts which they hid several days before

Nighthawk in New York City, March 28

A Nighthawk was observed by the writer, flying about over the Pennsylvania Railroad Station in New York City late on the afternoon of March 28, 1918. The call-note was also heard several times. This is a month earlier than the earliest date recorded for the species near Orient, L. I.

Mr. Forbush, in the extremely interesting 'Bulletin of Information,' No. IV, reports one in Demarest, N. J., on March 20, 1918.—ROY LATHAM, *Orient, L. I.*

Are Starlings as Hardy as English Sparrows?

There was a flock of Starlings about Kingsbury Street during the season of 1916. They had probably been there some time, and early in December were trying to drive the English Sparrows from the belfries of the churches and the school-house. There is also another flock that nests or roosts about Pattens Mills, perhaps in the belfry of the church, three or four miles west of Kingsbury Street.

During the winter of 1916-17—not a severe winter here—Starlings would occasionally come about the house and orchard trees, and a flock of twenty-five birds came the latter part of January for frozen apples. They were rather shy and easily frightened away. Dec. 28, 1917, there was a flock of thirty Starlings about, and, two days later, two birds came. Nothing more was seen of them until March 13, 1918, when two birds came and remained about the orchard trees for half an hour.

The extremely cold wave of the winter of 1917-18 was from December 29 to January 5, when the mercury went as low as 40 degrees below zero in this vicinity, and only a few hours during that interval of time registered above zero. At the village of Fort Ann, Miss Hattie T. Burnham said several Starlings were found perishing from the extreme temperature, and although brought into the house near a fire, the birds very soon died. I am under the impression that many of the Starlings in this region succumbed because of the severe cold weather of the past winter. This section is about 43.5° north latitude, and I doubt very much if the Starling can hold its own, thrive, and do well at a much higher latitude, as the English Sparrow most certainly does.

The Starling is a more attractive bird than the English Sparrow. Near Hudson Falls, I have been told that the Starling drives away and usurps the nesting-places made by the Woodpeckers. At Shushan, the southern part of Washington County, Mr. Frank Dobbin writes me that the Starlings, during January, 1918, were

seen feeding on the 'bobs' of the staghorn sumac, and that a Starling had been seen to pursue and kill an English Sparrow.

The winter of 1917-18 has been made notable here by the presence of a Northern Shrike or two, which occasionally would come about the house and drive the Tree Sparrows up from their 'hayseed' table in the garden.—STEWART H. BURNHAM, *Hudson Falls, N. Y.*

Two Corrections

The August issue of BIRD-LORE contains two errors for which the Editor is responsible. (1) The author of the article entitled 'Spotted Sandpaper Colonies' is Julian K. Potter, not J. W. Lippincott as given. (2) H. E. Tuttle's Studies of the Nesting Habits of the Nashville Warbler were made at Simsbury, Conn., not Lake Forest, Ill., as stated.—LUTHER

House Sparrows Robbing Robins

In the July-August number of BIRD-LORE is a note by C. Bonning, of Detroit, Mich., telling of seeing a House Sparrow steal an angleworm from a Robin—a common sight this summer on the lawns of this city. Not infrequently several Sparrows, instead of one, gather about a feeding Robin and accompany it as it runs from place to place. While digging operations are in progress, the bandits sit expectantly around, not far from the Robin's head, watching for results and ready to swoop in the moment the worm appears. Sometimes the Robins are so annoyed by the pestiferous band that they give up the quest and go hungry for the time. It is strange that a bird as big as a Robin has no more 'spunk.' Once in awhile they will resist and a rough and tumble fight will take place, but the Sparrow is more than likely to come off victor, with the booty in its bill.

I have also seen the Robin systematically robbed by the Red-winged Blackbird in exactly the same way when it was digging the big white grubs of the cockchafer from an infested lawn. In this case

the Blackbirds waited close by until the holes were finished, when they "rushed" the Robins, which always retreated, and pulled out the grubs themselves. I fear that the Robin, despite our love for him, is but an arrant "pacifist" at heart.—THOS. S. ROBERTS, *Minneapolis, Minn.*

An Oregon Oriole

The place is a veritable paradise for birds. An old brown house, half hidden by giant rose bushes climbing to the roof, wide lawns with open stretches, where sunshine and shadow play hide and seek; sleepy firs, towering maples, locusts, and poplars for shade, hedges of roses and sweet peas to shut out the dust of the street; basins of clean, cool water under a dripping tap, where the birds come often to drink and bathe.

There I first heard of the Oriole, not an Oriole, but *the* Oriole. Six summers before, a boy threw a stone at him and broke his wing. The brown-house people found him in time to save him from prowling cats, bound up his broken wing, and now receive yearly reward, for he returns each season and builds nearby. They know him by his wavering flight and the cluster of white feathers that never lays smoothly on the broken wing.

I was calling at the brown house one May afternoon, when a flash of yellow past the window caught my eye, and an instant later a bird's voice rang out a song of greeting. The lady of the house ran to the window, saying, "That must be our Oriole." I asked why she said "our Oriole," and got his story.

This is about as she told it to me.

For several weeks following his injury we fed the Oriole from a window-ledge, and until the going-away time in the fall he seldom failed to appear at a regular hour for his breakfast.

"The next spring my husband built a cooler-cupboard over the north kitchen window, and for a temporary protection tacked a mosquito netting loosely over the exposed side.

"It was early strawberry season, and I

had a dish of choice ones set there beside a bowl of cream, ready for lunch. Going to the cupboard on some errand, I saw my luscious berries all nibbled raw, and the cream spotted with pink. 'A mouse,' I cried. We searched cupboards, pantry, and closets but found no four-footed thief. The strawberry and cream episode remained a mystery.

"I think it was the next morning as we were eating breakfast, a slight tapping on the window glass made us glance that way. There on the ledge sat an Oriole, his cocked head and twinkling eyes seeming to say, 'Don't you know me? Don't you know me?'

"Our first thoughts and words were, 'Can it be our Oriole?' We cautiously opened the window, and he promptly flew away, though only to the nearest tree. That settled our doubts, for he flew in the old zigzag manner.

"We were pleased as two children and immediately laid out a tempting tidbit for our traveler. Meanwhile he watched from the tiptop branches, pouring out his joy in the clearest, purest notes you ever heard. A flash and twitter, and, lo, two Orioles were where one had been before. He had brought his mate, but we couldn't be sure whether she was the old wife or a new.

"One morning, a little later, my neighbor's little daughter was playing about the kitchen while I did my morning work. Suddenly she gave out a funny little squeal, and cried, 'Oh, look Auntie, look! look!' A chubby finger pointed to the cooler-cupboard. There, in the very center of a fresh currant pie, stood Mr. Oriole, filling his 'tummie' and likewise that of his more timid mate, who fluttered and coaxed and chirped just outside the danger-line. The mystery was solved; but what was to be done with the beautiful, daring robber?

"Well, we put up a wire netting, for such impudence was past our endurance. For days he fought that netting like a thing alive, beating it with beak and claw. In some way we discovered that if a berry were placed close against the screen, the

bird managed to get the greater part through the mesh of the wires.

"Since then he and his mate have come every season to be fed from the cooler-cupboard, and every year they have raised a family in their hanging-nest somewhere here in the yard."—ELLA GETCHELL, *Willmar, Minn.*

Memories of a Rainy Day

Today as I sit thinking of many things and listening to the patter of the raindrops without, the character of the day calls to my mind another rainy day in the spring when I spent two of the most delightful hours of my life looking in upon a center of bird activity.

It was about 3 o'clock in the afternoon when Sam and I set out to a pond nearly 3 miles east of town which is known as the 'Lily Pond' because of the large water-lilies found there in summer. We 'plopped' along in the mud and water through a slow, drizzling rain. A great many rains had fallen that spring, and every little depression in the ground was standing full of water.

After nearly an hour of wading through the mud we arrived at the pond, which, on account of the heavy rains, was higher than usual. It is a shallow, marshy pond 200 yards long and 50 yards wide. The water extends 20 to 30 feet back among the masses of sedges and rushes. It is an ideal place for marsh birds. About 6 feet from the north bank, projecting out of the water, is a ridge 3 to 4 feet wide and over 50 feet long. Upon this ridge, and about 30 feet from a small branching willow tree, is a large pile of brush.

We crawled along through the sumac bushes and high grass on the north until we got close to the pond. Hiding behind a clump of little scrubby trees near the edge, we saw a large number of Coots and five Spoonbill, or Shoveller Ducks,—three drakes and two hens.

A great amount of bird-life was on the pond. Looking east I could see the Ducks and down in the west end I discovered an old Mallard hen. I counted the Mud-bens

or Coots. There were between twenty-five and thirty. As I looked across the pond a large Bittern came over from the river and alighted among the sedges. From time to time I could see him stepping about, searching for his evening meal, and once or twice I heard his hoarse squawk. Hearing a noise at my left I turned and saw a reddish brown bird with a long bill and moderately long legs sitting upon the brush-pile. His head was drawn down against his shoulders, and he appeared to have a very short neck. He sat there calmly gazing out across the pond and often uttering a single, short, nasal call-note, similar in quality to that of the Nighthawk, but of shorter duration. He was a puzzler to me. I had never seen one like him nor heard the call before.

About this time it was getting darker. The rain had slackened. Bird notes sprang up from everywhere. From all parts of the marsh came the rapid rattlings and cluckings which I knew to be the call-notes of the Rails then feeding. Twitterings and peepings of Sandpapers and Phalaropes could be heard along the ridge. Across the pond from me a flock of lesser Yellow-legs walked about searching for food. Their long stilt-like legs seemed almost too weak and unsteady to hold up their weight. I heard a splashing from the east. A flock of birds, twelve in number, came out from the weeds along the north bank, and sitting low in the water, their backs hardly showing, glided out toward the middle of the pond. They swam in the shape of a large V, a large one leading. Again a splash and they could not be seen. In a few seconds they appeared again, widely scattered over the surface of the pond. They continued the leaping, splashing, and diving as if they heartily enjoyed it and were having a good frolic. I recognized them as Pied-billed Grebes.

The Coots scattered and some came so close that I could have touched them. The Spoonbills came back down the pond and passed me not 15 feet away. Another splash, as a muskrat, cleaving the water, swam up the pond, carrying a piece of a sedge for his house. I could see the Caro-

lina and Virginia Rails now. They were faintly picking their way along the edges of the rushes, gathering seeds and insects. The Rails do nearly all of their feeding toward dusk. The brown bird on the brushpile stopped his calling, stretched out his neck, and, with the most fastidious placing of his feet, stepped off the old dead limbs. Behold, a King Rail! I recognized it instantly, although it was the first that I had ever seen. I then got a better view with my naked eye than I ever expect to have again, for he walked down to the edge of the ridge, swam across to the main bank, and came down along the edge, not 6 feet away! What a beauty! He walked along without concern, hardly giving me a glance, closing the toes of each foot as it was raised and slowly opening them again as they were carefully placed upon the ground. He looked like a creature from another world. Could any bird be as smooth, as neat, as clean, or as beautiful?

It grew darker and the rain increased. The bird-songs gradually ceased. One by one the birds disappeared. The Grebes returned to the sedges, the Ducks to the other end of the pond, and the Rails and Sandpipers sank back into the rushes. The Bittern could be seen no more. The Coots drew into the weeds for the night and all was still. The surface of the pond was calm and unbroken, save by the steadily increasing fall of the rain.—HOWARD K. GROVE, *Ottawa, Kans.*

Wild-Fowl of the Susquehanna Flats

On December 5, I revisited, after an absence of five years, that great paradise of the wild-fowl, the Susquehanna Flats. Situated at the head of the Chesapeake, where the Susquehanna broadens out into the bay, the Flats are a somewhat obscurely defined tract of waters about 200 square miles in area, 3 to 6 feet in depth when the tide is in; and the whole region is practically one vast bed of wild celery. The Susquehanna Flats have been famous as ducking grounds ever since Colonial days, not only because of the

great abundance of wild-fowl which the natural food of the waters attracts, but because of the prime quality of the celery-fed game.

I have looked in vain through my unbroken set of BIRD-LOGS for a note or record about the region by some ornithologist who is closely familiar with the wild life of the Susquehanna Flats. Surely there are few regions in the United States which offer greater scope for observation and study of water-birds of all kinds.

To me an expedition to the Flats, 50 miles from my home, is an event preceded by days of happy anticipation and followed by permanent memories. I go as a sportsman, but most of the thrills of my day in the boat come to me from the birds that are not shot. To get the real spirit of the Flats it is necessary to be on them before the hills of the eastern shore are sharply defined against the brightening sky. Then, in the vanishing gloom, a consciousness of the presence of the wild life about almost imperceptibly passes into glimpses of shadowy movements, until a swish of wings helps the eye to a vague flock in the gray. Gradually the picturesque scene unfolds. There are Canvasbacks, and again and again Canvasbacks, thousands upon thousands of them, in curving, reforming lines; there are quick-beating Blackheads (Scaups), Black Ducks, Bull-heads (Golden-eyes), South Southerlies (Old Squaws), and several other species restlessly moving about over the feeding-grounds; there are many rigid formations of Canada Geese; and there are scattered flocks of Swans moving along like great snowy aeroplanes. It is all a joyously impressive sight. The voices, the forms, the spirit of bird-life are gloriously staged at sunrise in December on the Susquehanna Flats.

A strong element of my pleasure on my recent visit was the notable increase of wild-fowl since I had last been to the region. Canvasbacks seem to be four or five times more plentiful. Even the market hunters of Havre de Grace, who at first bitterly opposed spring shooting laws and who looked upon federal regulations as

encroachment upon their time-honored rights, are enthusiastic about the increase in Ducks, and attribute it solely to the new legislation. In spite of widespread decoy shooting during the season, in spite of the sink-box man who brags of his 200 head per day, and in spite of occasional 'big gunning' of the Ducks at night (an evil practice that still persists), the Ducks are not only holding their own in numbers but they are obviously increasing.

The Federal Government, which has done so much to bring about improved

conditions among wild fowl, is now to subject the ducking ground to a supreme test. For 20 miles along the western shore the land has been taken over and is being made ready for an ordnance proving-ground. It will be interesting to watch the effect of the heavy cannonading on the wild fowl. Will the birds be driven away or will they be as unmindful of the crash and roar as were the Blackbirds along the battle-torn Yser, about which Major Brooks has told *BIRD-LORE's* readers?—H. H. BUCK, *Lancaster, Pa.*

THE SEASON

IX. June 15 to August 15, 1918

Mr. John T. Nichols, of the American Museum of Natural History, has consented to assume Mr. Rogers' duties as Editor of this Department and reporter for the New York Region, and Dr. Glover M. Allen replaces Dr. Tyler in the Boston Region.—F. M. C.

BOSTON REGION.—Early summer was notable for the absence of long-continued storms, and so has been favorable for nesting. The occasional severe thunderstorms that followed in late July and August seem to have done no noticeable harm to the birds, despite their fury.

By the third week of July an interesting Robin and Bronzed Grackle roost was discovered at Lexington, to which already nearly 200 Robins nightly resorted as well as somewhat less than half that number of Bronzed Grackles. The spot selected was a dense clump of small red maples and gray birches, bordered by shrubs, and nearly surrounded on three sides by open meadow. The Grackles arrived, mainly in a body, a few minutes before sunset, followed shortly by a few late individuals in groups. These either lit on neighboring tree-tops and, after a brief rest, betook themselves to the densest part of the roost, or sometimes kept on past and returned after a brief survey of the country. Meanwhile, Robins were already arriving singly or in

small scattered groups of three or four, coming mainly from the direction of the center of the town or the thinly built-up portion to the east. Few came from the open country to the west. Some pitched at once into the dense growth and soon settled down; others alighted, first in nearby trees and, later, after preliminary challenging notes, betook themselves to rest. The last birds came in early twilight. The whole company took barely three-quarters of an hour to assemble for the night. These were apparently birds from the immediate vicinity, within a radius of perhaps a mile or two. The Grackles had nested in the pines less than a mile away earlier in the spring. Among the Robins, the voices of young birds of the year, now strong on the wing, were occasionally distinguishable. Apparently the Robins that still were busied with young in the near countryside did not join in the flocking to this roost at the time. Absence from town prevented further observation.

Starlings have been seen in small flocks throughout early and late summer in the lowland market garden country of Belmont, but are seldom seen back on the hills to the north of Boston. They feed much on the ground and seem to find considerable insect food. No reports of damage to small fruits have been received from this vicinity. In late August they are found

with the Robins and Cedar-birds, eating the wild black cherries.

Bluebirds are in fair numbers and seem to have brought their broods through well. Chipping Sparrows appear more abundant than usual and in August are seen in flocks of old and young, with the Bluebirds, in pastures and fields or along the roadsides.

Apparently more Herring Gulls than usual have been seen on the waters of the Back Bay Basin this summer. In previous years one or two have drifted in to rest on its quiet surface after summer storms, but this season few days have passed when from one to half a dozen might not be seen swinging in or out again to the harbor. Many of them, as was true of numbers seen on the coast at Essex in late August, seemed immature birds.

The fall migration of Warblers has already started at this writing (August 27) in normal fashion. On the coast multitudes of White-bellied Swallows are noticeable. The continuous fair weather should be favorable for their safe passage south.—GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—After a cold spell in April, the spring and summer came on gradually and steadily until June. June and July were cool and backward, there being little hot summer weather until about August 1.

Summer resident birds arrived on time and were present in about their usual numbers. Every year more Laughing Gulls summer in this vicinity. July 6 and 7 of this year a flock of about fifty were noted at Mt. Sinai, L. I.

Waves of spring transients, Warblers, etc., were notably absent. Two hypotheses have been advanced in explanation: That these birds are actually decreased in number, or that there were lacking warm waves to stimulate the rapid advance of the migrants and cold waves to hold them up in this latitude.

The most notable bird phenomenon in this vicinity was the abundance and lateness of north-bound shore-birds, several species lingering through June, the last of this spring flight being a single King-neck

Plover at Long Beach on July 3 (E. P. Bicknell). As the Least Sandpiper had returned there from the North on that same date (about its usual time of arrival), north- and south-bound birds actually met in this latitude. It is assumed that the Ring-neck of July 3 was a straggler from the northward flight, as that species had been present through the month of June. It would be interesting to know whether this individual continued northward until it met members of its own species returning, remained in this vicinity until they arrived, or turned southward at this point with Least Sandpipers and other birds with which Ring-necks associate. The late summer occurrence of young Little Blue Herons on Long Island is greater than that of last year (a flock of eight observed at Mastic, 60 or 70 miles east, August 3), but there have been fewer American Egrets reported from near New York.—JOHN T. NICHOLS, *New York, N. Y.*

PHILADELPHIA REGION.—June and July averaged about normal as to weather conditions. On June 14 a severe thunderstorm occurred, accompanied by hail, yet in spite of this occurrence several nests which I had been watching were unharmed. A mother Killdeer must have endured a severe pelting but apparently with no ill effect to her eggs, which all hatched, or to herself.

Purple Grackles, mostly immature birds, were first noticed flocking in considerable numbers June 8.

On June 16 a small Night Heron colony near the city, containing sixteen nests, was visited. That they had done very well was shown by the fact that twenty-eight young were counted perched about near the nests. Some flew away at my approach. Only one dead youngster was discovered, probably having fallen from the nest.

July produced few interesting features. Bank Swallows first appeared flying over the marshes in conspicuous numbers July 8.

The abundance of Nighthawks flying about the city this summer is worthy of mention. Their harsh cries could be heard in almost any part of the city from twi-

light on through the night.—JULIAN K. POTTER, *Comden, N. J.*

WASHINGTON REGION.—Ornithological happenings about Washington during June and July were scarcely out of the ordinary. A very hot wave during the last week of May sent practically all the northern migrants in search of a more congenial climate, so that by June 1 almost none but summer resident birds remained. A few notes, however, seem worthy of mention.

The Least Bittern appears to be rather unusually numerous this summer, for many were seen at Wellington, Va., and Dyke, Va., by Mr. and Mrs. L. D. Miner on June 24 and July 6. An American Bittern was also heard by them, pumping in a marsh at Wellington on June 24, an occurrence of some interest, since this species has been uncommon here in summer during recent years. The same observers report a Pied-billed Grebe seen at Chevy Chase, Md., on July 2; and an adult male Horned Grebe at Wellington, Va., on June 24, the latter doubtless a crippled bird. They also saw the Prothonotary Warbler at Dyke on June 1, and observed it at Warwick, Va., June 15, which dates, taken together with reports from other observers this summer, seem to indicate that the species is breeding in this vicinity.

On July 19 the writer found several Long-billed Marsh Wrens in an unimproved part of Potomac Park. The ground here is entirely dry, with no ponds or cattails, but is covered with a rank growth of weeds 4 to 7 feet in height, composed chiefly of various species of goldenrod, including the giant species, *Solidago altissima*. Here the Wrens were quite at home and in full song, though it is a place much more suited to the Short-billed Marsh Wren than to the other species. These birds have been here through June and July, and inquiry among local ornithologists developed the fact that many years ago birds of the same species inhabited the same place when it was damper than at present and interspersed with a few little ponds that had a sparse growth of

cattails. Thus it appears that the Wrens have clung to the same habitat ever since, notwithstanding the changes that it has undergone, or returned to it on account of the destruction of much cattail marsh by the dredging operations now reclaiming the river-flats in the vicinity of Washington.

The Purple Martins have again begun to roost in Washington, somewhat earlier than last year. They first appeared on July 19, and since that time have been steadily on the increase in numbers.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNEAPOLIS, MINN., REGION.—The portion of the summer covered by this report has been unusually cool and delightful, broken by only an occasional really hot day or two. Rain has fallen in sufficient quantity so that the whole state has been green and beautiful, and, as a result, crops of all essential kinds have developed beyond the ordinary, both in quantity and quality, and are just now, when of all times they are most welcome, being garnered in glorious abundance.

It may be interesting to note a curious freak spell of weather that occurred July 1 up along the northwestern border of our state. Snow fell there on that date to the depth of 4 inches, and photographs published in the papers at that time show men shoveling the snow from the sidewalks and streets of Fargo as in wintertime.

Much of my last report was devoted to a consideration of the exceptional scarcity of birds in this locality the present year. Further observation confirms this impression. Certain usually common summer residents have been almost entirely absent hereabouts. As examples: The writer has not seen or heard this year a single Towhee, the notes of which ordinarily come from almost every suitable woodland, and the frequent haunts of the Oven-bird have been silent and deserted. True, an occasional lonely individual of these species has been reported, but the normal resident population failed to appear. A careful observer reports that the White-throated Sparrow and the Junco were much less

abundant than usual in their summer homes in our northern forests, and this tallies well with the report that they passed through the southern part of the state this spring in greatly reduced numbers.

As an offset to this general paucity of birds, it is a pleasure to record the unusual abundance of a few species. Never before have I seen such numbers of Grinnell's Water Thrush. From May 7 to May 23 they were constantly abundant along all wooded streams and bushy lakesides, the height of the migration being about May 14, when often several could be seen at once in some favored haunt, daintily wading and waggling along through the shallows or flitting from stone to stone, for all the world like tiny Sandpipers. This Water Thrush is a migrant in southern Minnesota, passing northward to the evergreen forests to nest in company with the Canadian Warblers and Sparrows. Southeastern Minnesota is, however, the summer home of a considerable number of Louisiana Water-Thrushes which push northward from the normal Carolinian surroundings of the species, through the wooded bottomlands of the Mississippi River, to establish themselves at posts well within the Alleghanian Fauna of the Transition Zone. Not a few of these pioneering birds leave the Mississippi and turn into the valley of the St. Croix River, between Wisconsin and Minnesota, distributing themselves to nest along this deep gorge as far north as Taylor's Falls, about latitude 45 degrees, 20 minutes north, just on the southern edge of the Canadian Zone at this point. Curiously enough, only a rare straggler now and then continues the direct course up the Mississippi. There are only two or three stray records for the vicinity of Minneapolis, and this year, for the first time, the nest of the Louisiana Water-Thrush was found in this region. This nest was situated in the bank of a brook running through a wooded ravine some 10 miles south of Minneapolis. When discovered by the writer, on June 6, it contained nearly fully fledged young,

indicating a surprisingly early date for the arrival of this species in this latitude.

Another bird that was unusually common this spring was the Solitary Sandpiper, in contrast with the scarcity of the ordinarily abundant Spotted Sandpiper. Hundreds of this species were to be seen in mid-May along the wooded waterways. They leave here to nest in the Canadian Zone farther north. There was also, for a few days, a great flight of Wilson's Snipe, coming about April 16. A few of these remain to breed in this vicinity. The Lesser Yellow-legs was also common in migration, and, as usual, a few stragglers have remained through the summer—unmated or barren birds. On August 1 two Least Sandpipers were seen feeding on a mud-flat along the Minnesota River, either very early returning migrants or unmated birds summering far south of their nesting fellows. These summer vagrants among the Waders are of frequent occurrence and caution must be exercised lest exceptional breeding records be thus established. Thus in mid-June of 1915, the writer found a Ruddy Turnstone at Lake Mille Lac, Minn. When shot, on June 22, it proved to be a non-breeding female, summering amid the colony of Common Terns nesting on Spirit Island in that lake. Four Bonaparte's Gulls in immature plumage were also present. Again, on June 22, 1916, two Sanderlings were found on Gull Rock in Lake of the Woods, at home, apparently, among the breeding Herring Gulls and Double-crested Cormorants. One of them was shot and showed no signs of being a nesting bird.

Very few of the returning migrant land-birds have reached the southern part of Minnesota before the middle of August. An occasional Tennessee Warbler may be found during the first days of the month and, a little later, the first Magnolia and Blackburnian Warblers. These birds nest in the northern part of the state; the first species sparingly, the others commonly.—THOMAS S. ROBERTS, *Minneapolis, Minn.*

Book News and Reviews

The Ornithological Magazines

THE AUK.—The July issue of 'The Auk' opens with an article of historical interest by Mr. S. N. Rhoads, entitled 'Georgia's Rarities Further Discovered in a Second American Portfolio of John Abbot's Bird Plates.' A volume containing 122 hand-colored plates has been found in a private library, and our curiosity is aroused as to the chances of other bits of the work of this early portrayer of birds and insects turning up. Two of the plates are reproduced in half-tone as a frontispiece.

One's attention will be arrested by a careful study, accompanied by tables, of the 'Home Life of the Vesper Sparrow and the Hermit Thrush,' by E. M. and W. A. Perry. It is concise, omitting non-essentials that often burden similar studies, and it is a clear statement of facts that speak for themselves, and should be of interest to many of us. Another readable contribution is, 'Further Notes and Observations on the Birds of Hatley, Stanstead, Quebec, 1916-1917,' by H. Mousley, a list annotated in considerable detail.

'The Distribution of Nuttall's Sparrow in California,' by Mr. C. L. Hubbs, shows this race to be closely confined to humid coast areas which are not swampy, but regularly swept by moisture-laden winds. He points out the abrupt change that takes place at Point Conception. Another contribution to the northwest coast ornithology is by J. H. Bowles on 'The Limicola of the State of Washington,' a group of birds about which information is always welcome. There is also an annotated list, by Mr. J. K. Jensen, entitled 'Notes on the Nesting Birds of Wahpeton, North Dakota,' a region that has received little attention of late years; and one of rarities in southern New England, by A. A. Saunders, entitled 'Some Recent Connecticut Bird Notes.'

'The Birds of Desecheo Island, Porto Rico,' by Mr. A. Wetmore, includes eleven

species. A brief sketch of the island is given. 'Notes on the Anatomy of the Cuban Trogon,' by Prof. H. L. Clark, also describes the pterylography of this species.

The reviews of special important works should not be overlooked by those who seek to keep in touch with the progress of ornithology.—J. D.

THE CONDOR.—The July number of 'The Condor' is divided into three nearly equal parts devoted to general articles, reviews and minutes of the Cooper Club, and a 'Directory of Members.' The first article, containing 'Notes on the Nesting of the Redpoll,' by Lee R. Dice, includes records of three nests observed in 1912 on the north fork of the Kuskokwim River in Alaska. Less than thirty days intervened between the time of the completion of the nest and the date when the young birds left the nest. Because of a trip elsewhere just when the eggs were hatching, the precise period of incubation was not determined. A third part of Mrs. Bailey's 'Return to the Dakota Lake Region' is devoted largely to experiences with White-winged Scoters, Golden-eyes, and Prairie Hens. Joseph Mailliard contributes a description of a new subspecies of Fox Sparrow, the Yolla Bolly Fox Sparrow (*Passiella iliaca brevicauda*), the type of which was collected near South Yolla Bolly Mountain, Trinity County, Calif., Aug. 7, 1913.

The reviews contain critical comments on several recent publications, including Dwight's paper on 'The Germs Junco' and Cory's 'Catalogue of Birds of the Americas.'

The steady growth of the Cooper Ornithological Club is shown by the 'Directory of Members' which contains the names of 606 members, six of whom are honorary members. The club now has nearly one-third more members than the British Ornithologists' Union and two-thirds as many members as the American Ornithologists' Union.—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

Published by D. APPLETON & CO.

Vol. XX Published October 1, 1918 No. 5

SUBSCRIPTION RATES

Price in the United States, one dollar and fifty cents a year; outside the United States, one dollar and seventy five cents, postage paid.

COPYRIGHTED, 1918, BY FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

To many of the Editor's friends it has never been quite clear why an ornithologist should have been called to serve in the Red Cross, though reflection will show that the editorial problems presented by technical publications are not unlike, whether the subject matter relate to birds or to surgical dressings. However, in a new position in the Red Cross to which the Editor has recently been appointed, the relation between his profession and present duties is somewhat clearer.

Knowledge of the country gained during ornithological explorations in South America, in combination with experience acquired during the past year in the Red Cross, has, in the opinion of the War Council, fitted him for the post of Red Cross Commissioner to South America, and in that capacity he leaves this country October 3, for an absence of several months, to visit the Chapters of the American Red Cross which have been formed in the South American republics and to further the interests of the Red Cross generally. During this period his editorial labors for BIRD-LORE will be performed by Mr. John T. Nichols, of the American Museum of Natural History.

While it is not expected that a Commissioner of the Red Cross will have much time at his disposal for the study of bird-life, one's inherent interests and the habits of a lifetime cannot be overcome, even by the absorbing character of Red Cross work, and it is proposed, therefore, to

send to BIRD-LORE some account of the bird-life of the countries visited as it appears to the ornithologist en route. Our itinerary leads from Havana to Panama and thence to Lima, Valparaiso, Santiago, Buenos Aires, Montevideo, and Rio de Janeiro, with detours into the interior, and should therefore afford wide opportunity for casual observations of the most characteristic birds of land and sea.

These sketches will be illustrated by Mr. Louis A. Fuertes. We regret to say that Mr. Fuertes will not be a member of our party, but his own wide experience in tropical America has given him a large fund of information concerning the appearance in life of many species of South American birds.

THE soldier members of the ornithological department of the American Museum will recall with regret that the American Ornithologists' Union will hold its annual Congress at the Museum in November of this year of their absence. But visiting members may be assured that Messrs. Allen, Waldron Miller, Dwight, and Nichols will accord them a hearty welcome to the department of birds. Meanwhile let us hope that all members of the A. O. U. absent on war duty may answer the roll-call at the meeting of 1919.

THE Biological Survey has issued explicit regulations regarding the enforcement of the laws protecting migratory birds. Due provision is made for the issuance, to properly accredited persons, of permits to collect specimens for scientific purposes. It should, however, be clearly understood that these permits do not do away with the necessity of a state permit, but are required in addition to the permits issued, as heretofore, under state laws. The regulations are printed on a succeeding page.

UNDER the head, 'Our Native Birds,' the Pittsburgh *Chronicle Telegraph* publishes, each Saturday, articles on birds of general and local interest, replies to questions, helpful suggestions, etc. The establishment by bird-clubs of similar departments in their local press would do much to arouse and extend an interest in bird-study.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

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

PRESENT AND FUTURE RESPONSIBILITIES

One has only to glance through the pages, or even the tables of contents, of most of our weekly and monthly papers and magazines to realize that the press is striving unremittingly to acquaint the public with changing conditions and responsibilities, in the endeavor to educate as well as to interest its readers. Running through *The Scientific Monthly*, for example, appear such articles as 'Education of the Public and Conservation of Native Fauna,' 'Modern Natural History Museums and Their Relation to Public Education,' 'The Banana, a Food of Exceptional Value,' 'The Conservation of Platinum,' 'Snow and Its Value to Farmers,' 'The Cheapest Source of Increased Food Supplies,' 'Insects and National Health,' 'Zoölogy and the War,' 'The Girasole, or Jerusalem Artichoke, a Neglected Source of Food,' 'A National Park Policy,' 'The Work of Museums in Wartime,' 'The Application of Organized Knowledge to National Welfare,' 'Beckkeeping and the War,' 'Plant and Animal Life in the Purification of a Polluted Stream,' etc. These few titles are cited to illustrate the range of subjects which affect human welfare and in which everyone ought to take an interest. It is not necessary to refer to a publication bearing the name 'scientific,' to find articles dealing with topics of this nature, since, in some form or other, they appear increasingly for the benefit of all classes and ages of people. The significance of this condition is that in times like the present, it is a national, yes, and an international necessity that everywhere, even in the remotest districts, enlightenment along broad lines with reference to future responsibilities be furthered in the most practical and beneficial way. "The future of any nation is secure, if it *lives up to its possibilities*. Its national problems will be solved and solved thoroughly and intelligently," says an English writer. Considering that, on the average, without special incentive, nations as well as individuals do not attain to half their possibilities, it becomes clear that in periods of stress like the present, not only nations but also every individual member of them must rise to a higher level of intelligence, training and activity if the problems and responsibilities so constantly multiplying are to be met sanely and successfully. Through education alone, "without any unusual incentive" it is stated that one may improve to the point where he may attain to 60 or perhaps 80 per cent of his possibilities, by the aid of trained experts upon whom would devolve the task of mapping out a system sufficiently flexible and thorough to attain such a result.

Not only is this forward look alluring in its promise of results, but it also reflects the radical changes which must come about in our somewhat conservative ideas concerning the meaning and aim of education. A keen observer recently wrote: "Few teachers realize the instrumental character of ideas, or that the activity of knowing arises either *to satisfy a need or to meet a new situation* and that the failure of education is due largely to the neglect of these considerations. . . . The one reform needed at present is to form a clear idea of what education really is, to understand that it takes place only when our pupils are being trained to think out solutions to real problems, or to devise means to meet real situations.

"Generally, we must ever keep in mind that education is taking place only when the pupil is *thinking*; that thinking arises only when there is some problem to solve, some new situation to meet or some obstacle to remove, and that when these conditions are absent, all instruction becomes and must become, mere unintelligent memorizing which develops neither the intellectual powers nor the ability to meet the after demands of life."

Should this dictum appear to minimize the purely cultural side of education and to savor too strongly of utilitarian ends, recall the instructions that Pasteur gave to his students: "Your business, your especial business, must be to have nothing in common with those narrow minds which despise everything in science which has no immediate application." Somewhere between the extremes of the mind narrowed strictly to practical, visible ends and that of a creative imagination with which one in ten thousand possibly, like a Pasteur, may be endowed, must our ideal system of education for the masses be moored, and let us never overlook the fact that while the narrow mind can never solve the problems of the larger world, the creative vision of a Pasteur encompasses not only large but small problems, even those of humblest needs. It was such a master-mind as his that opened up vistas of research leading to modern surgery, and, at the same time, "taught the vinegar-makers of Orleans how to increase their output, instructed France how to prevent the souring of her wines, and helped the brewers of London" by showing them the importance of pure yeast, all practical problems in his day.

A great deal of discussion is going on just now about what shall be taught and what shall be omitted in a thorough education. This is especially true of science. We are confronted with great needs in scientific training and attainment, but there is altogether too much uncertainty as to how best to accomplish the tasks before us, and, in consequence, our schools fall below the standard of efficiency demanded of them. Without proposing to settle the disagreement as to whether general science, elementary science, or a single science is the best means to the end, or whether nature-study shall be confined to the so-called "natural history" method or be based more thoroughly upon a foundation in touch with science, for the moment let the *need* of training be emphasized. At this instant, in a single one of the allied nations, 50,000 specialists await

the call of their country or are already in service along lines for which long and thorough training has prepared them. The supply of such workers for public welfare must be augmented. Many teachers are leaving schools and colleges to take up Government service, but instead of fewer teachers, more are constantly needed to carry on the program called for in a complete education. Vocational training has possibilities as yet only beginning to be fulfilled. Whether it be pupils in public schools, or the teachers guiding their education, vocationalists, industrialists or, higher up in the scale of training, specialists of university and research grade, everywhere more workers and better training are demanded. By better training is meant not only a firmer grasp of the facts underlying knowledge but also a breadth of vision which applies that knowledge, not alone to physical and mental development but to spiritual upgrowth as well.

Criticizing present-day methods, especially of training in science, Sir H. H. Johnston addressed to the Association of Public School Science Masters these expressive words: "It is almost universally agreed that the education of the impressionable young cannot be confined to the cultivation of the muscles and the steadying of the nerves, to the care of the teeth and removal of adenoids, to the initiation into the mechanical arts and the decorative arts, nor to the filling of the mind with an encyclopaedia of useful information. You have, in addition to caring for mind and body, to impart such education as may here with great, there with only partial success, turn the raw material of your pupils into good men and women, honest servants of the state, enthusiastic patriots and law-abiding citizens, obeying, however, wise and humane laws which they are competent to frame and understand.

"Into this third great branch of education (that of the education of the soul) science, founded on demonstrable truth alone, must enter; superstition must be banned. The scientific basis and authority for temperance and chastity must be explained. Children must be shown that wrongdoing against one's self or the community does not pay in the long run; that against one's own body and mind it is rapidly punished, that against the community not only are there unpleasant consequences through the enforcement of laws which we have made for the protection of the community, but, also, that the wrongdoer himself would suffer in security and happiness were there no such laws."

It is, perhaps, due as much to this one great lack in the educational system of our present foe, namely, the neglect of the education of the soul, as to any cause, that mental perspective has become so out of alignment and spiritual sympathy and common humanity so startlingly absent among a people for many of whose methods of training universal respect has hitherto been entertained. There is much to criticize in our own system, so much, indeed, that we will do well to take the matter up intelligently and conscientiously. Have the schools in your vicinity been brought up to as high an average standard as is consonant with the needs of the times? Are you resting satisfied with bodily and mental training, the removal of adenoids and condensed, encyclopedic

curricula? Are you quite sure that you are converting the raw material of youth into citizenship of vision, a sense of duty, responsibility, creative thought and spiritual understanding? Are you teaching children the *value* instead of the *dread* of laws, the *inevitableness* of the results of transgression instead of *fear* of those results? This is not a sermon nor is it intended to be one. It is a plea for the highest standards of education by means of the application throughout the world of knowledge to human welfare.

Especially urgent at this time seems the need of training with regard to the relation between natural resources and human welfare. On every hand we are asked to conserve without always understanding the reason. A carefully prepared brochure from the Conservation Department of the General Federation of Women's Clubs states that "these resources touch every phase of our national and individual life at some point of contact," and "that they are vitally essential to the prosecution of the war." Enumerating soil, forestry, waterways, water-power, minerals, natural scenery, birds and flowers and wild animal life, as well as related matters such as good roads and the planting of the Lincoln Highway, food production and the conservation of human as well as material resources, an appeal is made for a "practical, comprehensive study of nature as a formal part of the public school course," on the ground that "in children, the study of natural objects of the outdoor world is essential to a well-balanced, rational mental development."

The opportunity to broaden our educational basis is certainly at hand, and not alone boards of education, but you and I, as citizens and as members of societies for the betterment of conditions, should stand ready to help this movement. Audubon Societies are particularly responsible in this matter of conservation and education for present needs and future demands.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XLI: Correlated with Geography, Elementary Agriculture, and Conservation

A striking example of the need of some imperative necessity to awaken us to the possibilities within our grasp is the relation of the war to agriculture and conservation of resources. In 1898 a report of existing conditions in the United States showed that "for several years prior to 1897 the price of wheat in the North and West was so low as hardly to cover the cost of harvesting, while in the southern states not enough was raised for local consumption," so that the price was more than double in that section of the country. At the same time, cotton, the staple crop of the South, was so low in price as "to yield no profit," while wheat was so high "that if a fair division of acreage had been made

between the two, the southern planters would have realized handsome profits instead of suffering financial distress."

At the same time, in the North, in New York and Wisconsin, for example, dairying, and especially cheese-making, were chiefly relied upon by farmers, although the price of cheese was only eight or nine cents a pound, and a few years earlier, even as low as four cents. Most of the same land which was exclusively devoted to feeding stock for dairy purposes lay in the sugar-beet belt and was also suitable for growing wheat and other paying crops.

Today, owing to the requirements of war measures, a farmer *must become informed correctly* as to what to plant and what not to plant, as well as to how to plant, when to plant, and when to change crops. The Government furnishes an almost endless amount of information with regard to these matters, besides having established in every state a thoroughly equipped school of agriculture in which some of the finest instructors anywhere are to be found.

The United States Department of Agriculture, under the Division of Biological Survey, does a work so invaluable that every scholar in every school should at least know of its existence and have some idea of the benefits to be derived from following its suggestions.

Take a geography and look at a map of North America, one upon which no states or territories are marked. What idea have you concerning the nature of the soil, the amount of forested area as contrasted with great plains or cultivated land, the relative amount of rainfall or the extremes in temperature at any point which this map represents?

Perhaps you know the names of large cities, of important seaports or navigable rivers, of mountain ranges and lakes of considerable size, but do you know where wheat can be successfully grown, and, if so, what kind of wheat, or where cattle can be raised to advantage, or the sugar-beet, fruits, cereals of all kinds, and upon what conditions the nation's supply of fish and shell-fish depends?

These are questions of very great interest to every man, woman and child today, and, as time goes on, they will become far more imperative because, as people increase in numbers, here as well as all over the world, a food-supply must be produced which will keep them strong and in constant health. At the same time, this food-supply must be grown with such attention to its proper distribution that the *possibilities* of each particular soil and climate be taken advantage of to the utmost. In this way, all classes of people, wherever they may live, will be able to get food of healthful quality and in sufficient amount to meet their necessities, and, particularly, by this means will the distressing complications of transportation, which now cause hardship to many, be largely avoided.

The time and place for every boy and girl to make a start in this extremely valuable kind of knowledge are in our public schools. With an isothermal map of North America and a handful of colored crayons at hand, a class can quickly

trace the so-called "life-zones," that is, the land areas where crops can be grown, throughout North America, with especial emphasis upon the arrangement of those zones in the United States. Bulletin No. 10, by Dr. C. Hart Merriam, published in 1898 by the U. S. Department of Agriculture (Division of Biological Survey), contains a map of the United States upon which these life-zones are traced in color, and on which the humid and arid portions of them are also indicated.

We find three great divisions of temperature: cold (*boreal*) in the North, and high up along mountain-ranges even into Mexico; temperate (*austral*) throughout the United States and Mexico, except on the cold mountain heights or in the hot lowlands; and hot (*tropical*) in southern Florida, the edges of Texas, and Southern California, the tip of Lower California, and most of Central America, with a part of Mexico.

Within these regions of heat, cold, and partial heat and cold, only certain kinds of vegetation will grow or particular forms of animals thrive. To the far North there are almost endless stretches of ice and snow, along the southern limit of which, during midsummer, the temperature rises to about 50° Fahr. Below this frigid zone, which may be described as Arctic-Alpine, and where no trees can grow, and only a few rugged, dwarfed plants, beautiful beyond description during the period of bloom, comes a broad *transcontinental* belt of evergreen (coniferous) forests that bears the name of the great bay, the southern shores of which it only partially surrounds, namely the Hudsonian Zone. Here, also, it is too cold to raise any but the hardiest crops. Indeed, in a climate where the highest summer temperature is only a little over 57° Fahr., one would hardly expect to find crops of any amount or value. So vast as the land-area in these zones may appear on the map, they are as yet of little value to man in producing food-supplies beyond fish or wild game, and these only in limited quantity. The great Canadian Zone, which forms the extreme southern part of the Boreal Region, except along mountain-heights farther south yet, is where we may begin a survey of agriculture. Before making a list of the different kinds of food-supply found in this zone and the more temperate ones, it will be helpful to make a simple study of the kinds of soil in which crops grow. So important is this matter of soils that the U. S. Department of Agriculture has a special staff of workers whose business it is to chart different kinds of soil on large colored maps. You will find it interesting to look at such maps, where the prominent feature is the soil. Here you will find the location of swampy areas, tidal marshes, coastal beaches, meadows, muck-beds, rough stony land, fine sandy or gravelly loam or varieties of these types of soil. On page 842 in Mrs. Anna B. Comstock's 'Handbook of Nature-Study,' you will discover a helpful method of becoming acquainted with the earth beneath you, and if you will, in addition, bring from your own home grounds a few handfuls of earth to compare with samples which your state boards of agriculture will doubtless be glad to loan or give you, in a short time you will be able to tell one soil from another.

SUGGESTIONS

1. In what region do you live, boreal, austral, or tropical?
 2. What is your idea of a life-zone?
 3. Where are the coldest parts of the United States? The hottest? The temperate?
 4. Will wheat and other cereal crops grow anywhere? What kind of soil do they need?
 5. What determines their distribution? How much frost, rainfall, and drought will they survive?
 6. Does wheat grow where you live? Do you know how much wheat your state produces annually? How much of other cereal crops?
 7. Do you know how many bushels of these various crops are raised to the acre in your state? Does the amount vary from year to year? Is it possible to increase the amount raised on an acre? How?
 8. Where are the largest wheat-belts of the world? Where is the largest amount of wheat to the acre raised?
 9. Is it possible for the United States to raise all the wheat needed at home as well as what is demanded for export to other nations? Should we try to raise as much as possible or just what is needed? What is a surplus? Do you know how large a surplus of wheat our Government hopes to have this year? Will it want more yet in 1919? Why?
 10. What birds injure cereal crops? What birds protect them?
 11. Can you name all the countries and states as well as the water highways over which the Golden Plover flies in its annual migration? Where is it not well protected?
 12. Why would it pay to protect this as well as all other Plovers and shore birds generally? Are there Plovers in the eastern hemisphere? Golden Plover? Do they ever meet our Golden Plover? If so, where do you think it might be? Does anyone know why the Golden Plover goes so far north to nest and so far south to winter?
 13. What do you know about the insects upon which it feeds? Does it have any other kind of food? Can you tell the difference between different kinds of grasshoppers and locusts? Have you any idea how many kinds there are in the United States alone?
 14. Compare the habits of the Bobolink in the North and in the South, also in the spring, summer, fall, and winter. When and where should it be always protected?
- In 1865, 1869, and 1886, locusts appeared in devastating numbers in Nebraska, at places so many as to darken the sun. Without the aid of such birds as the Yellow-bellied Blackbird, Plover, Quail, Curlew and Prairie Chicken, cereal crops would have been lost. A farmer in Fremont, Neb., wrote, "In answer to your question about the birds and the locusts, I must say this: 'Every farmer that shoots birds must be a fool.' I had wheat this spring on new breaking. The grasshoppers came out apparently as thick as the wheat itself, and indeed much thicker. I gave up that field for lost. Just then great numbers of Plovers came, and flocks of Blackbirds and some Quail, and commenced feeding on this field. They cleaned out the locusts so well that I had at least three-fourths of a crop, and I knew that without the birds, I would not have had any. I know other farmers whose wheat was saved in the same way."
- From Fall River, Mass., comes this surprising record of the beneficial work of the Spotted Sandpiper in a garden and orchard about 1,500 feet from the shore. "Three pairs nested in a young orchard behind my house and adjacent to my garden. I did not see them come go to the shore for food, but I did see them many times make faithful search of my garden for cutworms, spotted squash bugs, and green flies. Cutworms and cabbage worms were their especial prey. After the young could fly, they still kept at work in my garden and showed no inclination to go to the shore until about August 15. They, and a flock of Quail just over the wall helped me wonderfully."—A. H. W.

For and From Adult and Young Observers

OUR BIRD EXHIBIT

A bird exhibit was held by the Junior Audubon Society of Grades V and VI, at Fields School, Wollaston, Mass., on May 6. Bird records were played on the victrola, and the children enjoyed them very much.

Stuffed birds were loaned by Henry Jones, and four or five came from the Wollaston School. Among the birds there were the Blue Jay, Flicker, Kingfisher, Loon, Rail, Barred Owl, Cedar Waxwing, and many others.



MASSACHUSETTS FIELDS SCHOOL, GRADES V AND VI

There were some nests brought in by the children, although Miss Thayer brought most of them. There were nests of the Baltimore Oriole, Robin, Hummingbird, Barn Swallow, Chipping Sparrow, and others, too.

On the wall there were pictures from the Audubon Leaflets and drawings colored by the children. Booklets written by the class on "How Birds Will Help to Win the War" were displayed.

Five dollars was received from the exhibit. Half of it was donated to the Junior Red Cross and half to the Massachusetts Audubon Society.—ELIZABETH MORRIS (age 11 years).

[The teacher of these pupils writes: "The boys and girls have enjoyed very much our work on birds this year. Meetings have been held every week since the last of March. The pupils look forward to Tuesday afternoons when one of their members presides. We have found the Audubon leaflets and the outline drawings very helpful." In another column of this Department special reference is made to the value of these outline drawings. Any teacher who grasps the significance of *form* and *proportion* in identifying

birds has gone a long way in solving the problem of teaching others how to become most certain of bird neighbors in all conditions of adverse light, distance, and unusual phases of plumage.

The exhibition described above has an added interest for our readers because of the judicious and patriotic disposal of the proceeds of the entertainment. There cannot be too much of this cooperation between Junior and State Societies.—A. H. W.]

BIRD EXHIBITS IN PUBLIC LIBRARIES

Marian A. Webb, of Fort Wayne, Ind., writes of a proposed plan to hold bird exhibits in the public libraries of Indiana. The idea is an excellent one.

[For many reasons, public libraries, and particularly the children's departments in them, are most advantageously situated for the display of bird exhibits as well as for reaching a large number of people in a short time. Now that the public needs graphic instruction in many essential points relative to national welfare and conservation, the libraries throughout the land would do well to discuss some form of concerted action in this connection. Food conservation exhibits are not infrequent in public buildings like museums and libraries, and attract large numbers of interested persons who readily wish to learn the essential facts about present methods and needs in establishing regulations which shall insure safety to ourselves and all nations now dependent upon us for food. As time goes on, and the requirements of all the allied nations are being more carefully systematized, it becomes the duty of every thinking and patriotic person to obtain information which is entirely reliable. Many who have neither time nor patience or, perhaps, who cannot read the various conservation bulletins which are going broadcast through the land, will grasp the truth and heed the warning conveyed by a carefully arranged exhibit. Not alone birds but many other natural resources must be studied with a view to wise conservation, and, for many persons, an exhibit which silently presents the actual state of affairs now existing without comment or antagonizing argument, is more effective than lectures, bulletins, or personal appeals. Unobtrusively, thousands of adults and children came into sympathetic touch with the national situation last year, as well as with future national necessities, through the clear and truthful presentation of the matter in the detailed exhibit shown in the main entrance hall of the American Museum of Natural History in New York City. Any exhibit, however small its scale, can reach the public if it illustrates a fact truthfully. The cooperation of libraries and museums is greatly to be desired at this juncture.—A. H. W.]

ATTRACTING BIRDS TO MY HOME

I would like to tell readers of BIRD-LORE my lovely experience in trying to attract the birds to my home.

Our home, with its yard of trees, shrubbery, vines, and garden, faces a small lake. The first summer we lived there we had very few birds. The next year we put up nesting-boxes and began feeding the birds to make them feel we were their friends. The food we used was only the left-overs from the table, such as cereals, crumbs, and dry bread, which they carried away to their babies as fast as we put it out. This summer we had thirty-six varieties, so you can see what protection and food means to the birds.

After having that number visiting our feeding-place, we could go to the nests of seventeen different kinds of birds.

I am a little girl ten years old, and a member of the Audubon Society of Findley School, Akron, Ohio.

I have found the colored plates a great help in studying the birds. I wish every little girl could be a member of this Society.—ELIZABETH FOUST, *Akron, Ohio.*

[Perhaps no more appreciative comment could be made upon this attractive, though unembellished statement of home experiences with birds, than to add a letter from a little girl farther west who is taking up bird-photography with the same pure and sane enthusiasm of the real nature-lover. In both instances, home surroundings are made the starting point for acquaintance with birds, and, in both instances, that apparently narrow horizon is rich in results. It was Gilbert White who as long ago as 1768 wrote of his quiet English garden "All nature is so full that that district produces the greatest variety which is most examined." It is quite safe to say that patient observation in very limited areas leads eventually to records and discoveries of secrets apparently hidden from those who survey Nature only superficially here, there, or anywhere fancy or chance may lead. The summer bird-population with which the writer is most familiar might almost be compared with that of a strictly home plot, so intimately associated are the birds with particular and probably preferred nesting and feeding areas therein. Possibly circumstances may never again combine so favorably as to make another opportunity for acquaintance with bird neighbors as fortunate as this. Surely they can never duplicate this particular spot.—A. H. W.]



A WREN AND ITS HOME

AMATEUR PHOTOGRAPHY

Not until yesterday did I know that such a profitable magazine as *BIRD-LOVE* existed, and now I am anxious to contribute some of my kodak pictures to it.

I am a true lover of nature and am especially fond of birds. My camera, for years, has been my favorite companion, but not until last year did I realize the real value of bird-photography. Now that I know how to get *BIRD-LOVE*, I am more interested than ever. After my experiences, and my failing results

along this line of work, I have learned that to obtain a good bird picture, requires one to have the patience of Job.

I shall enclose a picture of a little Wren and its house, which took me two hours before I was able to get it, but when finally I saw the result of my effort, I think it was worth all my time and trouble. There is never a bird too small nor too tame to be unworthy of my attention; I love especially the little Wrens.



YOUNG SCREECH OWL

form of head, motions and quality of song. Once acquainted with a Wren as a Wren, the task of deciding its specific name becomes simplified.—A. H. W.]

I was never so surprised in my life as when a companion and myself took a stroll through a woods, and without any trouble were able to obtain the picture of an Owl, which seemingly sat on a tree-stump posing for us.

I hope that other bird-lovers will direct their interest to bird-photography, as the results, when good, are an everlasting pleasure.—FRIEDA E. NOLTING, *Indianapolis, Ind.*

[The contributor does not give the species of the Owl and Wren photographed, but apparently they are the Screech Owl and Bewick's Wren. However, it is better to know a Wren simply as a Wren, and know it well because of its family characteristics than to think you know the difference between a House and Bewick's Wren, without first being able to distinguish the Wren out of *bill, tail and wings.*

BIRDS OF THE FAR WEST

I

I have seen a great many birds in this eastern Oregon country—ever so many more than I expected.

We started on Wednesday afternoon, June 20, and went as far as Hood River that evening. The birds seen that far were about the same as in Portland. The next morning we got an early start, and motored, on a side trip, to the 'Devil's Punch-Bowl,' a beautiful waterfall in the shape of a punch-bowl, not far from Hood River. It was here that I had the first of my interesting experiences. Near Hood River I saw a kind of Junco that, so far, I have not been able to identify. A little farther along we saw several beautiful specimens of the Lewis' Woodpecker. At the 'Devil's Punch-Bowl' in which the water is very swift, we saw a Dipper 'swimming' in and out. I was really a little anxious for its safety in that swift falls, but it seemed not to mind it in the least.

After making the 'Devil's Punch-Bowl' as a side trip, we went on to Maupin. We stopped at The Dalles for lunch, and that was about the beginning of the sagebrush country. Here we began seeing several new birds not found in the Willamette Valley. Crossing the Cascades I had my first, and very enthusiastic acquaintance with the Mountain Bluebird. Though I had always thought it beautiful, I had no idea it was as beautiful as it really is. The picture in Reed's 'Western Bird Guide,' is not at all accurate, and even the descriptions did not paint to me such a pretty picture as it proved to be. There, also, I had my first acquaintance with Say's Phebe and Cassin's Kingbird. Both were very plentiful, though the bird that was the most numerous, I think, was the Meadowlark. One peculiar thing that came to my notice was the nesting-site of the Cassin's Kingbird. The telegraph poles in this district are braced by smaller posts some five feet high, directly alongside, and I saw two nests of Cassin's Kingbird, placed on the top of the smaller post with absolutely no protection from wind or rain. Along in this district, through Wasco County, I also saw several Mourning Doves.

Wasco County abounds in rolling plateaus covered with low sagebrush and small, fine grass. Shortly before reaching Maupin I saw the first Dusky Horned Lark on the trip and one Rock Wren, the first I had ever seen, and it was very obliging and allowed me to get a good look at it.

We arrived at Maupin shortly after sunset, and as it grew dusk I went down to the river to "see what I could see." About six Nighthawks were sailing over the water, catching the many mosquitoes.

The following day we motored to Heppner from Maupin. Not far from Maupin I saw my first Northern Shrike. The rolling plateaus continued here, and now the more desert types of birds became abundant. Cassin's Kingbird, the Dusky Horned Lark, Vesper Sparrow, Mourning Dove, and Mountain Bluebird were abundant, while several Burrowing Owls, Cowbirds, Bank Swallows, Rough-winged Swallows, and Killdeer were seen. Going through a mountainous region covered with Pine, I saw my first White-headed Woodpecker.

About sunset we came to a place called 'Buttermilk Cañon.' This cañon is about six miles long and very winding. A number of birds were seen here, including Brewer's Blackbirds, (among these I saw a freak with a white tail), Mourning Doves, Robins, and Dusky Horned Larks. I do not think, however, that I ever saw such a magnificent sunset. The effect on the rolling plateaus surrounding us was wonderful, and just as dark nearly closed in around us, coming up a hill, we came into full view of Mt. Hood, half enveloped in darkness, but with a beautiful pink haze covering the summit, and Mt. Adams was a solid mass of glowing color—orange, pink, blue, purple, and gray, all blended together.

The next day, having stopped for the night at Heppner, we went on to Pendleton. It was here that we met many Magpies. We also saw a number

of Burrowing Owls, Brewer's Blackbirds, Kingbirds (*Tyrannus tyrannus*), Cowbirds, Cassin's Kingbirds, Mourning Doves, Crows, and Ravens. Just out of Pendleton, much to my surprise, I saw several Ring-necked (or Chinese) Pheasants.

On the 25th we went to LaGrande, crossing the Blue Mountains. The birds were about the same here, with the exception of another White-headed Woodpecker.

The following day we went on to Baker. The most common birds were Brewer's Blackbirds, though Redwings, and Barn and Cliff Swallows were abundant.

On the 28th we started back for LaGrande but were marooned by the Rock Creek flood caused by the dam breaking. The entire town of Rock Creek was washed away, and the country for five miles around was flooded, so we decided to return to Baker. The only things I noticed which were disturbed in bird-life were the Barn Swallows. They seemed much disturbed over the flood and flew about, dipping into the water now and then. On the way back to Baker, however, I saw something which made me feel well repaid even for being marooned by the flood, and that was four Bobolinks not far from Baker. They were the first ones I had ever seen, and I understand they are quite rare in Oregon. I saw them very well, and had the good fortune to hear them sing.

Today we came on to LaGrande, and saw the Bobolinks again. Another bird I saw not far from Cove was the California Quail which I had not seen before in eastern Oregon.

So far this year (since Jan. 1, 1917) I have seen 112 varieties of birds, and I'm going to raise that number before I get home.—MARY E. BAKER, *Portland, Ore.*

II

I live in Vancouver, Wash., on the Columbia River.

Since the new interstate bridge is finished between Oregon and Washington, we often go to Portland in our automobile, it is such a lovely drive. As we cross the sloughs of the river we see the Great Blue Herons catching fish. They seem to like it there, and we usually see two or three every time we pass.

Mother and I go out into the woods to watch the birds in summer. They are so interesting.

The Oregon Towhees are plentiful out here, and the Willow Goldfinches are nearly as thick as the English Sparrows. I have two bird-houses on our garage, and there is a family of Bluebirds that build there every year. They have been building there for four years now. They usually raise several broods a season.

The little Martins also build in one of my boxes. They go into my garden and keep it clear of all insects that would harm my plants. Last summer I raised and canned twenty-one quarts of tomatoes and had all we wanted to eat fresh, from a dozen plants of tomatoes, while some of my neighbors had a

very few on account of some kind of an insect that ate the tomatoes. I think it was my Martins and Bluebirds that kept mine free from insects, because I did not use anything to keep the insects off.

I have just put up a Wren-house. I am hoping some little Wren will make its home there next summer.

We have a vine on our front porch, and a Robin built there last summer and raised four little Robins. We are hoping that they will come back again this year.

The Oregon Chickadees are very numerous here. You can hear them almost any time you go out.

Meadowlarks stayed here all winter, and so did the Bluebirds and Robins. It snowed for about a week here, but we fed them and they just swarmed around the back porch where there was food. As we are only 100 miles from the coast, and on a river, Sea Gulls stay here for the smelt in the river.

I have a kodak and try to take pictures of birds but have never had very much luck.

The Flicker, or more commonly known Yellow-hammer, is a familiar bird in these parts. We also have the Allen Hummingbird, as well as the Kingfisher. There are also lots of Thrushes here and plenty of Sparrows.—MARY C. DENNY, (age, 13 years), *Vancouver, Wash.*

It will be instructive for Eastern readers to look up the species and varieties of the common birds noted in these letters from the Far West, e. g., the Chickadee, Goldfinch, Towhee, and Bluebird, and, also, to study the occurrence and distribution of Hummingbirds in North America, and more particularly, in the United States. Especially noteworthy is the mention of the beneficial food habits of birds in the garden. The tomato-worm may have been the pest injuring the plants.—A. H. W.]

NESTING RECORDS

Last year I found seventy-one nests. Fifty-four of them were found back in New Jersey before the middle of June, when I came home. There, although it was rather late for nests, I found seventeen nests, exclusive of two large Cliff Swallow colonies.

I have a notebook in which I keep a record of all the nests that I find. I give each nest a number and record each observation of that nest under its own number. In the first entry for each nest I describe the location carefully for future reference. Here is just a sample, showing the records of the first six nests that I found.

1. April 23. Robin in apple tree nearest barn in back orchard. Saw her lay the first piece of string in the crotch.
2. April 24. Phoebe on steel girder under first bridge west of hospital. Two eggs. Last year's nest on another girder.
3. April 25. Robin in bush in front of Cline house. No eggs.
4. April 25. Big bunch of grass, no mud lining.
4. April 26. Purple Grackle in small cedar on edge of our orchard. Three eggs.

2. April 28. Four eggs.
5. April 28. Robin in the big maple. One egg.
6. April 28. Song Sparrow in Keef's hedge. Three eggs.
1. April 29. Two eggs, but no mud lining.
3. May 1. Cat killed one of the birds and pulled nest down.
3. May 2. Five eggs. Sitting.
6. May 2. Four eggs. Sitting.
4. May 3. Five eggs. Sitting.
1. May 8. Four eggs. Sitting.
5. May 13. Nest empty. Think they were stolen.
2. May 13. Three young just hatched and two eggs.
1. May 16. Three young just hatched and one egg.
4. May 16. Young three or four days old.
6. May 20. Only three young, pin-feathers ready to burst.
2. May 23. Feathers not out yet.
6. May 23. Ready to leave nest.
2. May 24. Feathers all out.
4. May 24. Left nest.
1. May 24. Three young left nest. One unhatched egg in nest.
2. June 1. Four young left nest. One unhatched egg left in nest.

To find the history of any nest, first find its number and then go down the list, reading wherever that number is repeated. In this manner I have all my nesting records in a compact form, where they are readily accessible.

At the end of the year a summary may be made:

3 Robins	1 Song Sparrow
1 Grackle	1 Phoebe

This shows how much more common the Robin nests are than any others.

A Robin takes five days to build a nest.

Phoebes build under the same bridge year after year.

A Song Sparrow builds its nest, incubates, and young leave nest in about a month.

A Phoebe lays an egg every *other* day.

These and more facts can be obtained from the records of these six nests, so it is easy to see what records can be obtained through a study of seventy-one nests.—JAMES W. CLISE, JR. (age 15 years), *Willowmoor Farms, Redmond, Wash.*

[Observations of nesting operations are especially instructive. *Do not disturb the parent birds.* It is excellent practice to keep brief records like the above, which can be easily tabulated for reference.—A. H. W.]

BIRDS

Birds are a help, especially to the farmers. They help by eating worms and insects. Then, too, everybody likes to hear their sweet songs. All birds are pretty, even the little English Sparrow which we hate so much.

The birds help us, why not let us help the birds? We can tie a bell around the cat's neck so that when it chases birds the bell will ring and give the

birds a warning. In the winter the birds have to have food as well as we, so let us throw out the crumbs when we brush the table-cloth. Another way to help birds is to put out horse-hairs, because they like them for their nests. There is another that boys do not very often pay any attention to, that is, not to rob their nests. You shouldn't do it, boys. Do not shoot or throw stones at birds. If you see anybody doing harm to birds, tell them that they ought to be like Mr. Audubon and love and care for them instead of harming them. If you see a bird with a broken wing or leg take it and care for it as though it had always lived with you.—DORCAS DAVIS, (age 10 years), Fourth Grade, *Delavan, Wis.*

[If we could only get the feeling that *birds have always lived with us* we should feel much more interest in them and we should certainly protect them with far greater care.—A. H. W.]

AN OPPORTUNITY FOR HELPFUL EXCHANGE CORRESPONDENCE

I am forwarding to you under separate cover three school papers, and the supplement of the official organ of the Education Department of South Australia. They may interest some of your members, in so far as they indicate the steps we are taking in our schools to educate the 'young idea' up to bird protection.

What are our American cousins doing in this direction? Could any of them send a written message of encouragement, to be printed in the Children's Hour in this state? I'm sure our boys and girls would be most appreciative. Yours sincerely.—ALFRED GEO. EDQUIST, Adelaide High School, Education Department, Adelaide, South Australia.

A STRAY VERSE

"Oh Goldfinch!
Oh, happy Robin!
Who taught you how to smooth your pretty feathers!
Who gave you hay to stuff your breast out with!
'Twas God! 'twas God!
He done it."

[Written by a little girl of eight, whose name was not sent. Without changing the grammar, let us all catch the spirit of these charming, naive lines.—A. H. W.]

LEAST TERN

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 97

One of the daintiest and most confiding of our sea-birds is the Least Tern. Except where they have been extensively shot or otherwise disturbed, they often exhibit a lack of fear that is astonishing.

On the North Carolina coast I have frequently seen them light on the beach within 15 or 20 feet of where I was standing in the open. Their aggression, when one approaches their nests, is equaled only by their near relative, the Arctic Tern.



LEAST TERN FEEDING ITS MATE ON THE NEST

Photographed by F. H. Fairbank on an island off the Massachusetts Coast

Forty years ago Least Terns were among the most numerous sea-birds inhabiting the North American continent. Their colonies, situated on islands or points of sandy peninsulas, could be found with great frequency as one traveled along our eastern coast from Maine to Texas. They were also found interiorly in some places, especially up the Mississippi River and, to a limited extent, its tributaries. Here the birds bred on small shoals in the rivers. In those days they ranged as far north as Nebraska, Missouri, and Iowa.

Their beauty of plumage, the ease with which they might be killed, and their vast numbers all contributed to their popularity with the feather-trade, and



LEAST TERN

Order—Laniiformes
Family—Sternidae

Family—Laniidae
Genus—Sterna

National Association of Audubon Societies

during the '80's, before the Audubon work became effective, their slaughter constituted one of the blotches on our American life.

It was the custom in those times for men to fit out vessels with provisions, ammunition, and collecting materials sufficient to last them for days, or even weeks. These piratical crews sailed the coast, killing and skinning the Least Terns and, incidentally, many other birds for the New York millinery houses.

This shooting was carried on almost entirely in spring and summer when the birds were gathered in colonies for the purpose of rearing their young. It was very easy to kill them in numbers, as they flew in screaming clouds low over their eggs and young that dotted the breeding territory. In fact, it was not always necessary to use a gun. So dense were the clouds of birds that the hunters frequently would hurl clubs or short poles among the flying hosts. From two to a half-dozen birds could easily be disabled at a stroke. A half-hour's work at clubbing and shooting by two or three men was often sufficient to secure several hundred birds—all that the crew could skin during the remainder of the day.

By this method the colonies on Long Island were exterminated in a short time. A big killing went on along the coast of Virginia. On Cobbs Island, 10,000 specimens were taken in a single season. A woman representing a New York millinery house directed this work. She took with her two or three skinners and employed the local gunners to kill the birds, paying them ten cents for each one brought in.

So rare had the Least Tern become on Cobbs Island in 1892 when the writer visited the place during the height of the breeding season that less than a half-dozen individuals were seen. The terror of man was so strong upon them that when they caught sight of two of us coming down the beach they flew with startled cries toward the open sea, and we did not see them again during our subsequent excursions along the beach the next three or four days.

Two inhabitants of Morehead City, N. C., Augustine Piner and Joseph Royal, were famous slaughterers of birds in those days, and the numbers of Terns and Egrets that these two men and their crews gathered for the leather business ran into the hundreds of thousands.

By both of these men I have been given intimate, detailed descriptions of their killing and skinning cruises. From them I learned that they frequently found the shooting of Terns profitable at other places than on the breeding-grounds. The Terns often gathered in numbers about inlets to the sea where the constant ebb and flow of the tide evidently furnished excellent opportunities for feeding.

As soon as one bird was shot down on the water, the others in the neighborhood would come flying about overhead, dipping down and shouting at the strange appearance of their helpless comrade. It was then easy to make a large bag of birds in a few minutes. If the flock was wild and difficulty was experienced in getting down the first bird, all they needed to do was to tie a

handkerchief to a stick and throw it in the air. This decoy, falling to the water, was sufficient to bring the nearest Terns quickly within range of the guns. Because of its small size, the entire skin of the Least Tern was usually worn for hat-decoration. In the case of the larger Terns it was often customary to use only the wings.

For many years the killing of these birds has now been illegal, and the wardens of the National Association of Audubon Societies and, in two cases, the wardens of state game commissions have been guarding the summer colonies



NEST AND EGGS OF LEAST TERN
Photographed by H. M. Kerth

of Terns along our coast. In some sections the Least Tern is recovering its numbers to a limited extent. For example, when the first Audubon warden began guarding the colonies on the North Carolina coast, which was in the year of 1903, so scarce had the Least Tern become that only fourteen eggs were laid that year.

By careful guarding, the birds increased until three years later, by fairly accurate count made by the warden in charge, 577 Least Terns are believed to have been raised. The numbers steadily increased another year or two, when heavy storm-tides, sweeping the low-lying islands, destroyed the eggs and young alike and for a time prevented further increase.

The Audubon Law in North Carolina put an end to this slaughter, but only when the Least Tern had decreased almost to the point of extermination and the other Terns of the region had become vastly reduced in numbers.

This killing also went on along the coast of South Carolina, Georgia, Florida, and Louisiana. In fact, wherever the Least Tern was found there came men with guns, ammunition, arsenic, and plaster of paris, ready to transform the living bird into a hat-decoration.

On the coast of Massachusetts, chiefly as a result of numerous cats brought by summer residents, the Least Tern appears to be passing away. According to E. H. Forbush, who in 1917 carefully examined the few remaining Massachusetts Tern islands, the principal colonies are now located at Cape Cod and on and in the neighborhood of Martha's Vineyard.

There is a small colony on the sandy point of Raccoon Island, S. C., and a

few are breeding at Dry Tortugas, Fla. In June, 1918, Carlos Earle reported that there were a number of Least Terns breeding on one or more islands near the mouth of Tampa Bay. On June 30, 1918, I found a group of perhaps fifty pairs feeding their young on a small sandy island in Caxambas Pass, Lee County, Fla. There are some colonies on the islands in Mississippi Sound, and, on June 16, 1918, while cruising with Stanley C. Arthur, I found about one hundred birds that had their nests on some small islands in Calcasieu Lake, Cameron County, La. A few still persist along the outer islands off the coast of Texas, especially in the neighborhood of San Antonio Bay. Some fairly healthy colonies exist on the coast of southern California. Outside of the United States the birds breed in limited numbers in the Bahama Islands, West Indies, British Honduras, and Venezuela.

The nest of the Least Tern, like that of many other sea-birds, is of a most primitive character. It consists chiefly of a slight hole in the sand, without any attempt at lining. Most authorities give the number of eggs deposited as three or four. Of the hundreds of nests that the writer has examined, more contained two than four. Occasionally single nests of drift-weed or grass are found.

When the Least Terns select as a breeding-place an island occupied by other Terns, their colony is always, as far as I have observed, situated in an area quite to itself. In other words, Least Terns seldom, if ever, lay their eggs in close proximity to nests of other birds. The eggs are about an inch and a quarter long and nine-tenths of an inch wide. In color they are brownish white, spotted and dotted with chocolate.

In common with the Black Tern, these exquisite little birds at times feed to some extent on insects, but their food in the main appears to consist of minnows and small shrimps. I have often watched them along our southern coast as, in little companies, they flit along over the creeks and wind for miles through the extensive salt-marshes. They wander into the southern bays and, at times, up the rivers, but along our Atlantic seaboard appear never to breed except on outer sandy islands and spits.

They begin their migration northward in April, and by the middle of May are usually well distributed throughout their summer home. June and July are the months when the duties of rearing young go forward. Apparently these birds do not rear two broods in a season, but if the eggs or young are destroyed by high tides, Fish Crows, crabs, or other causes, a second laying shortly takes place.

As the accompanying illustrations will show, the general appearance of the Least Tern suggests a white bird with a black cap. In reality the wings, back, and tail are of a pearlish gray and the underparts are pure white.

In length from bill-tip to tail-tip it is 9 inches, or an inch shorter than the average Robin. Its wing expanse, from tip to tip, is 20 inches, or 4 inches more than the expanse of the Robin's wings.

The Least Tern belongs to the order of *Longipennes*, the long-winged swimmers, and to the family *Laridae*.

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, 1924 Broadway, New York City

WILLIAM DUTCHER, *President*
FREDERICK A. LUDWIG, *Adj. President* T. GILBERT PEARSON, *Secretary*
THOMAS S. PALMER, *First Vice-President* JONATHAN DWIGHT, JR., *Treasurer*
SAMUEL T. CARTER, JR., *Attorney*

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:

\$4 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 RECEIPT.—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,

ANNUAL MEETING

Notice is here given of the fourteenth annual meeting of the National Association of Audubon Societies which will be held in the American Museum of Natural History, New York City, on October 29, 1918.

The business session will open at 10 o'clock A.M. After luncheon the Educational Conference will convene at 2 P.M.

It is planned to hold a public meeting

in the main lecture hall of the Museum the evening before, viz., October 28, beginning at 8 P.M. At this gathering no business will be discussed. The program will be of an entertaining character.

All members and friends of the Association who can find it convenient to attend any or all of these sessions are urged to be present.

A REDDISH EGRET COLONY IN TEXAS

The Reddish Egret is today undoubtedly one of the rarest Herons in the United States. Occasionally a few are seen in Florida and Louisiana, but these reports are rare. No breeding colony of the birds has, to my knowledge, been discovered of recent years. It was, therefore, a source of much satisfaction to find a large colony of them the past summer.

On June 20, 1918, I visited the "Chain-of-Islands" lying between Mesquite Bay and San Antonio Bay, Tex. This is 20 miles north and east of Rockford. Twelve islands constitute the group, ranging in size from 1 to 2 acres. They are composed of mud and oyster shells. The most notice-

able vegetation is stunted mesquite, prickly pear cactus, and Spanish bayonet (yucca). Water-birds were nesting on nine of these islands. Egret and Herons' nests were everywhere in the cactus or mesquite, at heights varying from 8 inches to 7 feet from the ground. I estimated the following numbers of birds breeding on these islands: Louisiana Herons, 3,000 pairs, Reddish Egrets, 1,250 pairs, Black-crowned Night Herons, 600 pairs, Ward's Herons, 200 pairs, and American Egrets, 3 pairs. Probably 100 pairs of Great-tailed Grackles were also breeding there. On a small strip of beach I counted 85 nests of the Black Skimmer containing eggs.

Other birds noted were: 3 Texas Nighthawks, 6 Royal Terns, 1 Forster's Tern, 10 Black Vultures, and 1 Scissor-tailed Flycatcher. This appeared to be at the height of the breeding season, as many young of

all the Herons were found, and numerous nests containing eggs were examined.

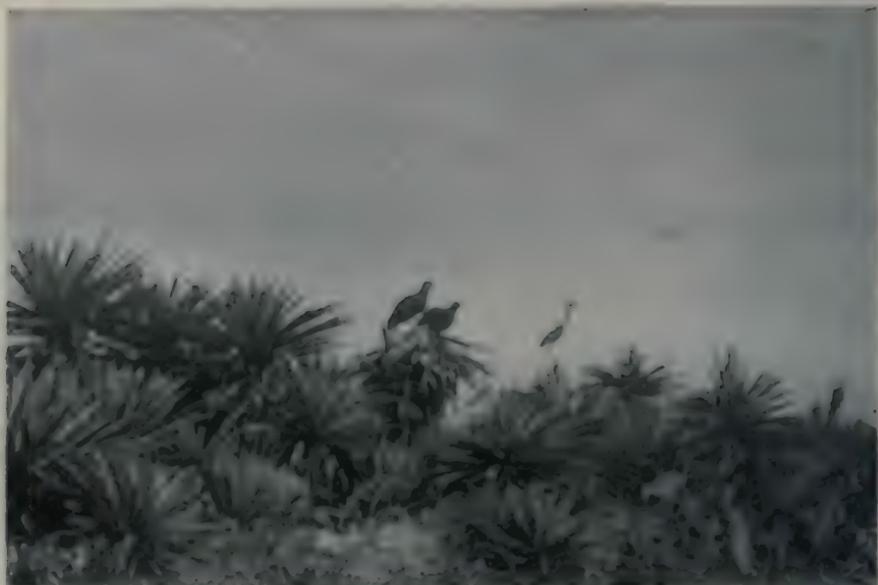
The characteristic note of the Reddish Egret is of a melodious, trumpet-like character.



NEST AND EGGS OF REDDISH EGRET EIGHT INCHES FROM THE GROUND IN A CLUSTER OF PRICKLY PEAR CACTUS, CHAIN-OF-ISLANDS, TEXAS
 Photographed by T. Gilbert Pearson



REDDISH EGRET NEAR CENTER OF PICTURE, LOUISIANA HERONS IN BACKGROUND, CHAIN-OF-ISLANDS, TEXAS
 Photographed by T. Gilbert Pearson



BLACK VULTURES AND REDDISH EGRET, CHAIN-OF-ISLANDS, TEXAS
Photographed by T. Gilbert Pearson



NEST OF GREAT TAILED GRACKLE AT THE LEFT. NEST OF WARD'S HERON TO THE
RIGHT. CHAIN-OF-ISLANDS, TEXAS
Photographed by T. Gilbert Pearson

MIGRATORY BIRD TREATY ACT

[Approved July 3, 1918. Public. No. 186, 65th Congress—2, 1553]

AN ACT To give effect to the convention between the United States and Great Britain for the protection of migratory birds concluded at Washington, August sixteenth, nineteen hundred and sixteen, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act shall be known by the short title of the "Migratory Bird Treaty Act."

SEC. 2. That unless and except as permitted by regulations made as hereinafter provided, it shall be unlawful to hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time or in any manner, any migratory bird, included in the terms of the convention between the United States and Great Britain for the protection of migratory birds concluded August sixteenth, nineteen hundred and sixteen, or any part, nest, or egg of any such birds.

SEC. 3. That subject to the provisions and in order to carry out the purposes of the convention, the Secretary of Agriculture is authorized and directed, from time to time, having due regard to the zones of temperature and to the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of such birds, to determine when, to what extent, if at all, and by what means it is compatible with the terms of the convention to allow hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any such bird, or any part, nest or egg thereof, and to adopt suitable regulations permitting and governing the same, in accordance with such determinations, which regulations shall become effective when approved by the President.

SEC. 4. That it shall be unlawful to ship, transport, or carry, by any means whatever, from one State, Territory, or District to or through another State, Territory, or District, or to or through a foreign country, any bird, or any part, nest, or egg thereof, captured, killed, taken, shipped, transported, or carried at any time contrary to the laws of the State, Territory, or District in which it was

captured, killed, or taken, or from which it was shipped, transported, or carried. It shall be unlawful to import any bird, or any part, nest, or egg thereof, captured, killed, taken, shipped, transported, or carried contrary to the laws of any Province of the Dominion of Canada in which the same was captured, killed, or taken, or from which it was shipped, transported, or carried.

SEC. 5. That any employee of the Department of Agriculture authorized by the Secretary of Agriculture to enforce the provisions of this Act shall have power, without warrant, to arrest any person committing a violation of this Act in his presence or view and to take such person immediately for examination or trial before an officer or court of competent jurisdiction; shall have power to execute any warrant or other process issued by an officer or court of competent jurisdiction for the enforcement of the provisions of this Act; and shall have authority, with a search warrant, to search any place. The several judges of the courts established under the laws of the United States, and United States commissioners may, within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue warrants in all such cases. All birds, or parts, nests, or eggs thereof, captured, killed, taken, shipped, transported, carried, or possessed contrary to the provisions of this Act or of any regulations made pursuant thereto shall, when found, be seized by any such employee, or by any marshal or deputy marshal, and upon conviction of the offender or upon judgment of a court of the United States that the same were captured, killed, taken, shipped, transported, carried, or possessed contrary to the provisions of this Act or of any regulation made pursuant thereto, shall be forfeited to the United States and disposed of as directed by the court having jurisdiction.

SEC. 6. That any person, association, partnership, or corporation who shall violate any of the provisions of said convention or of this Act, or who shall violate or fail to comply with any regulation made pursuant to this Act, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not more than \$500 or be imprisoned not more than six months, or both.

SEC. 7. That nothing in this Act shall be construed to prevent the several States and Territories from making or enforcing

laws or regulations not inconsistent with the provisions of said convention or of this Act, or from making or enforcing laws or regulations which shall give further protection to migratory birds, their nests, and eggs, if such laws or regulations do not extend the open season for such birds beyond the dates approved by the President in accordance with section three of this Act.

SEC. 8. That until the adoption and approval, pursuant to section three of this Act, of regulations dealing with migratory birds and their nests and eggs, such migratory birds and their nests and eggs as are intended and used exclusively for scientific or propagating purposes may be taken, captured, killed, possessed, sold, purchased, shipped, and transported for such scientific or propagating purposes if and to the extent not in conflict with the laws of the State, Territory, or District in which they are taken, captured, killed, possessed, sold, or purchased, or in or from which they are shipped or transported if the packages containing the dead bodies or the nests or eggs of such birds when shipped and transported shall be marked on the outside thereof so as accurately and clearly to show the name and address of the shipper and the contents of the package.

SEC. 9. That the unexpended balances of any sums appropriated by the agricultural appropriation Acts for the fiscal years nineteen hundred and seventeen and nineteen hundred and eighteen, for enforcing the provisions of the Act approved March fourth, nineteen hundred and thirteen, relating to the protection

of migratory game and insectivorous birds, are hereby reappropriated and made available until expended for the expenses of carrying into effect the provisions of this Act and regulations made pursuant thereto, including the payment of such rent, and the employment of such persons and means, as the Secretary of Agriculture may deem necessary, in the District of Columbia and elsewhere, cooperation with local authorities in the protection of migratory birds, and necessary investigations connected therewith. *Provided*, That no person who is subject to the draft for service in the Army or Navy shall be exempted or excused from such service by reason of his employment under this Act.

SEC. 10. That if any clause, sentence, paragraph, or part of this Act shall, for any reason, be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, or part thereof directly involved in the controversy in which such judgment shall have been rendered.

SEC. 11. That all Acts or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

SEC. 12. Nothing in this Act shall be construed to prevent the breeding of migratory game birds on farms and preserves and the sale of birds so bred under proper regulation for the purpose of increasing the food supply.

SEC. 13. That this Act shall become effective immediately upon its passage and approval.

MIGRATORY BIRD TREATY ACT REGULATIONS

(Effective July 21, 1918)

BY THE PRESIDENT OF
THE UNITED STATES OF AMERICA

A PROCLAMATION

WHEREAS, section three of the Act of Congress approved July third, nineteen hundred and eighteen, entitled "An Act To give effect to the convention between the United States and Great Britain for the protection of migratory birds concluded at Washington, August sixteenth, nineteen hundred and sixteen, and for other purposes" (Public, No. 186, 65th Congress), provides as follows:

That subject to the provisions and in order to carry out the purposes of the

convention, the Secretary of Agriculture is authorized and directed, from time to time, having due regard to the zones of temperature and to the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of such birds, to determine when, to what extent, if at all, and by what means, it is compatible with the terms of the convention to allow hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any such bird, or any part, nest, or egg thereof, and to adopt suitable regulations permitting and governing the same, in accordance with such determinations, which regulations shall become effective when approved by the President.

AND, WHEREAS, The Secretary of Agriculture, pursuant to said section and having due regard to the zones of temperature and to the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of migratory birds included in the terms of the convention between the United States and Great Britain for the protection of migratory birds concluded August sixteenth, nineteen hundred and sixteen, has determined when, to what extent, and by what means it is compatible with the terms of said convention to allow hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, and export of such birds and parts thereof and their nests and eggs, and in accordance with such determinations has adopted and submitted to me for approval regulations, which the Secretary of Agriculture has determined to be suitable regulations, permitting and governing hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, and export of said birds and parts thereof and their nests and eggs, which said regulations are as follows:

REGULATIONS, MIGRATORY BIRD TREATY ACT

Regulation 1.—Definitions of Migratory Birds

Migratory birds, included in the terms of the convention between the United States and Great Britain for the protection of migratory birds, concluded August 16, 1916, are as follows:

1. *Migratory game birds:*

(a) Anatidae, or waterfowl, including brant, wild ducks, geese, and swans.

(b) *Graculæ*, or cranes, including little brown, sandhill, and whooping cranes.

(c) *Rallidae*, or rails, including coots, gallinules, and snipe and other rails.

(d) *Limicolæ*, or shorebirds, including plovers, curlews, dowitchers, godwits, snipe, oyster catchers, phalaropes, plovers, sandpipers, snipe, stilts, earl birds, turnstones, willet, woodcock, and yellowlegs.

(e) *Columbidae*, or pigeons, including doves and wild pigeons.

2. *Migratory nongame birds:*

Bobolinks, catbirds, chickadees, cuckoos, flickers, flycatchers, grosbeaks, humming birds, kinglets, martins, meadowlarks,

nighthawks or bull-bats, nuthatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes, vireos, warblers, waxwings, whip-poor-wills, woodpeckers, and wrens, and all other perching birds which feed entirely or chiefly on insects.

3. *Other migratory nongame birds:* Auks, auklets, bitterns, fulmars, gannets, grebes, guillemots, gulls, herons, jaegers, loons, marres, petrels, puffins, shearwaters, and terns.

Regulation 2.—Definitions of Terms

For the purposes of these regulations the following terms shall be construed respectively, to mean—

Secretary.—The Secretary of Agriculture of the United States.

Person.—The plural or the singular, as the case demands, including individuals, associations, partnerships, and corporations, unless the context otherwise requires.

Take.—The pursuit, hunting, capture, or killing of migratory birds in the manner and by the means specifically permitted.

Open season.—The time during which migratory birds may be taken.

Transport.—Shipping, transporting, carrying, exporting, receiving or delivering for shipment, transportation, carriage, or export.

Regulation 3.—Means by which Migratory Game Birds May be Taken

The migratory game birds specified in Regulation 4 hereof may be taken during the open season with a gun only not larger than number 10 gauge, fired from the shoulder, except as specifically permitted by Regulations 7, 8, 9, and 10 hereof, they may be taken during the open season from the land and water, from a blind or floating device (other than an airplane, powerboat, sailboat, or any boat under sail), with the aid of a dog, and the use of decoys.

Regulation 4.—Open Seasons on and Possession of Certain Migratory Game Birds.

For the purpose of this regulation, each period of time herein prescribed as an open season shall be construed to include the first and last days thereof.

Waterfowl (except wood duck, elder ducks, and swans), rails, coot, gallinules, black-bellied and golden plovers, greens and lesser yellowlegs, woodcock, Wilson snipe or jacksnipe, and mourning and white-winged doves may be taken each day from half an hour before sunrise to

sunset during the open seasons prescribed therefor in this regulation, by the means and in the numbers permitted by Regulations 3 and 5 hereof, respectively, and when so taken, such species may be possessed any day during the respective open seasons herein prescribed therefor and for an additional period of 10 days next succeeding said open season.

Waterfowl (except wood duck, eider ducks, and swans), coot, gallinules, and Wilson snipe or jacksnipe.—The open seasons for waterfowl (except wood duck, eider ducks, and swans), coot, gallinules, and Wilson snipe or jacksnipe shall be as follows:

In Maine, New Hampshire, Vermont, Massachusetts, New York (except Long Island), Pennsylvania, Ohio, West Virginia, Kentucky, Indiana, Michigan, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Colorado, Wyoming, Montana, Idaho, Nevada, and that portion of Oregon and Washington lying east of the summit of the Cascade Mountains the open season shall be from September 16 to December 31;

In Rhode Island, Connecticut, Utah, and that portion of Oregon and Washington lying west of the summit of the Cascade Mountains the open season shall be from October 1 to January 15;

In that portion of New York known as Long Island, and in New Jersey, Delaware, Oklahoma, Texas, New Mexico, Arizona, and California the open season shall be from October 16 to January 31;

In Maryland, the District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, and Louisiana the open season shall be from November 1 to January 31; and

In Alaska the open season shall be from September 1 to December 15.

Rails (except coot and gallinules).—The open season for sora and other rails (except coot and gallinules) shall be from September 1 to November 30, except as follows:

In Louisiana the open season shall be from November 1 to January 31.

Black-bellied and golden plovers and greater and lesser yellowlegs.—The open seasons for black-bellied and golden plovers and greater and lesser yellowlegs shall be as follows:

In Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, and Virginia the open season shall be from August 16 to November 30;

In the District of Columbia, North Carolina, South Carolina, Tennessee, Ar-

kansas, Oklahoma, New Mexico, Arizona, California, and Alaska the open season shall be from September 1 to December 15;

In Vermont, Pennsylvania, Ohio, West Virginia, Kentucky, Indiana, Michigan, Wisconsin, Illinois, Missouri, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Colorado, Wyoming, Montana, Idaho, Nevada, and that portion of Oregon and Washington lying east of the summit of the Cascade Mountains the open season shall be from September 16 to December 31.

In Utah and in that portion of Oregon and Washington lying west of the summit of the Cascade Mountains the open season shall be from October 1 to January 15; and

In Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas the open season shall be from November 1 to January 31.

Woodcock.—The open seasons for woodcock shall be as follows:

In Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Ohio, West Virginia, Kentucky, Indiana, Michigan, Wisconsin, Illinois, Missouri, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, and Kansas, the open season shall be from October 1 to November 30, and

In Delaware, Maryland, the District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, and Oklahoma the open season shall be from November 1 to December 31.

Doves.—The open seasons for mourning and white-winged doves shall be as follows:

In Delaware, Maryland, Virginia, Tennessee, Kentucky, Illinois, Missouri, Oklahoma, Texas, New Mexico, Colorado, Arizona, California, Nevada, Idaho, and Oregon the open season shall be from September 1 to December 15; and

In North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana the open season shall be from September 16 to December 31.

Regulation 5.—Bag Limits on Certain Migratory Game Birds

A person may take in any one day during the open seasons prescribed therefor in Regulation 4 not to exceed the following numbers of migratory game birds:

Ducks (except wood duck and eider ducks).—Twenty-five in the aggregate of all kinds.

Geese.—Eight in the aggregate of all kinds.

Brent.—Eight.

Rain, sand, and gallinules.—Twenty-five in the aggregate of all kinds.

Black-bellied and golden plovers and greater and lesser yellowlegs.—Fifteen in the aggregate of all kinds.

Wilson snipe, or jacksnipe.—Twenty-five.

Woodcock.—Six.

Doves (mourning and white-winged).—Twenty-five in the aggregate of both kinds.

Regulation 6.—Shipment and Transportation of Certain Migratory Game Birds.

Waterfowl (except wood duck, eider ducks and swans), rails, coot, gallinules, black-bellied and golden plovers, greater and lesser yellowlegs, woodcock, Wilson snipe or jacksnipe, and mourning and white-winged doves and parts thereof lawfully taken may be transported in or out of the State where taken during the respective open seasons in that State, and may be imported from Canada during the open season in the Province where taken, in any manner, but not more by one person in one calendar week than the number that may be taken under these regulations in two days by one person; any such migratory game birds or parts thereof in transit during the open season may continue in transit such additional time immediately succeeding such open season, not to exceed five days, necessary to deliver the same to their destination; and any package in which migratory game birds or parts thereof are transported shall have the name and address of the shipper and of the consignee and an accurate statement of the numbers and kinds of birds contained therein clearly and conspicuously marked on the outside thereof, but no such birds shall be transported from any State, Territory or District to or through another State, Territory, or District, or to or through a Province of the Dominion of Canada contrary to the laws of the State, Territory, or District, or Province of the Dominion of Canada in which they were taken or from which they are transported, nor shall any such birds be transported into any State, Territory, or District from another State, Territory, or District, or from any State, Territory or District into any Province of the Dominion of Canada at a time when such State, Territory, or District or Province of the Dominion of Canada prohibits the possession or transportation thereof.

Regulation 7.—Taking of Certain Migratory Nongame Birds by Eskimos and Indians in Alaska.

In Alaska, Eskimos and Indians may take for the use of themselves and their immediate families, in any manner and at any time, and possess and transport auks, auklets, gulliemots, murres, and puffins and their eggs for food, and their skins for clothing.

Regulation 8.—Permits to Propagate and Sell Migratory Waterfowl

1. A person may take in any manner and at any time migratory waterfowl and their eggs for propagating purposes when authorized by a permit issued by the Secretary. Waterfowl and their eggs so taken may be possessed by the permittee and may be sold and transported by him for propagating purposes to any person holding a permit issued by the Secretary in accordance with the provisions of this regulation.

2. A person authorized by a permit issued by the Secretary may possess, buy, sell, and transport migratory waterfowl and their increase and eggs in any manner and at any time for propagating purposes; and migratory waterfowl, except the birds taken under paragraph 1 of this regulation, so possessed may be killed by him in any manner except by shooting, and the unplucked carcasses and the plucked carcasses with heads attached thereto of the birds so killed may be sold and transported by him in any manner and at any time to any person for actual consumption, or to the keeper of a hotel, restaurant, or boarding house, retail dealer in meat or game, or a club, for sale or service to their patrons, who may possess such carcasses for actual consumption without a permit.

3. Any package in which such waterfowl or parts thereof or their eggs are transported shall have plainly and conspicuously marked on the outside thereof the name and address of the permittee, the number of his permit, the name and address of the consignee, and an accurate statement of the number and kinds of birds or eggs contained therein.

4. Applications for permits must be addressed to the Secretary of Agriculture, Washington, D. C., and must contain the following information: Name and address of applicant; place where the business is to be carried on; number of acres of land used in the business and whether owned or leased by the applicant; number of each species of waterfowl in possession of applicant, names of species and number of birds or eggs of each species if permission

is asked to take waterfowl or their eggs, and the particular locality where it is desired to take such waterfowl or eggs.

5. A person granted a permit under this regulation shall keep books and records which shall correctly set forth the total number of each species of waterfowl and their eggs possessed on the date of application for the permit and on the first day of January next following, also for the calendar year for which permit was issued the total number of each species treated and listed, number of each species and their eggs sold and transported, manner in which such waterfowl and eggs were transported, name and address of each person from or to whom waterfowl and eggs were purchased or sold, together with number and species and whether sold alive or dead, and the date of each transaction. A written report correctly setting forth this information shall be furnished the Secretary during the month of January next following the issuance of the permit.

6. A permittee shall at all reasonable hours allow any authorized employee of the United States Department of Agriculture to enter and inspect the premises where operations are being carried on under this regulation and to inspect the books and records of such permittee relating thereto.

7. Permits issued under this regulation shall be valid only during the calendar year of issue, shall not be transferable, and may be revoked by the Secretary, if the permittee violates any of the provisions of the Migratory Bird Treaty Act or of the regulations thereunder.

8. A person engaged in the propagation of migratory waterfowl on the date on which these regulations become effective will be allowed until September 30, 1918, to apply for the permit required by this regulation, but he shall not take any migratory waterfowl without a permit.

Regulation 9.—Permits to Collect Migratory Birds for Scientific Purposes

A person may take in any manner and at any time migratory birds and their nests and eggs for scientific purposes when authorized by a permit issued by the Secretary, which permit shall be carried on his person when he is collecting specimens thereunder and shall be exhibited to any person requesting to see the same.

Application for a permit must be addressed to the Secretary of Agriculture, Washington, D. C., and must contain the following information: Name and address of applicant and name of State, Territory, or District in which specimens are pro-

posed to be taken and the purpose for which they are intended. Each application shall be accompanied by certificates from two well-known ornithologists that the applicant is a fit person to be entrusted with a permit.

The permit will authorize the holder thereof to possess, buy, sell, and transport in any manner and at any time migratory birds, parts thereof, and their nests and eggs for scientific purposes. Public museums, zoological parks and societies, and public scientific and educational institutions may possess, buy, sell, and transport in any manner and at any time migratory birds and parts thereof, and their nests and eggs for scientific purposes without a permit, but no specimens shall be taken without a permit.

Permits shall be valid only during the calendar year of issue, shall not be transferable, and shall be revocable in the discretion of the Secretary. A person holding a permit shall report to the Secretary on or before January 1st following its expiration the number of skins, nests, or eggs of each species collected, bought, sold, or transported.

Every package in which migratory birds or their nests or eggs are transported shall have clearly and conspicuously marked on the outside thereof the name and address of the sender, the number of the permit in every case when a permit is required, the name and address of the consignee, a statement that it contains specimens of birds, their nests, or eggs for scientific purposes, and, whenever such a package is transported or offered for transportation from the Dominion of Canada into the United States or from the United States into the Dominion of Canada, an accurate statement of the contents.

Regulation 10.—Permits to Kill Migratory Birds Injurious to Property

When information is furnished the Secretary that any species of migratory bird has become, under extraordinary conditions, seriously injurious to agriculture or other interests in any particular community, an investigation will be made to determine the nature and extent of the injury, whether the birds alleged to be doing the damage should be killed, and, if so, during what times and by what means. Upon his determination an appropriate order will be made.

NOW, THEREFORE, I, WOODROW WILSON, PRESIDENT OF THE UNITED STATES OF AMERICA, DO HEREBY APPROVE AND PROCLAIM the foregoing regulations.



Quil. Agassiz Charles.

1 and 2. MAGPIE

3. YELLOW-BILLED MAGPIE

(*Cyanoprocne bicolor*, etc.)

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XX

NOVEMBER—DECEMBER, 1918

No. 6

Notes from a Traveler in the Tropics

By FRANK M. CHAPMAN

I. DOWN THE COASTLINE TO CUBA*

IN these days of submarines, the coastline route to Cuba, by way of Key West, has certain obvious advantages over the voyage by sea. The necessity of stopping at the Marines' Training Camp, on Paris Island, off Beaufort, S. C., however, left me no choice in the matter, though I am free to confess that a strong desire to avoid meeting a submarine, added to a keen wish to see the southern states in October,—even if only from a car-window,—would have prompted me to make the journey by land. To paraphrase Dr. Van Dyke's remark to the effect that he did not care to climb a mountain unless there was something very pleasant at the top and something very disagreeable at the bottom, a sea-voyage offered only objectionable possibilities, while the trip by rail promised to be exceptionally interesting and attractive. Most of my many journeys to and from Florida have been made in the winter or early spring, when some of the most characteristic trees are leafless and the crops of the country have been gathered; in short, when the region through which one passes is at its worst. It was a surprise to me, for example, to see sugar-cane and well-developed banana plants near Beaufort—though I assume that the latter do not bear fruit—while the cotton-fields, with their green leaves, popcorn-like cotton-bolls and occasional corn-colored blossoms, possessed small resemblance to the dreary rows of brown stalks, with an occasional wisp of cotton which the winter traveler sees.

Fallow fields and waysides were yellow with goldenrod, wild sunflowers, and numerous flowering plants new to me; there was an abundance of green grass instead of brown sedge, and this general air of greenness was the dominant note which everywhere impressed me. Cypress, china-berries, and scuppernong grape-vines, all of which are leafless in winter, were fully foliaged, and the turkey oaks, which flutter their dead leaves depressingly in the winter, were clad in rich yellow-green.

*The first of a proposed series of letters by the Editor of Bird-Lore, written while on a mission to South America for the American Red Cross.

There is no reason to be surprised at all this; it is simply the difference between winter and late summer, but many persons who go south in the winter express disappointment in the vegetation. Florida, for instance, as a "Land of Flowers," is expected to be in a perpetual state of inflorescence, but even in the tropics vegetation must have its periods of rest. A tree cannot bear blossoms and fruit continually, any more than a bird can nest throughout the year.

The bird population of the southern states is probably smaller in early October than in any other part of the year. The migration is nearly over, the summer residents have gone, and, like the tourists who later will flock south, the winter residents have not come.

Mourning Doves, which are doubtless more often seen from car-windows than any other North American bird, flew, usually in pairs, as though they were hurrying to keep an appointment somewhere. Sparrow Hawks and Loggerhead Shrikes, both of which hunt in the open, were not uncommon, and there were occasional Turkey Buzzards. A scattered company of about twenty White Herons animated the marsh near Beaufort; doubtless they were immature Little Blues. About a charming old hotel in this quaint city of the real south, Mockingbirds were singing delightfully—not the passionate outburst of nesting-time, but a subdued melody as though, so to speak, the birds were 'running over the keys' reminiscently. Here, too, were Boat-tailed Grackles, feeding on the berries of a tree which grew in the hotel yard. From the wide second story, with its broad outlook over the bay to the sea islands, one could almost touch them.

The journey down the east coast of Florida was made at night, and when I awoke at sunrise we were already in the Keys. The floral change is striking. We had gone from the Subtemperate to the Subtropical. If the earth here were as favorable to plant-growth as is the air, what superb forests we might have! As it is, the growth is dense and luxuriant, if low, but when it is cleared only limestone is revealed, and one marvels that the trees can find either foothold or food.

Under the best conditions for exploration I have never found birds abundant in Florida Keys, and it is therefore not to be expected that many species would be seen from a train. Ospreys and Herons were the characteristic birds. Of the latter I saw Little Green, Louisiana, and Yellow-crowned Night Herons, Ward's and the Great White Heron, while one individual, quite near the train, had the white head which marks the puzzling intermediate between these two, so-called, 'Wuerdemann's Heron.'

There was but a single Brown Pelican, one Duck Hawk, numerous Sparrow Hawks and Florida Red-shoulders, a few Gulls (evidently Laughing), and, on the upright boards driven to the water's edge, which retain the grading on this remarkable railroad, were occasionally perched rows of Snipe. I identified, with reasonable certainty, Dowitcher, Turnstone, and Black-bellied Plover,

but the birds were so near—not more than 20 feet from the train—that we passed them too quickly to permit a satisfactory view.

The beauty of the morning hour, the lure of an unnamed bird darting from one thicket to another, made me long to be afoot, but the sight of two negroes standing near a smudge and making violent, and significant, gestures about their heads, indicated that life on the Keys is probably not as rosy as it looks from a car-window.

As we neared Key West, a flying form of wide wing-spread, swept overhead, and soon I counted five hydroplanes, adjuncts of the military Aviation School at which man is learning to master the air.



FRIGATE OR MANGROVE WAR BIRDS ROOSTING ON THE MANGROVES.
THOSE WITH WHITE HEADS ARE YOUNG

When I was last in Key West, twenty-six years ago, I doubt if the most enthusiastic prophet of the city's future would have ventured to predict that my next visit would be by rail, or that on arriving I should find men soaring over the town like Frigate Birds!

The voyage from Key West to Havana was made at night. Early morning revealed no birds off the coast or in Havana harbor. The Prado, parks, and playas of Havana contain, apparently, only House Sparrows, introduced at an early period in this bird's American history, I believe, from Spain. The surroundings of the city are almost equally unattractive for the bird student.

Fortunately, my mission called me to the Isle of Pines, 60 miles off the southern coast of Cuba, opposite Havana. A motor-ride of 38 miles across the island to the Port of Batabano, over a road continuously lined with arching

trees, in the hills winds through forests of royal palms with some undergrowth, and although the early tropical morning had passed, enough birds were heard and seen to indicate a place of promise.

In view of the character of the coast, with its shallows and mud-flats and abundance of fish-life, there were surprisingly few birds off the coast at Batabaño, and fewer still near the Isle of Pines. Indeed, the lack of water-birds everywhere suggested some seasonal reason for their absence. Three Brown Pelicans, three Man-o'-War Birds, about fifteen Laughing Gulls, and half a dozen Cormorants constituted the entire list.



THE ANL. ONE OF THE COMMONEST CUBAN BIRDS. THEIR LONG-DRAWN, WHINING WHISTLE WAS ONE OF THE MOST CONSPICUOUS BIRD-NOTES.

Motors and excellent roads permitted me to see a large part of the northern half of the Isle of Pines, but nowhere did I observe an apparently more favorable place for birds than the immediate surroundings of the home of William L. Pack, at La Ceiba, near Santa Fé, where it was my good fortune to spend three days. In the prevalence of birds and the general flatness of the land, the Isle of Pines suggests parts of Florida. There are, however, small hills which, singly or in short ranges, arise abruptly to a height of several hundred feet, giving, in some cases, a suggestion of mountainous horizons. The exceptional charm of Mr. Pack's home is due to the hilly surroundings and the richer, more tropical growth, with numerous royal palms which flourish along the streams of the narrow bottomlands.

The house itself is set in a grove of grapefruit and orange trees, frequented by numerous Prairie Warblers, with occasional Yellow-throated Warblers

(whether *dominica* or *albilora* I could not distinguish), while in the high grass between the trees were Grassquits (*Tiaris*) and a few Maryland Yellowthroats. Large 'Red-bellied' Woodpeckers (*Centurus*) hopped around among the bunches of fruit which they are said to puncture, though I did not catch them in the act. Pitirris (*Pitangus*) took the place of Kingfishers, and Bobitos (*Blacicus*) equally suggested Wood Pewees.

A large mango overhanging the house made a one-night dormitory for a flock of about fifteen Anis. I found them there early one morning, roosting so closely together that a peck-measure would have covered them all. Their daily range was evidently limited, and their long-drawn, whining whistle was one of the most conspicuous bird-notes. It is to me one of the few thoroughly unpleasant, disagreeable birds' voices, wholly in keeping with the appearance of the bird, and without one redeeming feature.

The beautiful blue Thrush (*Mimocichla*) was tame and common, and cheerfully uttered a series of squawking calls exactly resembling the distress notes of a captive young Robin struggling to regain its freedom. In the Bahamas I have heard a closely allied species sing delightfully; but October is apparently no more the song-season in Cuba than it is in the United States, and the early morning hours were comparatively quiet. Ground, Zenaida, and Mourning Doves cooed softly; the Cuban Meadowlark sang its brief *wee-chur-chee-chuggle-chee*, far less musical, but suggesting in tone and form the song of our Eastern Meadowlark rather than that of the Western species (*neglecta*); the Great Cuban Cuckoo (*Saurothera*), like a Yellow-billed, but half again as long and four times the bulk, sprang his weird rattle, while, at intervals, there was a sudden and surprising outburst of screams and calls from a flock of rose-breasted Parrots, White-crowned, climbing about in the pine trees—pines and Parrots are not commonly associated. The first is here at the southern limit of its sea-level range; the second goes but little farther north, but, from force of circumstances, the birds frequent this tree of boreal origin more often than any other.

Seeing a little flock fly from a pine into a small tree, thinly branched, but with rather dense foliage at the ends of the limbs, we decided to inspect the birds at close range. At a distance of 30 yards, close examination, with and without a glass, revealed only five birds, but as we clapped our hands seventeen birds flew from the tree!

I should like to return to the Isle of Pines in April, when the Thrushes are doubtless singing and possibly thousands of north-bound migrants make it their resting-place.

HAVANA, October 17, 1918



CHIPPING SPARROW IN WINTER PLUMAGE

Photographed by Elton Perry, Austin, Texas

When the North Wind Blows

By A. A. ALLEN, Ph D., Assistant Professor of Ornithology, Cornell University

With photographs by the Author

THERE is something incongruous about birds and snow that appeals to one. The association of birds with flowers and green trees is so much a part of man that when a flock of Larks whisks by in a snowstorm, or when a tiny Chickadee perches on an icicle near his window, it gives him a thrill quite out of keeping with the weather. So strong is the association of ideas in the human race that it is difficult to convince some persons that there are birds that really thrive in cold weather and that prefer braving a northern winter to migrating to the sunny South. Some even think that the birds found in winter are the poor weaklings that have been left behind, which must therefore be cared for until spring.

If most of us were asked the best time to study birds, we would answer, with one accord, May, the month of migration, when the woods and fields are teeming with birds and the air resounds with their songs. Perhaps it is, at least for those who need the inspiration of balmy air and music and abundance of life. Certainly none of us can escape the charm of bird-migration. But the student of the home-life of birds can hardly wait for the migration to cease and for the birds to begin nesting. And when the nesting-season is about over, in August and September, and song-birds become uninteresting to most people during their molting, there are the mud-flats, the marshes, and the shores that attract the water-birds. What joy it is to lie in wait for the returning Sandpipers and Plover and to stalk the Herons and the Rails! Then comes the fall migration, often with many surprises, and, following it, the winter, the time to get out the camera and the time for the beginner to practise to his heart's content. For the winter birds and the feeding-stations offer numberless opportunities, and there is no chance for the catastrophes to young birds that sometimes result when inexperienced persons try to learn bird-photography in the summer. Each winter brings something new, and the sport never becomes monotonous. What if one has photographed a Chickadee fifty times before? Each winter it behaves differently, and one can always improve on the pictures he already has. One year there is an invasion of Evening Grosbeaks, another year it is Lapland Longspurs, last winter it was Northern Shrikes. It is never twice the same, and the problem of getting the different birds to pose for their pictures will occupy more than the leisure of even the most resourceful, winter after winter.

There are two general methods of procedure in winter photography: The one, baiting the birds up to you at permanent feeding-stations, and the other, going after particular birds and baiting them on their own ground at temporary feeding-stations. In the first method we usually establish a number of feeding-stations early in the season in promising places and keep the food replenished. The regular winter birds soon find these, and if any unusual ones

pass in the vicinity, they are apt to follow the other birds and remain with them. If the feeding-stations are properly scattered about the country, nearly every bird can be secured in this way. On the tip end of one log in a city yard, where we kept food for two years, we secured photographs of seventeen different kinds of birds, and a few others, that we did not succeed in photographing, visited the log.

The other method is to wait until one discovers where the desired birds are feeding and then replenish their supply with as nearly the same kind of food as convenient. Usually they will keep returning to the same spot until the food is exhausted, and will even come back to it from time to time if one forgets to



"THERE IS SOMETHING INCONGRUOUS ABOUT BIRDS AND SNOW THAT APPEALS TO ONE." A WINTER CHICKADEE

replenish the supply. For example, a small flock of Prairie Horned Larks, containing a single Lapland Longspur, was discovered feeding in a patch of weeds. The weed seed would soon have become exhausted and the birds have gone elsewhere before becoming accustomed to a camera had we not tramped down the snow in the vicinity and sprinkled chick-feed. This supply was maintained from day to day, and the birds soon formed the habit of coming there to feed. Others followed them until there was a flock of over a hundred Larks, five Lapland Longspurs, and a few Snow Buntings. Had we at this time put up a camera focused on the grain, in an attempt to photograph them, we would probably have frightened them all away. Instead, a box was placed in the snow when the feed was first put out, and the birds were accustomed to it from the beginning. Another box, with a hole in one end through which the

camera could be pointed was placed upon it. When the camera was put in place, the birds never noticed the difference. They were not frightened away, and no time was lost waiting for them to become accustomed to it. It was merely necessary to wait for the birds to arrange themselves properly before pulling the thread.

Another occasion arose during the past winter. A Northern Shrike was observed to dash into an arborvitæ hedge near the house in pursuit of some House Sparrows. Investigation showed the wings of four Sparrows on the snow beneath the hedge, proving that the Shrike had been there before and would probably come again. A dead Sparrow was, therefore, fastened to the tip of a



LAFLAND LONGSPURS AND PRAIRIE HORNED LARKS AT A FEEDING STATION
EVERY WINTER THERE ARE NEW BIRDS TO BE PHOTOGRAPHED

branch near the hedge. Two weeks passed, and the frozen Sparrow dangled in the wind until one morning all but the leg by which it was fastened disappeared. Later in the day the Shrike was seen fluttering at the tip of the branch, trying to pull off the leg. No more Sparrows were available, but a Duck that had died furnished a piece of flesh with feathers attached. This was fastened in the place of the Sparrow, and the camera, covered with its gray box, was focused upon it. The Shrike soon returned, but since it was beginning to snow and the branch was swaying in the wind, conditions were impossible for photography. A 4-foot stake was therefore driven into the snow below the branch, and the piece of Duck nailed to the top of it, so that there would be no motion. It was now snowing hard and so dark that an exposure of one-fifth of a second with the diaphragm at stop / 6.3 was necessary, but when the Shrike returned, he remained quiet enough to give a fairly satisfactory picture.

The Shrike seemed unable to hold the food beneath his feet and tear off pieces as do the Hawks and Owls, or even the Chickadees. The post was not large enough for him to perch beside the meat as he would liked to have done,



A NORTHERN SHRIKE AT ITS FEEDING-STATION

The bird could not pull all the bits of meat when standing upon it. It is here seen resting between bites.

so in order to get it, he either hovered before it like a Hummingbird or clung to the post like a Woodpecker, as shown in the accompanying photograph. Later on, he gave us many opportunities to observe this habit, for we fed him

mouse and Sparrows for two weeks. In every case he perched at one side of the food instead of directly upon it. When he secured a piece too large to swallow, instead of holding it beneath his foot, as might be expected, he flew to a nearby pear tree and wedged it in a narrow fork so that he could get sufficient leverage to pull it to bits. It occurred to me that this might be the origin, if not the immediate cause, of the habit shared by his relatives, of impaling food upon thorns, that is ordinarily spoken of as 'storing.' We, therefore, brought in a small thorn tree and impaled a mouse upon one of its thorns, thinking it might serve by auto-suggestion to inspire him to do the same. He relished the mouse but seemed rather clumsy in the bush, as though he did not care for thorns, and even when opportunity offered, he did not take advantage of them but flew to the pear tree and wedged his food in the narrow forks according to his custom. The southern Migrant Shrikes and Loggerheads, however, are more partial to thorn trees and may have learned to use the thorns as more convenient than the forks.

The Shrike finally made regular visits to our meat-market and did not mind the appearance of an umbrella blind, nor even the rattle of a motion-picture camera. Thanks to his fearlessness, we now have a permanent record in motion-pictures of just how the Shrike eats, as well as a partial record of just how he catches a Sparrow, by making a headlong dash at it, relying upon the surprise of his onrush to put the victim at a disadvantage. If he misses his prey in the first rush, he seems to realize that he has lost his best chance and does not carry the pursuit further. On one occasion he made a dash at some Sparrows in a wire trap and, when unsuccessful, he did not persist and try to get at them through the bars, as a Sparrow Hawk would have done, but immediately flew back to his perch and waited for the excitement to die down.

It was interesting to see the reactions of the different birds to his presence. The House Sparrows all rushed for the hedge and hopped about in its thick



THE SHRIKE IN THE ACT OF EATING

There was not room on the post to perch beside the food, and in order to tear off bits, it had to hover like a Hummingbird or perch like a Woodpecker, as here shown.

branches, chipping excitedly, but the native birds, at the first alarm, froze immovable wherever they happened to be. A Song Sparrow on an open feeding-shelf, a Junco on a bare branch, and several Juncos on the open snow remained motionless for twenty minutes and as long as the Shrike was quiet. As soon as he moved or darted at a bird, they all made for the hedge, except the one pursued, which made off through the open. The Chickadees, among the native birds, were an exception. They could not remain quiet for more than a few minutes without getting nervous, when they would fly to the tree over the Shrike's head and scold him.

That the freezing method had its advantages was evidenced by the fact that all of the birds captured by the Shrike, in so far as any traces were left,

were House Sparrows. Strangely enough they were all male Sparrows. Apparently their fluttering drew attention to themselves, and since they never left the hedge, they were more easily cornered than the native birds that took to flight in the open when pursued.

The permanent feeding-stations have many advantages over the temporary ones that one establishes in going after some particular bird. One advantage is that a permanent shack or 'Chickadee barn' can be erected in which one can sit with his camera and photograph to his heart's content without scaring the birds away. If one does not wish to build a blind of boards, one can use an umbrella



FEEDING STATIONS OFFER ENDLESS OPPORTUNITIES TO THE PHOTOGRAPHER

To show all of the distinctive marks of a species in one photograph requires a good deal of ingenuity and patience. Tree Sparrows



DOWNY AND HAIRY WOODPECKERS AT A SUET-STATION

'Double headers' offer a new field for those who have photographed all the birds that come to their feeding-stations

blind, though it is rather cold and cramped for winter use and does not last long if left in a permanent position. A box to conceal the camera, which is manipulated from a distance by a thread or electric device is the next most satisfactory way. At any rate, the blind or box should be kept permanently in place so that the birds will be accustomed to it and no useless waits ensue.

The first ambition of the winter bird photographer is naturally to secure as perfect a picture as possible of each bird that comes to the feeding-station. When these have been secured, however, one has really only begun. One pose of a bird will not show all of its distinctive marks. If one wishes to show well the spot on the breast of the Tree Sparrow, for example, he must take a front view of the bird, but this will not reveal the conspicuous wing-bars nor display the bird to advantage. Again, photographs of the Downy and Hairy Woodpeckers look very much alike, because there is ordinarily nothing in the photograph by which one can judge size. We took a good deal of pleasure, therefore, at one feeding-station, in drilling a hole clear through a small sapling and filling it with suet so that a bird could feed on one side of the tree without disturbing the bird on the other, and both be in focus at the same time. In this way many 'double headers' were taken, but it was some time before we got the Downy and Hairy together and showed, photographically, the difference in size of the two birds.

(To be concluded.)

Homeland and the Birds

By MABEL OSGOOD WRIGHT

ALL the land is astir, and every loyal heart in it is striving for the winning of the Great War that shall make the earth safe for its people. From college, laboratory, workshop, field, hospital and home the people are flocking to make the winning sure and lend aid to the fighters. Men, women, children, all eager to do their part in the way that seems best, those who cannot go over seas, often doing double tasks to release those who can go forth.

We are lending our money for our country's need; we are denying ourselves sugar to help the shell-shocked soldier boys grow strong again; we are conserving every scrap of food that it may be used as a bulwark against grim famine, but are we stay-at-homes, whose part is equally necessary in the great wartime fabric, doing all we can to keep the Homeland at its 100 per cent value? Are we doing our best to keep alive the organizations for its conservation upon which so much time, money, and personal effort have been lavished during the past score of years?

Last spring, at twilight, a mother stood in her garden near here, waiting for the coming of her son just grown a man, who was to say goodbye before going 'over there.'

The flower-beds showed bare spots; such blooms as were there looked straggly and uncared for. Presently a step came behind her and the strong arms that at first nearly crushed her relaxed and led her to one of the garden seats, while in the content of being there, the young man's eyes scanned the home acres.

"Why, what is the matter with the garden, Mother? You don't seem to have gone at it at all, and you've always been so keen. You're not ill, are you?"

Avoiding his searching eyes by shading them with her hand, she answered with a forcedly steady voice:

"You will not be here to see them, so I meant to let the flowers go this year; or else plant food-stuff in their place. It seems to be right these days that we should only give our time to useful things, my son."

"Useful things! Nonsense, Mother. Home is always useful and something that will help a fellow as much as food. That is, I know that they will help me. Wherever I am I want to be able to close my eyes and see you here in your garden. I want to see the breakfast table with the roses on it between you and as much of dad's head as can be seen above the newspaper. And, for heaven's sake, Mummies, watch out for the Quail that nested down beyond the brush-let—draw them up this way by feeding and later don't let those scamps across the river break up the covey! If I didn't think someone would look after my real home country, I couldn't bear to leave it."

This mother made her garden in the between times, when her fingers were cramped with knitting and her eyes too full to see the needle's eye. While as to that dreaded "across the river" crowd, they fell and kept away after one experience with an irate little woman who was feeding the Quail as a lure to a winter shelter of cornstalks, set up with her own hands on the wood-lot edge. The poachers, finding to their cost that at least when it comes to keeping faith with a son at war, the most gentle "female of the species is more deadly than the male."

All this is a lengthy text to a very short sermon that I would preach to my fellow workers for the preservation of the Homeland of the men and women who have gone forth; that on their return they may find it the land of joy, beauty and promise as it lives in their memory. Most especially do I make a plea for the bird and its preservation and the trees that give it shelter.

Very few person in general understand the double menace to bird-life that is coming with the approach of the winter of 1918-19—the withdrawal of many game-wardens (who were also the chief legal protectors of song-birds) from the field and the very great cost and difficulty of obtaining suitable material for the feeding of our winter-residents or visitors.

Coupled with these two dangers may return that of last year, when the below-zero winter drove a starving horde of birds of prey from the north, the Great Horned Owl to feed on the game-birds, and the Northern Shrike to practise, even in the confines of *Birdcraft Sanctuary*, his butcher-bird habits, that purely sentimental bird-lovers seek to deny.

The money, such as it is, that allows the Fish and Game Commission to be efficient here in Connecticut, for example, comes from the licenses of hunters, a class of men almost wholly drawn heretofore from those of draft age, who either are or will be absent, and I must suppose that the same is the case in the majority of states. Also, already, in several states, protective laws are trembling in the legislative balance and pretended sportsmen who are poorly disguised pot-hunters at heart, are whimpering for the "right to increase the food supply" by literally killing the source of all future game-bird life in the same way as the Passenger Pigeon was slaughtered.

Federal migratory bird protection is now a law, as well as the *Enabling Act*, but who shall see that these are live and not dead measures?

We, the people to whom circumstances entrust the care and conservation of the Homeland of the United States of America, the trust left us by our soldier boys, should do this work, not in the place of other necessary war requirements, but as a mentally necessary rest from them.

The tendency among many ardent patriots is to rush to something newly organized, if it particularly appeals to their craving for the heroic, rather than to give a little time to the keeping up of old, well-considered and time-tried institutions.

"What can I do?" you ask, and "How shall we do it?"

In the first place, when necessary, put the case of lack of funds for *game-warden* service fairly before your various legislatures, asking for a wartime appropriation for the deficit.

Try to bring influence to bear upon all those who, from necessity, not choice, are cutting down woodlands and brush lots for fuel, asking that they exercise reasonable care against the destruction of mere saplings that have no value other than for bird shelter. Divide your home district among the bird-lovers of the place for the purpose of winter feeding, and send out appeals to others to do likewise.

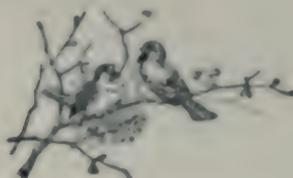
In regions infested by Starlings, or in windswept and birdless stretches of country usually snowed under, make up parties to gather sumach and bay-berries, also the seed-cones of the composites of the sunflower tribe that are relished by all the winter birds.

In short, double all your former efforts to cherish these our Sky-sweepers, Seed-killers and Weed-warriors, in their perpetual and hard-fought battle to do their work of keeping the Homeland green and fruitful.

Then let those of you who have the gift of compelling or silver-tongued speech go into the schools and gathering-places of your neighborhood, telling and repeating again and again the story of the beauty and worth of our birds and their wartime necessities, weaving into your talk the duty to the Homeland itself, to its soil, as the foundation of all lasting patriotism. And do not ask them for money for this thing or that in connection with bird-protection at this time—this year the pennies belong to Uncle Sam. Ask them for *personal service*—for a bit of their time—the bit of themselves that is most worth while and will count for more than their pennies in the end.

Friend, save the birds during the stress that is even now upon them! We need their presence to keep our courage up, the courage it takes to live to win, the courage to keep the even balance when victory is won. Help for the birds is help for our soldiers at their home coming.

"The birds that make sweet music for us all
In our dark hours—as David did for Saul."





YOUNG SANDHILL CRANE

Photographed by H. and E. Pittman, Manitoba, Canada

The differences between Cranes and Herons are much more pronounced in the young than in the adults. Cranes have a downy natal plumage and can run about soon after hatching, while Herons are born comparatively naked and spend several weeks in the nest.



CANVASBACK DUCKS. BRANCHPORT. MARCH 5, 1914

A Wild Duck Trap

By VERDI BURTCH, Branchport, N. Y.

With Photographs by the Author

THE harbor at Branchport, N. Y., on Lake Keuka, is cut off from the lake itself by a long sand-bar through which a channel has been dredged to enable the boats to enter. This channel does not freeze entirely over, even in the coldest winter, as there is a strong current continually flowing in and out, keeping a small area free from ice all through the winter. This open area is a veritable trap for the wild Ducks, as in nearly every winter, after the lake is frozen over, a few Ducks stay on here and starve to death.

The winter of 1911-12 was particularly disastrous. January was very cold, and the lake froze over early in the month, zero weather marking early February, when I heard from the fishermen that there was a large flock of Ducks in the channel. On the 12th I went down and found that there were about fifty Ducks, mostly Canvasbacks, with many American Scaups and American Golden-eyes and a single Bufflehead, in the channel. As we neared them, the Canvasbacks took to wing, the Scaups and Golden-eyes crowding to the opposite side of the channel. The Canvasbacks soon came back, circled around a few times, and dropped in with the others. One female, however, was weak and could not sustain her flight long enough to reach the water, but dropped on the ice and flopped along until she was again in the water.

February 15, there were about 150 Ducks in the channel, including one

American Merganser. A large box with sides of strawboard, in which holes were cut for observation and for the lens of my Graflex, made me an excellent blind. This was pushed out to the edge of the ice February 15, disturbing but a few of the flock, which now had increased to more than 500. I had but just concealed myself when a bunch of Scaups came back, circling around, and my camera caught a female Scaup coming to the water on a turn, wings fully extended, feet wide apart, with the toes spreading the web to the utmost as she back-pedaled to the water. Then came the Canvasbacks, circling again and again, a few dropping in each time around, their wings forming a parachute as they neared the water and the toes turning up as they tobogganed into it.

We made several attempts to feed the Ducks with wheat, corn, and chopped cabbage. This was thrown out into the water, and while we did not see them feeding, I think that they did get some of the corn and wheat. One day I took a dead Golden-eye from one of the fish-lines that was let through the ice near the channel. It was hooked through the wing, evidently having struck the hook while searching for food.

Sometimes a large flock of the Ducks would sit out on the ice in the middle of the lake for days at a time, and one day we went out to them. As we drew



AMERICAN SCAUP (FEMALE) ALIGHTING IN A FLOCK OF SCAUPS AND CANVASBACK DUCKS, BRANCHPORT, FEB. 15, 1911

near, all flew away except a female Scaup. She was too weak to fly and we carried her home and fed her some minnows and scraps of beef. The first minnow was forced down her throat, and as soon as she swallowed it she became ravenous, picking at our fingers and clothing, and took the minnows from our fingers the moment they were offered, however, the feeding came too late, and she died the next day.

Coming back to the channel, we found one poor Canvasback floating on the water, dead, and another struggling to keep her head above the water, but she soon gave up, turned on her side, and after a few gasps was still. Every day, now, there were more dead Ducks. They floated to the edge of the ice, the Herring Gulls and Crows coming and dragging them out on the ice, where they picked the meager flesh from their bones. Some animal must have carried the bones away, for after a few days a few feathers were all that remained on the blood-stained snow. It has always been a mystery to me why



CANVASBACK DUCKS BRANCHPORT, FEB. 15, 1914. "THEIR WINGS FORMING A PARACHUTE AS THEY NEAR THE WATER, AND TOES TURNING UP AS THEY TOROGGAN INTO IT"

these Ducks remained here, slowly starving to death, when Seneca Lake, with its open water, was only 12 miles away, and it would seem that they could see this water when they were up in their flights.

February 21 brought a thunderstorm which was followed by high winds and intense cold. Many of the Ducks must have been up in the air and got caught in the wind and blown away over to Seneca Lake as, when the calm came on the 23d, there were but forty or fifty Ducks left in the channel. I picked up three Canvasbacks (two drakes and a duck) that were stranded on the ice, and soon had them eating oatmeal gruel. They were fed and cared for

until the middle of April, when they were sent to the New York Zoological Park.

Only 10 Ducks were in the channel February 25: 12 Canvasbacks, 6 American Scaups, and the Bufflehead. March 5, the little Bufflehead was the sole survivor from the flock of 500 or more Ducks that were in the channel early in February. Here she stayed on, and on March 10 was flushed from the water and made a sustained flight of five minutes' duration. At this time there was a Holbell's Grebe with her which stayed until the 16th. The Bufflehead was last seen March 17, when the ice began to break up, and, as other Ducks (Mallards, Scaups, Baldpates, Mergansers, and Golden-eyes) were then arriv-



AMERICAN SCAUP DUCK AND HOLBELL'S GREBE MARCH 12, 1916. THE BACKGROUND IN THIS AND THE SUCCEEDING PHOTOGRAPH IS SNOW COVERED ICE

ing, I have no doubt but that the little Bufflehead fully recovered and joined others of her kind on their northern migration.

Never, since 1912, have so many Ducks been caught in this trap, but a few do get caught there every winter. Canvasbacks and Scaups are the principal victims, and sometimes we find dead Golden-eyes and Black Ducks. Gadwalls, Pintails, and Redheads sometimes stop in the channel for a day or two, and sometimes after a severe storm a Holbell's Grebe is found there.

The first half of March, 1916, was very cold, with high winds and much snow. A Holbell's Grebe was brought to me the 16th that was found on the snow in an orchard. I fed it scraps of beef and minnows, but it survived only a few days. Another Grebe was in the channel the 19th. It was very cold, the thermometer registering only a few degrees above zero, and the open area in

the channel was the smallest that I ever saw it, being only about 3 rods long and 1 rod wide. An American Scaup drake was out on the ice, and as we came up he managed to fly back to the open water. The water was shallow, so I could wade out and crowd the Scaup to one end of the opening until he was forced to pass close by me, making a fine target for my Graflex. The Grebe would not consent to be crowded, but would dive, remaining under water for a long time, sometimes so long that I was afraid that it had got caught under the ice. However, it always managed to come up in the open.

Before the shooting season was shortened (closing January 15), any Ducks that remained after the lake was frozen were soon killed or driven away by the hunters, so it is only of late years that they have remained here to starve. The winter of 1911-12 was the one year in which the fatalities were greatest.



AMERICAN SCAUP DUCK (MALE)
BRANCHPORT, MARCH 19, 1910

The Migration of North American Birds

SECOND SERIES

VII. MAGPIES

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

AMERICAN MAGPIE

The American Magpie (*Pica pica hudsonia*) breeds in western North America, north to southern Manitoba, southern Saskatchewan, central Alberta, middle Yukon, and the eastern Aleutian Islands in Alaska; west to the islands of southern Alaska, Vancouver Island in British Columbia, western Washington, western Oregon, and eastern California; south to northern Arizona and northern New Mexico, east to western Kansas, western Nebraska, and central North Dakota. In nearly all parts of its range it is resident, except possibly in the northernmost areas; but in winter it wanders more or less, south to central western Texas, and east to Indiana, Michigan, and Ontario. It also has straggled to Montreal, Quebec, Albany Fort, northern Ontario; and York Factory, northern Manitoba.

Some of the eastern records are: Parker's Prairie, Minnesota, December, 1910. Winnebago County, Iowa, spring, 1875. Corning, Missouri, April 23, 1911. Saline County, Missouri, November 1, 1890; Bailey's Harbor, Wisconsin, November 15, 1849. Dunn County, Wisconsin, February, 1884; Chicago, Illinois, October 17, 1892. Knoxville, Illinois, May 16, 1896; Bicknell, Indiana, February 10, 1908, and December 24, 1909, and Odessa, Ontario, March 12, 1898.

YELLOW-BILLED MAGPIE

The Yellow-billed Magpie (*Pica nuttalli*) is confined to the state of California, where it is a permanent resident, though apparently less numerous and less widely distributed than in former times. Its principal range is now the valleys of the Sacramento and San Joaquin rivers, but it has been reported north to Tehama County; west to San Francisco and Monterey County; south to San Diego, and east to Placer County.

NOTE.—For a photograph of a Magpie at a winter bird-table, see BIRD-LORE, November-December, 1910.

Notes on the Plumage of North American Birds

FIFTY-FIRST PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

American Magpie (*Pica pica hudsonia*, Figs. 1, 2). The male and female Magpie are alike in plumage, and the young bird when it leaves the nest differs in color from its parents only in having all the black areas dull instead of glossy, the white scapular patches tinged with buffy, and more or less white showing through the black feathers of the throat and breast. The wing- and tail-quills, while not fully grown, resemble those of the adult, and at the postjuvinal molt these feathers alone are retained, while those of the body are shed. The young bird is now indistinguishable in color from the adult. There is no spring molt, and summer plumage closely resembles that of winter. The postnuptial molt, as usual, is complete but produces no change in appearance.

The plumage and plumage changes of the Magpie are therefore as simple as are those of any other bird.

Bird-Lore's Nineteenth 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. Each report must 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, 1901-18, 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.*

Those readers who take part in the Christmas census this year will find it very interesting to examine the censuses from their part of the country in years gone by, which will be found in back volumes of BIRD-LORE, and to note how the northern birds vary in the different winters. Reference to 'The Season' Department of the present issue will show that up to the middle of this October there had been no incursion of the Pine Siskin or other northern Finches, as during some autumns, and observers fortunate enough to find these on the Christmas Census should take particular pains with their identification. The Red-breasted Nuthatch, on the other hand, has rather generally moved south. We also would call to the special attention of observers who are able to be in the field this winter, the article on winter birds, by Dr. A. A. Allen, published elsewhere in this issue of BIRD-LORE.—J. T. N.

Notes from Field and Study

Red Crossbills in Seattle

Seattle has had an unusual visitation of the erratic Red Crossbills this year. Flocks of these birds have been in and about the city for the entire months of May and June and are still to be found this first week in July. They are often seen in gardens on the shade and orchard trees, and have been heard many times flying overhead, their metallic *link link* being unmistakable.

Their presence here seems to be another proof that the birds come when we need them most. The aphids have been swarming over all forms of vegetation this year, and in every case where the Crossbills have been found feeding, they were eating aphids. In the elm trees and the fruit trees the aphids injure the leaves, causing them to curl up. As I stood under an elm tree, where the Crossbills were feeding, these leaves kept dropping at my feet, and in every case they had been cleaned of the aphids by the birds. In holding them to get a better grip they had torn the leaves off.

The birds are in various colored dress, but many are in the mature plumage, and one wonders when and where they will nest this year, if at all. No single pairs have been noted, the birds always being in flocks of from ten to twenty.—M. I. COURTON, *Seattle, Wash.*

Maine Notes

This has been a fine year for birds in Maine. All the usual species are abundant, while several rarer ones have been seen. On my premises there are three trees; each was occupied this season, one by a pair of Bluebirds, the second by Robins, and the third by Cedar Waxwings. I have enjoyed watching these birds for hours, and all have safely raised one brood, and the Waxwings and Robins are feeding their second (August 8).

Probably the place that is resorted to

most by bird-lovers of this section is Riverside Cemetery, along the banks of the Androscoggin River. It is a beautiful spot and ideal for bird study. On one of my walks there I identified forty-one species. On this walk I saw and identified the Golden-winged Warbler, which is a very rare bird for Maine.

I am glad to be able to report that Bob-white are on the increase in this section of the state. While I was camping at Takoma, Me., I saw and heard a great many of them, while last year they were quite rare.—HAYDN S. PEARSON, *Lewiston, Me.*

Golden-eye Duck Carrying Young

The following observations upon the method by which tree-nesting Ducks bring their young down to water may be of interest. I have a summer cottage on Hopkin's Point, on the St. Lawrence River, in the township of Dundee, province of Quebec. Early in June a pair of wild Ducks were observed nesting in a tree some 35 feet from the front door of my cottage. The nest was in a hole in the tree about 18 feet from the ground, the opening being barely large enough to admit the parent bird. The Ducks were easily identified as the common Golden-eye, called also Whistler, from the sound of their wings in flight. The drake had a black head and back, with the neck, lower parts, and a patch on the cheek of white. The Duck had a reddish brown head and the upper portion of the body mottled gray instead of black. Both had white patches on their wings and bright yellow eyes. I think it is impossible that there was any error in regard to the species. This Duck not infrequently breeds in this section, though not a common summer resident.

I had every opportunity, together with other members of my family, to observe the Ducks closely, but we did not make the matter public lest the birds might be

disturbed or the nest robbed. The brooding Duck would frequently sit absolutely motionless, apparently without winking an eye, with her head out of the entrance of the hole, for some length of time. She soon grew accustomed to the presence of the campers, but when she left the nest temporarily she circled warily around the tree tops several times before re-entering the nest. One Sunday afternoon, while the two Ducks were feeding in the bay in front of the cottage, some miscreant fired at the drake with a rifle, whereupon he squawked, rose with his mate, and the drake was seen no more. Whether he was injured or not it is impossible to say. In July it is common for the drakes of certain species to duck by themselves, and this might possibly explain why he left his mate.

The Duck, however, was seen attending to her duties as usual, and the incubation was uninterrupted. On the afternoon of July 7 the old Duck was seen at the foot of the tree, standing on the ground. She gave several low quacks or calls, and out of the hole in the tree overhead promptly tumbled about a baker's dozen of fledgling Ducks. They were unable to fly but were sufficiently grown to be able to ease their fall to the earth, and, not unlike a flock of butterflies, they came down pell-mell, fluttering and tumbling, some of them tools over head, until they reached the ground unharmed. The tree was nearly but not quite perpendicular, so they were unable to scramble down. The old bird gathered them in a bunch and piloted them along the fence for some 3 or 4 rods to the river. Down the rocky shore they went and into the water. The old Duck then sank low in the water and the ducklings gathered over her back in a compact clump. She took them across the bay to a bed of rushes, some 20 rods distant, where they disappeared from sight. An attempt was made to count the brood but their movements were too rapid, and, naturally, during the incubation period no effort was made to inspect the nest for fear of frightening the birds away. Since the evidence of unhatched eggs was obtained, the inference would be that the eggs

were all successfully hatched. Whether the method adopted of bringing down the young was the usual and customary one or otherwise, I am unable to say, but that this was the plan adopted in this particular instance is established beyond question.—
W. N. MACARTNEY, M.D., *Fl. Covington, N. Y.*

The Birds I Watch from My Window

A few years ago, when we moved from the village to a new house on the hill, the only tree of any size that graced (or disgraced, some people thought) our lawn, was a weather-beaten old apple tree, so old that the trunk was split through the center clear to the ground, causing each half to lean drunkenly in an opposite direction. It was so rotted and worm-eaten that scarcely anything but the shell remained—too far gone to be cemented and reclaimed. In spite of "fuel conservation," the old tree still stands, and though every fierce wind shakes it to its roots, it still serves as a fine lunch-table to all the birds that come for food. I fasten suet on a lower limb; also, a lid from a tin pail was nailed fast to the same branch, and makes a fine container for crumbs, cracked corn, and the like. The knot-holes and many cracks in the bark I fill with peanuts, cracked hickory nuts, and other nuts, and the feast is ready. From early morning until sundown there is scarcely an hour that from three to five different kinds of birds may not be seen feeding happily together. Last winter (1916 and 1917) was the banner year as to variety. From December 1 to March 15 I identified fifteen different kinds. On the morning of December 30 a lone Robin made his first appearance. It was extremely cold, and poor Redbreast looked decidedly unhappy, as though he realized he had made a serious mistake in experimenting with a northern winter. He came occasionally after that, but was not a regular visitor. Of course there are flocks of English Sparrows, but, unlike many other observers, I have never seen them drive away other birds, though they quarrel fiercely among

themselves for a coveted morsel, so I welcome even the English Sparrow—for with it comes the dainty Tree Sparrow, and also the Song Sparrow, that in cold weather seems willing to chum with its English cousin.

I have been much amused when watching a pair of Downy Woodpeckers. Evidently equal suffrage has not become a fact in the bird-world, for when Mr. and Mrs. Woodpecker come together for lunch, if my lady tries to get a crumb from the opposite side of the suet from which her lord and master is feasting, he flies at her in such a threatening manner that she hurriedly takes refuge on an upper branch and patiently waits until his majesty is satisfied and flies away. Then Mrs. W. flies down and eats as fast as she can. I have watched this instance of family discipline many times, and never has the lady of the family been allowed to eat at the same time as her husband—though he never interferes with the Nuthatch or Chickadee that perch by his side and peck away so sociably at the frozen suet. All day long the Nuthatches will work, picking nuts from the shells, seldom stopping to eat, but flying away to hide their treasure in the bark of a neighboring walnut or cherry tree, then hurrying back for another morsel. The cheerful little Chickadees are constant visitors, and as I watch them—even though they wear a black cap and necktie—I always think of a dainty old-time Quaker lady—they are so trim and neat in their soft gray garb. I have been unable, as yet, to coax the Meadow-lark to my tree, though I often hear him calling in the neighboring wood. This year the Blue Jay has come several times and taken an early breakfast, and though he hasn't a very good reputation, he is so very handsome that I am willing to forgive his many sins, and even his harsh call sounds good to me.

Following is a list of winter birds that have come more or less regularly to partake of the hospitality of the old apple tree, some even coming to the window-sill and peering with bright eyes into our dining-room, as though asking us not to for-

get that we have hungry neighbors waiting outside for crumbs.

List of Winter Visitors—Robin, White-breasted Nuthatch, Red-breasted Nuthatch (one pair), Downy Woodpecker, Chickadee, Hairy Woodpecker, Tree Sparrow, Fox Sparrow, Vesper Sparrow (one), Song Sparrow, English Sparrow, Starling, Junco, Goldfinch, Purple Finch (flock of about twenty), Kinglet, Blue Jay, Crow.—**MRS. F. W. GORHAM, Katonah, N. Y.**

Bird Horizons in the San Francisco Bay Region

A summary of what birds can be seen in the San Francisco Bay region in a series of spring trips afield may be of interest to bird students. One section of the University Extension class, taking the course "Six Trips Afield" in the spring of 1918, was successful in noting 69 different species of birds. The trips taken with the total number of birds seen on each trip, were as follows: March 2, 1918, University of California campus, Berkeley, 26 species; March 16, 1918, Bay Farm Island, near Alameda, 27 species; March 30, 1918, Redwood Canyon, Alameda County, 14 species; April 13, 1918, Golden Gate Park, San Francisco, 26 species; May 18, 1918, Tunnel Road Canyon, Berkeley Hills, 32 species; May 30, 1918, Mill Valley to Manzanita via Big Lagoon, 52 species.

All trips occupied three to four hours on Saturday afternoons, with the exception of the last one, which was an all day trip.

A composite list of the birds seen is as follows. Species, the nests of which were inspected, are marked with an asterisk (*).

- | | |
|-------------------------|-------------------------------|
| 1. Western Grebe | 15. Bullock-head |
| 2. Pint-gullied Grebe | 16. White-winged Noddy |
| 3. Baird Grebe | 17. Surf Scoter |
| 4. Pacific Loon | 18. Ruddy Turnstone |
| 5. California Murre | 19. Black-crowned Night Heron |
| 6. Glaucous-winged Gull | 20. California Clapper Rail |
| 7. Western Gull | 21. Coot |
| 8. California Gull | 22. Northern Phalarope |
| 9. Herring Gull | 23. Western Sandpiper |
| 10. Forster Tern | 24. Heermann Curlew |
| 11. Parasitic Cormorant | 25. Killdeer |
| 12. Mallard* | 26. California Quail* |
| 13. Canvasback | |
| 14. Lesser Scaup Duck | |

- | | |
|-------------------------------|----------------------------------|
| 17. Western Mourning Dove | 59. Intermediate Sparrow |
| 18. Turkey Vulture | 60. Golden-crowned Sparrow |
| 19. Martin Hawk | 61. Western Chipping Sparrow |
| 20. Cooper Hawk | 62. Tharber Junco |
| 21. Western Red-tail | 63. Santa Cruz Song Sparrow |
| 22. Sparrow Hawk | 64. Salt Marsh Song Sparrow |
| 23. Barn Owl | 65. Marin Song Sparrow |
| 24. Red-tail Kingfisher | 66. English Sparrow |
| 25. Willow Woodpecker * | 67. San Francisco Towhee |
| 26. Red-headed Flicker | 68. California Towhee |
| 27. Anna Hummingbird * | 69. Black-bellied Grosbeak |
| 28. Allen Hummingbird | 70. Lazuli Bunting |
| 29. Ruby-throated Hummingbird | 71. Cliff Swallow * |
| 30. Olive-sided Flycatcher | 72. Cedar Waxwing |
| 31. Western Wood Pewee | 73. California Shrike |
| 32. Western Flycatcher | 74. Western Warbling Vireo * |
| 33. Blue Jay * | 75. Hutton Vireo |
| 34. California Horned Lark | 76. Lutescent Warbler |
| 35. Coast Jay | 77. California Yellow Warbler |
| 36. California Jay | 78. Audubon Warbler |
| 37. Western Crow | 79. Plumbeous Warbler |
| 38. Indigo Bunting | 80. Pipit |
| 39. Western Meadowlark | 81. Vigors Wren * |
| 40. Roseary Black-throat * | 82. Western House Wren |
| 41. California Purple Finch | 83. Plum Titmouse |
| 42. House Finch | 84. Santa Cruz Chickadee * |
| 43. Green-backed Goldfinch | 85. Marsh Chickadee |
| 44. Willow Leaf-bird | 86. Coast Blackbird * |
| 45. Pine Siskin | 87. Intermediate Wren-tit |
| 46. Bryant Marsh Sparrow | 88. Western Ruby-crowned Kinglet |
| 47. Western Lark Sparrow | 89. Russet-backed Thrush |
| 48. Nighthawk * | 90. Western Robin * |

shot about 5 miles south of the place where the first was killed. Presumably these two birds killed were mates, for the Bald Eagle is not such a common visitant to the central Illinois prairies that three would likely be seen within such a restricted locality in so brief a time. The last previous record was in 1915.—SIDNEY E. EKBLAW, *Rantoul, Ill.*

The Blue Grosbeak in Central Illinois

Early on the morning of May 3, this year, while our family was at breakfast, we heard bird-notes new to us, so often repeated that they could hardly be unfamiliar notes of any of our known bird friends.

Upon investigation, a quick flash of dusky blue in a low plum bush attracted my attention to the bird from whence the notes came. Careful stalking brought not only this bird, but another of even brighter blue, into plain view, so that I had no difficulty in identifying them. They were the Blue Grosbeak.

For five days they stayed about the place, as leisurely at home as if they had selected the place for summer residence; then they were gone again.

This was the first time in many years of observation of birds about my home that we had recorded this bird, so I was elated at my good fortune in seeing them—SIDNEY E. EKBLAW, *Rantoul, Ill.*

A Record of the Bald Eagle from Champaign County, Ill.

Early in May a pair of Bald Eagles appeared northeast of Rantoul, Ill., and remained in the vicinity until one of the pair was shot.

They were first noticed on May 3; after that they were seen several times in the vicinity of an old orchard and a big grove which they frequented. A farmer in the neighborhood finally shot one of them on May 5, when it perched in a low tree near a hog pasture, after it had tried to take one of his small shoats. The wing-spread of the bird was over 5 feet.

A few weeks later, a second Eagle was

Our Summer Boarders

Last winter I hung the usual piece of suet on a tree near the porch of our house, but we had very few winter birds—an occasional Downy, but no Chickadees or Nuthatches. I left the suet hang during the summer, and it has certainly been a source of enjoyment. One family of Downies, two Catbird families, Blue Jays, and Red-headed Woodpeckers have feasted upon it, which shows it does not altogether serve as winter food.

The suet is suspended from a branch on a string, and the Downy, in his Woodpecker fashion, hangs on the suet while

eating. The Catbird looked at the swinging suet many times, and at last, to our amazement, perched on the suet as did the Woodpecker, but perhaps not with such firmness.—*Mrs. A. W. BREYNALL, Gileco, Ill.*

Our Winter Bird Neighbors

Are you feeding the birds these snow-bound, zero days? I often wonder which is in the greater need—the birds in the grip of the cold wave or we in the grip of these heart-chilling wartimes. But when it comes to the question of which receives the greater reward, there is no doubt in my mind—the birds pay a big rate of interest.

This is the way it began. The house is responsible for the first suggestion, for the architect, some eighty years back, startled this little village by departing from the Colonial and daring French windows and Italian balconies. What could be better adapted for feeding the birds? In fact, do not balconies in the light of their being otherwise impractical for everyday use, proclaim themselves, above all, bird-feeders?

The next suggestion came from the birds themselves when, upon the first soft fall of snow, just before Thanksgiving, there was disclosed from the dining-room a lacework of tiny footprints on the balcony, leading right up to the window. To disregard such an appeal seemed out of the question, and I made all haste to tie a small chunk of suet to a corner balcony-post. In less than ten minutes a pair of White-breasted Nuthatches were voraciously tearing out tiny chunks, flying off to the maple-pole, lodging them to fit in a crevice in the bark, and 'hatching' at them fiercely with their long bills. When the tray of mixed bird-seeds found its way outside the window, however, they transferred their interest at once and daintily chose the sunflower seeds, paying attention to the suet only rarely. During our own Thanksgiving dinner we watched them with great satisfaction and agreed that their *yaak, yaak* on arrival and

departure was their formal thanks for the sunflower seed received.

Close upon the heels of this success, two other dining porches were installed, one on the south and one on the west side of the house. The balcony first commissioned, being on the east, serves as their sunny breakfast porch. As our own breakfast appears on the table each morning, out goes the tray of seeds, newly replenished and generously sprinkled with the handsome, striped sunflower seeds. Can you imagine anything more delightful than breakfasting with the birds? What could put one in a better humor for the day than to be able to mingle with the delightful taste of the breakfast coffee the still more delightful sight of the arrival of the dapper, friendly, little Nuthatch who never fails to greet you with courteous thanks as he arrives and departs? It serves to strengthen one's lurking suspicion that it is after all the guest who should receive the thanks rather than the hostess.

Their midday meal is spread upon the southern balcony and supper on the western, where the chill of the coming evening is tempered by the last rays of the sun. They attend a sort of moving-feast, you see, or might we not say that they chase their meals around the house? That reminds me of the story of a husband of the modern wife who, after having been dined in all the rooms in his house in rotation, was reported to have said in a resigned tone, "Well, I suppose we will be eating in the cellar next."

The first days I spent breathlessly tip-toeing about the house and cautiously peering from behind curtains to see whom my guests might be. The whole house took on an expectant attitude. Even the cook, obdurate soul, became infected. She whose first pose was that of pyrrhic tolerance toward a household of feeble minds, was discovered, during the pursuance of her daily routine, directing furtive glances at the bird-trays. Of course, we have not extracted an admission from her but, on the other hand, there have been subtle indications of a change in temper that could point only one way. The birds did it!

The Downy Woodpecker, the Nuthatches' bosom companion, was our next guest attracted by the suet, which he still favors. He was an arresting sight. Such style to his black and white costume of contrast, set off the more vividly by the splash of blood-red on his head! Is it a case of hereditary nerves in the Woodpecker family which occasions the feverish glancing and swaying of the head from side to side before the vigorous attack upon the suet, or do you think that it is all done for effect—to display to full advantage that flashing crest in the sunlight? Does the fact that his spouse does not possess that distinguishing brilliance make it more valuable in his eyes? Of course, we will have to admit, will we not, his eyes in this case are her eyes, for how could he know about his superior marking if she did not tell him?

The Chickadees we have watched for early and late, knowing them to be associates of both Nuthatch and Downy, but not until today did they put in their appearance. Cousin Nuthatch brought them down from the woods and introduced them to the suet right before my eyes. Veritable puff-balls of feathers! Small wonder they seek shelter in the poses against the winter gales. While I write I can look out upon the large maple facing the window and see the Downy mounting high up the tree-trunk, holding himself regally, with lofty crest. Just below him is the Nuthatch, head down, vigorously claiming with his long bill the attention of some grub imbedded in the bark, while out on the end of a branch hang the two Chickadees, giving a demonstration in tumbling that would take the heart right out of a Swedish gymnast.

You see I have begun with our feathered aristocracy, whom we love but who do not begin to afford us the real amusement which we derive from the proletariat of the set, the English Sparrow. They, as could be expected, were right on hand to receive everything coming their way, but all the time ready to duck when signs of life appeared at the window—like guilty consciences in dirty-faced little ragamuffins,

all ready to cry, "Cheese it, the cop!" and be off.

The most amusing thing about them was the apparent utter astonishment they displayed at being treated so well. For a week after our trays went out they stood singly and in groups, gaping in at the windows and chattering discussions as to the probable meaning of such a phenomenon. I think their conversation must have run something like this: "Gee whiz! What's struck these folks anyway. We've been living in these parts long enough to lose our cockney accent and nothing has happened like this before. Rumples our feathers! If we can make out what's up. One thing's sure we've got to keep our weather-eye out for any minute they might turn and scatter us!"—KATRINE BLACKINTON, *Blackinton, Mass.*

Northern Shrike Visits a Feeding-shelf

I have a bird feeding-shelf just outside my window, attached to the window sill, where Downy Woodpeckers, Chickadees, and Nuthatches are daily visitants. Yesterday (Dec. 12, 1917) I noticed an excitement among my Canaries which were on a table just inside the window. Upon investigation I discovered a Northern Shrike trying to get through the window, evidently determined to make a dinner of one of my birds. I stood by the window and watched him for nearly five minutes—within 3 feet. After making persistent efforts without success, he perched on the feeding-shelf, cocking his head on one side and the other, turning himself about as much as to say, "Look at me if you want to, I will bear inspection" when, suddenly as if in disgust, he flew away.—MRS. CLARK PIERCE, *Puinow, Conn.*

Observations on a Food-Shell

The shelf measures 3 by 2 feet, is 2½ feet from the ground, 8 feet from a corner of the house formed by my study and an enclosed porch (into whose open door many a bird flies hastily, only to be examined by me at leisure), and is 30 feet from a

balsam hedge (partly dead). From the windows of study or porch I have seen exactly seventy different species, a number which would be slightly larger if I could have differentiated the Ducks that have flown by overhead. Thirty-four have eaten from the shelf, with an additional seven which have either eaten from the crumbs that fell from this rich birds' table or have bathed in or drunk from the bath placed halfway between the shelf and the hedge.

One of the curious things about such a shelf (after three years' observation) is the frequency with which one species is seen one season and the scarcity or absence of it in the same season of the succeeding year. In the winter of 1916-17 a pair of Cardinals never missed a day (after the first week when the male tested the food alone before allowing his more sober-colored mate to eat thereof) from January 22 to March 21. In a similar fashion, the little Red-breasted Nuthatch ('Mouse-bird' we call him in our household, so much does he resemble that animal as he runs over the shelf) was an occasional visitor in 1915-16, and unintermittently the next year from November 22 to May 3. But neither of these has been seen at all during the last winter (though at least four pairs of Cardinals have wintered in the village). The Chickadees were constant friends the first two years, but this year they stayed with me a scant week in December. The Evening Grosbeaks can never be depended on, except to avoid the shelf itself, though probing by what falls from it and by the bath. Similar variations are recorded of the Hudsonian Chickadee, the Redpoll and the White-crowned Sparrow. The White-throated Sparrow, that companionable little minister with his small white necktie, is nearly as dependable as the calendar.

In the early summer the variations depend on what is nesting in the neighborhood, and one season I can see on the shelf what the next year I will look for in vain. This was noticeably true of the Red-headed Woodpecker. My shelf has furnished nothing more comical than a

mottled young of this species, peering over the edge as it clings to the side, nor has my camera caught anything more pleasing than the same young being fed, unless it is a whole family of Bronzed Grackles being fed in turn. The Catbird, the Thrasher (whom I could stroke on the nest), the House Wren, the Hairy Woodpecker (how unapproachable compared with his replica in miniature, the friendly Downy Friendly the year round), the Mourning Dove, the Rose-breasted Grosbeak and the Wood Thrush, are among those whose nests, being near, have been regular visitors to the shelf one year and entirely unseen the next year.

The early days of May see the bushes and trees alive with Warblers (most of them, which is nearly equivalent to seeing thirty-eight, so different are the two sexes, in color at least), and yet only five have taken a meal at my restaurant: the Black-throated Blue, the Black-throated Green, the Myrtle, the Magnolia, and the Redstart (the latter most frequently). That is not as long a list as the Sparrows, and the difference is due, of course, to the difference in food enjoyed by the different families. The Finches delight in the sunflower seed, millet, hemp, and suet which are the staple articles of food I provide, with side-dishes of nuts, bread, meat, and the like. And, oh, if only the Flickers would grace the table instead of limiting their attentions to probing my lawn, nesting in my trees, and tapping on my roof. And why did it take the Robins, nesting, several of them, within 50 feet of the lilac tree against which the shelf is attached, a summer and a half to care, or dare, to eat of the delectable suet? On the other hand, why should the Cowbirds come in from the fields, a mile or more away, to spend so much time eating millet in the center of a city-like village? Is the lazy habit seen in its egg-laying spreading to its eating habits? These are questions I cannot answer, but their very mystery makes the presence of the shelf an un-failing delight.

But I must pass on to telling a few facts, curious or otherwise, concerning my

feathered friends attracted to the neighborhood of my windows. And, most curious of all, to me, is the frequency with which Jay feeds Jay. Why, in the dead of winter, or early in the spring (April 7 and 17, to be exact in two cases), should one Jay give another Jay a sunflower seed, the latter being apparently as well able to help himself (or herself) from the table as the former? Or why should one fly off to a lower branch in the hedge to be promptly approached, as if by prearrangement, by another to which he gives some morsel taken from the shelf? I cannot tell, I only know it is done. Sometimes the recipient immediately eats the tidbit, sometimes it takes it between its feet to crack it open. And, again, when the camera has caught from three to five Jays feeding together, why there should be times when there seem to be two laws, well-observed. "One at a time, please," and "The line forms on this side?" That is, one Jay feeds for from thirty to forty seconds and then flies off, immediately it is succeeded by a second that has been perched just above the shelf, when this one has finished a third comes down and takes its place; and this may go on for as long as twenty minutes—a veritable bread-line. That other birds should keep off when the Jays are feeding is not to be wondered at, and yet it is not a universal rule—the Jays do not seem always to inspire terror. One summer day a Jay hastily left its bath when a Robin came to drink; one May 23 a single female Rose-breasted Grosbeak successfully kept three Jays (apparently not young ones) from coming on to the shelf, and her belligerent spirit continued when a male and female of her own species later appeared; but she soon relented and the three fed in peace together. For June 4 my journal records: "Male Cowbird successfully and repeatedly drives off, and keeps off, Jay from shelf; then, proud of his powers, he also drives off a male Rose-breasted Grosbeak." The Doves proved equally successful in keeping the Jays away, and the young ones, in July, even followed their parents' example. (What a difference between a family of noisy, cry-

ing, whining, Jays, looking too old to be fed, and a family of silent Doves, looking too young to feed themselves!) To revert to the Jays, I find that the Grackles are not afraid of them at any time, and that the Jays prefer to vacate when a Grackle appears. In fact, most birds leave the shelf when the metallic-headed, evil-eyed Blackbirds come to eat, save the Cowbird, to whom color resemblance may perchance allow an *entree*. And the White-breasted Nuthatch, who almost runs between their legs in his clumsy little way of trying to walk horizontally after ceaselessly running vertically, up or down, is unafraid in the presence of these swarthy and larger birds. And shall I ever forget the comical expression on the face of a Nuthatch which flew on to the shelf when a Junco was feeding. The *hyemalis* promptly dropped to a lower branch, and the little Nuthatch turned and looked at him, as if to say, "You were not afraid of me, were you?" and then went about his business of eating.

Some time in 1915 a young Grackle appeared one day (when the shelf was at my window) with a sore foot. A little later a second one appeared with the same affliction. Later in the summer one of them had entirely lost the foot; the other seemed unaltered, and the foot seemed 'withered' and was never used. They were both frequent feeders until November. In 1916 the one with the 'withered' foot returned and was here all summer. It kept constantly by itself, and in October (after I returned from a month's absence) I wrote of it: "It has grown quite white on the shoulders and upper back, and looks like a patriarch." This year I have not seen it.

And so one could go on almost endlessly. What a red-letter day when two sprightly little Ruby-crowned Kinglets (whose song had been so often heard earlier) decided to try my restaurant. What a banisher of spring-fever the sight and sound of Towhee and Fox Sparrow scratching among the dead leaves. What music to the ears the first-heard *Peabody* song of the White-throat, even though when first heard it is never completed. How unusual to see a Downy suddenly leave the suet on the tree-

trunk to catch a passing insect in a veritable flycatcher's method. How interesting (not monotonous!) the Brown Creeper, nearly as silent as the Waxwing—a modesty in feathers. How can one be annoyed when he looks out and sees the hulk of a gray squirrel squatted on the shelf, or the English Sparrows that my bullets have missed eating food not set out for them; and yet it is because of what they displace that one does become angry, and must be rid of them in order to enjoy one of God's greatest gifts to men: birds around the house, useful, beautiful, companionable.—**GEORGE ROBERTS, JR., Lake Forest, Ill.**

Snowy Owl in Iowa

On December 12, 1917, during a typical Iowa blizzard, I chanced to look upward and just above the chimney-tops, seemingly born out of the throes of the storm, I saw a great white bird with a wing-expanse of about 3 feet. Later, during Christmas week, a record of another Snowy Owl was telephoned me from a farm some 12 miles east of Osage.—**F. MAY TUTTLE, Osage, Iowa.**

American Egret in Pennsylvania

BIRD-LORE readers will be interested to know that the writer had the good fortune of identifying an American Egret on July 23, 1916, at Blue Marsh, Berks County, Pa. (about 7 miles from Reading, Pa.). The Egret was first observed in flight, coming stoically winging along with its characteristic Heron like flight. The sun being propitious, I had an admirable opportunity to identify the bird for an American Egret—with its yellow bill, black legs, and white plumage.

I also wish to report that a friend and the writer identified eighty species of birds on May 10, 1917, at the same Blue Marsh (from Sinking Springs to Blue Marsh and return, 7 to 8 miles). Such a list, as you may suppose, was the making of an interesting day! (Will be delighted to furnish the list if it can be of any use.)

And again may I report that a Black-

crowned Night Heron colony is situated near Bridgeport, Pa., possibly the one referred to as being at Red Hill in the July-August, 1917, BIRD-LORE. The birds had a very successful season, and there are sixty-five nests, with as many pairs brooding, by a conservative count.—**CONRAD K. ROLAND, Narrowsburg, Pa.**

Bird-banding

As a part of certain investigations now being carried on by the Department of Biology of the Western Illinois State Normal School, at Macomb, Ill., 250 young birds were marked during the past summer. A small, white celluloid ring was placed upon the right leg of each bird. Most of the birds are Robins, but several other migratory species are included in the list. All were reared upon, or within one block of the campus. It is hoped that some data concerning the movements and habits of the young birds after leaving the nest and during the next year may be obtained. If anyone who observes a bird marked as indicated above will let us know, it will be very helpful to us. Address any communications to C. W. HEDGECOCK, Macomb, Ill.

[Certain kinds of valuable and interesting data (relative to age and migration for instance) can best be obtained by marking individual birds. The American Bird-Banding Association, Howard H. Cleaves, Secretary, Public Museum, New Brighton, N. Y., issues aluminum bands suitable for placing on the legs of wild birds. Each band bears a serial number, with request that in case of recovery, the American Museum of Natural History, New York City, be notified. A record of each band placed is kept by the Association in card-catalogue form, and can be referred to if a band is recovered. It is expressly stated that under no circumstances should a bird be killed for the purpose of recovering a band, but a certain number of bands are recovered from birds killed by accident, etc. If you find a dead bird in the fields, look at its legs. It may be the bearer of a band which will establish some valuable

scientific fact. We understand that Mr. Cleaves is at present preparing a report of the work of the Bird-Banding Association

which will present much interesting data already obtained by bird-banding in America.—J. T. N.]

THE SEASON

X. August 15 to October 15, 1918

BOSTON REGION.—The fine summer days of late August passed with little noteworthy to the general observer. The fall rains began in early September, storm following storm, with dull weather between for much of the month. The first heavy frost came September 11, but otherwise the month was not unusually cold. In distinct contrast have been the many clear, cold days, with occasional frosts, of late September and early October.

The gradual withdrawal of the summering birds through August and early September, and the apparent absence of migrants from the north may have contributed to cause the seeming great dearth of birds throughout most of the latter month. As a means for determining the approximate time of departure of the local Robins and Bronzed Grackles, the disappearance of those that summer on the Public Garden and Common in the heart of Boston is important. A number of pairs of each species live constantly on these green oases during the summer, raising their young in the midst of the city noise. Their numbers gradually dwindle in late summer, but a few individuals of each species were seen up to September 16, busily hopping or walking about on the grass, sometimes accompanied by half-grown young. It was at about this same time that a Robin-roost, previously noticed at Lexington, was abandoned, though up to the end of August it had become the nightly resort of nearly a thousand birds. The recrudescence of song in several species before they leave for the south is a pleasant reminder of springtime. A last Baltimore Oriole was heard bugling August 31 at Cambridge. On September 1, a Warbling Vireo sang gaily from the village elms at Lexington and was heard by another

observer a few days later. A Yellow-throated Vireo was heard in full song September 12, near the same place. Both species have been rare with us the last two years, a result, in part, perhaps, of the thorough spraying of orchard and shade trees to destroy the insect pests or benefactors. The old elms about Boston have particularly suffered of late years so that the few still remaining in Cambridge have long since ceased to attract the Warbling Vireo.

On September 15, two Myrtle Warblers were seen at Lexington, feeding in the red cedars at the edge of a pine wood, the first northern migrants to be noticed. It was not, however, until September 27 that migrants appeared with a rush, when, on the wings of clear weather following a succession of rainy or inclement days, Myrtle Warblers, Black-poll Warblers, Juncos, and White-throated Sparrows, and a number of Yellow-bellied Sapsuckers appeared suddenly, and with them a few Red-breasted Nuthatches, a bird of irregular appearance here. In the first half of October, the two species of Warblers just noted have swarmed over the country, every birch thicket having its quota of birds. Juncos abounded in the weed-fields and by the roadsides. Bluebirds have been markedly common, their notes being constantly in the air, as small flocks passed over in the early mornings. In feeding they haunt the pastures and gather with Chipping Sparrows and Myrtle Warblers about the open brooks and rills. Yellow Palm Warblers in small numbers have at times accompanied them. The first one seen was on October 2, with a flock of Bluebirds, Chippies, and Myrtle Warblers. Like the last species, it was seen feeding on the smooth, brownish caterpillar com-

mon among grass and weeds at this season. A second bird was seen October 12. Brown Creepers were seen on October 2.

The sunny days of early October seem to have favored the late stay of several birds. A Nighthawk was seen at Lexington on October 5, and a second reported the following evening, in characteristic flight over a meadow. Phœbes were in evidence at least till the second of the month. A belated Great-crested Flycatcher was found on the morning of the 12th, and was watched for half an hour as he busily caught flying insects from a perch in the topmost twigs of a maple. A few Sharp-shinned Hawks have passed through, taking toll of the migrating hosts the last few weeks. Song and Savannah Sparrows swarm together on the edge of weed-fields, Titlarks in small flocks have lately appeared in plowed grounds, and a few Rusty Blackbirds have been seen. Altogether, the first half of October has fully redeemed the poverty of September in its hosts of migrating birds.—GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—Except for a short hot period in August, the summer was, on the whole, a cool one, and signs of autumn appeared at about the customary dates. On Long Island, the Black Tern, generally present in late summer, were very late in putting in an appearance, and the birds were there a comparatively short time, although one, seen on September 22 (at Mastic), is later than they generally remain with us. The Red-breasted Nuthatch almost completely absent last year, has been present in fair numbers, a single bird recorded from Long Island on September 2, and a flight of them reported from various points by various observers in Connecticut, New York, and New Jersey the end of September. The White-throated Sparrow, in the end of September, was somewhat more common and more generally distributed than usual at this time. The southbound flight of small arboreal birds, especially Warblers, was less scant than a year previous, the usually abundant Black-poll Warbler being fairly numerous (in

October), and the Magnolia apparently scarcer of those which should have been common. The Myrtle Warbler has arrived generally and is common. This species was absent from its usual winter haunts the latter part of last winter, and was everywhere unusually scarce in the spring.—JOHN T. NICHOLS, *New York, N. Y.*

PHILADELPHIA REGION.—August has brought the hottest day ever recorded in the history of the local weather bureau, when the thermometer soared to 100 degrees (August 7). At this time the temperature averaged from 10 to 19 degrees above normal for about a week. Such heat had a decided effect on the birds, scarcely a note of any kind being heard, even English Sparrows being much less noisy than is their habit. Toward the end of the month cool days prevailed, and some few migrants were noted. However, the first perceptible Warbler movement was not observed till September 5. From that date, the Warblers were present in their usual numbers, the scarcity this spring having no apparent effect on the numbers this fall, which would seem to indicate that the birds were not as scarce this spring as they were reported, or that the breeding season was very favorable for the increase of this family of birds.

Herring Gulls were first noted September 25. Red-headed Woodpeckers and Goldfinches were somewhat more numerous than usual the latter part of September.

It might not be out of place to mention that there is a very apparent increase this fall in unlawful shooting in this region. I have not only observed a good deal of this myself but several people have told me the same thing. I am glad to say that our local game warden, Charles Folker, is very much alive and has already apprehended a number of these indiscriminating and lawless shooters.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—The city of Washington, though situated in the valley of the Potomac River, is apparently of

the main north and south route of bird-migration, which lies considerably nearer the Atlantic coast. Thus we get here only, as it were, the overflow traffic from the main highway. As a consequence, during August and September, the vicinity of Washington is not a very favorable place for bird observation.

During these two months in the present year there have been three definite migration waves: one about September 1, another about the middle of September, and still another during the last week of the same month. These waves brought a number of birds down from the north earlier than common, yet no earliest records were broken. The Lesser Yellowlegs appeared on August 24, three days ahead of their average date of arrival; the Pectoral Sandpiper, on September 1 (average date of first appearance, September 11, the Slate-colored Junco, on September 28 (average, October 8); the Mistle Warbler, September 28 (average, October 1); the Black-poll Warbler, September 14 (average, September 24); the Common Nuthatch, September 14 (average, September 25). The Red-breasted Nuthatch came on August 31, nearly a month in advance of its time, which is September 24, and it was fairly common during the month of September, which is welcome information, as it was almost wholly absent during last fall and last winter.

The mild, pleasant weather of September evidently induced some species to overstay their allotted time. The Baltimore Oriole, the latest previous date of which was August 26, 1887, was observed by Raymond W. Moore on September 7; the Purple Martin remained until September 26, its latest previous date being September 14, 1889; and the Olive-sided Flycatcher was observed by L. D. Miner and Raymond W. Moore on September 14, the only other autumn record being an individual noted in September, 1881. Furthermore, the American Redstart remained until September 29, although ordinarily it departs about the 19th of this month, and the Green Heron stayed until

September 28, whereas its average date of departure is August 27.

With the migration wave of the middle of September came a large flight of American Robins, and this species was very abundant in the city on September 14. On September 22 Miss M. T. Cooke observed a flock of about a thousand Broad-winged Hawks, and another of some two hundred. These birds were driving in a southerly direction at a great altitude over the city, and apparently made part of the southward migration of the species. The Pied-billed Grebe first appeared on September 24, and since then has been uncommonly numerous for this season of the year. The Black Tern, first observed on August 17 at Chesapeake Beach, by Dr. A. K. Fisher, has likewise been present on the larger streams near Washington in unusual numbers during the latter half of August and most of September. The American Egret, which has been rare of late about Washington, was seen on the Anacostia River on September 1 by Raymond W. Moore, but only three individuals were noted.

An interesting incident was observed by the writer on September 14 in the wooded, hilly country along Scott's Run, near the Potomac River. A fine, adult Bald Eagle, sailing about majestically at a moderate height, was spied by a big Red-tailed Hawk, soaring at a much greater altitude. After circling about for a time over the Eagle, the Hawk suddenly closed its wings and plunged almost vertically, with incredible swiftness, directly at the Eagle, checking himself only when a short distance away. He then proceeded to chase the Eagle out of sight.

There were in the city, during August and September, the customary Purple Grackle roosts, but none of them seemed to be as well populated as usual. There were no large roosts of European Starlings observed, such as were noted last year. During the month of August, however, a few birds, never over seventy-five, roosted near the Purple Martins; they later disappeared from this vicinity, possibly taking up their abode elsewhere, as a few

resorted to the Capitol grounds near the secondary Purple Martin roost. The Purple Martins returned this year in much greater numbers than in August of 1917, but they roosted in another place, as will be more fully described later in BIRD-LORE.—HARRY C. OBERMOLSER, *Biological Survey, Washington, D. C.*

MINNEAPOLIS REGION.—The weather during the last two weeks of August continued cooler than usual. Early in September heavy frosts began to appear in the northern part of the state, ice forming in Itasca Park on September 3, and freezing temperatures prevailing throughout the northern counties on the 10th. On September 12 the first frost occurred at Minneapolis, but it was light, and even the tenderest garden plants are still uninjured in this locality at the present date. In the middle of September, just before the opening of Duck-shooting, the southwestern part of the state experienced several sharp, frosty nights which, at Heron Lake, were supposed to account for the scarcity of local birds, especially Teal. During the third week of September, cold, raw days predominated all over the state, followed by beautiful, warm "Indian Summer" weather that has continued to the present time. Aside from a few local heavy down-pours in August, there has been but little rain. Lakes, streams, and sloughs are exceptionally low, and the uplands dry and parched, which conditions have prepared the way for the widespread and terrible forest fires that are at present causing the greatest loss of life and property in the history of Minnesota. The devastated area extends over several large counties in the heart of the Canadian Zone, and everything in the path of the fires has been swept clean. In addition to the destruction of vegetation, the loss of animal life in such conflagrations must be enormous.

The crop of wild rice this year has been unusually large and luxuriant. Even in the almost dry sloughs it stands tall and dense and heavy with seed. It would seem as though this should have a beneficial effect on the vast numbers of birds, both

aquatic and land that prefer this to any other food. Unfortunately, it comes too late to save the farmers' crops from the devouring hordes of Blackbirds. The damage is wrought by these birds while the corn and grain are "in the milk."

The most interesting phase of bird-study in the fall is the return of the migrants. In this connection it is a perennial surprise to see how quickly many of the far northern breeding waders are back again at their old spring haunts. On August 24 a flock of eleven Least Sandpipers was seen feeding in company with many Lesser Yellow-legs on a mud-flat along the Minnesota River, not far from this city. On the 25th a couple of Baird's Sandpipers had joined them. These two birds kept much by themselves and did not seem to be in particularly good favor with the others. In general actions they resembled very closely the Least Sandpiper. Both ran quickly about, searching for their food by a rapid, vertical probing with the slender bill instead of picking it up in a leisurely fashion as did the larger species present. August 25 a single Green-winged Teal was seen on the mud-bar in company with a brood of ten or twelve Blue-wings. The former species is now a rare breeder in southern Minnesota, and, as a migrant, the bulk comes rather late.

A flock of twelve Horned Larks, old and young, and several single birds were seen near the city on September 2, this being worthy of note because this bird has been strangely scarce in this vicinity in recent years.

Late in August the usual miscellaneous assemblages of migrating and resident birds appeared in the woodlands, roving about, feeding and calling to one another as they drift hither and thither through the tree-tops. The composition of these groups is always a curious and fascinating study. Often they number several hundred individuals and thirty or forty species may be represented, ranging all the way from Woodpeckers to Kinglets. Young and old are alike present. Warblers, Vireos, and Flycatchers predominate. These loitering migrants are here closely

associated for the time with such permanent residents as Nuthatches, Downy and Hairy Woodpeckers, Brown Creepers, Chickadees, and even an occasional Blue Jay. In the earlier collecting days of the writer, these heterogeneous autumn flocks were fruitful sources of many fall specimens. Tamarack swamps, growing as circular fringes of trees around central open areas, were favorite haunts, and as the birds went round and round it was an easy matter, by heading them off by quick movements to and fro across the open space, to become fully acquainted with the entire personnel and many a choice find in species or new plumage was the result. With the falling of the leaves in late September and early October these parties are broken up and the migrating portions pass on their way to their winter homes in the South.

In view of the limited numbers that were observed in this locality last spring, it was interesting to see the abundance of White-throated Sparrows, Juncos, Fox Sparrows, and Myrtle Warblers that passed here this fall. These irregularities in the seasonal representation of birds are rather puzzling problems.

A word in regard to the Ducks this fall. At the opening of the season in mid-September but very meager bags were secured at all points of the state, and it was the opinion of both hunters and guides that now Ducks were less numerous than usual. Just at this writing it is reported that the northern birds are coming down in considerable numbers but it is too early to report in regard to relative abundance.—*THOMAS S. ROBERTS, M. D., University of Minnesota, Minneapolis, Minn.*

ORIOLES REGION.—Purple Martins left the vicinity on the last day of August. Baltimore Orioles were in full song until the middle of September. Chimney Swifts left September 7, which is unusually early for them to go.

Olive-backed Thrushes arrived on September 8 in numbers. On October 7, the first Black-throated Green and Bay-breasted Warblers were noted, and, on

October 14, the first Hermit Thrush, Myrtle Warbler and Slate-colored Junco. Red-breasted Nuthatches and White-throated Sparrows were first noted on September 29, but they probably arrived a few days earlier than that.

It has not been possible for the writer to keep careful note of the birds during the summer and autumn, but the general impression which he has gained is that the singing of most of the Sparrows and the Orioles has continued much later than usual, and that the departure of the insect-eating birds, notably the Swifts and Swallows, came much earlier than usual—which latter was the case last year.

Birds have been about as numerous as usual during the summer, and Robins and Bronzed Grackles have been so abundant that many hundred dollars worth of garden fruits and corn must be credited to their insatiable appetites. English Sparrows damaged the wheat to a less extent than usual.—*LYNDS JONES, Oberlin, Ohio.*

KANSAS CITY REGION.—The most notable event of the season was the finding of a nest of Blue Grosbeaks about a mile east of the southeast corner of the city. The nest was 10 to 12 feet from the ground, in a peach tree, and contained young. The owner of the orchard would not allow of a close inspection of the nest, but the bobbing heads of at least three young could be seen in open-mouthed clamor for food on each arrival of the female. The male sang almost continuously for nearly an hour, and came near the nest several times with food, but was too timid at our presence to feed the young. This bird, like the Bewick's Wren, is known to be extending its range northward in western Missouri, but this is the first authentic nesting record for the Kansas City region. It has been observed in this vicinity only twice previously.

As reported in previous notes from this district, the increase in Ducks has been very noticeable since the new law went into effect. Especially is this true of the species that formerly nested here. Fortunately, they are still able to find suitable nesting

sites in the Missouri Valley, in northwestern Missouri and eastern Kansas, where they may rear their young with some degree of security. It is reported from several points in this up river country that Blue-winged Teal and Wood Ducks have nested in numbers this season, and a few favorable reports have been received as to Mallards, Pintails, and Shovellers. It is regretted that no apparent increase in the Geese can be noted. R. P. Holland, of Atchison, reports that a pair of Canada Geese remained to breed near the Iowa line this summer, and that while the male was killed by some unknown farmer, there was evidence that the female brought off her brood of young. All this is very encouraging to the very few well-wishers of this law in this region.

The flocks of migrating Pelicans usually looked for on the Missouri River from September 13 to 25 did not appear until October 4, when the first of these majestic birds was seen making their way south, high overhead, like a string of glistening war-planes.

Several small, scattered flocks of Lincoln's Sparrows were seen on September 29, an unusually early date for these birds in this region, as they usually arrive near the middle of October.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—The writer's new duties in the service do not take him entirely out of the Denver Region, but they have curtailed considerably his chances of noting bird-life since August 15.

The early impressions of the year, that some birds were not up to the normal in number, and also queer in distribution, has been confirmed during the past weeks. Thus, only one large flock of Bronzed Grackles was seen, to wit, on August 27, and, again, the writer was surprised to see a Hairy Woodpecker in his yard on August 24, a very rare occurrence for that

state in this place. This period has shown in an interesting manner the difference in the nesting habits of two different species of Warblers, both of which breed not more than 20 miles away from Denver, in the higher foothills, thus, the Virginia Warbler appeared about my yard on August 26, and was last seen in the neighborhood on October 15, while the Massachusetts Warbler was detected only on August 28 and 29.

On August 22 a brood of young Robins was noted, all barely able to fly, and plainly just out of the nest, this is a very late date for this species to finish the season's nesting work. Late in August, and early in September, several Goldfinches were seen, all having been what were called Mexican Goldfinch not years ago, while at the same time the writer saw none of the Arkansas species, though they were common breeders earlier in the season. This observation is but one of a similar nature made in the past, and lends support to the suggestion made by E. R. Warren that this form is not with us early in the season, and probably is really a distinct species, not a form of the Arkansas Goldfinch. I do not see the previously called Mexican Goldfinch here until late in the summer or early in the fall, and I, too, feel dubious as to its being a form of the Arkansas Goldfinch.

On September 9, many large flocks of Robins were seen flying southward; this could not have been due to severe weather driving them south, for the season here has been mild and exceedingly pleasant.

The writer has seen, this fall, more Barn Swallows, often in considerable flocks, than in several years past.

Our winter birds have begun to arrive, the Grey-headed Junco getting here on September 13, and today (October 15) some Tree Sparrows were seen in the suburbs.—W. H. BERGOLD, *Denver, Col.*

Book News and Reviews

JUNGLE PEACE. By WILLIAM BEARD.
Henry Holt & Co., New York, 1918.
8vo. 277 pages, 16 full-page plates from
photographs.

This book is a picture. Its theme is the beauty of the South American jungle as seen by the philosopher-naturalist. It is not a picture of birds, but there are birds in the picture. Of the eleven chapters which comprise it, the central one of seventeen pages gives a vivid, careful description of 'Hoatzins at Home.'

In the author's words, "The hoatzin is probably the most remarkable and interesting bird living on the earth today." The colony of Hoatzins studied was over the edge of a river in "an almost solid line of broadleaf pumpler or thorn tree. This was the real home of the birds, and this plant forms the background whenever the hoatzin comes to mind." The methods of the reptile-like young of this bird using the clawed digits at the bend of the wing in climbing, and also of diving into the water beneath to escape capture, are described in detail.

The student of bird-life in temperate climes will find in the many allusions to birds of the tropics the tang of the unfamiliar, yet much that parallels and gives fresh meaning to things which he knows well. We are all acquainted with the heterogeneous association of Chickadee, Downy, Nuthatch, Kinglet, etc., which drift through the winter woodland, and read with interest (page 247) "Little assemblages of flycatchers, callistes, tanagers, antbirds, manakins, woodhewers and woodpeckers are drawn together by some intangible but very social instinct. Day after day they unite in these fragile fraternities which drift along, gleaning from leaves, flowers, branches, trunks, or ground, each bird according to its structure and way of life. They are so held together by an intangible gregarious instinct that day after day the same heterogeneous flock may be observed, identifiable by

peculiarities of one or several of its members. The only recognizable bond is vocal—a constant low calling; half-unconscious, absent-minded little signals which keep the members in touch with one another, spurring on the laggards, retarding the overswift."

'Jungle Peace' is delightful reading in part or throughout. The thread which binds it together is subtle, perhaps the author's personality, or perhaps the many-sided spirit of the jungle itself. We are told that most of the chapters have appeared independently in the *Atlantic Monthly*, and that the one on the Hoatzins is adapted from a publication of the New York Zoological Society. In any event, they form an harmonious whole from the initial ones which carry the reader southward into the tropics, across the Sargasso Sea and through the West Indies, to the final 'Jungle Night,' which leaves him in moonlight stillness of the jungle with the weird cry of the big goat-sucker-like poor-me-one ringing in his ears. Looked at as a picture, the light and shade values are the elements best executed.—J. T. N

The Ornithological Magazines

THE AUK.—In the October issue we may read a valuable contribution on 'The Nesting Grounds and Nesting Habits of the Spoon-billed Sandpiper' by Joseph Dixon, who shows us a half-tone of the country and of the eggs and nest of this little-known bird, as well as diagrams of its nuptial flight and a sketch map of northeastern Siberia. This very rare Sandpiper, with its peculiar, spade-shaped bill, is accidental on the Alaskan coast, but it has been taken in migration as far south as Rangoon, Burma. In contrast to this study of a rare bird in the far north, we have observations made on the common Crow in Massachusetts by Dr. Chas. W. Townsend, under the title, 'A Winter

Crow Roost. Let no one despair of opportunity, for if one is denied Arctic exploration, one may find something new about home, and Dr. Townsend shows us what may be learned of the humble Crow when he gathers nightly by the thousand in a "river of black wings." We learn that "Crows take no interest in food conservation" and eject pellets like the Owls, rich in nutriment when berries are plentiful in the fall, but consisting only of skins and husks when food becomes scarce in the winter. Arthur T. Wayne, with 'Some Additions and Other Records New to the Ornithology of North Carolina,' also shows how much may be learned in a limited area by constant and careful observation.

Chauncey J. Hawkins reviews at great length some of the pros and cons in 'Sexual Selection and Bird-Song,' adding some theories of his own which, although they are not altogether convincing, are, superficially at least, as plausible as some others that have been advanced in the past.

Prof. Hubert L. Clark discusses 'The Pterylosis of the Wild Pigeon' based on material in the Agassiz Museum which is fortunate in possessing alcoholic specimens of an extinct bird.

In a 'List of Birds Collected on the Harvard Peruvian Expedition of 1916' are included a number of new forms. A sixth paper of 'Notes on North American Birds' by H. C. Oberholser briefly discusses and summarily settles the status of the Belted Kingfishers, the Barn Owls, the Brown Creepers, the Redpolls, the Myrtle Warblers, and the Carolina Chickadee. He also, in another extensive paper, resuscitates 'The Subspecies of *Larus hyperboreus*, Gunnerus' (i. e. the Point Barrow Gull), which the present reviewer had the temerity to lay at rest a dozen years ago. It is merely a question of opinion as to how much difference in size we care to recognize!

The departments of Notes and of Reviews are filled with items showing the interest of numerous observers and workers in many channels of activity.—J. D.

THE CONDOR.—The contents of the September number of "The Condor" are unusually varied and interesting. Bradbury's 'Notes on the Nesting of the Mountain Plover' illustrated with eight excellent photographs, contains an account of the finding of six sets of eggs of this bird, in May, 1917, on the open rolling prairie about 26 miles east of Denver, Col. A brief autobiography of Frank Stephens, accompanied by a portrait, will be read with much interest by the many friends of this veteran field naturalist. This article, the first of "a series of autobiographies of the older ornithologists of the West," will, we hope, be followed by others at frequent intervals. A subject somewhat different from those based on ordinary field experiences is discussed in Willard's 'Evidence That Many Birds Remain Mated for Life.' The evidence presented concerning Flycatchers, Hummingbirds, Warblers, Woodpeckers, Doves, and other species nesting in southern Arizona, while strongly presumptive, suggests that more conclusive data for certain species might be secured by banding birds and observing them from year to year. The fourth chapter of Mrs. Bailey's 'Return to the Dakota Lake Region' is devoted to a most interesting description of the habits of 'the Grebe with the Silvery Throat,' commonly known as the Western Grebe.

Warburton contributes a suggestive article on 'Some Oceanic Birds from off the Coast of Washington and Vancouver Island.' Auklets, Albatrosses, Murres, Puffins, Shearwaters, Skuas and Fork-tailed Petrels were observed during a week spent on a halibut fishing-launch from June 26 to July 3, 1917. If such means of transportation were utilized more frequently, a valuable series of observations on the sea-birds of the fishing-banks could readily be collected.

Two rather more technical papers are: Oberholser's description of a new subspecies of Blue-throated Hummingbird based on a specimen from the Chinlehan Mountains, Ariz., and Taverner's list of forty species of 'Summer Birds of Alert Bay, British Columbia.'—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

Published by D. APPLETON & CO

Vol. XX Published December 1, 1918 No. 6

SUBSCRIPTION RATES

Foreign (including postage) one dollar and fifty cents a year;
domestic (including postage) one dollar and seventy-five cents,
in advance.

Copyrighted, 1918, by FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

With the publication of this number, *BIRD-LORE* completes its twentieth year. While this volume, like the nineteen it follows, is the lineal descendant of its immediate predecessor, each one has given birth to its successor without loss to itself, and *BIRD-LORE*, at two years remains as tangible an entity as *BIRD-LORE* at twenty now becomes. So we may perhaps be permitted to express the satisfaction with which our eyes rest upon the row of volumes that mark the years of *BIRD-LORE*'s life, with their thousands of pages of text, their several thousands of photographs, and their hundreds of colored plates. They form not only a permanent contribution to our knowledge of bird life, but they also contain a detailed history of how our birds have gradually won their proper place in the hearts of the people and have finally been accorded their rights as citizens. The twenty years of *BIRD-LORE*'s existence almost cover the entire second of the two periods which mark the actual awakening of the country to a realization of the value of its assets in bird life.

The first of these periods was inaugurated by the formation of the American Ornithologists' Union in 1884. It included also the organization of the first Audubon Society, in effect a branch of the Union, and lasted until 1894. Then began the second movement, which, under the inspiring leadership of William Dutcher, developed into the National Association of Audubon Societies.

It was the A. O. U., with its direct offshoot, the Biological Survey, that laid the foundation on which this structure could be raised; it was the Audubon Society which brought a knowledge of birds to the people; it was the response of the people that made bird protection possible.

With the Federal Migratory Bird Law an accomplished fact, the National Association is now relieved of the necessity of watching the legislation of every state and of combating the numberless attempts to legalize the destruction of birds for private gain. It can, therefore, devote its efforts largely to the most profitable field which it has before it—the development of its work with children. Prior to the war, the growth of the Association's cooperation with schools was advancing at a phenomenal rate, but with the establishment of the Junior Red Cross the attention of the children has naturally and properly been focused on various phases of war-relief work.

The Red Cross, however, reminds teachers, through its 'Teachers' Manual,' of the importance of studying conservation problems and, in this connection, it commends the efforts of the National Association to place a knowledge of the value of birds to man within reach of every child. Even before the end of the war, therefore, we may expect to see our work in the schools develop at its former rapid rate of increase, which means that the limit of its growth will be marked only by the extent of the resources of the National Association.

The influence of the work itself cannot be overestimated. The school is often the most direct and effective road to the home. Nesting-boxes and feeding-stands made in the schools find their natural resting-places in home-gardens, and with them come all the delightful possibilities of making friends with the birds.

Here and there will flame up the 'divine spark' which is the priceless heritage of the born ornithologist, but everywhere we may hope to see that intimacy with our more familiar birds which makes them the most potent bonds between man and nature.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

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

CHRISTMASTIDE REFLECTIONS

Most of the harvest of the war-gardens upon which I have looked through shortening autumn days is now safely under cover, but here and there a frost-nipped stick or crackling stalk that has escaped the brush-heap fire of the empty lot in which the gardens were made, attracts a pair of persevering Jays or a flock of acquisitive English Sparrows. One lone cornstalk recalls to mind the lines of the poet Lanier, to whom every swaying bough or growing blade, every glow of color in sky or sea or on flashing wing, conveyed Nature's truth in measures of his universal language—music.

"I wander to the zigzag-cornered fence
Where sassafras, entrenched in brambles dense,
Contests with solid vehemence
The march of culture, setting limb and thorn
As pikes against the army of the corn.

"Look, out of line one tall corn-captain stands
Advanced beyond the foremost of his bands,
And waves his blades upon the very edge
And hottest thicket of the battling hedge."

—From "Corn," by Sidney Lanier.

On the walls of the early home of a more familiar American poet are these words, written by Stephen Longfellow in 1824 to his son, Henry, who was then in college: "I am happy to observe that my ambition has never been to accumulate wealth for my children, but to cultivate their minds in the best possible manner and to imbue them with correct moral, political and religious principles, believing that a person thus educated will with proper diligence be certain of attaining all the wealth which is necessary to happiness."

To the stranger looking, as the poet so often did, out upon the narrow, walled-in garden of this simply furnished home, comes back the glow of contact, even through the medium of these treasured relics of his past, which such a lover of nature felt as he watched the falling leaf or mused upon the misting rain. Seen through the poet's eyes, how clearly is the truth revealed!

NEW STANDARDS IN A NEW ERA

In an illuminating and, as it seems, prophetic address given by President emeritus Eliot of Harvard University, entitled "Certain Defects in American Education and the Remedies for Them" (later published as Teachers' Leaflet, No. 5, Bureau of Education), eleven points were frankly stated and discussed with reference to the betterment of our educational system, and particularly that part of it represented by the public schools.

Briefly, the defects noted were classified under eleven headings, of which the last three are: (9) NO MANUAL SKILL, the remedy for which is the development of "some kind of ocular and manual skill, which may be attained not alone through mechanical drawing and the elements of free-hand drawing, both of which are desirable in elementary and secondary schools, but also, the elements of chemistry, physics, and biology in an experimental and concrete manner, partly for the reasoning of these sciences, of course, but also for the training of the senses which comes through the proper study of them," (10) LITTLE TRAINING OF THE SENSES, again the remedy for which lies in systematic training, and (11), NO HABITUAL ACCURACY OF OBSERVATION AND STATEMENT, for which what better training could be offered than nature-study? Indeed, the last three defects enumerated find much of their antidote in nature-study.

President Eliot observes that "it is the men who have learned, probably out of school, to see and hear correctly, and to reason cautiously from facts observed, that carry on the great industries of the country and make possible great transportation systems and international commerce," and although we may take some exception to this opinion, it is nevertheless based upon a wide and impartial estimate of actual conditions.

Inspected thus critically, our school-systems, admirable as they seem in organization and equipment, must be subjected to a very searching investigation, if they are to fulfil the needs of a new era. It would be well if in every school might be posted, for the benefit of each pupil, these words of President Eliot: "Every boy and girl in school should learn by experience how hard it is to repeat accurately one short sentence just listened to, to describe correctly the colors on a bird, the shape of a leaf or the design on a nickel," and for each teacher "every child should have had during its school-life innumerable lessons in mental truth-seeking and truth-telling."

The pity is that we do not recognize the unlimited opportunity in bird- and nature-study for this much-to-be-desired training, and enter into this inheritance so long withheld from us in its entirety.

Not only our public schools, but normal schools, colleges, and universities need awakening and are rapidly coming to it through the exigencies of the war. To-day between five and six hundred of our higher institutions of learning are in affiliation with the War Department, having in charge the Students' Army Training Corps. Time-honored curriculums are being completely revamped,

in the interests of overcoming some of the defects emphasized above. If our colleges and universities can so willingly and rapidly meet the demand for a more practical and concrete training, why should not our public and normal schools follow their patriotic example? They are leading the way as President Eliot prophesied they must, and we may look for "a new sort of teacher and much new apparatus" also, thus "*broadening but not excluding book work.*"
—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XLII: Correlated with History, Geography, Physiology, and Conservation

"The Wild Turkey should have been the emblem of North America, and so thought Benjamin Franklin. The Turkey is the national bird, truly indigenous, and not found beyond the limits of that continent, he is the herald of the morning, and, around the log-house of the squatter, must convey associations similar to those produced by the crowing of the cock around the cottage of the European farmer. 'I was awakened,' says Bartram, 'in the morning early, by the cheering converse of the wild turkey cocks, sauntering each other from the sun-brightened tops of the lofty cypress and magnolia. They begin at early dawn, and continue till sunrise. The high forests ring with the noise of these social sentinels, the watchword being caught and repeated from one to another, for hundreds of miles around, insomuch that the whole country is, for an hour or more, in an universal shout, or in the poetry of Southey,

'On the top
Of yon magnolia, the loud Turkey's voice
Is heralding the dawn; from tree to tree
Extends the wakening watch-notes, far and wide
'Till the whole woodlands echo with the cry.'"

—From *The Naturalist's Library*, Vol. III.

THE MEAT-SUPPLY OF THE WORLD

NOTE.—Referring to the preceding exercise, let emphasis again be placed upon the value, to both teachers and pupils, of becoming familiar with the work and publications of the United States Department of Agriculture. As the public need for information and instruction becomes more urgent, not only with reference to the food supply of the world, but also to much of the essential business of living, the Bureau of Education under the Department of the Interior, in cooperation with the United States Food Administration, has undertaken a series of "Lessons in Community and National Life," graded from the intermediate classes of the grammar school to the upper classes of the high school.

This fundamental subject of food involves a great deal of the business of the world, as well as matters pertaining to business organization, national standards, the origin and development of large industries, national institutions and methods and pro-

cesses of government. In these Bulletins is a simple, clear presentation of facts which every American citizen and every future citizen of America should know. The Commissioner of Education at Washington, D. C., has charge of these Bulletins. They should be widely studied and discussed.

Those who have taken up the matter of the world's supply of cereals, such as wheat, for example, will have discovered how complex the subject is, whether viewed from the point of natural and cultivated varieties, distribution and demand from country to country, and by race to race, or the gigantic business mechanism which controls the production and trade-distribution of this practically world-wide essential of human diet.

A second important subject is the meat-supply of the world. It is true that many people, not vegetarians by habit, are learning to eat less meat and more vegetables, but meat has become so favored an article of diet that, generally speaking, it is an essential food. There are important substitutes for meat which we should learn to use, but so long as meat remains on our menus, it is well to study its history and use.

Familiar as we are with the appearance of cooked meat on the table, and of "cuts" of meat in the market, perhaps no one of us could correctly locate or describe the most notable meat-producing centers of the world or properly explain the origin of our present meat-supply. We have heard, perhaps, of the vast cattle-ranges and large ranches which a generation ago occupied the great plains of the United States; we may have pictured rather dimly in our minds the rich pampas-lands of South America or the far-straying flocks of Australia, but could any of us write down or mark on a map the places where beef, pork, and mutton are produced in large quantities? Could we name even a few of the different stocks of cattle, sheep, and hogs which furnish our meat-supply, or tell where they come from? When you see a cow, a lamb, or pig, does it occur to you that each has a history worth looking into, and not only a history with reference to your food-supply, but also a history in connection with animal creation and human civilization?

You may sometime have had on your table a thick, juicy steak which you heard described as a piece of "Texas beef." Could you have watched Columbus loading his frail ships for a second voyage to America in 1493, or, later, colonists starting for the newly discovered West Indies, you might have seen the ancestors of this so-called Texan stock being taken from the Old World to the New, where they spread partly in domesticated and partly in wild state, at last reaching the mainland, both north and south of the Isthmus of Panama. By 1525 this stock had reached Vera Cruz, Mexico, and thence doubtless found its way gradually into Texas. Travelers and settlers returning to the Old World, tradition tells us, carried the native Wild Turkey of North America to Spain, whence it probably became domesticated as far north as Great Britain, and was in later times retaken to America by colonists who very likely knew nothing of its origin. In 1836, Sir William Jardine, Baronet of Scotland, wrote: "The

Turkey has now been domesticated in almost every civilized part of the known world, and it is probable that it will be sooner extirpated from the greater part of its native wilds than from the poultry-yards of the opulent and luxurious. Bonaparte observes, that it is now extremely rare, if, indeed, it exists at all, in the northern and eastern parts of the United States. In New England, it even appears to have been already destroyed one hundred and fifty years back.

... We may anticipate a day, at no distant period, when the hunter will seek the Wild Turkey in vain."

It seems a long step from our common barnyard fowl to the jungles of India where some of its ancestors had their native haunts, or from the sociable grunting pig of our farms to the fierce wild boars of Europe and Asia. It is, perhaps, not quite so difficult a stretch of the mind to associate the quiet cattle and sheep of our pastures with the huge musk-oxen of the frigid north and the water-buffalo of the Philippines and East Indies, or with the graceful pronghorn of the Rocky Mountains, and even with the more familiar goat. One has only to study the origin and distribution of any domesticated animal to learn much of interest and value in the history of mankind. Whether other animals than those already domesticated might have been tamed to the service of man, we can only test by experiment. Those animals and birds which man has thus far trained to live under his care are the ones upon which we most depend for food. It will be useful in your nature-study work this coming year to read all you can about these food-producing creatures, and to write compositions describing their native haunts and nearest relatives, as exercises in English, geography, and history.

Many boys and girls nowadays are joining Pig Clubs or Poultry Clubs, to help themselves and others learn to properly conserve and increase these valuable sources of meat-supply. All that you can find out about pigs and poultry, for example, will add to the interest of your Club meetings and aid your own intelligence in selecting and breeding good strains or stocks. It might be stated as a rather important point that many of the failures of poultry-raisers and stock-owners are the result of lack of knowledge. If there were space to make this matter more emphatic by giving statistics and detailed illustrations, it would be delightful to go more deeply into the history, let us say, of a Jersey cow, a Shropshire sheep, or a common black pig and Plymouth Rock hen. But this you can do for yourself, if you will take the pains to ask your public librarian to assist you, or write to the U. S. Department of Agriculture at Washington. In any case, remember how much there is to be learned about **LIVE ANIMALS** before they become part of our marketable food-supply.

Considering now these same animals as a source of meat-supply, we may first lay stress on their value as food for man, as compared with the value of cereals, vegetables, fruits, or various other accepted articles of diet.

Meat is rich in protein and fat, but lacks carbohydrates, while cereals contain the latter and protein, but lack fat. In determining the value of dif-

ferent kinds of food, other chemical ingredients, such as water, mineral matter, and refuse are tested before it can be known exactly how much fuel-value may be reckoned to each pound of a given food. This fuel-value is set down in terms of calories, a convenient method of getting at the relative fuel-value of such different kinds of food as we are accustomed to eat. In studying physiology you will learn about the organs of digestion, their proper use and the harmful results of their abuse, with reference to these foods.

Since the science of physiological chemistry has made it possible for us to know beyond any doubt what kinds of food are needed to make up a wholesome diet, and what kinds are not necessary, or are possibly harmful, and also, how much is needed of certain kinds of food to maintain health, it is extremely important that every boy and girl should learn something about these matters.

Just because we may like some kinds of food much better than others is not in itself a reason for eating them instead of other kinds, although one's taste is usually a fair indicator, in health, of desirable foods for the system. It is a good thing to be adaptable and to learn to eat a variety, so that if one thing fails, another may be substituted in its place.

When the supply of meat in England was cut down suddenly by circumstances attending the war, it was decided by the Food Administration Committee to find out who needed meat the most and then to make it possible for the scanty supply to be distributed where it would do the most good in producing human energy. It was found that "before the war, the consumption of meat in England was as follows:"

Meat consumed per week, per person:

Group I, artisans, mechanics, laborers	2 lbs.
Group II, lower middle class	2 $\frac{1}{4}$ lbs.
Group III, middle class	3 $\frac{1}{2}$ lbs.
Group IV, upper class	5 $\frac{1}{4}$ lbs.
Average consumption per person	2 $\frac{1}{2}$ lbs.

Under Lord Rhonda's food-regulations, the meat-ration of all groups was cut to 1 $\frac{1}{4}$ LBS. PER WEEK PER PERSON, and in no case could anyone get more, except certain people in Group I, such as munition workers, who are known definitely to need a larger meat-ration.

When we recall that only 35 per cent of the food eaten in Great Britain is bread, while in France it is about 50 per cent and in some other countries on the continent 60 per cent, or even 70 per cent, we begin to realize what a remarkable change the English people made in their diet, and to realize that the small sacrifice we are called upon to make, in decreasing our accustomed ration of meat, is hardly to be compared with so radical a cut as that to which they agreed.

In finding out just how much a nation needs for food-supply, many factors enter in, which we are not in the habit of thinking about. For example, we are

told that we must give up the highly fattened prize beef, mutton, and pork, which have made our markets famous, because the fodder or food of cattle, sheep, and hogs must be reckoned more carefully in relation to its use. Beyond a certain point in fattening stock for market, it is wasteful to feed so large a ration as is necessary to add still more fat to the animal, already sufficiently fattened for food-purposes.

Not only must we learn to cut down our ration of meat at need, but we must also learn to give up over-fattened meats and to take substitutes, as well as to add new kinds of meat to our present variety. In Peary's arctic bill-of-fare appear walrus and seal meat, which he describes as making a "healthy diet not relished by white men as much as by Eskimos", musk-ox, reindeer, and polar bear meat, "all delicacies for any table," harp and square-flipper seal meat, which is not as strong as the walrus and other seal meat, and among birds, a variety of northern species upon which human life depends at certain times for existence in latitudes where no cereal crops are known. Fish also enters into this arctic diet.

The possibilities of the prairie-dog, the muskrat (sold under the name of "marsh rabbit"), of horse-flesh, and even of the hippopotamus, are to-day made known to us. Some of the North American Indians found dog-meat wholesome, while we recall the birds'-nest soup of the Chinese made from the nest of a species of Swift, and the cultivated taste of the Boers in South Africa for Ostrich eggs. One Ostrich egg weighs from two to three pounds and is equivalent in quantity to two dozen hens' eggs. Daniel Lewis Noyes, writing about "New Meats for the Wartime Table" says that eggs of the Ostrich are being canned, without the shell of course, and shipped to London to be used as a substitute for hens' eggs.

This leads us to call attention to the possibilities of adding to our meat- and poultry-supply by proper means of rearing certain edible birds in domestication, in addition to the common forms of fowl now in use. Such artificial propagation calls for much skill and knowledge and is worthy the ambition of the careful student. At present, every boy and girl on a farm should at least learn to care successfully for a dozen or more hens, or for enough to supply home needs. Here in town, some people are producing their own egg- and poultry-supply by using the portable houses which shelter a dozen fowls. The results are remarkably good, and one looks with envy at the young woman whose daily record shows that from the middle of December to the first of September 2,316 eggs were produced from twenty-two hens, kept in a small chicken-house on the back of a narrow city lot.

By actual tests, boys and girls who have become active members of Poultry Clubs, as well as of Pig Clubs, have improved in so many ways that too much cannot be said in favor of these Clubs where they are conducted by an informed and responsible person.

In our study of the meat-supply of the world, there are still other points of great interest and value, namely, the investigation of diseases among cattle

and poultry, and the inspection of meats for the market in relation to human welfare and health. If you will look in the Yearbook of the U. S. Department of Agriculture for 1915, and read the article entitled, "Animal Diseases and Our Food-Supply," you will find many facts desirable to know. The discovery of the carriers of malaria, yellow fever, and bubonic plague was led up to by investigations on cattle-tick fever, for instance, while the figures of annual loss from diseases of animals and poultry, with statistics of work already done in suppressing them or producing immunity to them, show what a great opportunity many a bright student of these common creatures may have, in adding to knowledge, economic resources, and human welfare. Begin now to study with a desire to find out the truth of the world about you in a practical, thorough manner; learn to eat properly a sufficient amount of wholesome food, and, above all, cultivate happiness in whatever you undertake. These three maxims of right living and right thinking will do much to assure you perfect health, contentment, and joyful anticipation of each coming day.—A. H. W.

SUGGESTIONS

1. Make a series of charts to represent the distributions of cereals. Have a wheat-chart, a corn-chart, a rye-chart, etc. Hang each one up in turn, with a picture of the growing crop, and pass around a bottle of the seed, showing what part or parts are used in making flour, meal, cereals, etc. Make this study a preparation for Bird and Arbor Day exercises incidentally.
2. What is a ruminant? an ungulate?
3. How many different animals can you name which are ruminants?
4. How many breeds of cattle can you name?
5. Where do Ayrshire and polled Angus cattle come from? What is each most useful for in our food-supply?
6. Describe Jersey and Guernsey cattle and give their history.
7. Which breeds of sheep have fine wool? Which are most used to produce mutton? Name some of the best known breeds and tell something about the value of each one.
8. To what kinds of birds does the term poultry apply? Is poultry a meat, or a meat substitute? Look up the use of the term "meat."
9. Which is easiest to raise, turkeys, chickens, ducks or geese? What are guinea-fowl?
10. Look up the development of agriculture in Argentina. What was the original breed of cattle there? Why were Durham, Shorthorn, Hereford and other breeds introduced? How much wheat and corn are produced there?
11. How are cattle used in India? Did you ever see cows used in the harness? or trotting bullocks attached to wheeled carriages? Have the great famines of India affected the supply of cattle there?
12. Do you know of any cattle with humps on their backs? Where are such cattle found? What other kinds of animals are humped? Are they related to cattle?
13. How are cows cared for in Holland? What is much of their milk used for?
14. Look up the history of the jag in Serbia, of poultry in France, sheep in Australia and of goats in Switzerland. (See "Encyclopedia Britannica.")
15. Do any birds protect or help protect cattle from the insects which annoy them and often cause disease?
16. How did the Cowbird get its name?
17. Learn something of the life-history of cattle-ticks, sheep-ticks, and of "black-head" among poultry, especially among turkeys.

18. Learn something about the regulations of our federal inspection of meat. What is good meat? bad meat? Be careful to define the latter correctly.

19. How much do you know about the artificial propagation of wild birds?

20. What is the National Association of Audubon Societies doing in this direction? Private game-preserve holders? The Government of this and other countries?

Get all the information you can at first hand through public libraries, and the federal bulletins already mentioned. Failing in these sources, the School Department will try to refer you to other sources.—A. H. W.

For and From Adult and Young Observers

ROBIN

Black back, wings, tail and head,
Has Mr. Robin, with breast of red.
His nest is in that little tree,
With Mrs. Robin and babies three.

If you want to see him, just remember,
From early April till 'round September,
He stays in the north and is so gay,
Caring for his wife and family.

When the babies learn to fly
Way up into the bright blue sky,
Then to the south the Robins go
To get away from the ice and snow.

—DONALD H. ROBINSON, *Audubon School, Scranton, Pa.*

WORD FROM SCRANTON, PA.

Being a teacher in Audubon School and an organizer of Junior Bird Clubs in Scranton, I am very much interested in the School Department of BIRD-LORE.

Our Club in Audubon School consists of over sixty members, and all are very enthusiastic. We have made bird-boxes and placed them in Nay Aug Park. We have a feeding-station there, and each club member takes a turn in placing food there during the winter months. Our last meeting was held in the park, and more than a hundred attended. We launched a floating bird-bath on Lake Everhart. Several boys gave bird-calls. The older pupils were given the privilege of joining the Scranton Bird Club, which is for adults.—HELEN J. HAY, *Scranton, Pa.*

(The Robin is so much beloved by the majority of observers, both young and old, that the verses sent by this teacher from one of her pupils will give pleasure to other readers of BIRD-LORE.

Once more President Elliot's words should be recalled with reference to the difficulty of describing the colors of a bird's plumage. As a test, see how many of us, teachers as well as pupils, can describe with some degree of accuracy the colors and markings of the Robin without consulting a book or picture. The *School Department* would welcome a picture of the floating bird-bath as well as one of the Club who launched it.—A. H. W.

HOW WE STUDY BIRDS IN OUR ROOM

The way we study birds in our room is very interesting. Last fall we made bird-books of colored paper. At the top we printed the word "Birds" and on the bottom our own names. We selected a bird we liked, painted and cut it out, then placed it in the center of our covers. Each week we add a plate to our books. The plate consists of a piece of drawing paper with an inch margin. We divide the paper into two parts, the upper half for the bird's picture and the lower half for the description. We draw the bird and paint it in natural colors. In the descriptions, we write out all we have learned about the color, size, diet, use, habits, and range of the bird. We get a great deal of help from the little sets of birds that Church and Dwight Soda Company, of 27 Cedar Street, New York, issues. By sending them six cents in stamps or money, they will send a set of thirty colored birds, with descriptions. We took up a collection in our room and bought a bird-guide. We also get help from *BIRD-LORE*, which we get because we are members of the Junior Audubon Society. On Fridays we have oral composition on the bird we drew. On the following Monday we have written compositions on our bird. We pick out the best essay by vote of class, and the winning ones are sent to the different local papers to be published. It is a great honor to get your essay in the paper, so every one tries.—ELIZABETH WYATT (age 12 years), Seventh Grade, *Emerson School, Maywood, Ill.*

The teacher writes: "This plan has been such a success in arousing interest in birds, and has caused the pupils to accumulate such a fund of information concerning birds, that we decided to tell others about it through the pages of *BIRD-LORE*. The special advantage of this plan, it would seem, is the correlation of bird-study with composition and hand work. Simple as the books may be which are thus made, they offer considerable opportunity for skill and neatness, in addition to mental drill."—A. H. W.]

SEEN FROM THE WINDOW OF A RURAL SCHOOL IN VERMONT

To attract the winter-staying of birds, a doughnut had been slipped on to an apple tree branch, far enough from the tip to prevent its being blown or shaken off. This delectable morsel was duly discovered by the birds, who had come to expect little leasts from crumbs, scattered by the school children, on the top of a near-by stone wall. In a short time a lordly Blue Jay came to regard the doughnut as belonging solely to him. One day an unusual commotion called

us to the window. The Jay was alternately scolding and pecking vigorously at the doughnut, while a red squirrel, on the under side of the twig, was gnawing the wood just at one side of the cake. Suddenly the twig fell apart, the doughnut slipped off, and was caught in a twinkling by the squirrel. He ran over the apple tree, leaped upon another tree, and from that to a stone wall, and, still running on the wall disappeared from view over a hill, —all the time pursued by the Jay shrieking, "Thief! Thief!" and making vicious thrusts at the victorious maurauder.—LELLA J. WEBSTER, *East Roxbury, Vt.*

{Here is observation and composition "on the spot" one might say. A delightful method of teaching birds is to seize any opportunity for observation, even though it disturb the school routine for a few moments. Such an observation is likely to make the pupils remember the day, the lesson taught by Nature as well as the one given out by the teacher, and the schoolroom with pleasure.—A. H. W.]

A FEEDING STATION

I think you may be interested to know some things we observe that the birds do while eating crumbs. The birds that come most frequently are: English and Chipping Sparrows, Robins, Brown Thrashers, Starlings, and Grackles. I think I have read that Brown Thrashers are shy, but they come once in awhile. This morning I noticed the English Sparrows were flying around very excitedly and a Robin was chasing a Blue Jay, and I suppose when the Blue Jay flew away from the Robin the Sparrows thought he was chasing them, which was the reason for the excitement. About a week ago mother called my attention to a female Robin with four fairly young birds around her. Two she was feeding, one she chased away, and the other didn't have any attention paid to it at all. We have had Robins and Sparrows feeding young birds in front of the window. The Robins seem tamer than Sparrows and come very close to the window. We had a Chipping Sparrow's nest about ten feet from the porch in the front. We used to be out on the porch a great deal and the birds were remarkably tame, even allowing us to approach about one and a half yards from the tree while feeding was going on. Last year Starlings were in a nesting-box put up in our yard by a boy who lived in the next house.

I want to end the letter by telling how much I enjoy BIRD-LORE and I do wish it would come oftener.—NOEL SAUVAGE, *Glen Ridge, N. J.*

{The home feeding-station is perhaps the most attractive form of bird study for those who have only spare moments to give to it. An intimacy hard to duplicate elsewhere soon springs up between the observer and his bird pensioners.

In the above communication, dates are not given as to the precise time when the birds ceased frequenting the feeding-station, but it was presumably a little later in the season than usual, owing to the cold, backward spring. The actions of parent birds toward their young just out of the nest are less generally understood than those of nestlings, especially with reference to birds raising more than one brood. In the case described above, lacking the actual identity of the four young birds, one might hazard a guess that the parent paid most attention to those leaving the nest last, although individual

birds vary so much in what we may call their intelligence, that their actions are not always to be explained in the same way. Robins vary greatly in their nest-building instinct. For example, one finds their nests at a most any distance from the ground up to 50 feet or more in height, and the nests themselves in all degrees of completeness and perfection of construction, from a shallow, hastily fashioned structure, with so little mud as to puzzle the observer, to a high, shapely nest, made solid with a plaster-like foundation. Our readers send us many contributions on the Robin. Next spring let us try to follow with sharp eyes the movements of the parents and young as the latter leave their nest.—A. H. W.]

ACTIONS OF A CHIMNEY SWIFT

I have seen lots of Chimney Swifts and know where there are lots of nests but never had a Swift in my hands until the other day. There is a pair that have built in our chimney. One of them got down the stove-pipe and flew about in the pipe for a whole day. Then I became curious, so I rapped on the pipe and it began to flutter. I turned the damper off. The little fellow was frightened and flew around inside the stove. I caught him and got a good look at him and let him go. He was not hurt and flew away.—ROGER D. PINKHAM, *Lancaster, N. H.*

[Young Chimney Swifts are far from beautiful objects, and they are extremely difficult to feed, but their actions are of much interest.—A. H. W.]

NOTES ON THE FLOCKING OF SWIFTS IN FALL

We are all watching for the return of the Chimney Swift, which has been noted as early as April 10. He is an April comer that never fails us. October 12 was the last night he spent here. Before that there had been a remarkable sight every night at dusk. Scores of Swifts circled around one of the tall chimneys of Giles Hall (a brick school building four stories high), at first in wide sweeps—they had been gathering in the neighborhood since five o'clock. They came closer and closer to the chimney, 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.—MISS LUCY UPTON, *Providence, R. I.*

[Miss Upton's reminiscences, besides giving us pleasure, always add to our knowledge.—A. H. W.]

PREFERENCES OF CLIFF SWALLOWS IN NESTING

I read in BIRD-LORE last fall that a man who was lecturing said Cliff Swallows never built their nests on painted buildings, so I have watched to see, and this spring I happened to notice where they had built on six or seven different buildings.

There is a barn here near our schoolhouse where there are seventeen nests under both eaves, and the barn is painted red, and I know five other buildings

painted red and white where there are several nests on each of them.—CLIFFORD R. GREY (age 13 years), *Lancaster, N. H.*

[Have any of our readers information to offer on this matter? Cliff or Lave Swallows, let us remember, are now very rare as compared with their former abundance in the East.—A. H. W.]

LITTLE BIRD STORIES

THE CARDINAL

One afternoon I was sitting on the porch when a mother Cardinal flew up in a tree right near our house. I hunted in the woods and found the nest. There were three eggs in it. When we came back home we saw the father Cardinal.—EMILY HILLYER (Grade 5A).

THE CROW

One day we were out in the woods. We were walking and we saw a baby Crow. Then we took it in our hands and we played with it. Then it cawed and some Crows came and then we let it go.—NORMAN ANDROBETTE (Grade 5A).

OUR BIRDS

We had honeysuckle near our fence. There were many birds around our house. A pair of Sparrows built their nest in the vine. The mother bird flew away and left the little birds there. One day I went there and looked in. I found the little birds in the nest. They had very few feathers on their backs.

Later I looked into the nest again. I found the nest covered over with a big spider's web.

We took the nest from the honeysuckle and found the little birds all dead. What do you think killed them?—MARY BURNS (Grade 5B).

[Lack of food, if the parents met with an accident, may have caused the birds' death, or possibly some form of bird disease due to parasites, but more likely, they died of starvation.—A. H. W.]

THE RABBIT

One day when I was out in the woods I saw a young rabbit. It crossed the path in front of me. I followed it and saw it go into a hole in the ground under a stump. I watched there a little while and saw another one come and go into the same hole.—THOMAS TULLY (Grade 5A).

[The family of hares and rabbits has at least twenty different species in North America. Some make burrows, others sleep on the flat ground, while others make "forms" in herbage and there squat to rest, sleeping with eyes open, it is said. They may be found in marshes, dense swamps and canebrakes, in woodland and dry, briery places or even in prairie wastes and sterile deserts, or in alpine areas.—A. H. W.]

THE SIGNAL

One day my mother walked part way to school with me. As we were walking along, mother called my attention to a gray squirrel which had an enormous toadstool in his paws. He was nibbling away at it as though his life depended upon finishing it.

A little way off another squirrel, evidently his mate, had scampered up a tree. All of it we could see was the tail, for the tree hid the rest. It was wildly waving its tail as though signaling to the mate to hurry and get away from us.—FRANCIS DURY (Grade 5B).

[The writer knows of a box turtle that was seen to eat part of a toadstool.—A. H. W.]

THE TANAGERS

One day I had a pleasant experience with birds. It took place in the woods, and while I was walking. I suddenly noticed, sitting on a tree in front of me, a couple of Scarlet Tanagers, one large and the other smaller. I walked quite close to them before they flew to a near-by tree. They stayed around the place a few minutes, as if wishing to be friends with me, but not knowing how to begin.

When they had made up their minds that no good was to come from a strange little creature like me, they flew away without further investigating the matter.—MARY BETTS (Grade 5A).

[It is pleasant to imagine that the birds recognize us, but it is safer not to attribute to them any human actions.—A. H. W.]

THE STORY OF A ROSE

I was once a little seed and I grew and I grew until I was out of the ground. Then the sun warmed me and I grew and I grew until all of a sudden there were leaves on my stem.

The next morning there was a bud. The next day the sun warmed me, and that afternoon it rained on my head till I was wet.

At night I went to sleep. Then in the morning the sun warmed me again till at last my bud was a full-grown rose.

I bloomed all summer. At last it began to grow cold, then all my leaves fell off and I slept all winter till next spring.—AGNES FLYNN (Grade 5A).

[These little stories of Nature come from fifth grade pupils in a school in Great Kills, N. Y. They illustrate the range of observation and imagination which pupils of this grade have, and also indicate the variety of objects likely to attract the attention at this age. Space does not permit printing all of the stories.—A. H. W.]

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PRARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1914 Broadway, New York City.

WILLIAM DUTHIE, *President*
T. GILBERT PRARSON, *Secretary*
FREDERIC A. LUCAS, *Acting President* JOSEPHINE DUNN, *Treasurer*
THEODORE S. PALMER, *Past President*
SAMUEL T. CARTER, JR., *Attorney*

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 Receipt.—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,

NO ANNUAL MEETING

The annual meeting of the National Association scheduled for October 28 and 29, 1918, was not held because of the seriousness of the widespread epidemic of influenza.

Quite aside from the question as to whether it would be wise to ask a large number of people, many of these from a distance, to come to a public meeting, there was also the very strong probability that either the State Board of Health, or the New York City authorities would prohibit public gatherings, as was being done in many other states at the time. Due notice of this action was sent in advance of the date to all members of the Association, and, from the many words of commendation we have received, it is evident that the decision of the Board met with the approval of the members.

The annual convention of the American Ornithologists' Union, scheduled to meet in New York City the week beginning November 10, was called off for the same reason. Many of us exceedingly regret the necessity of such action, for attending meetings of this character always results in much inspiration and a general quick-

ening of interest on the subject of ornithology.

The Board of Directors of the National Association met on October 29, when it passed on the reports of the Secretary and Treasurer, reflected the officers of the previous year, and transacted much other business in connection with the Association's welfare.

The reports of officers, field agents, and a large number of organizations affiliated with the National Association will be found published elsewhere in this issue of BIRD-LORE. If anyone is laboring under the impression that war activities the past year have seriously interfered with the movement for bird-study and wild-life conservation in this country, let him turn and read these reports. It will be seen that groups of people in all parts of the country have been active in carrying forward their bird-work very much as heretofore.

We should like particularly to call attention to the large number of life members enrolled the past year. The number was 167. This means that from this source the sum of \$16,100 was added

to the permanent Endowment Fund. No bequests were received during the year, although the Association was made the residuary legatee by the will of Edwin

Reynolds of Providence, R. I. We are informed, however, that there will probably be no residuary estate after the specific legacies have been paid.

THE COMING YEAR

The bird-study and bird-protective organizations of this country occupy a strong place in the hearts and minds of the people. Their practical value is demonstrated in the growing crops of a million farms, and the flowers and vegetables of ten million gardens. In the great national struggle through which we have been passing, as Dr. Swope says, "The pro-Ally birds have valiantly fought the pro-Hun insects."

Bigger crops mean more food for insects, and more food for insects means more insects, and more insects mean the need for more birds, and to have more birds there is a need for more bird-students and bird-protectors and for those engaged in propaganda for bird protection.

One of the most unpopular words in the English language is *duty*. When a man says he does a thing from the standpoint of duty there is an implied intimation that he is not doing it for pleasure. Happy is the man or woman who can get pleasure and a sense of duty performed both out of the same activity. A well-organized Audubon Society or Bird Club that is doing effective work is not only discharging a solemn duty to the less enlightened part of a community, but is also doing work that its members enjoy. A well-known writer once said of Ambassador Page that he was a man who, "sang at his work." I have known few bird-students concerning whom the same might not be said.

That good-fellowship is developed by association with others of like temperament has long been recognized, and the getting together of members of bird-protective societies is one of the most vital ways of stimulating a deeper love for the subject of their mutual interest.

I have just been impressed anew with

this fact as a result of a visit from W. A. Eliot, who is leaving for France to engage in war-work. Mr. Eliot has for two years been chairman of the Educational Committee of the Oregon Audubon Society. His account of the method by which they have aroused interest in bird-study in Portland should stimulate others to similar measures.

Two years ago they engaged the use of a room in the Y. M. C. A. building, to which they invited members of the Audubon Society and others to attend bi-weekly meetings. During the first year the attendance rarely reached over about 15, and sometimes not a third of this number. The next year they started in by holding their meetings every Saturday night and ran a column in the local paper every Friday afternoon. They secured a Balopticon by means of which they could throw pictures on the screen, either from slides or from photographs. The attendance at once began to increase, and it was soon necessary to move to a larger hall. During last winter, and until late in June, the hall, seating 250, was packed every Saturday night by the people who came to hear and learn about birds and take part in the discussions that followed.

As a result, there is in Portland and the surrounding country today a very widespread interest in bird-study and bird-protection. If it were possible to address in one audience the officers of all the Audubon Societies and Bird Clubs of the country, I should certainly insist strongly for the consideration of two suggestions to be borne in mind during the coming year: First, the great economic importance of keeping the organization going, and, second, the great pleasure and profit to be derived by frequent gatherings of the members and their friends.



WALTER FREEMAN McMAHON

Killed in France, August 28, 1918

This Association has sustained a great loss in the death of Walter Freeman McMahon, who formerly occupied the position of Chief Clerk in our New York office.

Mr. McMahon left his duties here to go into camp on March 15, 1918, and in less than sixty days his company was ordered to France. He saw much active service in the trenches, where he was connected with a machine-gun squad. Because of his knowledge and experience in outdoor life, he was quickly chosen for the dangerous position of scout for his platoon. It was while on a desperate mission, alone, in No-Man's Land that

he met his death from the bullet of a German sniper.

Mr. McMahon was born in Chelsea, Mass., in 1889. He early developed a great interest in natural history. For two years he served as secretary to Edward H. Forbush, and for a year as Secretary of the Massachusetts Fish and Game Protective Association. This latter position he resigned to come with the National Association in January, 1917.

In addition to being one of the most promising of the young ornithologists, he was a writer, speaker, and artist of ability, and gave great promise of usefulness in the cause of wild-life conservation.

Annual Report of the National Association of Audubon Societies for 1918

CONTENTS

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION.—FIELD AGENTS.—AFFILIATED SOCIETIES AND BIRD CLUBS.—
SUMMER SCHOOLS.—AUDUBON WARDEN WORK.—REPORT OF JUNIOR AUDUBON
CLASSES.—MISCELLANEOUS FACTS.—FINANCES.

REPORTS OF FIELD AGENTS

WINTHROP PACKARD.—DR. EUGENE SWOPE.—ARTHUR H. NORTON.—WILLIAM
L. FINLEY.—EDWARD H. FORBUSH.—HERBERT K. JOH.

REPORTS OF STATE AUDUBON SOCIETIES

CALIFORNIA, CONNECTICUT, DISTRICT OF COLUMBIA, EAST TENNESSEE, FLORIDA,
ILLINOIS, INDIANA, MASSACHUSETTS, MICHIGAN, MISSOURI, NEW HAMPSHIRE,
NEW JERSEY, OHIO, OREGON, RHODE ISLAND, SOUTH CAROLINA,
WEST VIRGINIA.

REPORTS OF AFFILIATED ORGANIZATIONS

AUDUBON CLUB OF NORRISTOWN (PA.)—AUDUBON SOCIETY OF BUFFALO (N. Y.)—
BIRD-LOVERS' CLUB OF BROOKLYN (N. Y.)—BROOKLINE (MASS.) BIRD
CLUB—BURROUGHS AUDUBON NATURE CLUB OF ROCHESTER (N. Y.)—
BURROUGHS JUNIOR AUDUBON SOCIETY OF KINGSTON (N. Y.)—CAYUGA
(N. Y.) BIRD CLUB—CHAUTAQUA (N. Y.) BIRD AND TREE CLUB—COCONUT
GROVE (FLA.) AUDUBON SOCIETY—COLUMBUS (OHIO) AUDUBON SOCIETY—
DE BOIS (PA.) BIRD CLUB—ELGIN (ILL.) AUDUBON SOCIETY—ERASMUS
HALL (BROOKLYN, N. Y.) AUDUBON BIRD CLUB—FOREST HILLS GARDENS
(N. Y.) AUDUBON SOCIETY—FRANKLIN (N. Y.) MARSH WREN CLUB—
HARTFORD (CONN.) BIRD STUDY CLUB—KEZ-HI-KONE (CONN.) CAMPEIRE
GIRLS—LOS ANGELES (CAL.) AUDUBON SOCIETY—MAYWOOD (ILL.) BIRD
CLUB—MERIDEN (N. H.) BIRD CLUB—MINNEAPOLIS (MINN.) AUDUBON
SOCIETY—MINNESOTA GAME-PROTECTIVE LEAGUE—NATURAL HISTORY
SOCIETY OF BRITISH COLUMBIA (CAN.)—NEIGHBORHOOD NATURE CLUB
(CONN.)—NEW CENTURY (UTICA, N. Y.) CLUB—OIL CITY (PA.) AUDUBON
CLUB—PASADENA (CAL.) AUDUBON SOCIETY—RHINEBECK (N. Y.) BIRD
CLUB—ROCKAWAY (N. Y.) BIRD CLUB—RUMSON (N. J.) BIRD CLUB—ST.
LOUIS (MO.) 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—SURREX COUNTY
(N. J.) NATURE STUDY CLUB—VIGO COUNTY (IND.) BIRD CLUB—WARRING-
TON (IND.) AUDUBON SOCIETY—WATERTOWN (N. Y.) BIRD CLUB—WILLIS-
LEY COLLEGE (MASS.) BIRD CLUB—WILD LIFE PROTECTIVE SOCIETY (WIS.)
—WYNCOTE (PA.) BIRD CLUB.

LIST OF AFFILIATED SOCIETIES AND BIRD CLUBS

REPORT OF THE TREASURER

LISTS OF MEMBERS AND CONTRIBUTORS

BENEFACTOR, FOUNDER AND PATRONS.—LIFE MEMBERS.—ANNUAL MEM-
BERS AND GENERAL CONTRIBUTORS.—CONTRIBUTORS TO THE DEPARTMENT
OF APPLIED ORNITHOLOGY.—CONTRIBUTORS TO THE EGRET FUND.



DR. FREDERIC A. LUCAS
Acting-President of the National Association of Audubon Societies

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION

Mr. Herbert C. Hoover, United States Food Administrator, writing the Editor of the *People's Home Journal* some time ago, said, "I hope the people of the United States realize how closely related to this whole question of food-saving is the question of the protection and encouragement of insectivorous and migratory birds."

This same feeling has been prominent in the minds of the members of the National Association of Audubon Societies and the various organizations associated with it in the work for bird-protection the past year. Increased acreage under cultivation very naturally means more insects, and more insects, in turn, means the need for more birds to combat them. Hence, perhaps greater than ever before in this country, there has been a need for Audubon Society service.

There has been determined effort on the part of certain land agents in Oregon and California to wrest from the Government the title to Klamath and Malheur Bird Reservations, in order that these vast bird-refuges may be drained and converted into ranches. The Association is combating these efforts with the greatest energy, and Mr. Finley, our Oregon agent, is now working with the Biological Survey to secure a law in Oregon which will save these Reservations for all time.

A great cry has arisen of late that the sheep-raising industry on the islands off the coast of Maine is being ruined because of the presence of the Herring Gull colonies. Arthur H. Norton was sent to investigate the matter, and his reports thus far received tend to show that the presence of the Gulls on the islands is responsible for improving the grass supply rather than destroying it.

In response to a request from the United States Food Administration, the Secretary, in June, investigated the feeding habits of the Brown Pelican along the Gulf Coast of the United States from Corpus Christi, Texas, to Key West, Fla. In this work he had the cooperation of the Conservation Commissions of Texas, Louisiana, and Florida. Every known breeding colony of Pelicans on the Gulf Coast was visited. The birds were found to be far less numerous than reputed, the number of adult birds being estimated at 65,000. Their food was found to consist almost wholly of fish never eaten by man. A more extended account of these investigations will probably be published in the near future. The expense of this undertaking was borne by the income from the Mary Dutcher Memorial Fund.

The Secretary also engaged in a lengthy controversy with influential interests that sought to get possession of Stinking Lake, N. Mex., as a private shooting preserve. In the end, the Department of the Interior, which controlled the

territory involved, decided to follow the course urged by the Association and made of it a bird sanctuary.

Much effort was put forward by the Association and cooperating organizations in helping to secure the passage by Congress of the Enabling Act to give force and power to the treaty for the protection of migratory birds between the United States and Canada. The final triumph of the measure on July 3, 1918, marks a most important turning-point in the history of American bird-protection.

The Association has also been active in other matters which at various times required the presence of the Secretary in Washington. One was the bill, which passed Congress, to prohibit the sale of game in the District of



YOUNG BROWN PELICANS ON A "MUD LUMP" AT MOUTH OF MISSISSIPPI
 Photographed by T. Gilbert Pearson

Columbia, and another concerned the prohibition of shooting on the Aberdeen, Md., Testing Grounds. During the year much correspondence has been carried on from the home office, and literature, cloth warning notices, bird-charts, and other material distributed. All departments of the Association's undertakings have gone forward as in former years, despite the many distracting influences due to war and its attending activities.

The Association and the cause of bird-protection in general has sustained a severe loss in the death of Walter Freeman McMahon, who has recently fallen in France. Mr. McMahon was born in Chelsea, Mass., June 17, 1889. He early developed a strong interest in bird-study and for several years before his death was actively engaged in work of this character. For two years he served as secretary to E. H. Forbush, State Ornithologist of Massachusetts. Following this, for one year he was Secretary of the Massachusetts Game and Fish Protective Association. He resigned this position to come with the

Association in January, 1917, and served in the home office in New York until he joined the Army on March 15, 1918. Mr. McMahon was not only a man of varied accomplishments, but possessed a most unusually attractive personality. As far as can now be ascertained, the date of his death was August 28, 1918. He was killed while on scout duty at the front.

FIELD AGENTS

An extremely important part of the Association's work has long been the efforts of the men and women who have officially represented our work in various parts of the country. During the year that has just closed, Edward H. Forbush, Supervising Field Agent for New England, has continued his extensive lecture and correspondence work, and was of very great service for the passage of the Enabling Act in Congress.

Winthrop Packard, Agent for Massachusetts, again directed the state activities in Junior organization, successfully solicited many members for the Association, attended to a large correspondence, gave lectures, wrote articles for the press, and made trips to Washington and elsewhere in the discharge of his duties.

Dr. Eugene Swope, Agent for Ohio, directed the campaign in Ohio for Junior Audubon Classes, solicited and secured adult memberships, lectured and carried forward a heavy correspondence in addition to giving a four weeks' bird-course at the University of Florida.

William L. Finley, of Portland, Ore., Agent for the Pacific Coast states, was active for the Junior work, lectured all over the state, took more moving pictures of birds, and has been tireless in his efforts to save, as Federal bird reservations, the lakes of Malheur and Klamath.

Mrs. Mary S. Sage continued her lecture-work in New York state until she left the employ of the Association in March, 1918. She is now engaged in Government work in Washington, D. C.

Herbert K. Job, working, as heretofore, in "Applied Ornithology," has conducted the experimental farm at Amston, Conn., run a successful summer school of bird-study at the same place, lectured, written, made moving pictures, and has given much advice to people desiring to engage in the propagation of wild birds and game.

Arthur H. Norton, Agent for Maine, has been carrying forward an important investigation of the feeding habits of the Herring Gull on the coast of Maine, as well as a study of the relationship of the colonies of these birds to sheep-raising on the outer islands.

It is with much regret that we record the death of Mrs. Granville Ross Pike, our Agent for the state of Washington. Her death occurred at her home in North Yakima, Wash., on August 20, 1918. She was one of the most successful bird-workers among children that we have ever known.

AFFILIATED SOCIETIES AND BIRD CLUBS

The numerous demands of various war activities have adversely influenced the efforts of the organized bird-workers of the country much less than was to be expected. Especially has this been true of the older and better-established State Audubon Societies, where the feeling prevailed that now more than ever was their work needed.

Various local organizations have ceased to function for a time, but this was to be expected in view of the great demand for active agents in war-work.

The organizations now affiliated with the National Association number 137. About 60 of these have submitted reports of good organized work done the past year, and these will be found published with this report.

It is well worth the time of any conservationist of wild life to read these carefully, in fact, only by so doing can one get an idea of the tremendous amount of fine effort for bird-study and bird-protection now being put forward by these numerous organizations.

Recently the Association has been pleased to contribute to two worthy efforts of affiliated institutions. One was a gift of \$500 to the Wisconsin Game Protective Association, to aid in putting a lecturer in the field. The other was a contribution of \$250 toward the expense of a Museum for the Meriden (New Hampshire) Bird Club.

On the other hand, some of the societies have contributed to the expense of the Association's work for Egret-protection.

SUMMER SCHOOLS

During the summer, for the fourth year, the Association arranged with the directors of summer schools for courses in bird-study. The plan, as heretofore, provided for the expense of the course being borne jointly by the Association and the educational institutions where they were given. This instruction was given as follows with good results:

Dr. J. M. Johnson, of Brooklyn, N. Y., gave a four-weeks' course at the Summer School of the South at the University of Tennessee, Knoxville. Several illustrated evening lectures were also delivered to the entire Summer School.

Miss Mary Bacon, of Athens, Ga., represented the Association in a course of enthusiastic bird-work at the University of Georgia, Athens.

Miss Belle Williams, of Columbia, S. C., conducted a four-weeks' course at the Winthrop Normal College Summer School, Rock Hill, S. C.

Ralph Hubbard continued his bird-work of last year at the University of Colorado, located at Boulder.

Dr. Eugene Swope, of Cincinnati, again worked at the University of Florida, conducting bird-courses and giving illustrated public lectures.

J. Bowie Ferneyhough, of Richland, Va., was again at the University of Virginia, located near Charlottesville.

Many hundreds of teachers gathered at these various centers of learning received this instruction and had their interest in bird-study and bird-protection greatly quickened.

AUDUBON WARDEN WORK

Wardens to the usual number have been employed during the year to guard important breeding colonies of water-birds. There are three groups of these agents. First, there are those engaged by the Association in cooperation with the United States Biological Survey. These men protect certain Federal Bird Reservations. Second, there are the wardens who guard Egret colonies, and third, the general bird-colony wardens who are mainly located on islands along the Atlantic Coast from North Carolina to Maine, inclusive.

The past season appears to have been only an average one for the nesting birds. At some stations they have done well; at others, owing to various natural causes, the hatch and development of the young were seriously interfered with. The following quotations from wardens' reports will indicate something of the conditions that prevailed in various protected colonies.

Great Duck Island, Maine: "The young would have done better if food had not been so scarce. I helped feed them as far as I was able."

Metinic Green Island, Maine: "Herring Gulls this year drove all the Terns (Arctic and Common) off the island. However, they settled near by."

Cone Island, Maine: "On the night of June 22-23 from 900 to 1,200 eggs and young Herring Gulls were destroyed by a heavy sea that broke over the island."

Gou's Island, Maine: "Owing to the scarcity of food this summer the Gulls killed many of their young."

Dry Tortugas, Fla.: "There has been a great increase of Sooty Terns this year. I estimate the number at 100,000. There were about 13,000 Noddy Terns."

Virginia Coast Islands: "High tides destroyed most of the eggs and young of the Laughing Gulls, Terns and Black Skimmers."

Wepecket Island, Mass.: "The Terns are gradually decreasing. There were about 2,500 of them this season."

Islands of Mississippi Sound: "All the birds seem to be increasing. I estimate, for the season, breeding birds as follows: Laughing Gull, 94,000; Royal Tern, 32,000; Black Skimmer, 61,000; Cabot's Tern, 16,000; Caspian Tern, 600; Forster's Tern, 16,000; Least Tern, 96,000; Black-crowned Night Heron, 9,600; Louisiana Heron, 63,000; and Brown Pelican, 50,000. Total, something more than 450,000."

The Egret colonies, as a whole, fared better this year than did the sea-

birds. Very little killing of our protected birds was reported. The drying up of many of the feeding-grounds in central Florida caused some birds to leave their accustomed haunts and seek nesting places in new territories.

In protecting the hard-pressed Egrets, guardianship is also extended to many other water-birds that assemble with them in their rookeries. Thus, on the Association's Bird Island in Orange Lake, Fla., in addition to 350 large Egrets and 320 Snowy Egrets, large numbers of Louisiana Herons, Black-crowned Night Herons, Green Herons, Little Blue Herons, Ward's Herons, Water Turkeys, Boat-tailed Grackles, Purple and Florida Gallinules, Least Bitterns, Florida Ducks, and White Ibis received protection. A pair of the rare Glossy Ibis (probably the White-faced) also occupied this wonderland of bird-life. In all, forty-seven wardens were employed this year.

REPORT OF JUNIOR AUDUBON CLASSES

Despite all the distracting influences the past year, the formation of Junior Audubon Societies has gone steadily on as heretofore. The systematic plan of supplying children with first-class material for doing simple elementary work in bird-study is appreciated by school men and women in every state in the Union and in Canada.

One evidence of how the Junior Audubon work holds in a school where it is once established is shown by the many teachers in the grades who have formed a Junior Society every season for the past five or six years. Usually the classes move on so that the teachers have a new set of children each year, but their interest in the work causes them to encourage each group coming under their care to organize for bird-study. In many other instances, where a Junior Class has been formed in one of the lower grades, the children have insisted on reorganizing year after year, although the class continually passes on to the care of different teachers.

This year, as heretofore, immense numbers of bird-boxes have been built, and around thousands of schoolhouses birds have been fed in winter. Many attractive programs have been rendered, and the local interest in bird-preservation kept alive and stimulated by the little folk at school.

For the school year ending June 1, 1918, classes were formed and members enrolled in the different states and in Canada, as shown in the following summary:

Summary for the year ending June 1, 1918:

State	Classes	Members	State	Classes	Members
Alabama	5	147	District of Columbia	1	35
Arizona	4	74	Florida	21	473
Arkansas	1	31	Georgia	39	608
California	107	5,678	Idaho	57	1,300
Colorado	48	1,437	Illinois	247	7,205
Connecticut	324	7,608	Indiana	109	2,009
Delaware	3	51	Iowa	118	3,021

State	Classes	Members	State	Classes	Members
Kansas	65	2,009	Ohio	815	18,227
Kentucky	29	821	Oklahoma	26	814
Louisiana	7	212	Oregon	90	2,716
Mass.	37	856	Pennsylvania	460	14,189
Maryland	46	1,421	Rhode Island	19	545
Massachusetts	329	8,210	South Carolina	24	901
Michigan	196	5,099	South Dakota	33	889
Minnesota	261	6,375	Tennessee	26	693
Mississippi	16	484	Texas	45	1,269
Missouri	100	2,658	Utah	37	826
Montana	66	1,620	Vermont	37	797
Nebraska	78	1,995	Virginia	25	715
Nevada	—	30	Washington	214	5,330
New Hampshire	92	2,221	West Virginia	39	1,000
New Jersey	174	4,885	Wisconsin	161	3,981
New Mexico	3	92	Wyoming	5	147
New York	891	24,448	Canada	381	8,763
North Carolina	48	1,245	China	1	15
North Dakota	30	938			
Totals				6,071	159,083

Never in the history of our country have school children been called upon to contribute to so many projects, and so continuously, as of late. The campaign in the schools for War Savings Stamps, for membership in the Junior Red Cross, seeds for war gardens, and other war activities, have been tremendous. Giving continually to these most worthy causes has had a very decided effect on the enrollment of the Junior Audubon members. Scores of teachers have reported that they found it absolutely impossible to collect the 10 cents necessary for the Junior fees.

In one large school building in the Middle West, a teacher who had asked that the children in the various grades bring their Audubon fees to send in on a certain date, found when she went to collect them that the children had brought their money, but that at the last moment the principal of the school had instructed them to give this money to the Red Cross.

This is only one of many instances of a more or less similar character. As a result of these causes, enrollment of the Junior members showed a marked falling off from the year previous when the number reached the high-water mark of 261,654.

This work with the young people was made possible by the following contributions:

Unnamed Benefactor	\$20,000 00
Mrs. Russell Sage	2,000 00
General Coleman duPont	1,000 00
George Eastman	1,000 00
Other Subscribers	1,280 00
Total	\$26,280 00

MISCELLANEOUS FACTS

During the year we have issued four new Educational Leaflets, publishing them first in BIRD-LORE, and afterward separately. These were Leaflet No. 94,

Pileated Woodpecker, No. 95, Raven, No. 96, Slate-colored Junco, No. 97, Least Tern. Our Department in BIRD-LORE occupied 241 pages. Of Educational Leaflets, reprints were made to the number of 611,400. Circulars announcing the plan of our Junior work to teachers 100,000, letterheads and envelopes 255,111. Other miscellaneous items such as gum labels, membership blanks, Pigeon folders, and notification cards amounted to 187,000.

Stereopticon slides to the number of 795 have been sold at a little above cost, and our moving-picture films on various occasions have been sent out at a nominal rental.

FINANCES

The Association enrolled during the year 161 life members at \$100 each. The funds received from this source, together with \$375 in gifts and partial payments on life membership fees, makes a total of \$16,475 added to the permanent Endowment Fund.

During the year the Investment Committee invested \$10,000 of this amount in Third and Fourth Liberty Loan Bonds.

The sustaining membership, the fee for which is \$5 annually, has this year numbered 3,890. The total income of the Association for the year has been \$121,235.28.



NEST OF BROWN PELICAN, GRAND COCHARE ISLAND, LOUISIANA

Photographed by T. Gilbert Pearson

REPORTS OF FIELD AGENTS

REPORT OF WINTHROP PACKARD, FIELD AGENT
FOR MASSACHUSETTS

The good work that the National Association of Audubon Societies has done in past years throughout Massachusetts certainly has a firm foundation in the hearts of the people, for, in spite of war conditions, the interest in the welfare of our wild birds continues.

Your agent has been able, during the past year, to add to the membership list of the Association 31 life members and 101 sustaining members. In the Junior Class work, 8,210 new Juniors have been added. The interest of the public in the cause has been shown in the continued calls for lectures, exhibitions, information, and personal advice and assistance in bird-work. In this the office has worked with various influential and important societies. It gave an exhibition at Worcester in conjunction with the State Society and the State Board of Agriculture; at Horticultural Hall at Boston it joined with the Massachusetts Horticultural Society in its exhibition and instruction work for home-gardens, making a display of bird-protection material during the spring and summer months. It joined with the State Grange and State Audubon Society in a Bird Day exhibition and lectures. The requests for traveling exhibits of bird-protection material to be shown in various parts of the state, and indeed throughout New England, have been numerous. These requests have been invariably filled, as have those for bird-lectures.

Legislation throughout New England has been carefully watched, and your agent is glad to state that no bills adverse to bird-protection have passed.

New England, last year, passed through the severest winter in its history. Your agent feels that the request sent out by him that the birds be fed with more than usual care, and which received a hearty response, was effective in saving the lives of many of our winter birds which seemed to have come through the inclement weather successfully.

The office, with its exhibitions, has been very popular with visiting Junior Classes and their teachers, and the mutual good-will that is established has helped greatly in the Junior work.

Your agent had the honor to represent the bird clubs and Audubon Societies of New England at Washington during the campaign for the passage of the Enabling Act, and was present when the House finally voted in favor of this great measure for bird-protection. He is proud to say that there was no dissenting voice among our New England representatives.

In closing, he wishes to express his appreciation of the unflinching wisdom and friendly guidance of T. Gilbert Pearson, Secretary of the National Association, and that of Edward Howe Forbush, the New England Agent for the Association, to whom such measure of success as has been achieved is largely due.

We feel, here in Massachusetts, that bird-work is war-work, and do our best to carry it hopefully forward toward the winning of the war.

REPORT OF EUGENE SWOPE, FIELD AGENT FOR OHIO

December 15, 1917, the Junior Class work in Ohio surpassed all former records for the state up to that date. This was accomplished at the same time that Liberty Loan, Thrift Stamp, Red Cross, and relief-fund drives were in progress. Then came the severe cold, fuel shortage, closed schools and suspended Audubon work for nearly three months.

With the coming of spring, your agent again pushed the Junior work as a "win the war" measure and was able by the close of the school year to show a record not much behind that of the previous year.

Valuable assistance was rendered by county and city superintendents, and especially by Dr. J. C. Hambleton, Nature Study Supervisor of Columbus schools, and President of the Columbus Audubon Society. Dr. Hambleton edited the State Superintendent's annual publication, which in former years had been largely devoted to Arbor Day exercises, and made it a Bird Day book. It was almost wholly devoted to appeals and arguments for a better knowledge of wild birds and for their protection. The editor intentionally cooperated with the Association's work and greatly aided it, for which he deserves the thanks of all bird-protectionists. This publication contained articles by Dr. Frank M. Chapman and T. Gilbert Pearson.

Many newspapers of the state published such news items and reports as your agent sent them, thereby keeping the work of the Association before the public. One point urged was bird-conservation as a protection for war gardens against pro-German insect ravages. This received wide attention and did much good.

During the year, there have been more than the usual number of miscellaneous calls upon your agent for assistance and advice in the matters of attracting, feeding, and protecting the wild birds. These calls came from every conceivable source and give evidence of the widespread influence and of the confidence in the Association. Every call was answered promptly.

In all probability, attempts will be made in the next legislature to repeal certain protective laws. For instance, the lake fishermen have recently discovered that Terns, Kingfishers, and Blue Herons consume "tons of choice fish." As early as July they began a campaign of education advocating the "extermination" of these birds.

Ohio Audubon people saw to it that their representatives at Washington favored the Enabling Act.

One summer month was devoted to conducting a large bird-study class in the Teachers' College at the Florida State University and giving public lectures

there. So enthusiastic was the class that five members earned college credits, which apply on their degrees. A number of others earned the regular summer school credits. The class was composed of teachers from every section of Florida. Five of the summer school instructors regularly attended the field-work classes. It seems that the Association's efforts in Florida might give a new impetus to the study and protection of the wild birds of that state.

At no time, and under no circumstances, did your agent fail to disseminate cat-control propaganda.



DR. EUGENE SWOPE LISTENING TO BIRD-SONGS IN FLORIDA

REPORT OF ARTHUR H. NORTON, FIELD AGENT FOR MAINE

The winter of 1918 was one of unusual severity, in low temperature and vast quantity of sea-ice. With the closing of Bach Cove, Portland, and the adjacent Presumpscot River, the greater part of the thousands of Black Ducks which annually winter there left for the outer islands. Still, a few hundreds remained at their usual resorts and were fed daily for about five weeks by the local Audubon Society and a considerable number of individuals. As a result of this constant attention, relatively few perished. Not only in the vicinity of Portland, where this large number was under constant observation, but

from the Penobscot region, came reports and inquiries as to methods of providing for the Ducks.

Probably due to the exceptionally warm, dry weather of May, the Terns laid in very large numbers a week or more earlier than usual. Though later the season was wet and lacking in sunshine, it is known that a fair number of young reached maturity. Herring Gulls have done well, and this summer a few nested within 15 miles of the city of Portland, a range extension of about 60 miles. Laughing Gulls have been seen at several points some distance from their breeding place, indicating a slight increase of these birds. An inspection of the colonies of Herring Gulls in the region of Jericho Bay was made August 13. At this date none of the young Gulls had left the rookeries, and the abundance of both old and young Gulls showed the result of a season free from molestation by man. The birds have increased considerably in the region since the last general inspection of 1914. With the advance in the prices of wool and mutton, the once profitless custom of keeping sheep on the outer islands seems to promise a fair return. With this promise has arisen, in the region of this inspection, a claim that the sheep will not feed upon the vegetation that the Gulls have fouled by their presence, and that Gulls therefore menace the sheep-raisers' interests.

It was found that much of the soil of these islands is very sterile, composed largely of poorly decomposed wood, many of the deposits being over 2½ feet deep, entirely destitute of mineral soil. By visiting several different islands where the Gulls were abundant, and others where none or very few were nesting, it was possible to make a comparison of the conditions prevailing at the two different locations. On the islands where there were few Gulls, the vegetation was poor, closely grazed, and struggling hard for existence; moreover, the sheep there were eating the coarser forms of vegetation, left untouched on the islands where the Gulls were numerous. On those islands where the Gulls were numerous, the vegetation was invariably luxuriant. On each of the latter were areas nearly free from Gulls, yet the sheep showed no preference for these locations, but were found to feed in the midst of the colonies as much, or even more, than in the parts where the Gulls were nearly absent. On these islands the coarse flags, sedges, rushes, and grasses were not touched by the sheep.

One cause for the alarm-cry, that the Gulls are ruining the pasture, may be found in the fact that many of these outer islands produce an abundance of a native chickweed [*Cerastium arvense*], which is partial to sterile, or "sour," soil. Its habit is low and matting, forming large areas, but its color and low growth, cause it to attract no attention in the grazed pasture. With the "sweetening" of the soil, this native chickweed has begun to disappear, and in its place has come an introduced relative, *Stellaria media*, a lover of rich soil, which here reaches a length of nearly 2 feet, and is of a yellow-green color, in striking contrast to the color of the grasses. This is an annual plant, and should the

land occupied by it be reseeded with grass or clover, the improvement of the pasture would no doubt be excellent. Indeed, it is a striking fact that nothing has been done to improve these pastures, though grazed by sheep for years.

REPORT OF WILLIAM L. FINLEY, FIELD AGENT FOR THE PACIFIC COAST STATES

During the past year, sixty-five lectures, mostly illustrated with moving pictures, have been given by your agent through the Pacific Northwest. A number of these have been given for the benefit of the soldiers in the cantonments in this part of the country and were enthusiastically received. Lectures were also given under the auspices of the Red Cross and the Junior Red Cross in the schools. Approximately \$1,000 was raised for these organizations.

Among many of the schools, there has been very creditable bird-work during the past year. In Portland, the pupils of the Kenton School reproduced the bird masque, entitled "Bobby in Birdland" which appeared in the November-December, 1917, issue of BIRD-LORE. Moving pictures were taken of this play as it was acted in the woods. Moving pictures were also made of some of the manual training classes building bird-houses and the children putting up these houses along the Columbia Highway. These, with other pictures of Audubon work, are to be used for educational purposes in the schools. The Junior work among the school children during the past year for the Oregon Audubon Society has been in charge of Mrs. A. L. Campbell. She has visited many different schools, giving bird-talks and organizing societies.

Under the direction of Walter P. Taylor, of the Biological Survey of the Department of Agriculture, a systematic survey of the bird and animal life of the state of Washington is being carried on in conjunction with the different educational institutions. During the past summer, Mr. Taylor has been working in the field with Prof. W. T. Shaw of Pullman College. Inasmuch as the wild antelope are rapidly disappearing and since there are approximately not more than from five to seven hundred of these animals in the state of Oregon, an effort is being made to secure an area of land, partly in southern Oregon and partly in Nevada, where these animals range and set it aside as a permanent reservation. This area is also the home of large flocks of Sage Grouse. The details of this plan are being worked out by Dr. George W. Field, of the Biological Survey.

For the past two years, Malheur Lake Reservation in southeastern Oregon has been in jeopardy. Certain promoters have been trying to get the right to drain this body of water and dry up the surrounding marshland, advocating that this would make a valuable area for agriculture. On the other hand, this area is very alkaline in character, and experiments on similar areas by the Department of Agriculture show that it is of little or no value from the agricultural standpoint. If it were once drained, the whole place would

soon revert to a desert and Oregon would lose one of its most valuable assets. At the coming session of the Oregon legislature an effort will be made to secure the passage of a law ceding all state jurisdiction over this area to the United States.

It is very interesting to note that the only colony of Egrets (*Ardea egretta*) nesting in Oregon have at last taken up their permanent home on Malheur Reservation. In my annual report, published in the November-December, 1912, issue of BIRD-LORE, I told of a visit to this colony which had a short



PINTAIL DUCK. THIS SPECIES BREEDS ABUNDANTLY ON KLAMATH AND MALHEUR BIRD RESERVATIONS, OREGON

Photographed by H. T. Bohlman

time previously been discovered on an island in Silver Lake. There were eleven or twelve Egret nests at that time. Two or three years later, Silver Lake dried up and they moved. In 1917, they were reported to be nesting in the willows in the northern part of Malheur Lake Reservation. George Willett, who was in charge of the reservation during the past season, reported that the number of nests had doubled since our visit to the colony in 1912. The water on Lower Klamath Lake Reservation has been lower this year than at any previous time, on account of closing the dyke between the lake and Klamath River. In order to prevent the destruction of Klamath Lake Reservation also, it will be necessary to get a law passed in both the Oregon and California legislature ceding jurisdiction to the United States.

REPORT OF EDWARD H. FORBUSH, GENERAL AGENT FOR NEW ENGLAND

Your representative for New England has devoted most of his energies applied in your service to the task of securing the passage of the Migratory Bird Treaty Act, the most imperative matter regarding bird-protection for the year. In this he has merely assisted the well-directed efforts of your Secretary, who has reported in detail upon the campaign and its successful result. An attempt has been made also in Massachusetts to secure better protection for the Terns that have colonized on our shores. The Least Tern, which now has been reduced to comparatively few individuals in the Northeast, has been decreasing in numbers during the past three years. The larger species have been troubled by encroachments on some of their breeding-grounds, and may have been crowded off Muskeget Island to some extent by the increase there of the Laughing Gull, although no direct evidence that the latter molests them has been submitted. About thirty years ago, this Gull is said to have been reduced in New England to some twenty pairs of birds—the remnant left on Muskeget Island. Under protection they have since increased so that now there are many thousands breeding there, and they now appear along the coast in the breeding-season from Connecticut to Maine.

In the meantime, the Terns on this island have rather decreased in numbers. In the winter of 1917-18, Wm. C. Adams, Chairman of the Massachusetts Commissioners on Fisheries and Game, proposed to give some of the principal Tern colonies special protection during their coming breeding-season. It was recommended that wardens be allotted to guard five of the principal colonies and to destroy cats and skunks that were decimating them. This was done, and, apparently, as a result of this treatment, the birds have increased in number and at least two new colonies have been started on Cape Cod, where many young birds were successfully reared this season. Many of the eggs were destroyed by a storm and high tide but the birds nested again successfully. There has been a noticeable increase in the numbers of Common and Roseate Terns and a lesser increase of Least Terns. Arctic Terns also have been reported from time to time. The increase of Herring Gulls along the Maine Coast probably is responsible for an accession to the number of this species summering in Massachusetts. Many hundreds now remain on our coast all summer and a few breed here.

REPORT OF HERBERT K. JOB, DEPARTMENT OF APPLIED ORNITHOLOGY

During the past year requests for practical information about attracting or propagating birds, or both, have continued to come from all over this

country and Canada, and even from abroad. In reply, Bulletins 2, 3, or both, are sent free under the Applied Ornithology Fund, and letters accompanying often are extended "specifications." For instance, a gentleman in California wrote that he had a "farm" of 180 acres, enclosed with wire fence, including a 20-acre pond. He wanted to breed various upland game-birds and wild fowl, and to try to make the place a wild-bird paradise. After describing it carefully, he asked me to write him what I would do if I owned it myself and were embarking on such a plan. The variety in these inquiries may be indicated by quoting another from a woman in Pennsylvania, who desired light on how to get rid of a Whippoorwill which came every night to her domicile and kept up such a noise that her summer boarders could not sleep, and there was danger of it breaking up her business!

As usual, a number of estates have been personally inspected. The last, at present writing about to be visited, is the Hewlett Bay Park project on Long Island, which is to be laid out as a wild-bird sanctuary. Public lectures have been given from time to time, including a course of three on game propagation at Cornell University, two lectures at Oberlin College, two for a Bird Day celebration at Toledo, Ohio, and others for various schools, bird clubs, and other institutions.

The Experiment Station and Summer School project at Amston, Conn., has developed in an encouraging manner. Pupils came from various localities, as far away as Cleveland, Chicago, and Cincinnati, and expressed themselves enthusiastically. Mornings were spent afield, returning to the Audubon House at 11 o'clock, where instruction was given until the dinner hour, using a practically complete collection of New England birds. Afternoons were spent on, in, or at the lake, or in photographing birds. There were occasional picnic suppers at the lake, and moonlight boating excursions, listening to music and night sounds. About one hundred species of birds were found and studied in the Amston sanctuary in July. The experimental work was successful. The bird-boxes were well occupied, and young Quails, Pheasants, and Wild Ducks were reared, the latter including Wood Ducks, Redheads and Canvasbacks. Ninety per cent of the ducklings hatched were reared to maturity. Much credit for this is due to the careful work of the assistant, Richard E. Harrison, son of Prof. Ross G. Harrison, of Yale University, whose keen sight and hearing in locating bird subjects on field excursions were also greatly appreciated.

The lack of proper intelligent help during the winter months has hitherto been the one drawback to the full success of the experimental work, but this fortunately, has now been overcome. Through the organization of a number of influential men, R. J. McPhail has just been installed at Amston as resident game-keeper and naturalist. Mr. McPhail was brought up on great British game preserves, and is one of the best professional game-keepers in America. To pay the considerable expense of this experimental work, he is to conduct

a model commercial game-farm, which will also serve as the basis for another Summer School session in August, following the bird-study session in July, as a training-school for professional game-keepers and estate workers. The receipts of the Department for the year have covered all expenses, with a balance in the treasury. The finances of the Amston work are managed separately, otherwise the financial showing would be on a considerably larger scale.



BABY GULLS BEGINNING LIFE ON THE COAST OF MAINE

REPORTS OF AFFILIATED STATE SOCIETIES AND OF BIRD CLUBS

REPORTS OF STATE SOCIETIES

California.—During the year the Society has been carrying on its usual activities, being materially helped by the various local organizations, each of which has been looking after the needs of its own neighborhood. More than ever have we been called upon to investigate cases of bird-killing. This is because some birds pick fruit and vegetables, and some people have overlooked their economic value. The small boy, too, imbued with the spirit of war, has made use of the sling shot and air-gun, and the birds have been the targets. In an effort to counteract these conditions, we have distributed many of our own cloth warning-cards, as well as those of the National Association. We are looking forward to a legislative year and trying to be ready to meet the adverse bird bills which we feel sure will be introduced.

We are fortunate in having added to our ranks two splendid workers who have come to make their home in California. One, Mrs. William Falger, former president of the North Dakota Audubon Society, is living in Modesto, in the heart of the big San Joaquin Valley, where she is lecturing before schools and clubs, and organizing the children. In this region of grain fields and orchards she can be of the greatest service. The other is Mrs. G. M. Turner, former secretary of the Buffalo (New York) Society. Mrs. Turner has located in Riverside, in the southern part of the state, and is chairman of bird-work for the women's clubs in her district. With her illustrated lectures she is *doing much good.*

Because of war conditions, there has not been quite so much lecture work as usual, still, our slides have been used in several parts of the state. It is with sorrow that I report that the English Sparrows are getting into the South, there being many of them in Los Angeles and neighboring cities. As yet I do not see that they are driving out the other birds.—HARRIET WILLIAMS MYERS, *Secretary.*

Connecticut.—Though the educational activities of this Society have been none the less during the past year, on account of war conditions and the pressure of more direct patriotic work, the social element has in a great degree been omitted. There have been seven meetings of the Executive Board, and, in spite of the severity of the past winter, a quorum was never lacking. Forty of the Audubon Charts of winter birds were added to the sets now circulated for us by the Connecticut State Board of Education. We paid half the cost of re-binding and cleaning necessary to traveling libraries, as well as transportation one way for the libraries sent to teachers, the Board of Education paying the other half. Two new traveling libraries were voted to be pur-

chased as memorials to two faithful workers who have passed on—Miss Mary Burr Kippen, the Society's treasurer for nineteen years, and Miss Martha Burr Banks, an ardent nature-lover and worker who furnished the text for one of our popular illustrated lectures, "The Orchard Playroom." At the moment of writing this report the choice of the books is being made, in cooperation with Mrs. B. H. Johnson of the State Board of Education, so that they may be fitted to special needs.

A new lecture, "The Connecticut Homeland—Its Birds, Flowers and Trees" with 100 colored slides by Wilbur F. Smith and text by Mrs. Wright, has been prepared and would have been given for the first time at our annual meeting on October 26, but the influenza caused the cancellation of all but the business part of the program—our first break during the twenty years of the life of the Connecticut Society, in the pleasant social gatherings where all the members of the Society meet for interchange of ideas and the personal "keeping in touch" so necessary to all successful endeavor.

The work of Miss Frances A. Hurd, the School Secretary, has been most faithfully carried out, notwithstanding bad weather and the fact that the various war activities must of necessity draw from the dimes that the children of the Junior Audubon Classes might have spent for the necessary set of study leaflets. She reports: towns visited, 21; schools, 75; talks given, 320; pupils addressed, 30,000; classes formed, 324; Junior Members gathered in these classes, 7,608. Last year the class membership was 12,546, but in spite of this falling off, Connecticut still stands well in the front ranks of the work of bird-protection.

Birdcraft Sanctuary still continues to more than hold its own in attracting, not only the interest of the general and more or less curious public, but the careful study of many people from all parts of the United States, who are about to form sanctuaries and wish to see at first hand what may be done within the limit of 100 acres. The warden reports that 5,576 persons have visited the place during the year, a very remarkable showing when it is considered that for three months the country was icebound and that we did not have the members of the conference of the spring of 1917 to swell the number. Cold as was the winter, not a single week passed without a few guests. The number of species of birds observed in the Sanctuary was 134. Within its bounds, 26 species nested, and 111 individual nests have been located up to date, many more always being added to the list after the leaves fall. We have added to our collection 82 birds picked up dead and brought in by friends. These have either been mounted to replace less perfect specimens in the habitat groups or prepared as "skins" for study or exchange. A pair of the Pheasants given by our State Fish and Game Commission nested in the Sanctuary and brought out a brood.

Owing to the pressure of time in printing the reports by the National Association, the report of our traveling librarians and lectures, always written

up in such an interesting way by Mrs. Johnson, is not yet available, but will appear in a later issue of BIRD-LORE.

As it is, while much more might be said of our work, we will abide by the present demand—*Conservation of space, time, and energy*—while today the working motto of our Society is, "*Conserve everything beautiful for the delight of men's eyes on their home-coming.*" hence the title of our lecture, '*The Connecticut Homeland—Its Birds, Flowers and Trees.*' for surely this is one of the most vital ways of keeping the home-fires burning and the home-love alive.
—MRS. W. B. GLOVER, *Secretary.*

District of Columbia.—At our annual meeting we had a most interesting lecture by Dr. Oberholser, his subject being "Common Birds about Washington." In spite of the very upset condition of Washington, owing to the war, we were able to hold our five bird-study classes under the valuable leadership of Mrs. Florence Merriam Bailey, and to take our always delightful spring bird-walks with such fine leaders as Dr. Palmer, C. R. Shoemaker, Mr. and Mrs. L. D. Miner, and Mr. Raymond Moore. Just a few years ago the latter was one of our Junior Members, now he has proved himself one of our most careful and accurate observers. (Keep up the work among the Juniors!)

The walks were well attended, and a large variety (130) of birds was seen, the most unusual being Laughing and Bonaparte Gulls, Barred Owl, Warbling Vireo, Nashville and Tennessee Warblers, Wilson's Snipe, Black and Common Terns, and Alder or Traill's Flycatcher. Cooperating with the powers that be, we have secured a strip of land along Rock Creek, in the Zoological Park, as a Bird Sanctuary, and, with the consent of the authorities, have placed a number of nesting-boxes. Through the generosity of one of our members, and the consent of the officers of one of our most beautiful cemeteries, Oak Hill, we hope to make that another Bird Sanctuary. On Decoration Day a few of us went there, and Dr. T. S. Palmer took us to the graves of six ornithologists, or those interested in bird-protection, and gave us short, but interesting accounts of the work accomplished by each. One day in August, a member of our Executive Committee called me up and said, "Have you seen the Purple Martins that gather near the Red Cross headquarters every evening? They begin to gather about ten minutes before 8 and are gone by 8.30." Mr. Oberholser computed the number at about 35,000.

A few evenings later my sister and I went down. It was just 7.45, and not a bird was to be seen. I was bitterly disappointed and thought they must have left. In a minute or two I saw one, then two, and by 7.50 they were coming thick and fast, until the wires were black with them. A large gilt ball seemed to be a favorite lighting-place, and they appeared to knock each other off the ball in their desire to obtain a foothold on this desirable perch. After a few minutes of restlessness they began rising, skimming, and circling around, and

at 8.23 not a bird was to be seen, all having gone to roost in the nearby trees.—
HELEN P. CHILDS, *Secretary*.

East Tennessee.—In spite of the fact that our hearts and hands are full to overflowing with war-work, we still keep in mind our feathered friends and never let an opportunity pass to arouse interest in behalf of the birds by talking in schools, before farmers' conventions, and instructing Boy and Girl Scouts. Four courageous members of the Society, Dr. McDonald, Mr. Aiton, Mrs. Walter Barton, and her sister, Miss Stephenson, arranged an exhibit at the East Tennessee Division Fair. One corner of the Land Building at Chilhowee Park was decorated with autumn leaves and pine branches. The walls were covered with colored pictures of birds, the table was spread with literature, while BIRD-LORE was advertised extensively, as was Mr. Pearson's latest book.

Miss Hargott, of the Young Women's Christian Association, loaned us a large collection of birds' skins. Our Health Officer closed the fair prematurely on account of the Spanish influenza. We were entertained and instructed by Prof. Johnson of the Summer School, who met with us while he was here and talked to us on western birds. A copy of BIRD-LORE, sent the Society because of its affiliation with the National Association, is placed in the Lamson McGhee Free Library so "he who runs may read."—(Miss) MAGNOLIA WOODWARD, *Secretary*.

Florida.—During the past year, war activities have absorbed popular attention in Florida, as elsewhere, and the State Audubon Society has not made its former headway. The work in the public schools, especially, has suffered. At the end of the war, however, we shall endeavor to revive this interest by an organized field campaign. Since our last report, two branch societies—the Miami Audubon Society and the Winter Park Bird Club—have been organized, and by regular meetings and bird-lectures and talks, with some field-work, have accomplished encouraging results. The Society has continued the circulation of warning cards, leaflets, and game-law digests, and has also circulated a large edition of a booklet in defense of the Brown Pelican. In the face of strong sentiment of press and public favoring and demanding better protective laws for the wild game, Florida continues in old ruts without state means of enforcing the game laws, turns the hunting license money into channels having no connection therewith, and attempts, by antiquated and haphazard methods to protect the game by county authorities. The Society will make vigorous efforts to remedy, or at least improve, this unhappy condition at the legislative session next April.

The Society has made efforts to keep in touch with and receive the cooperation of the various county wardens, but the result has not been encouraging. One notable exception, Warden Thompson, of Lee County, has made a

fine record for his convictions of violators. Now that the Migratory Bird Treaty Act is in force, the Society is expecting good results from the activities of the Federal Inspectors in this service. As in the past, the Florida Federation of Woman's Clubs has splendidly cooperated with the Society in its efforts to save the bird life of the state. The Winter Park Bird Sanctuary continues to be a conspicuous success, a large increase in the bird population being noticeable. More than forty species were noted as nesting on the Sanctuary this year. The farmers on lands adjoining the Sanctuary, fully informed of the value of the Quails and other birds as the best means of crop insurance, have greatly helped in this protective movement. It is notable that during an army-worm invasion of the state the past spring and summer, only those localities suffered where bird-life has been inadequately protected. Thousands of dollars were spent in fighting this pest, but not one cent was required for this purpose on lands within or near the Winter Park Sanctuary, where a large acreage of cotton and castor-beans was grown, the latter for the Federal Government.—W. SCOTT WAY, *Secretary*.

Illinois.—Interest in bird-conservation has lagged somewhat this year on account of war activities, but a fairly normal season's work has been accomplished. The membership list has held its own, losses being offset by new names, and a goodly number of members have changed from the active to contributing class. The officers remain the same, with one exception. In June, Miss Amalie Hannig resigned. She has long been devoted to the cause of the birds, and her faithful services to the Society were deeply appreciated. Mr. Roy M. Langdon, the energetic secretary of the Maywood Bird Club, which has made more than a local name for itself, has been elected a director of the Society. A generous amount of new material has been added to our sets of slides, bringing them up to a higher standard of excellence. That the educational value of these lectures is appreciated, is evidenced by the constant demand for their use by schools and colleges. Our president, Mr. Schantz, has given illustrated talks on birds to various schools in Chicago and suburbs.

Two numbers of the Audubon Bulletin have been issued, "Winter 1917-18" and "Spring and Summer 1918." This small magazine, full of interesting articles and informing material, proves to be the Society's most valuable educational medium. While exerting every effort to disseminate facts relating to the economic importance of our bird-life, the Society is also striving in various ways to arouse interest in forest preserves, state parks, and wild life refuges, since every bit of protected woodland and waterway means conservation of bird life. The Cook County Forest Preserve, now including some 15,000 acres of woodland, is, in effect, a bird sanctuary. Recently the Board of the Sanitary District, through the influence of the Audubon Society and other bird organizations, also declared its territory, comprising 40 miles of waterway, a bird sanctuary. In addition to the Bulletin, the Society has printed and dis-

tributed hundreds of copies of a unique and valuable "Cat Circular" by Roy M. Langdon. These circulars, a truly patriotic appeal to control cats and help save birds and food, are for sale. Order for quantities have already been received from State Audubon Societies and other bird organizations.

The second spring lecture-course, held in Central Music Hall on Saturday afternoons in March, was well attended. Ernest Harold Baynes talked on "Birds in the Nesting Season," Norman McClintock gave "American Birds in Motion Pictures," Edward Howe Forbush spoke on "How Birds Help Us Win the War," and Louis Agassiz Fierstein, new to a Chicago audience, lectured on "Birds and Bird Music." From a purely financial standpoint our lecture-course was not as successful as that of last year, but the keen interest in such lectures is so apparent, that we now consider the course an annual affair.—(Mrs.) **BERTHA TRACER PATTEE**, *Secretary*.

Indiana.—April 26, 1918, marked the twentieth year of the existence of the Indiana Audubon Society. A vast amount of good has been accomplished for bird-protection during this period. Since the war has come, with all its demands for food, we have dedicated ourselves toward the greater service of having the young people, and public at large, see and learn the vast importance of protecting and loving our useful birds. It was thought best to postpone the annual meeting this year until 1919. This was the opinion of the Committee on Arrangements at Washington, Ind., where we had planned to meet, and of the members from whom a vote was taken. The interest in bird-life in the state has in no way diminished. This is evidenced by the numerous questions sent in about birds, by the bird boxes, bird-shelters, bird-baths, and feeding-devices which may be seen in the school yards of towns, cities, and along the streets, all through the country.

Talks have been given, with and without slides, before children of the graded schools, high-school and college students, at clubs, farmers' institutes, and before local and Junior Audubon Societies. No doubt it will be written in history that the birds have been, and are, a very important asset in winning this war for freedom.

Miss Margaret Hanna, of Fort Wayne, has given many talks and has organized classes for bird-study, not only in Indiana, but in some of the southern states where she was called to speak to the young ladies in private schools. One boy who is in the trenches wrote home: "When I am off duty I find the birds of great interest, and one avenue by which I can rest my mind and have relief from the awful roar of the infernal machines of war."

A course in bird-study is given in the Teachers' College of Indianapolis. The past year has shown the largest number of students in that course of any previous year. These are sent out as teachers over Indiana and other states, preaching the gospel of bird-study and bird-protection.

The Boy Scouts are adding their support to bird-protection, and have

offered to feed the birds in winter, when they take their hikes over the country. Posters relating to the open season, which have been sent by the National Association of Audubon Societies, have been mailed to the members to be used where they will do the most good. Articles on birds have been published in the newspapers and in the *Indiana Educator-Journal* during the year. Last April we published the following leaflets: "The History of the Indiana Audubon Society," "How to organize an Audubon Society," and a "Checking List of the Birds of Indiana." Five hundred of each were printed and distributed. The memorial to David Worth Dennis, so beautifully written by Alden Hadley, was this year printed in the "Proceedings" of the Academy of Science.

We will be represented at the annual meeting in October of the Federation of Clubs of which this Society is a member. The Society lost a good bird-student when Mrs. Etta S. Wilson moved to Detroit. Mrs. Wilson was Field Secretary of Indiana. Michigan has gained a valuable bird-student and bird-defender. What the next year may demand of us we do not know, but one thing seems very evident, and that is, that the birds, the soldiers of the soil, will need our protection in a way we never yet have known, in order that we may have food for ourselves and some to spare for the people of Europe.—(Miss) ELIZABETH DOWNHOUR, *Secretary*.

Massachusetts.—The Massachusetts Audubon Society takes pride in the progress of the work at its Bird Sanctuary, Moose Hill, Sharon, during the past year. Mr. Harry G. Higbee is now established as resident warden in full charge of the wild bird-life of the 265-acre estate. A daily survey of the ground is made, each nest and species is card-catalogued, and it is proposed to keep minute and definite records of all individuals. The farmhouse which is the warden's headquarters is rapidly being made into a museum of the natural history of the region, especially of its bird-life, the plan being to make the Bird Sanctuary a model and an object lesson for all students of bird protection methods. The region is admirably adapted to the purpose, and the estate, lying as it does within the great state reservation of some 2,000 acres, is a natural nucleus of wild life. Bird-students are encouraged to make use of the Sanctuary for observation purposes, and the number of visitors steadily increases.

On May 18 the Society held its first Annual Bird Day Outing there, and all were charmed with the beauty of the place and the great numbers of the birds seen. Fifty-one species were noted on that day, some of them rare, eighteen pairs of eleven species nesting.

We rejoice, also, in the final passing of the Enabling Act, the culmination of legislative work for the Migratory Bird Treaty for which the Society, both as a whole and through individual members, has worked untiringly for a number of years and toward which it has directly contributed over \$4,500.

We appreciate the wise and vigorous leadership of the National Association in this work.

The Society is glad to report the cooperation and good will of the State Fish and Game Commission and the Legislative Committee on Fisheries and Game in all its work for legitimate bird-protection, as a result of which there were few undesirable bills brought forward in state legislation and none passed.

New sustaining members added during the year have totaled 298, life members 93, making a total of sustaining members since the founding of the Society of 3,486, life members 536.

There was an average attendance of 1,500 at the annual lecture course, the lecturers being Stanley Clisby Arthur, of Louisiana; William Lovell



MUSEUM AND WARDEN HEADQUARTERS ON THE MASSACHUSETTS
AUDUBON SOCIETY BIRD SANCTUARY

Finley, of Oregon; Norman McClintock, of Pennsylvania. Charles Crawford Geerst gave whistling imitations at each lecture.

At the great annual mass meeting in Tremont Temple, the speakers were the Rev. Manley B. Townsend, Secretary of the New Hampshire State Audubon Society, and Edward Howe Forbush, State Ornithologist. Charles E. Moulton gave bird imitations.

The multitude of varied activities annually reported have been vigorously carried on. There is no space to enumerate them here. They have covered not only the state, but in many instances have extended to the farthest corners of the nation.—WINTHROP PACKARD, *Secretary-Treasurer*.

Michigan.—In consequence of the war, no new work has been attempted, nothing but the usual distribution of literature, the correspondence, placing of charts and plans of work in schools, and a few lectures given in new territory. Many of the cloth posters have been sent out, and an exhibit is ready to go to the annual meeting of the Federation of Clubs, to convene in Battle Creek on October 15 and 16. Two sources most helpful in passing on material for bird-protection are the Federation, which sent out to all the clubs of the state a plan of work prepared by us, and the Wild Life Conservation Department of the Woman's Committee of the Council of National Defense, which sends bulletins, leaflets, and the like, into every township in the state.

Grand Rapids is to be congratulated on having so educated its people with its cat license law that where two years ago they were willing to pay licenses on more than 4,000 cats, this year only about 800 were willing to invest money for the protection of their tabbies. Not only our Audubon Society, but the whole state, has suffered a great loss this year in the death of Charles K. Hoyt, of Lansing, Vice-president of our Society, who died last July. Mr. Hoyt's naturally judicial mind, combined with his extensive knowledge of our game laws and his kindly helpful spirit, made him invaluable to the cause of bird-protection, and our Society can erect no better memorial to him than to "carry on" along the progressive lines he always advocated.

Let us take heart,

For through the grim gray clouds of war

We still can hear the Bluebird's song afar.—(MISS) GERTRUDE READING.

Missouri.—The annual meeting was held December 21, 1917, at the Missouri Botanical Garden, St. Louis. A paper by Otto Widmann, "Bird Clubs and Other Societies for Bird-protection" was presented, and an exhibition on the economic value of common birds of Missouri, of nesting-boxes, feeding devices, and literature was a feature of the programme. The following officers were elected: Dr. Herman von Schrenk, President; Mr. Ralph Hoffman, Vice-President; Dr. R. J. Terry, Secretary-Treasurer. During the year a small increase in membership, including several life members, has taken place. It is to be regretted, however, that the membership roll is still only the nucleus of what our Society should develop into. The "War" posters have been distributed and put up in many sections of the state. Considerable effort was made by the Society toward the passage of the Knudding Act for the Bird Treaty. Affiliated with the Audubon Society of Missouri are: The Science Section of the Wednesday Club of St. Louis; the Parents' and Teachers' League of Webster Groves, and the St. Louis Bird Club. In January, Ernest Harold Baynes was the guest of the Society, with the St. Louis Bird Club and St. Louis Garden Club, lecturing on "Birds in the Nesting Season."—R. J. TERRY, *Secretary-Treasurer*.

New Hampshire.—Despite war conditions, our Society has enjoyed a successful year. Some members have felt unable to continue their help, but these losses have been more than made up by others. Our membership now totals 756, including 69 life members. The total receipts for the year were \$1,626.34 and the disbursement, \$1,457.50.



MANLEY E. TOWNSEND (AT THE LEFT), PRESIDENT OF THE NEW HAMPSHIRE AUDUBON SOCIETY, IN CAMP IN THE NORTH WOODS

A large correspondence has been maintained, over 14,000 circulars and bulletins urging bird-conservation have been sent out to selected names, and more than fifty lectures, most of them illustrated, have been given before all sorts of gatherings. No call has been neglected. Many schools were visited and the interest of the young in bird-study stimulated. In these times it has seemed a golden opportunity to call public attention to the aid afforded the agriculturist, orchardist, and forester by the insectivorous and weed-seed eating birds. Articles have been prepared and published in the daily papers, pointing out that increased bird-life means fewer pestiferous insects and, consequently, more food for a world hard pressed for it. A lecture on "How the Birds Can Help Us Win the War" has been prepared and frequently given.

Our Society took active part in the campaign to secure the passage of the Enabling Act to put teeth into the Federal Migratory Bird Law. A large number of our members, urged by this office, telegraphed or wrote their

representatives in Congress. New Hampshire's congressional delegation voted right on the question. We mourn the death of Senator Jacob Gallinger, one of our honorary vice-presidents, and ever an intelligent friend of bird-conservation. We shall make a determined effort to secure the passage of a cat license law in this winter's legislature. The promise of substantial aid from other organizations gives ground for hope that we may succeed.—MANLEY B. TOWNSEND, *Secretary*.

New Jersey.—The activities of the New Jersey Audubon Society during the past year (its eighth) have been more along lines of routine than any startling developments. In common with many such organizations, it has felt the handicap which war conditions imposed, notwithstanding the fact that bird-protection is truly a war-work, as well as a peace-work.

In the legislative field, the Society, at the request of one of its members, had introduced and secured the passage of a state law removing protection from the European Starling, and successfully combated an effort to amend the bill so as to remove protection from Gulls. It also aided in the passage of a bill extending for three years the closed season on Wood Ducks. The fight for a cat license and for a closed season on Quail was unsuccessful. Having taken part in the effort in behalf of Federal legislation, it joined in the general rejoicing over the enacting of the Enabling Act, giving effect to the treaty with Canada. One patron, five life members, 35 sustaining members, 148 members, 16 associate members and 4,933 Junior members have been enrolled.

The New Jersey Audubon Bulletin has been issued at regular two-month intervals—six issues. Newspaper publicity work has been more satisfactory than ever before, including a number of special feature, illustrated articles. Twelve lectures have been given during the year by the Secretary, at schools, farmers' institutes, clubs, and other gatherings, and the Secretary has also acted as one of the judges in two bird-house contests. During the year 373 School Bird Clubs were organized with a total membership of 8,419.

The eighth annual meeting was held in the Free Public Library, Newark, October 8. The business session was at 4 P. M., immediately followed by a meeting of the Board of Trustees, public session at 8 P. M. Herbert L. Thowless, of Newark, was elected a member of the Board of Trustees in place of George Batten, deceased, otherwise the membership remained the same. The officers were reelected. At the public session the Secretary gave an illustrated address on "Our Wild Birds and Their Place in the War."—BEECHER S. BOWDISH, *Secretary*.

Ohio.—Despite the fact that war-work of various kinds has occupied much of our time during the past year, the work in the interest of bird-protection has not been neglected by our Society. We realize, as never before, what an

important factor—our birds are in winning the war. We aim to impress this fact upon the general public. We have had many splendid lectures during the past year, dealing with the value of birds as an economic factor, as well as the best method of attracting and protecting them. The "cat question" has been debated a great deal of late in one of our evening papers. At last, it seems, a goodly number of people are beginning to realize what a terrible menace cats are to our bird population. We expect to make renewed efforts during the ensuing year to induce our City Council to pass an ordinance providing for the destruction of stray cats and the licensing of all other cats. Our Society invested almost all its funds in Liberty Bonds.

Last winter we had the extreme pleasure of presenting to the public several reels of films depicting the home-life of our wild birds. These films, which are rented by the National Association of Audubon Societies for a nominal sum, are of the greatest value in instructing the people in bird-lore. They deserve to be shown in every city and village in the country. Our aim is to make the coming year even more successful than the year which is past.—WILLIAM G. CRAMER, *Secretary*.

Oregon.—Our educational work has been carried on as usual during the past year. The plan has been continued of holding public meetings each Saturday night in the public library at Portland. These have been under the direction of the Bird Study Committee, of which W. A. Eliot was chairman. A systematic study of birds has been taken up, and, each week, lectures have been given, illustrated with stereopticon slides and moving pictures. By the aid of these lectures and the many bird-walks beginners have been able to get a good knowledge of our common birds.

A contest in building bird-houses was held among the members of the Junior Audubon Societies last spring, and a large number of houses were made and put up in the woods. The various classes who won in the contest were taken on an automobile trip up the Columbia River Highway, and the best bird-houses were placed in the trees along the highway to attract songsters.

At the annual meeting of our Society, held October 5, the following officers were elected: President, William L. Finley, Vice-President, Willard A. Eliot, Corresponding Secretary, Dr. Emma J. Welty, Recording Secretary, Mrs. R. B. Horsfall, Treasurer, Herman T. Bohlman. Dr. Welty gave a short history of the Audubon movement. Dr. George W. Field and Dr. A. K. Fisher, both of the Biological Survey of the Department of Agriculture, gave interesting talks on the work of the Survey.—DR. EMMA J. WELTY, *Secretary*.

Rhode Island.—A record of the work of the Audubon Society of Rhode Island for the past year consists of activities through the circulating library, through field-trips, and through lectures.

The books of the library have been used by 1,040 individuals and have a

circulation of 6,735. This cumulative work of the library throughout the state is an important factor in making for the permanent protection of birds and wild life.

There have been twenty field-trips during the year, with a total attendance of 206. The personnel of these trips consisted of school children, school teachers, and adult members of the Audubon Society.

The Secretary-Treasurer and Librarian have given twenty-one lectures about birds to a total of 1,265 individuals, grouped as classes of school children, audiences at state granges, and as clubs and other organizations in and about Rhode Island. In this connection, the Secretary has given four lectures to the enlisted men at Camp Devens, under the auspices of the Y. M. C. A., to the approximate total of 300 men. It should be of interest to members to know that from 1912 to 1918 inclusive, officials of the Audubon Society of Rhode Island have given 307 bird-lectures to a total of 38,350 individuals.—**H. L. MADISON, Secretary.**

South Carolina.—In the press of war-work, the purposes for which the Audubon Society exists have not been entirely neglected. Letters have been answered promptly, and a few talks and illustrated lectures made. A set of bird-lessons, prepared by the Secretary for use in an elementary textbook on agriculture, has been printed in leaflet form for free distribution by the State Game Warden.

A six weeks' course in bird-study, offered by the National Association of Audubon Societies in coöperation with Winthrop College during the summer session, was taught by the Secretary. The connecting up of the inquirer (individual, institution, or community) with the National Association is perhaps the most valuable service of a State Society.—**BELLE WILLIAMS, Secretary.**

West Virginia.—Our Society has not been so alert and active this year as could have been desired, but some good, tangible results have been achieved. Our Secretary has been appointed a deputy game warden for Wood County, and several others in different localities in the county have been commissioned. It is hoped that this will be the means of inspiring better respect for existing bird laws. Our Educational Committee has done much work in the schools of Parkersburg and vicinity, by distributing literature and getting the teachers interested in Junior Audubon work. The cloth bird-conservation notices, issued by the National Association, have been mailed to all the post offices in this county, and also to other towns and gun clubs throughout the state. Action has been taken to have them distributed to all farmers who will agree to post them on their lands. During last winter, when we had an unprecedented period of snow and ice, the daily press was freely used to urge the necessity of maintaining lunch-counters for the starving birds. It was a hard winter on the Bob-White, and our Society was instrumental in saving some of

them by timely distribution of grain in the fields and fencerows. In addition to several minor walks for bird-study, we had a delightful field excursion in May in the vicinity of Beloit, Ohio, conducted by P. W. Athey, an accomplished ornithologist, and a valued member of our Society. On this trip of three hours' duration thirty-eight species of birds were seen and identified.—WALTER DONAGHO, *Secretary*.

REPORTS OF AFFILIATED ORGANIZATIONS

Audubon Club of Norristown (Pa).—The Club has had a very enjoyable and instructive year. The advantage of having the opportunity to hold its meetings in the Regar Museum has made it possible to study bird-life with mounted specimens and moving pictures, as well as to seek them in the woods and open fields. H. Severn Regar, Vice-President of the Audubon Club, and owner of the fine collection of birds classified in the Regar Museum, has provided an up-to-date moving picture and stereopticon machine. In March, Samuel Scoville, Jr., spoke to the Club on the topic, "Byways and Skyways," and brought pictures and nature-study most effectively before the Club members. On May 30, by the generous hospitality of Col. William Henry Wetherill, the owner, the Club made its annual field-day outing to Mill Grove Farm, on the Perkiomen Creek, the former home of John James Audubon, and studied birds in their native haunts.

At the September meeting of the Club, Mrs. S. Louise Patteson gave a most instructive and interesting talk on "The Birds, Our Allies in the Food Campaign." At the June meeting, J. Fletcher Street addressed the Club on "Local Birds in Their Haunts." All these talks were illustrated with lantern-slides and were followed by moving picture reels showing "Birds of Prey," "The Owl Family," "Birds of the Home Garden," "Birds of the Southlands," and others. Previous to each meeting, in the afternoon, the members of the Junior Audubon Club were entertained by the first showing of these moving pictures, and from seventy-five to a hundred young people attended.—HELLEN A. BOMBERGER, *Secretary*.

Audubon Society of Buffalo (N. Y.).—The Society completed its ninth year with a paid-up membership of 262 members. Mrs. Turner, the retiring Secretary, who had served for eight years, was presented with a life membership in the National Association in appreciation of her services. Owing to the severe weather and the inefficient street-car service, only one meeting was held during the winter. At that time Mr. Hoot, of Rochester, gave an interesting lecture entitled, "Hunting without a Gun." Mr. Avery, our President, lectured on April 26 on "Our Feathered Allies" and showed many beautiful pictures which he had made. He spoke especially of the economic value of birds and showed that it is necessary to protect them in order to conserve the crops.

The bird articles and migration calendar in the *Sunday Express* were resumed during the spring months, and besides attracting wide attention to bird-study, netted the Society about \$50. The Almanac Committee, consisting of Miss Crump and Mr. Avery, prepared a most interesting bird almanac, of which a thousand copies were printed and ready for distribution earlier than in previous years. The price of the almanac was 50 cents, and they had a wide distribution throughout the country. Unsold copies were presented to Junior Audubon Classes in the schools. The membership in the Junior Audubon Circles was not so large as usual, many children giving all their money to the Red Cross or spending it for Thrift Stamps.

Perhaps the most successful, and certainly the most pleasurable, part of our work was a series of excursions held on Saturdays to the following places: April 27, Williamsville; May 11, Springbrook; May 18, Fort Erie; May 25, Abbott's Pasture; June 1, Hamburg; June 8, Athol Springs; and June 29, Niagara Glen. Mr. Avery was the leader. The smallest number present was eight and the largest thirty-four. These trips were announced in the daily papers and several interested persons learned of our Society and asked to become members.—MISS CAROLINE O. DOLL, *Secretary*.

Bird-Lovers' Club of Brooklyn (N. Y.).—We hold our meetings the first Saturday of each month, from October to June, inclusive. At each meeting some member gives a talk on birds. These are very helpful and are thoroughly enjoyed. On the first Saturday of each month, from October to June, a field-trip to Prospect Park is conducted by a member of the Club. A list is kept of the birds observed, and this is posted in the Children's Museum, where the Club holds its meetings. From September, 1917, to August, 1918, the number of birds seen in the Park was 117. Each year the Club holds a contest for members of the Children's Museum. For three months the children study the migration, nesting habits, and enemies of the birds. They also study the bill, feet, wings, and feathers of various types of birds and their uses to the birds. Then an essay is written and the winner is awarded a pair of field-glasses.—HOWARD E. WHITLOCK, *Secretary*.

Brookline (Mass.) Bird Club.—Our membership remains about the same as last year, but the interest in bird-life and protection is steadily growing. We have had our regular meetings, with lectures, which have been well attended, and our field-walks on Saturday afternoons and holidays have been so popular that it has been almost impossible to conduct them the way we would like to. Our bulletin for the winter walks and lectures is already issued and includes a lecture this month by Herbert Parker, former attorney-general of Massachusetts, on his aviary at Lancaster, Mass.; also an illustrated lecture on Labrador by Dr. Charles W. Townsend.—CHARLES B. FLOYD, *ex-President*.

Burroughs-Audubon Nature Club of Rochester (N. Y.).—We have had a very interesting year. Our President, Wm. B. Hoot, had spent the preceding winter in California, and on two different occasions he entertained the Club with illustrated descriptions of the West, concluding each talk with a delightful account of his "Six Weeks in Sparrowdice." Sparrowdice was his own name for one of the many bird-haunts in California, and the bird pictures which he secured there were unusually fine. Mr. Calvin C. Laney, Vice-President of the Club, and superintendent of Rochester's park system, gave a very interesting and instructive description of the Arnold Arboretum. The Secretary-Treasurer gave his illustrated lecture, "Personal and Intimate Experiences with the Birds," using about 150 hand-colored pictures which he himself had taken. The out-of-door tramps through woods and fields were among the most pleasing and profitable of our meetings, and in this way many a member had his first introduction to some of Nature's rarest treasures. —CLINTON E. KELLOGG, *Secretary-Treasurer*.

Burroughs Junior Audubon Society of Kingston (N. Y.).—We held the first meeting for the year on September 18, at which time officers were elected. Meetings have been held once a month. At one meeting our Manual Training Director explained how to construct bird-houses and feeding-stations; at another, one of our faculty gave an address and imitated the calls of about fifteen birds very accurately. One trip was made to the home of John Burroughs, and it was a very interesting and instructive one. Last spring we celebrated



KINGSTON (N. Y.) BURROUGHS JUNIOR AUDUBON SOCIETY

Bird Day in chapel. At that time prizes were awarded to Helen Carroll and Donald Church for the best original compositions on "Bird Protection as a War Measure."

Cloth posters, received from the National Association of Audubon Societies, have been put in the woods about Kingston, permission having been obtained from the Mayor to place the posters anywhere the Society deemed wise. Lectures were also given, with the aid of colored slides obtained from Albany. A collection of about thirty mounted specimens of our common wild birds was loaned to the Society for study. We hope to continue our interest and do more work in the open.—(MISS) ELIZABETH RICHARDS, *Secretary*.

Cayuga (N. Y.) Bird Club.—Owing to the many calls upon our time and money the past year, we made no special plea for funds nor introduced any innovations. The inauguration of a course of public lectures on the "Conservation of Wild Life" by the Cornell College of Agriculture brought to Ithaca so many of the leading ornithologists of the country that it was unnecessary for the Bird Club to hold any public lectures. The usual field trips during the migration period of April and May were kept up and were well attended. The trips were taken in the Sanctuary every Saturday morning from 6 to 8 A.M.

Another bird-box competition was held among the school children, and about 100 well-built boxes were entered. Assurance that the boxes were all put up was secured by not announcing the prizes until the children brought back word that all of their houses were in position and ready for tenants. The regular feeding-stations in the Bird Club Sanctuary were maintained during the winter, and an increasing number of birds patronized them. The diet of millet and sunflower seed was somewhat more expensive than the usual one of chick-feed or cracked grain, but was deemed advisable.—ARTHUR A. ALLEN, *Secretary*.

Chautauqua (N. Y.) Bird and Tree Club.—While originally a summer organization, the Club has, for two years, held meetings during the winter at the Museum of Natural History in New York City, being most fortunate not only in its place of meeting, but also in the cooperation of T. Gilbert Pearson, who as Vice-President is seldom allowed to miss a meeting, the members always being eager to hear of his work all over the country. At one meeting Prof. S. C. Schmucker, after a preliminary lecture in the Hall on the evolution of the birds from the Reptilia, conducted the members about the Museum, showing from the splendid collection of fossils just how closely the great Dinosaurs were related to the earliest birds. Of especial interest was a fossil of an extinct bird which shows two rows of well-developed teeth. Dr. G. Clyde Fisher, of the American Museum of Natural History, has also lectured to us delightfully. Besides paying especial attention to the utilitarian value of birds as a war measure, the Club is helping the Committee for Devastated France in their

work of replanting the fruit trees of France, 60,000 or more having been ruthlessly cut down by the retreating enemy.—(Miss) HENRIETTA O. JONES, *Corresponding Secretary*.

Cocoanut Grove (Fla.) Audubon Society.—This year three active departments have been added: Legislative, Educational, and Study. The first is busy with important reforms; the second is doing fine work in Sunday and public schools; while the chairman of the third has created an unusual interest in the study of home-birds.



BIRD-FOUNTAIN (BY EPISCOPAL CHURCH RECTORY) ERECTED BY THE COCOANUT GROVE (FLORIDA) AUDUBON SOCIETY

We have secured a county game warden and have presented two bird-fountains, one to the Episcopal Church and one to the Christian Science Temple. Both have been appreciated by the birds and are very attractive. Our bird poster at a poster exhibit (of "Help Win the War") held by the Dade County Federation of Women's Clubs was the center of attraction. It showed some of the birds that eat the boll-weevil. We have interested two of the county farming organizations to the extent of gaining their promise of protectors for county birds. Our membership continues to increase, it now numbers 120. We own a Liberty Bond.—Mrs. KIRK M'NROE, *Secretary*.

Columbus (Ohio) Audubon Society.—Interest in birds, more as a relaxation than the doing of any special work, characterized the Society the past year, owing to the stress of the times. Interesting lectures, to only two of which an admission fee was charged, were given by the Club. In October, Mrs. S. Louise Patteson urged the boys and girls to put up bird feeding-stations and nesting-boxes, showing pictures of those used on her own place. In December, Prof. R. C. Osburn, of Ohio State University, traced the evolution of bird-life in an illustrated lecture which opened the eyes of many bird novices. The January lecture by E. H. Baynes was interfered with by zero weather and limited car service. Mr. Baynes, however, generously gave his "Wild Animal" talk the next afternoon, and went to Camp Sherman in the evening, repeating the talk and pictures for the boys in the camp. In February, Prof. J. S. Hine, President of the Society, took his audience to Alaska, showing the pictures and telling his experiences on the trip with the National Geographic Society explorations in the Mt. Katmai district. In April, C. C. Gorst celebrated the migration season by migrating with his audience from the Western Meadowlark to the Eastern Hermit Thrush and the Southern Mockingbird, through inimitable bird-calls.

Besides the annual fee, a subscription was made to the National Association to aid in bird-protection. In order to meet requests of bird clubs in the vicinity, the constitution was amended, and a club of forty girls from St. Mary of the Springs was the first to become affiliated with the Society. Only members of the Society were allowed on the field-trips, which were made on Saturday afternoons from March till June. These meetings varied from a few enthusiastic ones on rainy or windy days to thirty or more when hospitable members of the Club opened their summer cottages. — LUCY B. STONE, *Secretary*.

DuBois (Pa.) Bird Club.—During the first year of its existence the Club was increased from an original membership of eight to about sixty, largely through a lecture by Ernest Harold Baynes. This was delivered in the high-school auditorium, and as a result a much greater interest in bird-life was awakened and numbers of bird-houses were placed throughout the city.

Our greatest difficulty has been to arouse enthusiasm; people will join the Club but it is difficult to find dependable workers. Much of the success of Mr. Baynes' lecture was due to the efforts of two of the busiest women in the community, Mrs. Julia Long and Miss Sweeny, the former a teacher of domestic arts and the latter a teacher of mathematics in the city high school, who were of great assistance to the President of the Club in this matter. Mrs. Long, through her work among the school children, was instrumental during the severe winter weather in having hundreds of birds fed. The *DuBois Morning Courier* printed a number of bird articles by the Club's President.

Encouraged by the results already obtained, we expect to do something really worth while next year by showing the economic value of birds, their

need in agriculture, and the like. We would appreciate inquiries and suggestions.—W. D. I. ARNOLD, *President*.

Elgin (Ill.) Audubon Society.—This Society, organized in 1914, has a membership of 120, of whom 95 are on the active list, 16 on the associate list, and 9 on the Junior list. Meetings are held at the homes of the members. Last October, in cooperation with the Garden Club, we sponsored a musical lecture by Professor Olds for the benefit of the Red Cross. With the following slogan, "Crops will save the Allies; Birds will save the crops," the annual exhibit was held April 19 to 22, 1918, during which time it was estimated there were 2,000 visitors. No admission was charged, the purpose of the exhibit being solely to interest the people of Elgin in the need of bird-protection.

The Club has placed posters in regard to the conservation of birds and flowers in all the public parks, and now has twenty more printed on oilcloth, with a special appeal, to be placed this fall. One of the Club members, a taxidermist, prepares for the club collection any bird which comes to accidental death. The two issues which the Club is at present working on are, first, an ordinance restricting stray cats, and, second, the repairing of the city museum.—CHARLOTTE WEATHERILL, *Secretary*.

Erasmus Hall (Brooklyn, N. Y.) Audubon Bird Club.—We have been active the past year, and have conducted bird contests in the schools, one an Essay Contest, the essays of which were written on some phase of bird-life, and the other, a Poster Contest, the posters of which showed the importance of birds to agriculture. The winners of these contests were awarded school medals. The Club has voted to hold these contests each year. A Reed "Bird Guide" was won as a prize by Jerome Allen for identifying the greatest number of birds between March 1 and June 1. His list numbered 69 species.

The Club does most of its field-work in Prospect Park, although some trips are made to Sheepshead Bay and Staten Island. Members of the Club helped maintain a feeding station in Prospect Park during the early part of last winter.—(Miss) GRACE SEELIG, *Secretary*.

Forest Hills Gardens (N. Y.) Audubon Society.—The idea of the conservation of our natural resources has always been back of the Audubon movement, which has two aspects, the economic and esthetic. Since the war began, Forest Hills Gardens Audubon Society has emphasized the economic value of bird-life in preventing the terrible damage done to our crops by worms and insects. This damage has reached almost unbelievable figures, and there are only two ways of cutting it down. One is by constant spraying or dusting with chemicals, which entails expense and labor, and the other is attracting the birds around farms and gardens and letting them do the work.

To protect our beautiful gardens, where the trees, shrubbery, and flowers

are our greatest assets, cultivating the birds is not only a privilege but a necessity. If extra food, such as millet, rye, oats, and sunflowers are planted in vacant lots and in the individual gardens and if fresh water is provided in shallow basins, and nesting-boxes put up, the birds will come of themselves and destroy enormous quantities of injurious insects. Every opportunity has been taken to bring home the wartime lesson of conservation. It was urged last spring and summer, in our exhibit, in lectures to the children, in notices in the regular fortnightly bulletin, and in the small lamp-post bulletins. It was still further emphasized when Ernest Thompson Seton gave his lecture on "Wild Life" under the auspices of the Audubon Society on April 26, 1918.

Even the annual bills for dues carried the slogan, "Attract the Birds and Save the Gardens."—MARY EASTWOOD KNEELER, *Secretary*.

Franklin (N. Y.) Marsh Wren Club.—Our Club was organized in the summer of 1907. We are intensely active in the study of bird-life. Our Society motto is "Protection." Our native birds are well known to nearly all the



BRIDGET, THE RUFFED GROUSE
Special pet of the Marsh Wren Club at Franklin, New York

members, not only by sight but by their songs as well. At present we are making a systematic study of the birds. Recently we studied the "Bills and Beaks" of birds. Our last meeting was given to the "Tongues of Birds." The material for this study was presented to our President by Dr. F. A. Lucas.

12. We have been made happy by the visits of several birds which are rare in

this locality, among them a flock of Evening Grosbeaks and the Red-breasted Nuthatch. Last May a Red-faced Warbler was closely studied by two of our members. Study classes are well attended and many outings have been enjoyed by the Club. Bird-houses have been erected and many of our members have window-shelves for feeding winter birds. The accompanying photograph is that of a female Ruffed Grouse, which, through the kindness extended her by some wood-cutters, became very tame and has afforded us and other visitors many enjoyable experiences.—MARCIA B. HILLER, *Secretary*.

Hartford (Conn.) Bird-Study Club.—Our meetings have been carried on much as usual during the past year, although, owing to inclement winter weather and the increasing demands of war-work, the attendance at both indoor and field meetings has been somewhat smaller than in former years. Twenty-three indoor meetings have been held, including illustrated lectures by Dallas Lore Sharp, S. C. Chubb, and Dr. C. C. Beach, and seventeen field meetings. Among the many interesting birds seen on our field-trips, the Black Tern, Shoveller Duck, and Bonaparte Gull may be specially noted.

On May 25 the Club entertained the Connecticut Federation of Bird and Nature Clubs on the occasion of its first annual field meeting. Reports from the Clubs and a talk by Clinton G. Abbott filled the morning session, and after luncheon excursions were made to some of the city parks, that under the leadership of Mr. Abbott being particularly enjoyed. A Brewster Warbler was the *rara avis* of the day. The Chairmen of both our Educational and Sanctuary Committees are in the service, so that work along these lines has been necessarily deferred for a time, and as most of our members are giving much time to war activities, nothing new has been attempted. Our new Year Book has just been issued, and with the interesting program laid out we hope to keep alive interest in bird matters until the coming of happier and less strenuous days releases our time and energies for more progressive work.—(Miss) HELEN C. BLACKWELL, *Corresponding Secretary*.

Kez-Hi-Kone (Conn.) Campfire Girls.—For four years the girls have studied birds with me on all our hikes and at our house meetings. We all have bird-houses and feeding-trays and bird-baths. We plant sunflowers and other things purposely for them. We sent our plea to Congress for the bird-protection bill as you requested, and heeded all other requests. Naturally we have seen some interesting bird-sights, and I think we are all glad that on our trip to and fro from Red Cross work and other war activities we can see a bird, possibly identify it at once, enjoy its beauty, be cheered by its song, and know what kind of a bird sings it.—MRS. C. L. BERGER, *Guardian*.

Los Angeles (Calif.) Audubon Society.—We have had a most satisfactory year. In the beginning we seemed to be threatened with a loss of members,

due to outside, war, and other work. Our Membership Committee at once started such an efficient campaign that at the close our membership reached the highest mark in our history. We now have 88 paid members.

Another incentive to greater work was given by our President at the opening meeting in October, when she gave a stirring call to action, especially in the "war work" of protecting the "farmer's allies," the birds.

We have had nine interesting indoor meetings, with speakers from all parts of the country. Also nine field-days spent in fascinating cañons or on beaches, and at the same number of business meetings much has been accomplished relating to the needs of the Society.



BOARD OF MANAGERS OF THE LOS ANGELES AUDUBON SOCIETY

Some of our activities have been legislative work for Blackbirds and other so-called "destructive" species; preventing hunting licenses being issued to children, compiling the history of the Society for publication, causing the keeper of Silver Lake to lose his license for illegal shooting; having a beautiful and ornate bird-fountain, designed by a well-known Pasadena sculptor, erected in Exposition Park; purchasing a fine United States flag, to which allegiance is pledged anew at each indoor meeting. We also have a service flag containing thirteen stars. On Arbor Day we planted a vigorous young California Oak in Exposition Park, with appropriate ceremonies. We sent a written communication to the School Board, Park Commissioners and Playground Committee and suggested that bird-tables and drinking-pools be placed in the schoolgrounds, the same to be made and cared for by the children and supplied with crumbs and scraps from their lunches; this has met with hearty endorsement.

A War Committee was formed and a ten-dollar life membership campaign carried on in conjunction with it, with the result that ten life memberships were

secured, the hundred-dollars being used to purchase two Liberty Bonds. Our President has been appointed District Chairman of Bird-work, an honor we feel she justly deserves. She has given twenty-three addresses, using slides of her own photographs, and has represented our Society at the district and state federation conventions.

Our official speaker has answered requests from schools, clubs, and Boy Scout meetings, and has spoken mainly on bird-migration, birds in their economic relation and their domestic and esthetic values. Our library chairman has worked untiringly through the year, and her efforts have been rewarded for we now possess the nucleus for a good library. Our custodian has accumulated a valuable collection of government pamphlets, magazines, bird-nests, and the like.

Our press chairman has had the honor of having her fine article on "Hawks" printed in the Sunday magazine section of our leading newspaper. She has also conducted twenty-eight "trail-trips" through the year, these being in addition to our field-trips, and has taken Saturdays to accommodate school teachers who were desirous of studying the birds. Some of our members conducted a vigorous campaign during the holidays and again secured the largest annual Christmas bird census.

Our average attendance at indoor meetings has been 36, the largest being several hundred, at our Reciprocity Day, when the bird-fountain was dedicated. The largest field-day attendance was 101, at our annual "pilgrimage" to Fellowship Hill. We have had other large and enthusiastic field-days, those in winter having many eastern visitors.

The largest number of birds observed at any one field-day was forty-eight.—
MRS. G. H. CRASE, *Corresponding Secretary.*

Maywood Ill. Bird Club.—The Club's second year was devoted principally to launching a nation-wide campaign against the stray and unrestrained cat, in the interest of bird-protection and food-conservation. A circular was issued in April, which was emphatically indorsed by eminent authorities. The Illinois Audubon Society is printing and distributing this document. The Detroit Zoological Society and the Florida Audubon Society have distributed 1,000 and 500 copies respectively. It has been sent to Audubon Societies, bird clubs, and individuals in the United States and Canada. No interested organization or person can allow to pass unheeded this golden opportunity to help win the war by eliminating the cat-menace to bird-life and food-supply.

Four Junior Audubon Classes, with an enrollment of 176 children, were organized. The school children, under the leadership of a Maywood Bird Club director and the auspices of the Maywood Twentieth Century Woman's Club, rendered excellently, on two occasions, before 1,800 persons, Ella Padon's bird masque, "Bobbie in Birdland." Letters were written to congressmen in behalf of the Migratory Bird Treaty Enabling Act and protesting against opening

certain reservations to hunting and grazing. The reversal of an order to wardens to kill all Hawks and Crows in the forest preserve, Maywood vicinity, was secured through the efforts of the Club. President Harper has published a book, "Twelve Months with the Birds and Poets." Secretary Langdon was elected a director of the Illinois Audubon Society.

Last December, under the auspices of the Club, O. M. Schantz and Edward Hulsberg, bird whistler, gave an illustrated lecture entitled, "Birds and Food



ROY M. LANGDON
Secretary Maywood (Ill.) Bird Club

Conservation." The Club's honorary membership includes Charles B. Cory, Ruthven Deane, Ned Dearborn, Stephen A. Forbes, Benjamin T. Gault, Edward W. Nelson, Robert Ridgway, and Frank M. Woodruff, sons of Illinois who have contributed immeasurably to bird-lore. Maywood's constantly increasing interest in birds, evidenced by the extensive housing and feeding of birds and growing number of bird-baths, is assurance that the local work of the Club is permanently effective.—ROY M. LANGDON, Secretary.

Meriden (N. H.) Bird Club.—All the regular activities of the Club have been carried on as usual during the past year. "Bird Sunday" was observed in the village for the fourth successive year, and the congregations of both churches, with many visitors, gathered in the Bird Sanctuary to hear Rev. Noble O. Bowlby preach a sermon on birds. We have had three lectures: "How to Have Bird Neighbors," by Mrs. S. Louise Patteson; "Wild Birds and How to Attract Them," and "Animals Used in Modern Warfare," both by Ernest Harold Baynes. We also had an entertainment by Miss Matthews, who sang folk-songs. In August we opened an exhibition of war posters, in charge of Mrs. Wilfred Barnes, a member of the Club.

The Secretary has kept in touch with the numerous bird clubs which have been founded through our influence, and our General Manager has organized sixty-four new clubs within the year. Most of these were established during a lecture tour in New York and New England. We have raised, chiefly by subscription, about \$2,300 for the purpose of converting an old colonial house, standing in the Bird Sanctuary, into a museum of bird-conservation. Work on the building has been proceeding all summer under the direction of Miss Annie H. Duncan, a member of the Club, and will soon be completed — [Miss] ELIZABETH F. BENNETT, *Secretary*.

Minneapolis (Minn.) Audubon Society.—During the past year the Society has continued to hold its regular meetings, although the attendance has been affected by the many pressing demands of war-work.

It has also maintained the Bird Museum—a permanent exhibition of bird-study materials opened in 1917. The Public Library Board has kindly given the use of two rooms in a fine fireproof Branch Library, where our collection of 500 mounted birds of the Northwest has been installed, together with a growing collection of model bird-houses, nests, eggs, charts and books, a Bausch & Lomb balopticon, and 50 slides relating to bird-life. With the Museum serving as a nucleus, we hope to stimulate more interest in birds among the people of our city. Junior Audubon Classes have been organized in about thirty of the public schools. A strong desire was felt for a bird-study class, but no leader was available during the winter months, so a specially welcome feature of last spring was a series of twenty lectures, illustrated with slides and films, on "The Bird," given to our members by Dr. T. S. Roberts, State Ornithologist and long-time bird-student. — GERTRUDE P. WICKS, *Secretary*.

Minnesota Game-Protective League.—We have not put forth any effort during the past year to increase our membership or start any new work, but have just done enough to keep the organization intact and to keep close watch on wild life conditions so that no opening up of the laws will be brought about by those who would destroy the wild life with the excuse that, due to the war, the game-birds and animals could be made to supply the people with



THE 'QUERCUS' BIRD-BATH, DESIGNED BY MRS. LOUIS SAINT-GAUDENS, AND PRESENTED TO THE MERIDEN (N. H.) BIRD CLUB BY HELEN FOSTER BARNETT

an abundance of food. The State League convention, which was booked for St. Paul the last week of August, was canceled, due to war conditions which have taken hundreds of our members into the Government service. Although the convention was canceled, it does not mean that the League will go backward, but rather that it will hold its present position and use its powers during the 1919 session of the state legislature to bring about such changes as are thought necessary to better conserve and increase the wild life in the state.

Our investigations of the conditions of the various species of wild life in the state show that the Quail, which are found in the southern portions of the state, have come back in fine shape, due to weather conditions being in every way satisfactory this past year and the last winter not being a bad one in Minnesota. The cutting in half of the bag limit and season by the last legislature has, of course, helped considerably in conserving the Quail. The Ruffed Grouse seem to have increased, the closed season, which started in 1917 for three years, having already produced results. Pinnated Grouse have shown a nice increase. Aquatic fowl, so far, do not seem as plentiful as last year, which is no doubt due to many of our best breeding- and feeding-grounds being dried up. However, no fairly accurate account can be made until the season is over.

The increase in upland birds can be credited to the following: Shorter seasons, smaller bag-limits, better law-enforcement; ideal weather conditions, and probably the most credit is due the game refuges, which now cover approximately 2,000,000 acres of land. The latter cause has without doubt saved the moose, as they are quite plentiful in the great Superior Refuge in north-eastern Minnesota. Deer are quite plentiful. Briefly—game conditions in Minnesota are quite satisfactory. The game refuges and better control of the predatory species has not only helped the game, but has had a wonderful effect upon the song and insectivorous birds. Farmers in the refuge districts tell me that they lost less through the ravages of insects the past year than any previous year, due to the enormous increase in the insectivorous species.

Blackbirds, in some districts, destroyed an immense amount of corn this year, but I notice that there have apparently been more people that have eaten Blackbird potpie this past season than any previous time that I know about. As the deliciousness of this dish becomes better known, I feel that the Blackbirds will be brought down to the place, within a very few years, where they will do but very little damage. It has, of course, been fortunate that the Blackbird is not protected. The Minneapolis Branch of the League still maintains warden service on the refuges in this district, and is in about the same position as it was at this time last year, excepting that many of our best workers are now in the army.—FRANK D. BLAIR, *Secretary*.

Natural History Society of British Columbia (Can.).—As we do not hold meetings in the summer, it is rather hard to get hold of news from members until the fall meetings begin. However, J. R. Anderson has obtained from W. F.

Burton, a member, the following notes made by him: At Oak Bay (suburb of Victoria), while watching an Audubon Warbler this season, in May, I was surprised to see an 'imported' Blue Tit fly at the bird I was watching and drive it away. Its actions made me think it was nesting nearby, and, after a careful search, I was delighted to find its nest in a hole in a dead fir tree. The place chosen for the nesting-site was a bad one for me, as the tree was alongside a heavy-foliated tree, which made it difficult to watch the birds. I soon discovered, however, that the setting bird was a native Chickadee. I watched the pair of birds every few days until the young had flown, but had no chance to see if they showed any markings of the imported English Blue Tit. It would be interesting to know whether the progeny of these birds will breed in the future. The Dusky Horned Owls have been giving us great trouble here for the last two winters, and it seems they are to be here again this year, for I have already seen one and heard of others. I am told that there is a great scarcity of food up North, so we can expect them here where they will find plenty. In the last two years they have done much damage to game-birds, domestic fowls, and geese. Two cases have come to notice of domestic cats having been seized, one of which was dropped in the sea.

Purple Martins have been almost entirely driven away by the English Sparrows. Many pairs used to nest in this city, but only two cases are reported this season. With regard to the preservation of game, I might say that a Game Conservation Board has been formed, consisting of: The Curator of the Provincial Museum, *ex officio* Secretary, the Chief Game Inspector, and three members appointed by the Lieutenant Governor in Council. Administration of the Act is under the Superintendent of Provincial Police who is, *ex officio*, the Provincial Game-Warden, and all constables are *ex-officio* game-wardens.

Orders-in-Council were passed as follows: Willow Grouse, no open season in Western District (the Coast), sheep, no open season south of the main line of the Grand Trunk Pacific Railway. During 1918 the two lakes north of Victoria, namely Elk and Beaver Lakes, were created a bird sanctuary. And Mount Douglas Park, covering a small hill of that name, was made a game reserve. A. S. Barton reports large flocks of Band-tail Pigeons seen this fall at Salt Spring Island, where they were feeding largely on acorns.—HAROLD T. NATION, *Honorary Secretary*.

Neighborhood Nature Club (Conn.).—Our Club was formed about three years ago, by Miss Martha Banks, of Westport, to interest bird-lovers more deeply in winter feeding and protection and to increase the number of bird-protectors. The Club numbers about 30 and meets monthly for exchange of experiences with birds, for readings, and sometimes, as in May, 1918, for a delightful treat, such as an early breakfast with one of our Club members, followed by a wonderful walk in the woods where the birds seemed to welcome us by their willingness to sit and be watched for minutes at a time.

Our President, Miss Martha Banks, passed on from this life in December, 1917, and we feel her loss keenly as a friend as well as a leader and teacher in this work which she had begun. We are trying to carry it on as best we may, and feel that these small soldiers of Uncle Sam, the birds, will most surely help to win the war. The Club has made a donation of \$10 to the National Association of Audubon Societies, and our members aim to obtain new subscribers each year for membership in this and the National Association. A vote was taken at our last meeting for the Neighborhood Nature Club to become a sustaining member of the National Association.

When the need seemed apparent for supporting the Enabling Act for the protection of migratory birds, our members wrote to the state representative, asking his influence in passing this bill. The Club is planning a lecture, with lantern-slide views of birds, to be given soon, and, perhaps, before winter is past, a film at the local moving-picture house. So, in many ways, we hope to forward the work.—(Mrs.) H. P. BEERS, *Secretary-Treasurer*.

New Century (Utica, N. Y.) Club.—The New Century Club has responded to the requests of the National Association of Audubon Societies to further, as far as possible, right legislation for bird-protection. The Club posts on its bulletin board the leaflets the Association sends. Reports of birds seen and any interesting facts about birds are given at every meeting of the Science Department. We expect to continue the membership of the Club in the National Association.—ELIZABETH G. BROWN.

Oil City (Pa.) Audubon Club.—Our Society has not yet been organized a year, only since last spring, yet we feel that it has been very much worth while. We have twenty-six members, some of them very enthusiastic, several being especially well posted on bird-lore. At one meeting we took up the study of the migration of birds. This proved a most interesting session. Another time we enjoyed an evening with the stereopticon, showing the conservation of our forests and the important part taken by our birds in this very necessary work. Our May meeting was held in the woods, and a pocket-lunch was taken along so we could stay for the evening songs.—(Miss) HATTIE GOULD, *Secretary*.

Pasadena (Calif.) Audubon Society.—Five meetings were held during the season, at one of which Prof. Alfred Cookman gave a talk on "Ten Days Observation on the Bird-Life of the Coronados Islands." These islands are three small mountain peaks in Mexican waters off the coast of Lower California. At another meeting, Prof. Charles L. Thompson read a paper entitled "The Lake of Lingering Death," the lake in question being La Brea, a curious oil deposit near Los Angeles in which have been found countless remains of prehistoric animals and birds. At this meeting papers were also read by the President and Vice-President of the Los Angeles Audubon Society. The other

three meetings were taken up by papers read by our own members, by lantern-slides of birds, with accompanying descriptions, by talks by Mrs. Harriet W. Myers, and by music.

Mainly through the generosity of the late Mrs. E. W. Brooks, we were enabled to donate \$200 each to the California Audubon Society and the California Humane Association, to help forward legislative bills for bird and animal-protection. The sum of \$150 was contributed to the National Association of Audubon Societies in response to its appeal for funds. We trimmed a tree in Library Park as a bird Christmas tree, which we hope had an educational influence upon the public — (Miss) FRANCIS K. WALTER, *Secretary*.

Rhinebeck (N. Y.) Bird Club.—With its President and one of its Vice-Presidents in military service, its Treasurer a member of the Local Draft Board and County Fuel Administration, and its Secretary away from Rhinebeck in state conservation work, the activities of the Rhinebeck Bird Club have been somewhat curtailed during the past year. Since the last report in BIRD-LORE, the Club has held, besides its annual business meeting in December, two public lecture meetings. At the first, Capt. A. Raddlyffe Dugmore, well known as an ornithologist in this country before he entered the British army, gave an illustrated war lecture. At the second, Warwick S. Carpenter, Secretary of the New York State Conservation Commission, told, with lantern-slides and motion-pictures, how New York state is conserving its wild life and other natural resources.

The membership in the Club, both junior and adult, has remained about the same, and Audubon work in the schools has received the same prominence as in previous years. The Club's sales of winter food for birds and of nesting boxes shows that interest in these subjects has not abated. A contest in spring-migration records was instituted in the schools, and the list which won the prize (Reed's Bird Guide) was made by a boy of thirteen who showed a very definite and accurate knowledge of birds. In the campaign for greater protection to the diminishing Ruffed Grouse, the Rhinebeck Bird Club submitted to the Conservation Commission a petition signed by some of its members, which, with similar petitions from other clubs, was instrumental in reducing the open season and bag limit on Ruffed Grouse by one-half.

Rhinebeck is still a "bird village," even though the Bird Club's activities are, for the time being, somewhat overshadowed by more immediate war and Red Cross interests.—CLINTON G. ABBOTT, *Secretary*.

Rockaway (N. Y.) Bird Club.—From fall until late in the spring, the main activity of the Club was centered in keeping feeding-stations and drinking-fountains supplied and in persuading non-members to place such helps about their home-grounds. On April 30, Clinton G. Abbott, of the State Conservation Commission, gave the Club a most interesting lecture, illustrated by

stereopticon views. On May 4, a number of our members made a pilgrimage to 'Slabslides' and had a delightful visit with John Burroughs. Our next meeting was a 'Burroughs Evening' with anecdotes and extracts from his writings, showing the various phases of his character and charm. Other papers prepared by members for our monthly meetings have been unusually interesting: 'National Forest Reservations,' 'National Bird Reservations,' 'Causes for Migration,' and many others covering a wide scope. Most of these were printed in our town papers, and the result has been to simulate local interest and public spirit.

So valuable have our 'bird-guessing contests' been that mention of them here may prove of use to other clubs. We borrow collections of about twenty-five specimens from the American Museum of Natural History, and each member writes the names of as many as known on a numbered list. The correct list is then read and unfamiliar birds looked up. Books are always at hand, and experienced members see that no query goes unnoticed. For one contest, Miss Broomall and Miss Prescott wrote a 'Conservation Story,' having various words identical with bird-names scattered throughout. Each member was given a copy with blanks for the bird-names, and the results were amusing as well as instructive. The Committee on Junior Clubs has been active, organizing new groups, holding bird-walks, and interesting the children, and through them the parents. Several motion-picture reels were borrowed from the State Conservation Commission and were shown at special children's matinees.

By far the most important event of the year has been the decision of Joseph S. Auerbach to convert Hewlett Bay Park into a bird sanctuary. Mr. Auerbach has become very much interested in the work of the Rockaway Bird Club and has authorized his lawyer to make a game- and bird-preserve of his entire estate, consisting of about 400 acres, the Club being invited to cooperate. The estate was thoroughly examined and notes made. Herbert K. Job, of the National Association, has consented to go over the tract and make suggestions as to its development. Mr. Auerbach's sanctuary, like that of Mrs. Lord's, reported last year, borders on the ocean. The severe winter killed thousands of Sparrows, many being found in the hedges in the spring, but with their usual tendency to overcome conditions, they are, so far as we can observe, as thick as ever.

The Heronry at Mrs. Lord's 'Sosiego' has flourished. There the Green Heron and the shy Black-crowned Night Heron find a paradise. At the slightest movement of the watcher, they rise from the woods in a huge flock and fly off over the salt marshes, uttering their coarse *quack*. Although all of our members are working in some of the many war activities, and there are many demands upon the time of the most active ones, the Club has had a fair attendance at all of its meetings and enters upon its third year with bright prospects for future usefulness. — MARGARET S. GREEN, *Secretary*.

Rumson (N. J.) Bird Club.—The Club has little to report in regard to its activities for the past year. A majority of our members have been so engrossed in war-work that they have not had much time to devote to the interests of their friends—the birds. We have merely tried to keep the organization intact, hoping that after the war we may resume our activities. We have had but few resignations and have a fair balance on hand. We defrayed the expenses of a lecture by E. H. Baynes, whose topic was "Wild Birds and How to Attract them." The lecture was held in the high school in the borough of Rumson and nearly every seat was filled. A Bird-House Contest was set on foot by the Club, and B. S. Bowdish was engaged to come to Rumson and prepare the way for the Contest. Five prizes were awarded. Ten or fifteen houses were constructed by the pupils of the schools. Annual subscriptions to BIRD-LORE were presented to each of the teachers in the borough.—JOHN B. LUNGER, *Secretary*.

St. Louis (Mo.) Bird Club.—During the year 1917-18 the following work was accomplished by our Club: Bird-lists for the months of April and May have been compiled for certain parks and suburbs of St. Louis and placed in the Public Library. Nesting-boxes, to the number of 900, approximately, built by pupils in the manual training departments of the public schools, were distributed and set up in the parks throughout the city. The Club now enjoys the privileges of membership in the National Association of Audubon Societies, the Audubon Society of Missouri, and the Missouri Fish and Game League. Literature from the United States Biological Survey, pertaining to birds, is received regularly and cared for in the Public Library. The collections of mounted birds in Washington University have been made available for study by members of the Club.

The Commissioner of Parks and Recreation, Nelson Cunliff, besides giving his cordial cooperation in many plans of the Club relating to the parks, has undertaken to develop a new addition to one of the parks as a bird sanctuary, in accordance with the plan and recommendations submitted by officers of the Bird Club. The tract comprises about 8 acres and is well located. The work of laying out and the making of a small lake is now under way. During the year, the following lectures were delivered: "Birds of St. Louis and Vicinity" (illustrated) by Ralph Hoffman, Headmaster of the St. Louis Country Day School; "Birds in the Nesting Season" (illustrated) by Ernest Harold Baynes. The latter was given before the Audubon Society of Missouri, the St. Louis Garden Club, and the Bird Club; "Federal Game Reservations" (motion-pictures), by Jack Miner, Kingsville, Ont., before the Missouri Fish and Game League. Bird-walks in the parks and suburbs were conducted during the spring. Membership is growing, especially the Junior list; several life members were added.—(Mrs.) KELTON E. WHITE, *Secretary*.

Saratoga (N. Y.) Bird Club.—Our Club has met monthly throughout the last year. Readings have been given from Burroughs, Lowell, and Jefferies. A lecture by Ernest Harold Baynes at the Skidmore School of Arts (in collaboration with our Club) was a great treat. January brought us a letter from S. R. Ingersoll, of Balston Spar, who was in Florida, telling us of the southern birds. In April we had a paper on "Bird Day" by one of our local editors. One interesting evening was spent with the President of our Club, who showed us a collection of Thrushes which he had made. They were stuffed and so arranged that we could hold them and examine their beauty. July gave us "Bird Notes and Songs" through the medium of our hostess' victrola. Dr. Calvin S. May, of New York City, read a paper at our August meeting, and a collection of the following birds' nests which the hostess had found were shown: Goldfinch, Baltimore Oriole, Orchard Oriole, Vireo, and Marsh Wren. One of our great subjects has been "Moulting and Migration." We have planned to have a "hike" several times, but it is still to be, owing to the "unpropitious elements."—(Miss) CAROLINE C. WALBRIDGE, *Secretary*.

Seattle (Wash.) Audubon Society.—In spite of the war and a resultant decrease in the number of our active members, we feel that we have accomplished more for the birds during this year than in any other year of our organized history. Reinforced by Mr. Forbush's cat bulletin and various other agencies, the Seattle City Council was persuaded to pass a Cat License Ordinance. This will greatly decrease the destruction of bird-life within the city limits.

The Park Board has given us permission to use Seward Park for a bird sanctuary. This is situated on the shores of Lake Washington and is admirably adapted for such a purpose. We have posted nearly 1,000 of the National Association's "War" posters and have distributed 500 bird leaflets and 150 cat bulletins. Two large Junior Audubon Societies have been established at branch libraries, and plans have been made to increase this number. The coöperation of the Boy Scouts, who are Junior Game Wardens, helps greatly in this work. Bird-talks to both children and parents have been given in our public schools. We find the museum of the State University very generous in furnishing material for these lectures. Cooperating with the sportsmen, we are working to secure additional laws for bird-protection at the coming session of the Legislature. We are determined that our Society's slogan, "Bird-Protection Means Food-Conservation," shall bring increasingly good results next year.—(Miss) MAYME FARRAR, *Corresponding Secretary*.

South Bend (Ind.) Humane Society.—The report of the year shows that we gave three awards for evidence which convicted of the killing of birds. During the summer we kept a standing advertisement in our daily papers, offering a reward of \$5 for information which would convict of the killing of

birds. Thirty-nine members of our police force and twenty-seven of the mail carriers' association of this city have signed the Humane Pledge and are ever on the alert to report violations of the bird-law. We have a standing offer with the police and postal service of \$2 for information which shall convict. These awards we pay into their pension fund. The Secretary has shown stereopticon views of the birds in a number of the public schools.—H. A. PERSHING, *Secretary*.

South Haven (Mich.) Bird Club.—One year ago we, a little club of 36 members, were quite proud of our little selves and the progress we had made during our little life of one year. Now we are two years old, but instead of our growing better as we grow older, the weight of cares seems almost to have crushed us. Still we live! Have dropped from a membership of 36 to that of 25, but hope to climb up again some day. We did give another bird-program at "The Scott Club," a local literary club. May 21, sixteen ladies spent the day in the woods near a small stream and identified fifty-five species of birds.

Last year there were quite a number of books on birds added to those already in the local Public Library. This year the librarian reports no interest in the subject. So far we have not succeeded in securing an ordinance for the control of stray cats.—(Miss) FLORENCE L. GREGORY, *Secretary*.

Spokane (Wash.) Bird Club.—The annual business meeting of the Club occurs on the first Tuesday in January. Our activities for the year may be said properly to begin on that date. About that time, too, after a short spell of exceeding quietness in birddom, the winter birds from the Arctic prairies and Alaska commence to arrive in earnest, impelled by increasing cold and greater snowfall. As many as 3,000 Bohemian Waxwings, it has been estimated, have been seen at one time, cleaning up the mountain-ash and other winter berries within the confines of a couple of city blocks. These were accompanied by predatory Hawks, decimating their ranks like wolves around a caribou herd on the prairies of the North.

By the middle of March, with the commencement of nest-building in the pine woods, field-trips were arranged and undertaken. Pine Siskins were seen building on March 13, and a few weeks later they were sitting on eggs. These field-trips were taken periodically until the middle of June, every week or two, when our activities as a club ceased until the first club meeting on September 17. Individual members, however, carried on their pursuit of bird knowledge and fresh experiences during the summer months. Many new and interesting notes and photographs were taken in this vicinity for tales and lantern-slides during the coming winter. There will be three or four lantern-slide exhibitions during the next few months by members of the Club. Several hundred slides are already prepared, mostly by the writer, and future entertainments of this sort are looked forward to with keen interest and anticipa-

tion. One of the most instructive of these field-trips was taken on May 12, to Meadow Lake, 16 miles from Spokane by electric car. This trip was selected on account of a current report that Yellow-headed Blackbirds were in this neighborhood in large colonies, a statement we fully verified. Photographs of Mallard, Coot and Killdeer nests and eggs were taken, also half a dozen nests, more or less completed, of a single pair of Marsh Wrens which had not yet set up housekeeping. But young water-fowl, swimming with their parents in the open water of the lakes, showed that other species had not been idle. Forty-seven species of birds were observed.

I could recount many other summer experiences of bird-life in the woods and by field and stream, but the space allotted for this article forbids. I shall conclude by merely saying that we renewed our Club gatherings on September 17, when we listened, among other interesting things, to a paper by Thomas A. Bonser, of the high school, on the various tame and wild shrubs and plants and their berries in this region known to be favorite food of the winter birds. Our meetings occur twice a month, on the first and third Tuesdays, and, at the next meeting on October 15, the writer will give a lecture on the habits and activities of birds during the nesting-season, illustrated by lantern-slides made by himself from his own photographs taken during the past summer in the woods.—WALTER BRUCE, *President*.

Sussex County (N. J.) Nature Study Club.—During the year our members have been doing their "bit" in war-work, yet interest in nature-study has been sustained. As usual, our meetings have been held once each month, the attendance comparing favorably with other years. We are not strictly a bird club, but the birds receive their full share, and more, of our attention and care. One of the most pleasant meetings of the year was our "Warbler-time" picnic. Our special reward was a closer acquaintance with the worm-eating Warbler, which we have always considered rare in our section, and whose song we learned for the first time that day. A very fine view of the White-crowned Sparrow also added excitement to our hunt.

Our frequent articles in the county papers keep the public more or less interested in our Club and its activities. We have responded to all appeals for legislative assistance from the National Association of Audubon Societies and the State Audubon Society.—F. BLANCHE HILL, *Secretary*.

Vigo County (Ind.) Bird Club.—A greater effort toward bird-protection was evident in the second year's work of the Vigo County Bird Club, for, while excellent papers were read and talks given at each of its monthly meetings, more plans were made to protect birds in the vicinity of Terre Haute than had been attempted during its first year's existence. Posters were distributed, the aid of the Junior Bird Clubs enlisted, and the cooperation of the Park Superintendent secured. An interest in birds among children has been

fostered, the result being a number of Junior Audubon Clubs whose members are eagerly doing all they can to save the birds. One Junior Club has secured signed pledges from farmers to protect birds and designate their farms as "bird sanctuaries." Over 600 acres have been so pledged by the farmers. Numerous bird-houses all over the city attest to the fact that the Club has awakened an interest in birds never before known, except by a very small percentage of the town dwellers.—MRS. JOHN T. LAISHAW, *Secretary*.

Washington (Ind.) Audubon Society.—Our Society, formerly named "The Bird Lovers Club," closed a very successful year's work on June 21, 1918. This was our second year, and while there was not so large a membership, owing to war conditions, the members, who numbered thirty active and associate, were much interested and enjoyed some fine meetings. A social meeting held at the home of the President, Mrs. Cameron Hyatt, in October, started the year's work. Eight regular meetings, with programs, were held during the year, on the third Tuesday of each month.

J. N. Barber, Junior Superintendent, conducted a large and flourishing Junior Club during the year. In March, the senior Society held a successful Bird-House Building Contest, with the boxes shown in a downtown show-window, and prizes were awarded. A number of interesting field-trips were taken, and much was learned about birds. Mr. and Mrs. Charles Feagans entertained the Club in July with a pleasant social evening at their beautiful suburban home.—CAMERON HYATT, *Corresponding Secretary*.

Watertown (N. Y.) Bird Club.—During the year we held seven regular meetings and one social meeting. Mrs. George W. Knowlton opened her home for the September meeting. E. J. Sawyer gave a most interesting and instructive lecture on "Bird-migration," illustrating his talk by numerous charts which he had prepared for the occasion. In February the Club met with Mrs. E. P. Elitharp for a social evening, the program being in charge of Mrs. Everett Rogers. Great hilarity was aroused by the extemporaneous bird-drawings made by each member and named by his left-hand neighbor. Miss Antoinette Rogers directed the members in the art of folding paper in bird-forms.

At the April meeting, P. B. Hudson, our Vice-President, exhibited and explained a very complete collection of birds' eggs which he has been collecting since his boyhood days. At the May meeting each member submitted a short description of his favorite bird, following a suggestive outline prepared by Mr. Sawyer.

At the June meeting, F. S. Tisdale, the Club President, and superintendent of our city schools, gave an illustrated lecture on water-birds. The slides were procured from Albany. As Mr. Tisdale is an ardent sportsman, he was able to interpolate many interesting personal reminiscences in connection with the birds shown. This meeting was thrown open to the grammar-school children.

A donation of \$10 was made to the local chapter of the Red Cross. It was voted to have a Martin-house constructed and erected upon the grounds of the Flower Memorial Library, in an effort to conserve to Watertown its valuable Martin colony. Twenty-five of the Sawyer "Bird Books" were presented to the High School Library for the use of the biology class. The Bird Club feels that the success of its year's work was largely due to the interest and devotion of its President, F. S. Tisdale, who, in spite of many and varied interests, has given unstintedly of his time and energy in support of the Bird Club. The Secretary-elect is Miss Grace B. NOLL.—NINA BALLARD ELITHARP, *Secretary*.

Wellesley College (Mass.) Bird Club.—The activities of the Club for the year have consisted in measures for stimulating interest in bird-study and conservation. Meetings have been held throughout the year to discuss topics of interest, bird-walks have been directed through the spring, and prizes have been offered for the best lists of birds observed. In March, Winthrop Packard gave the Club an illustrated talk on "Wild Bird Friends." On the conservation side, the birds have been fed through the winter, and the nesting-boxes have been kept in order. Forty per cent of the boxes were occupied during the season of 1918. As a result of the severe winter, only one English Sparrow was found nesting in the boxes. A Crested Flycatcher, for the first time, occupied one of them. Tree Swallows' nests have increased, and those of Bluebirds have decreased since the previous year. Owing to the war-needs, the Club has made no permanent gift this year toward conservation.—(Miss) MADELINE E. ALMY, *Secretary*.

Wild-Life Protective Society (Wis.)—During the twelve months ending October 1, 1918, the activities of the Society were aimed at objects different from preceding years. Owing to the press of all kinds of war-work, it was impossible to conduct our school bird-club program as previously hoped. Junior Red Cross work in the schools crowded out all new work, and all we could do was to try and keep Clubs organized the previous year from going out of existence.

In the meantime, we were able to give considerable attention to the Wisconsin Game Protective Association, an incorporated league of sportsmen, rod and gun clubs, and conservation societies, for the protection of wild life, and we have furthered, as far as possible, the Association's plan of employing a paid field secretary to canvass the state, to organize clubs and secure them as members of the Association, and to arouse old organizations. We succeeded in raising considerable money here in addition to the \$500 donated by the National Association of Audubon Societies, and our members have given time and effort to help the work along. We now have the satisfaction of knowing that a capable fieldman has been at work since the latter part of March and has been successful in reawakening interest and in inducing people to subscribe



WHITE-BREASTED NUTHATCH ON FOOD-STICK
EATING SUEET. WYNCOTE (PA.) BIRD CLUB

for the work. We are keeping up our small bird refuge but have no definite report on it to offer.—CLARENCE J. ALLEN, *Acting Secretary.*

Wyncote (Pa.) Bird Club.

We have passed another successful year, although not so much has been accomplished as usual, because the war has claimed so much of our time and energies. Our two most notable lectures of the year have been by Mrs. S. Louise Pattison, who gave us a most delightful illustrated talk on "The Birds, Our Allies in the Food Campaign," and by George B. Kaiser, who lectured on "Our Native Wild Flowers," illustrated by the exquisite colored slides of the Pennsylvania State Museum.

We held the usual frequent spring bird-walks and summer picnics, and in September the Club went by an automobile truck to visit the Philadelphia Zoölogical Gardens. A good many Wren and Blue-bird houses were made and erected, and some were occupied. Feeding in individual gardens was continued, but little feeding in the woods and outlying districts was done, because our President, E. H. Parry, who has heretofore done most of this, is now in the army.—(Miss) ESTHER HEACOCK, *Secretary.*

STATE AUDUBON SOCIETIES AFFILIATED WITH THE NATIONAL ASSOCIATION

CALIFORNIA AUDUBON SOCIETY:

President, Dr. David Starr Jordan, Stanford University, Palo Alto.
Secretary, Mrs. Harriet W. Myers, 311 North Ave. 66, Los Angeles.

COLORADO AUDUBON SOCIETY:

President, Edward R. Warren, 20 West Caramillo St., Colorado Springs.
Secretary, C. S. Robbins, 1925 Alamo Ave., Colorado Springs.

CONNECTICUT AUDUBON SOCIETY:

President, Mrs. Mabel Osgood Wright, Fairfield.
Secretary, Mrs. William B. Glover, Fairfield.

DISTRICT OF COLUMBIA AUDUBON SOCIETY:

President, Hon. Job Barnard, 1306 Rhode Island Ave., Washington.
Secretary, Miss Helen P. Childs, Chevy Chase, Md.

FLORIDA AUDUBON SOCIETY:

President, Dr. W. F. Blackman, Winter Park.
Secretary, W. Scott Way, Winter Park.

ILLINOIS AUDUBON SOCIETY:

President, O. M. Schantz, 10 South La Salle St., Chicago.
Secretary, Mrs. F. H. Pattee, 2436 Prairie Ave., Evanston.

INDIANA AUDUBON SOCIETY:

President, Prof. Stanley Coulter, Lafayette.
Secretary, Miss Elizabeth Downhour, 2307 Talbott Ave., Indianapolis.

KENTUCKY AUDUBON SOCIETY:

President, Miss Isabel Clay, 443 West Third St., Lexington.
Secretary, Victor K. Dodge, 173 Bell Court West, Lexington.

MARYLAND AUDUBON SOCIETY:

President,
Secretary, Miss Minna D. Starr, 2400 North Charles St., Baltimore.

MASSACHUSETTS AUDUBON SOCIETY:

President, Edward Howe Forbush, 136 State House, Boston.
Secretary, Winthrop Packard, 66 Newbury St., Boston.

MICHIGAN AUDUBON SOCIETY:

President, Mrs. Edith C. Menger, Hart.
Secretary, Miss Gertrude Reading, Hart.

MISSOURI AUDUBON SOCIETY:

President, Dr. Herman von Schrenk, St. Louis.
Secretary, Dr. Robert J. Terry, 3313 Delmar Ave., St. Louis.

NEW HAMPSHIRE AUDUBON SOCIETY:

President, Gen. Elbert Wheeler, Nashua.
Secretary, Manley B. Townsend, 9 Mt. Pleasant St., Nashua.

NEW JERSEY AUDUBON SOCIETY:

President, Clarence B. Riker, South Orange.
Secretary, Boncher S. Bowditch, 124 Market St., Newark.

NORTH CAROLINA AUDUBON SOCIETY:

President, Dr. R. H. Lewis, Raleigh.
Secretary, Placide C. Underwood, Raleigh.

NORTH DAKOTA AUDUBON SOCIETY:

President, Daniel Freeman, Fargo College, Fargo.
Secretary, O. A. Stevens, Agricultural College, Fargo.

OHIO AUDUBON SOCIETY:

President, Dr. Robert C. Jones, 2123 Park Ave., Cincinnati.

Secretary, Prof. Wm. G. Cramer, Woodward High School, Cincinnati.

OREGON AUDUBON SOCIETY:

President, Wm. L. Finley, 621 East Madison St., Portland.

Secretary, Dr. Emma J. Welty, 321 Montgomery St., Portland.

PENNSYLVANIA AUDUBON SOCIETY:

President, Wilmer Stone, Academy of Natural Sciences, Philadelphia.

Secretary, Miss Elizabeth Wilson Fisher, 2122 Spruce St., Philadelphia.

RHODE ISLAND AUDUBON SOCIETY:

President, Dr. H. E. Walter, Brown University, Providence.

Secretary, H. L. Madison, Park Museum, Providence.

SOUTH CAROLINA AUDUBON SOCIETY:

President, Dr. A. C. Moore, Columbia.

Secretary, Miss Belle Williams, Columbia.

TENNESSEE (EAST) AUDUBON SOCIETY:

President, Rev. Angus McDonald, 1322 Tremont St., Knoxville.

Secretary, Miss Magnolia Woodward, Chestnut Hill, Knoxville.

WEST VIRGINIA AUDUBON SOCIETY:

President, Miss Bertha E. White, 1609 Latrobe St., Parkersburg.

Secretary, Walter Donaghio, Emerson Ave., Parkersburg.

CLUBS AND OTHER ORGANIZATIONS AFFILIATED WITH THE NATIONAL ASSOCIATION

BIRD CONSERVATION CLUB (BANGOR, MAINE):

President, Mrs. J. C. Buzzell, 71 Hudson St., Bangor, Maine.

Secretary, Miss Alice Brown, Conit St., Bangor, Maine.

BLAIR COUNTY (PA.) GAME, FISH AND FORESTRY ASSOCIATION:

President, John H. Winters, 1625 Eleventh Ave., Altoona, Pa.

Secretary, Dick Heverly, 1609 Eleventh Ave., Altoona, Pa.

BRITISH COLUMBIA (CANADA) NATURAL HISTORY SOCIETY:

President, Hon. A. R. Sherwood, 412 Jones Block, Victoria, B. C., Canada.

Secretary, Hon. J. R. Anderson, 412 Jones Block, Victoria, B. C., Canada.

BRONXVILLE (N. Y.) BIRD CLUB:

President, Roy C. Andrews, Bronxville, N. Y.

Secretary,

BROOKLINE (MASS.) BIRD CLUB:

President, Dr. J. B. Brainard, 57 Monmouth St., Brookline, Mass.

Secretary, Mrs. George W. Kaah, 162 Aspinwall Ave., Brookline, Mass.

BROOKLYN (N. Y.) BIRD LOVERS' CLUB:

President, L. F. Bowdick, 903 E. 11th St., Brooklyn, N. Y.

Secretary, Howard Whitlock, 445 E. Twenty-sixth St., Brooklyn, N. Y.

BUDD LAKE (N. J.) NATURE STUDY CLUB:

President, Miss Amy R. Brown, 257 Ridge St., Newark, N. J.

Secretary, Miss Martin L. Cox, 320 Clifton Ave., Newark, N. J.

BUFFALO (N. Y.) AUDUBON SOCIETY:

President, Dr. C. E. Beach, 296 Herkimer St., Buffalo, N. Y.

Secretary, Miss Caroline L. Doll, 187 Elliott St., Buffalo, N. Y.

HYDECOCK-AUDUBON NATURE STUDY CLUB OF ROCHESTER (N. Y.):

President, Wm. B. Hood, 201 Monroe Ave., Rochester, N. Y.

Secretary, Clinton E. Kelllogg, 79 Gonseline St., Rochester, N. Y.

ROCKWOODS JUNIOR AUDUBON SOCIETY (KINGSTON, N. Y.):

President, Miss Ruth Scott, Kingston High School, Kingston, N. Y.

Secretary, Miss Elizabeth Richards, Kingston High School, Kingston, N. Y.

CAYUGA BIRD CLUB (ITHACA, N. Y.):

President, L. A. Faetus, Ithaca, N. Y.

Secretary, A. A. Allen, McGraw Hall, Ithaca, N. Y.

CITY LEAGUE (SAGINAW, MICH.):

President,

Secretary, Miss May Turner, 1702 Court St., Saginaw, Mich.

CLEVELAND (OHIO) BIRD LOVERS' ASSOCIATION:

President, Mrs. E. C. T. Miller, 1010 Euclid Ave., Cleveland, Ohio.

Secretary, Mrs. William G. Pollock, 1010 Euclid Ave., Cleveland, Ohio.

COCONUT GROVE (FLA.) AUDUBON SOCIETY:

President, Mrs. Kirk Munroe, Coconut Grove, Fla.

Secretary, Mrs. Florence P. Haden, Coconut Grove, Fla.

COLORADO MUSEUM OF NATURAL HISTORY (DENVER, COLO.):

President, Frank M. Taylor, Colorado Museum of Natural History, Denver, Col.

Secretary, P. M. Cooke, Colorado Museum of Natural History, Denver, Colo.

COLUMBIA (S. C.) BIRD CLUB:

President, Prof. A. C. Moore, Columbia, S. C.

Secretary, Miss Mary Carr, Columbia, S. C.

COLUMBUS (OHIO) AUDUBON SOCIETY:

President, Prof. C. Hambleton, Columbus, Ohio.

Secretary, Miss Lucy B. Stone, 533 Franklin Ave., Columbus, Ohio.

CUMBERLAND COUNTY (MAINE) AUDUBON SOCIETY:

President,

Secretary, Amy B. Baker, 109 High St., Portland, Maine.

DANVILLE (ILL.) BIRD CLUB:

President,

Secretary, Mrs. T. W. Elliott, Hawthorne Place, Danville, Ill.

DELTA DUCK CLUB (NEW ORLEANS, LA.):

President, John Diamond, Jr., 1004 Maison Blanche Bldg., New Orleans, La.

Secretary, C. A. Burthe, Cottam Block, New Orleans, La.

DETROIT (MICH.) AUDUBON SOCIETY:

President, Chas. W. Bour, People's State Bank, Detroit, Mich.

Secretary, Ralph Beebe,

DETROIT (MICH.) BIRD PROTECTING CLUB:

President, Mrs. J. D. Harnes, 332 Hamilton Ave., Detroit, Mich.

Secretary, Miss Agnes Sherman, 577 E. Lavin Ave., Detroit, Mich.

DETROIT (MICH.) ZOOLOGICAL SOCIETY:

President, Edwin Denby, Dime Bank Building, Detroit, Mich.

Secretary, Richard E. Follett, Dime Bank Building, Detroit, Mich.

DOYLESTOWN (PA.) NATURE CLUB:

President, Mrs. I. M. James, Doylestown, Pa.

Secretary, Mrs. Thomas Haddon, Doylestown, Pa.

DUBOIS (PA.) BIRD CLUB:

President, W. D. I. Arnold, 208 South Brady St., DuBois, Pa.

Secretary,

ELGIN (ILL.) AUDUBON SOCIETY:

President, B. E. Berryman, Elgin, Ill.

Secretary, Charlotte Weatherill, 244 Villa St., Elgin, Ill.

ENGLEWOOD (N. J.) BIRD CLUB:

President, Robert S. LORRISON, Englewood, N. J.

Secretary, Miss Elizabeth A. DADA, Englewood, N. J.

ERASMUS HALL AUDUBON BIRD CLUB (FLATBUSH AVE., ERASMUS HALL HIGH SCHOOL BROOKLYN, N. Y.):

President, Joseph McGoldrick, Erasmus Hall High School, Brooklyn, N. Y.

Secretary, Miss Grace Seeling, Erasmus Hall High School, Brooklyn, N. Y.

EVANSVILLE (IND.) AUDUBON SOCIETY:

President, George S. Clifford, Evansville, Ind.

Secretary, Miss Edith O. Trimble, 1040 South Second St., Evansville, Ind.

FITCHBURG (MASS.) OUTDOOR CLUB:

President, Miss Margaret W. Foulck, 128 Prichard St., Fitchburg, Mass.

Secretary, Miss Grace F. Barnes, 79 School St., Fitchburg, Mass.

FOREST HILLS GARDENS (N. Y.) AUDUBON SOCIETY:

President, Fritz Hagen, 24 Slooam Crescent, Forest Hills, N. Y.

Secretary, Miss Mary E. Knevels, Forest Hills, N. Y.

FORT SMITH (ARK.) AUDUBON SOCIETY:

President, Dr. C. E. LARK, 803 Garrison Ave., Fort Smith, Ark.

Secretary, Rev. Edward Wilson, Fort Smith, Ark.

FRANKFORT (KY.) BIRD CLUB:

President, Rev. John J. Gravatt, cor. Broadway and Washington St., Frankfort, Ky.

Secretary, H. G. Bright, 208 Campbell St., Frankfort, Ky.

FRANKLIN (N. Y.) MARSH WREN CLUB:

President, Edson C. Stewart, Franklin, N. Y.

Secretary, Mrs. Marcia B. Hiller, Franklin, N. Y.

GARDEN CLUB OF EVANSTON (ILL.):

President, Mrs. W. E. Nichols, 1307 Ridge Ave., Evanston, Ill.

Secretary,

GLENS FALLS (N. Y.) LOCAL BIRD CLUB:

President,

Secretary, Mrs. M. S. Potter, 160 Ridge St., Glens Falls, N. Y.

GLENVILLE (W. VA.) NORMAL BIRD CLUB:

President, Edgar Hatfield, Glenville, W. Va.

Secretary, Miss Pansy Starr, Glenville, W. Va.

GROTON (MASS.) BIRD CLUB:

President, Rev. Charles B. Ames, Groton, Mass.

Secretary, Mrs. William P. Wharton, Groton, Mass.

HARDY GARDEN CLUB (RUXTON, MD.):

President,

Secretary, Mrs. John Love, Riderwood, Md.

HARTFORD (CONN.) BIRD STUDY CLUB:

President, A. J. Moody, 469 Farmington Ave., Hartford, Conn.

Secretary, Miss Irma R. Meigs, 76 Huntington St., Hartford, Conn.

IRWIN (PA.) AUDUBON SOCIETY:

President, R. T. McCormick, Irwin, Pa.

Secretary, Bert H. Rylander, Irwin, Pa.

INDIANA AUDUBON BIRD CLUB (ANDERSON, IND.):

President,

Treasurer, S. R. Dunbar, Anderson, Ind.

KEE-HI-KONE CAMP FIRE GIRLS:

President,

Secretary, Miss Joan Grumman, 165 Meadow St., Naugatuck, Conn.

LAKE PLACID (N. Y.) CLUB:

President, Melvil Dewey, Lake Placid, N. Y.

Secretary, Godfrey Dewey, Lake Placid, N. Y.

LITTLE LAKE CLUB (402 HENNEB BLDG., NEW ORLEANS, LA.):

President,

Secretary,

LONG ISLAND (N. Y.) BIRD CLUB:

President, Col. Theodore Roosevelt, Oyster Bay, N. Y.

Secretary, Mrs. F. M. Townsend, Townsend Place, Oyster Bay, N. Y.

LOS ANGELES (CALIF.) AUDUBON SOCIETY:

President, Mrs. F. T. Bicknell, 319 South Normandie Ave., Los Angeles, Calif.

Secretary, Mrs. George H. Crane, 1217 West Santa Barbara St., Los Angeles, Calif.

MANITOWOC COUNTY (WIS.) FISH AND GAME PROTECTIVE ASSOCIATION:

President, E. L. Kelley, Dempsey Building, Manitowoc, Wis.

Secretary, Fred Carus, 1402 Washington St., Manitowoc, Wis.

MAYWOOD (ILL.) BIRD CLUB:

President, Samuel A. Harper, 220 South State St., Chicago Ill.

Secretary, Roy M. Langdon, 709 North Third Ave., Maywood, Ill.

MERIDEN (CONN.) BIRD CLUB:

President, Judge Frank L. Fay, 591 Broad St., Meriden, Conn.

Secretary, Mrs. W. C. Homan, 168 Curtis St., Meriden, Conn.

MERIDEN (N. H.) BIRD CLUB:

President, Dr. Ernest L. Huse, Meriden, N. H.

Secretary, Miss Elizabeth F. Bennett, Meriden, N. H.

MIAMI (FLA.) AUDUBON SOCIETY:

President,

Secretary, Mrs. W. H. McIntyre, 1409 Ave. C, Miami, Fla.

MILLBROOK (N. Y.) GARDEN CLUB:

President, Mrs. Oakleigh Thorne, Millbrook, N. Y.

Secretary, Miss Katherine Wodell, Millbrook, N. Y.

MINNEAPOLIS (MINN.) AUDUBON SOCIETY:

President, Mrs. Phelps Wyman, 3917 Third Ave. S., Minneapolis, Minn.

Secretary, Mrs. Judson L. Wicks, Fourth Avenue Library, Minneapolis.

MINNESOTA GAME PROTECTIVE LEAGUE:

President, C. N. Odell, N. W. National Life Building, Minneapolis, Minn.

Secretary, Frank D. Blair, Room 26, Court House, Minneapolis, Minn.

MISS HATTIE AUDUBON SOCIETY (LOUISVILLE, KY.):

President, Mrs. Pierce Butler, 1303 First St., Louisville, Ky.

Secretary, Miss Adrienne Thum, 1236 Garvier Place, Louisville, Ky.

MISSOULA (MONT.) BIRD CLUB:

President,

Secretary, Miss C. Wells, 233 East Pine St., Missoula, Mont.

NEIGHBORHOOD NATURE CLUB (SOUTHPORT, CONN.):

President, Miss Elizabeth H. Banks, Westport, Conn.

Secretary, Mrs. H. P. Beers, Southport, Conn.

NEW BEDFORD (MASS.) BIRD CLUB:

President, Miss Edith F. Walker, High School, New Bedford, Mass.

Secretary,

NEW BEDFORD (MASS.) WOMAN'S CLUB:

President, Mrs. T. F. Tillinghast, 17 Eighth St., New Bedford, Mass.

Secretary, Miss E. B. France, 174 Mt. Pleasant St., New Bedford, Mass.

NEWBURYPORT (MASS.) BIRD CLUB:

President, Miss Harriet W. Colman, 14 Harris St., Newburyport, Mass.
 Secretary, Mrs. Wm. C. Moore, 150 High St., Newburyport, Mass.

NEW YORK BIRD AND TREE CLUB:

President, Mrs. Robert A. Miller, 17 West Forty-fifth St., New York City.
 Secretary, Miss Henrietta O. Jones, 230 W. 103th St., New York City.

NORRISTOWN (PA.) AUDUBON CLUB:

President, Willie R. Roberts, 300 DeKalb St., Norristown, Pa.
 Secretary, Miss Helen A. Bomberger, 556 Stonebridge St., Norristown, Pa.

NORTH EAST (PA.) NATURE STUDY CLUB:

President, N. S. Woodruff, North Pearl St., North East, Pa.
 Secretary, Miss Alice Moorhead, 55 Gibson St., North East, Pa.

OIL CITY (PA.) AUDUBON CLUB:

President, Miss Grace Robinson, 304 Orange St., Oil City, Pa.
 Secretary, Miss Hattie Gould, 106 W. First St., Oil City, Pa.

OSCEOLA (WIS.) FIELD CLUB:

President, Mrs. Jane A. Hansen, Osceola, Wisc.
 Secretary, Mrs. Grace P. Bloom, Osceola, Wisc.

PACIFIC AUDUBON ASSOCIATION (SAN FRANCISCO, CALIF.):

President, C. B. Lastreto, 209 California St., San Francisco, Calif.
 Secretary, W. A. Squires, 3852 23d St., San Francisco, Calif.

PASADENA (CALIF.) AUDUBON SOCIETY:

President, Dr. Garrett Newkirk, Pasadena, Calif.
 Secretary, Miss Frances K. Walters, 1085 North Raymond Ave., Pasadena, Calif.

PEORIA (ILL.) AUDUBON SOCIETY:

President,
 Secretary, Miss Minnie M. Clark, 514 Western Ave., Peoria, Ill.

PHILERGIANS (THE):

President, Mrs. Walter A. Poore, 94 Liberty St., East Braintree, Mass.
 Secretary, Mrs. Winthrop T. Case, 140 Adams St., Braintree, Mass.

PORT HURON (MICH.) BIRD CLUB:

President, S. J. Watts, Port Huron, Mich.
 Secretary, Mrs. John Gaines, 2638 Stone St., Port Huron, Mich.

RACINE (WIS.) BIRD CLUB:

President,
 Secretary, Miss Louise M. Collier, 1308 Main St., Racine, Wis.

RANDOLPH BIRD CLUB OF WESTFIELD (N. Y.):

President, Mrs. J. H. Kinney, Westfield, N. Y.
 Secretary, Miss Clara W. Kompka, Westfield, N. Y.

RESOLUTE CIRCLE OF THE KING'S DAUGHTERS (IVORYTON, CONN.):

President, Mrs. Elizabeth Rathburn, Ivoryton, Conn.
 Secretary, Mrs. L. Behrens, Ivoryton, Conn.

RHINEBECK (N. Y.) BIRD CLUB:

President, Maunsell S. Crosby, Rhinebeck, N. Y.
 Secretary, Clinton G. Abbott, P. O. Box E, Rhinebeck, N. Y.

RICHMOND (KY.) BIRD CLUB:

President, Mrs. Robert R. Burnam, 252 The Summit, Richmond, Ky.
 Secretary, Miss Bessie Dudley, Water St., Richmond, Ky.

ROCKAWAY (N. Y.) BRANCH OF THE NATIONAL AUDUBON SOCIETY:

President, Arthur Cooper, 7 Lockwood Ave., Far Rockaway, N. Y.
 Secretary, Miss Margaret S. Green, Cornage Ave., Far Rockaway, N. Y.

ROCK ISLAND COUNTY (ILL.) BIRD CLUB:

President, P. S. McGlynn, Moline, Ill.
 Secretary, Miss Nellie E. Peetz, Rock Island, Ill.

RUMSON (N. Y.) BIRD CLUB:

President, Ira Bartows, 15 Maiden Lane, New York City, N. Y.
 Secretary, John B. Langer, 120 Broadway, New York City, N. Y.

SAGERHUSH AND PINE CLUB (NORTH YAKIMA, WASH.):

President, J. Howard Wright, North Yakima, Wash.
 Secretary, Miss Carrie Grosenbaugh, North Yakima, Wash.

ST. LOUIS (MO.) BIRD CLUB:

President, Dr. Robert J. Terry, 5315 Delmar Ave., St. Louis, Mo.
 Secretary, Mrs. Kellton E. White, 4354 Maryland Ave., St. Louis, Mo.

SARATOGA (N. Y.) BIRD CLUB:

President, Dr. J. Manning Spoerl, 514 Broadway, Saratoga Springs, N. Y.
 Secretary, Miss Caroline C. Walbridge, 109 Lake Ave., Saratoga Springs, N. Y.

SAVANNAH (GA.) AUDUBON SOCIETY:

President, H. B. Skeele, 116 West Gaston St., Savannah, Ga.
 Secretary, Dr. J. T. Maxwell, 102 East Liberty St., Savannah, Ga.

SCITUATE (MASS.) WOMAN'S CLUB:

President, Mrs. Eva L. Graves, North Scituate, Mass.
 Secretary, Mrs. Mary A. Doherty, Scituate, Mass.

SEATTLE (WASH.) AUDUBON SOCIETY:

President, Mrs. C. N. Compton, 625 12th Ave. N., Seattle, Wash.
 Secretary, Dr. J. Dean Terry, 710 Joshua Green Building, Seattle, Wash.

SENBURLEY VALLEY (PA.) AUDUBON SOCIETY:

President, C. B. Horton, 21 Centennial Ave., Sewickley, Pa.
 Secretary, Mrs. M. G. Ross, 125 Meadow Lane, Edgeworth, Sewickley, Pa.

SHAKER LAKES GARDEN CLUB (CLEVELAND, OHIO):

President,
 Secretary,

SKANEATELES (N. Y.) AUDUBON SOCIETY:

President,
 Secretary, Miss Sarah M. Turner, Skaneateles, N. Y.

SMITHLAND (IOWA) AUDUBON SOCIETY:

President, Mrs. Kate Rahn, Smithland, Iowa.
 Secretary, Miss Nelle I. Jones, Smithland, Iowa.

SOMERSET HILLS (N. J.) BIRD CLUB:

President, John Dryden Kaiser, Bernardsville, N. J.
 Secretary, Walter F. Chappell, Bernardsville, N. J.

SOUTH BEND (IND.) HUMANE SOCIETY:

President, Mrs. F. E. Hering, 909 East Jefferson St., South Bend, Ind.
 Secretary, H. A. Pershing, South Bend, Ind.

SOUTH HAVEN (MICH.) BIRD CLUB:

President, Mrs. A. D. Williams, South Haven, Mich.
 Secretary, Mrs. S. H. Wilson, Route No. 2, South Haven, Mich.

SPOKANE (WASH.) BIRD CLUB:

President, Walter Bruce, 313 Lincoln Place, Spokane, Wash.
 Secretary, Mrs. Cora Roberts, Broslin Apartments, Spokane, Wash.

STATEN ISLAND (N. Y.) BIRD CLUB:

President, Mrs. Charles M. Porter, 224 Davis Ave., West New Brighton, N. Y.
 Secretary, Howard H. Cleaves, New Brighton, S. I., N. Y.

SUREX COUNTY (N. J.) NATURE STUDY CLUB:

President, Miss Wm. G. Drake, 33 Halsted St., Newton N. J.

Secretary, Miss F. Blanche Hill, Andover, N. J.

TWENTIETH CENTURY CLUB OF DETROIT (20TH CENTURY CLUB BUILDING, DETROIT, MICH.):

President,

Secretary,

UTICA (N. Y.) NEW CENTURY CLUB:

President,

Secretary, Miss Elizabeth G. Brown, 1004 West St., Utica, N. Y.

VASSAR WAKE ROBIN CLUB (POUGHKEEPSIE, N. Y.):

President, Miss Mary K. Brown, Vassar College, Poughkeepsie, N. Y.

Secretary, Miss Mary Horne, Vassar College, Poughkeepsie, N. Y.

VERMONT BIRD CLUB:

President, Dr. Ezra Brainerd, Middlebury, Vt.

Secretary, Mrs. Nellie Flynn, Burlington, Vt.

VIGO COUNTY (IND.) BIRD CLUB:

President, Mrs. Leon Stern, 669 Oak St., Terre Haute, Ind.

Secretary, Mrs. John T. Latshaw, Terre Haute, Ind.

WABLEIGH GENERAL ORGANIZATION (NEW YORK CITY):

President, Miss Frida Finklestein, 244 West 117th St., New York City.

Secretary, Miss Mildred Bunnell, 215 West 135th St., New York City.

WASHINGTON (IND.) AUDUBON SOCIETY:

President, Mrs. Cameron Hyatt, 302 Walnut St., Washington, Ind.

Secretary, Cameron Hyatt, 702 Walnut St., Washington, Ind.

WASHINGTON STATE FEDERATION OF WOMEN'S CLUBS:

President, Mrs. Solon Shedd, Pullman, Wash.

Secretary, Mrs. Ira D. Cardiff, 302 Oak St., Pullman, Wash.

WATERBURY (CONN.) BIRD CLUB:

President, R. E. Platt, 36 Chapman Ave., Waterbury, Conn.

Secretary, C. F. Northrup, 138 Concord St., Waterbury, Conn.

WATERTOWN (N. Y.) BIRD CLUB:

President, P. B. Hudson, Watertown, N. Y.

Secretary, Miss Grace B. Nott, Watertown, N. Y.

WELLESLEY (MASS.) COLLEGE BIRD CLUB:

President, Miss Isabel D. Bassett, 1746 Newkirk Ave., Brooklyn, N. Y.

Secretary, Miss Madeline E. Almy, 21 Morgan St., New Bedford, Mass.

WESTERN PENNSYLVANIA AUDUBON SOCIETY (PITTSBURGH, PA.):

President, Charles B. Horton, 964 Standard Life Building, Pittsburgh, Pa.

Secretary, John W. Thomas, Pittsburgh, Pa.

WILD LIFE PROTECTIVE SOCIETY OF MILWAUKEE (WIS.):

President, Clarence J. Allen, 1219 Second St., Milwaukee, Wis.

Secretary, Adolph Biersach, 1219 Second St., Milwaukee, Wis.

WILLIAMSTOWN (MASS.) BIRD CLUB:

President, Prof. S. F. Clarke, Williamstown, Mass.

Secretary, Mrs. D. M. Fernald, Williamstown, Mass.

WINSTON-SALEM (N. C.) AUDUBON SOCIETY:

President, Col. W. A. Blair, care of Peoples Bank, Winston-Salem, N. C.

Secretary, Miss Helen Keltz, 32 Brookstown Ave., Winston-Salem, N. C.

WISCONSIN GAME PROTECTIVE ASSOCIATION:

President, Dr. A. T. Rasmussen, La Crosse, Wis.

Secretary, E. P. Trautman, Stevens Point, Wis.

WOMAN'S CLUB (SEYMOUR, CONN.):

President, Mrs. E. B. Hobart, 40 Maple St., Seymour, Conn.

Secretary, Mrs. L. C. McEwen, 106 West St., Seymour, Conn.

WYNCOTE (PA.) BIRD CLUB

President, E. H. Parry, Wyncote, Pa.

Secretary, Miss Esther Heacock, Wyncote, Pa.

WYOMING VALLEY (PA.) AUDUBON SOCIETY:

President, Dr. H. M. Bock, 88 West Northampton St., Wilkes-Barre, Pa.

Secretary, H. W. Bay, 66 Pettibone St., Kingston, Pa.



VARIOUS KINDS OF BIRD FOOD HAVE JUST BEEN PLACED ON THE SYCAMORE TREE BY THIS JUNIOR AUDUBON CLASS OF FERU, NEBRASKA

JOHN H. KOCH & COMPANY, Certified Public Accountants,
55 Liberty Street, New York

New York, October 25, 1918.

THE AUDIT COMMITTEE,
National Association of Audubon Societies,
1974 Broadway, New York, N. Y.

Gentlemen.—In pursuance with engagement, we have made the customary examination of the books, accounts, and records of the National Association of Audubon Societies for the year ended October 19, 1918, and present herewith the following Exhibits:

- EXHIBIT A—BALANCE SHEET AS AT OCTOBER 19, 1918.
- EXHIBIT B—INCOME AND EXPENSE ACCOUNT, GENERAL FUND.
- EXHIBIT C—INCOME AND EXPENSE ACCOUNT, EGRET FUND.
- EXHIBIT D—INCOME AND EXPENSE ACCOUNT, CHILDREN'S EDUCATIONAL FUND.
- EXHIBIT E—INCOME AND EXPENSE ACCOUNT, DEPARTMENT OF APPLIED ORNITHOLOGY.
- EXHIBIT F—STATEMENT OF RECEIPTS AND DISBURSEMENTS.

Our examination embraced a verification of all disbursements made, which were substantiated either by approved receipted vouchers or canceled endorsed checks.

We attended the Safe Deposit Company's vaults and examined all investment securities, which we found in order.

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, 1918

Exhibit A

ASSETS

<i>Cash in Banks and at Office</i>		\$26,456 84
<i>Furniture and Fixtures</i> —		
Balance, October 19, 1917	\$1,004 42	
Purchased this year	11 59	
	<hr/>	
	\$1,016 01	
<i>Less—Depreciation</i>	105 64	
	<hr/>	
		1,810 37
<i>Inventory of Plates, etc. (Nominal Value)</i>		500 00
<i>Bird Label Purchases, Orange Lake, Fla.</i>		200 00
<i>Barnard Island, S. C.</i>		100 00
<i>Audubon Equity</i> —		
Balance, October 19, 1917	\$1,788 30	
Additions this year	41 50	
	<hr/>	
	\$1,830 80	
<i>Less—Depreciation</i>	283 38	
	<hr/>	
		1,547 42
<i>Investment, Endowment Fund</i> —		
Bonds and Mortgages on Manhattan Real Estate	\$196,050 00	
U. S. Mortgage and Trust Co. Bonds	1,000 00	
Manhattan Beach Securities Co.	1,000 00	
U. S. Government Liberty Bonds	20,000 00	
	<hr/>	
		414,050 00
<i>Investment, Mary Dunbar Memorial Fund</i> —		
Bonds and Mortgages on Manhattan Real Estate		7,100 00
		<hr/>
		\$451,057 07

LIABILITIES

<i>Endowment Funds</i> —		
Balance, October 19, 1917	\$100,684 80	
Received from Life Members	16,180 00	
Received from Gifts	205 00	
	<hr/>	
		\$410,159 80
<i>Mary Dunbar Memorial Fund</i> —		
Balance, October 19, 1917		7,737 70
<i>Special Funds</i> —		
Egret Protection Fund, Exhibit C	\$1,437 84	
Children's Educational Fund, Northern States, Exhibit D	16,411 34	
Department of Applied Ornithology, Exhibit E	114 30	
	<hr/>	
		17,963 48
<i>Surplus</i> —		
Surplus beginning of year	\$8,043 05	
Balance from Income Account, Exhibit B	1,311 57	
	<hr/>	
		11,113 52
		<hr/>
		\$451,057 07

INCOME AND EXPENSE ACCOUNT—General Fund

Exhibit B

EXPENSE

Warden Services and Reservations—

Salaries.....	\$1,375 54
Launch expenses.....	864 08
Reservation expenses.....	21 90

 \$2,461 52
Educational Effort—

Administrative expenses.....	\$7,178 83
Field Agents, salaries and expenses.....	4,726 71
Bird-Lore, extra pages and Annual Report.....	2,425 13
Printing, office and Field Agents.....	144 30
Traveling, local workers.....	32 97
Electros and half-tones.....	503 54
Library.....	244 13
Slides.....	829 00
Educational Leaflets.....	1,034 13
Bird-Lore to members.....	4,754 55
Bird Books.....	1,886 24
Colored plates in BIRD-LORE.....	507 86
Drawings.....	208 00
Field-glasses.....	336 30
Contribution to Meriden Bird Club.....	200 00
Contribution to Wisconsin Game Protective Association.....	200 00
Song-bird campaign, posters, circulars, and publicity.....	210 00
Summer School work.....	640 00
Legislation.....	90 80
Publicity and press information.....	335 10
Investigating Pelican rookeries.....	360 79

 21,915 05
General Expense—

Office assistants.....	\$8,712 47
Telegraph and telephone.....	280 00
Postage.....	2,447 08
Office and storeroom rents.....	1,645 00
Motion pictures.....	319 72
Legal services.....	401 56
Auditing.....	124 00
Envelopes and supplies.....	284 60
Miscellaneous.....	503 85
Cartage and expressage.....	146 03
Insurance.....	124 17
Electric Light.....	39 34
Sales Department expense.....	537 41
Depreciation on boats.....	283 38
Depreciation on office furniture.....	205 64
Exchange on checks.....	34 20

 \$18,038 51

Amount carried forward.....

\$30,397 47

Report of the Treasurer

523

INCOME AND EXPENSE ACCOUNT—General Fund

Amount brought forward		\$19,327 47
Expenses brought forward	\$18,038 51	
<i>General Expenses, continued—</i>		
Annual meeting expense	374 39	
Stenol addressograph machine	47 95	
Multigraphing	40 05	
New members' expense	6,688 34	
	23,198 21	
<i>Total expenses</i>		\$33,525 68
<i>Balance surplus for Year (Exhibit A)</i>		3,811 57

\$56,837 25

INCOME

Members Dues		\$19,450 00
Contributions		7,469 30
Interest on Investments		21,516 41
<i>Sales—</i>		
Educational Leaflets sales	\$1,033 33	
Field glasses	580 15	
Sales of slides	795 80	
Bird-Love subscriptions	1,005 73	
Bird-Book sales	2,986 33	
	8,401 34	
		\$56,837 25

EGRET PROTECTION FUND
INCOME AND EXPENSE ACCOUNT

Exhibit C**INCOME—**

Balance unexpended October 19, 1917.....	\$900 15	
Contributions	2,375 60	
	\$3,275 75	\$3,275 75

EXPENSES—

Egret wardens and inspections	\$1,685 00	
Postage, printing envelopes, and circularizing	129 12	
Miscellaneous	123 79	
	\$1,937 91	
Balance unexpended October 19, 1918	1,337 84	
	\$3,275 75	\$3,275 75

DEPARTMENT OF APPLIED ORNITHOLOGY
INCOME AND EXPENSE ACCOUNT

Exhibit E**INCOME—**

Contributions	\$2,291 00	
Earnings by H. K. Job from public lectures	678 36	
Miscellaneous	50 00	
	\$3,019 36	
Less—Deficit October 19, 1917.....	118 99	
	\$2,897 37	\$2,897 37

EXPENSES—

Agent's salary and expenses	\$2,631 25	
Motion-picture films	14 16	
Miscellaneous	120 46	
	\$2,765 87	
Balance unexpended October 19, 1918	131 50	
	\$2,897 37	\$2,897 37

CHILDREN'S EDUCATIONAL FUND
INCOME AND EXPENSE ACCOUNT

Exhibit D

INCOME—

Balance, October 10, 1917	\$16,341 69
Contributions	26,275 00
Junior members' fees	16,180 80
Refunds by express companies	43 27

\$58,840 76

Less—Deficit October 10, 1917, in Sage Fund...	852 53
--	--------

\$58,190 23

EXPENSES—

Administrative expenses	\$1,000 00
Field Agents, salaries and expenses	3,152 15
Stenographic and clerical work	3,820 90
Office supplies	78 98
Expressage on literature	912 91
Postage on circulars and literature	5,060 00
Printing leaflet units for Junior Members	10,900 00
Audubon Cabinets	5,704 00
Soliciting for Junior funds	210 10
Printed circulars to teachers	633 81
Brown-Lorr for Junior Classes	4,257 14
Half-tones for publication	.. 474 00
Reports and publicity	3,151 01
Buttons for Junior members	.. 1,365 10
Colored plates in Brown-Lorr	511 07
Printed envelopes	.. 80 90
Office rent	.. 540 00
Miscellaneous	.. 162 74

\$41,054 71

Balance unexpended October 10, 1918	.. 16,935 52
-------------------------------------	--------------

\$58,190 23 \$58,190 23

STATEMENT OF RECEIPTS AND DISBURSEMENTS
YEAR ENDING OCTOBER 19, 1918

Exhibit F**RECEIPTS—**

Income on General Fund.....	\$56,837 25
Endowment Fund.....	16,475 00
Egret Fund.....	2,505 60
Children's Educational Fund.....	42,501 07
Department of Applied Ornithology.....	1,008 35

Total receipts, year ending October 19, 1918..... \$121,331 28

Cash balance October 19, 1917..... 11,843 94

\$140,179 22

DISBURSEMENTS—

Expenses on General Fund.....	\$31,036 69
Investment on Endowment Fund.....	\$14,800 00
<i>Less—Amount received on account of</i>	
Mortgages.....	11,850 00
	22,050 00
Egret Fund.....	1,937 91
Children's Educational Fund.....	41,054 71
Department of Applied Ornithology.....	2,769 87
Furniture account.....	31 70
Addition to boats.....	45 50

Total disbursements for year ending Oct. 19, 1918..... \$108,202 38

Cash Balance, October 19, 1918..... 26,456 84

\$140,179 22

New York, October 19, 1918

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 19, 1918. The accounts show balance sheets of October 19, 1918, 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. Wharton 1900
 Miss Heloise Meyer 1912
 Anonymous 1915
 Gen. Coleman duPont 1917

LIFE MEMBERS

Abell, Edwin F.	1917	Battelle, J. G.	1917
Abbott, Clinton G.	1910	Battles, Miss C. Elizabeth	1918
Adams, Abeline F.	1918	Baylies, Mrs. N. E.	1912
Adams, Edward D.	1919	Beche, Mrs. J. Arthur 1907	
Adams, Joseph 1918		Beech, Mrs. Herbert 1914	
Adams, Thomas M.	1916	Bell, Louis V. 1917	
Agnew, G. R. 1917		Bemis, Albert F. 1918	
Agnew, Alice G. 1916		Bennett, Mrs. Alice H. 1914	
Ahl, Mrs. Leonard 1915		Berwind, John L. 1915	
Ainsworth, Mrs. H. A. 1918		Binglow, Dr. Wm. Sturgis	1912
Ainsworth, M. C. "From a Friend"	1918	Bingham, Miss Harriet 1907	
Allerton, Mrs. S. W. 1917		Black, R. Clifford 1916	
Alms, Mrs. Frederick H. 1918		Blake, Mrs. Francis 1916	
Amis, Charles M. 1916		Blanchard, Miss Sara H. 1918	
Anderson, Frank Bartow	1917	Blanding, Gordon 1917	
Andrews, Mrs. E. B. 1914		Bliss, Robert Woods 1915	
Andrews, J. Sherlock	1916	Bliss, Mrs. Wm. H. 1912	
Armstrong, Dr. S. J. 1913		Boardman, Miss Rosina C. 1916	
Arnold, Benjamin Walworth	1914	Boericke, Harold 1917	
Arnold, Edward W. C. 1916		Boettger, Robert 1916	
Art, Charles G. 1913		Bolling, Mrs. Raynal C. 1900	
Ashman, Mrs. B. I. 1918		Borden, Miss Emma L. 1914	
Ashman, Mrs. R. T. 1913		Borden, Mrs. William 1911	
Ash, L. A. 1917		Bourn, W. B. 1917	
Austin, Mrs. Isabel Valle	1914	Bowdoin, Miss Ethel G. 1911	
Ayres, Miss Mary A. 1911		Bowdoin, Mrs. Temple 1911	
Babcock, Mrs. Perry H. 1912		Bowles, H. L. 1917	
Bacon, Mrs. Robert 1917		Brackenridge, George W. 1916	
Baker, Mrs. Charles 1918		Branch, Miss Effie K. 1917	
Baldwin, S. P. 1918		Brewster, Frederick F. 1916	
Bald, Miss Susan L. 1918		Brewster, William 1905	
Baldwin, Wilbur D. 1911		Bridge, Mrs. Lillian E. 1907	
Balmer, Wm. P. 1906		Brooker, Charles F. 1917	
Barber, Henry G. 1914		Brooks, A. L. 1906	
Barry, Mrs. Cornelia Bassett	1917	Brooks, Miss Fanny 1913	
Barry, James H. 1916		Brooks, Gorham 1911	
Barrows, Ira 1917		Brooks, Peter C. 1911	
Bartlett, Miss Florence	1918	Brooks, Shepherd 1907	
Bartlett, Mrs. J. W. 1911		Brooks, Mrs. Shepherd 1906	
Barnett, Mrs. Robert J. 1918		Brown, Mrs. Addison 1917	
Batscheller, Robert 1917		Brown, Miss Annie H. 1914	
Bates, Mrs. Ella M. 1914		Brown, T. Hassal 1913	

LIFE MEMBERS, continued

Browning, J. Hull	1905	Crahtree, Miss Lotta M.	1912
Browning, Mrs. J. Hull	1918	Crawston, Miss Louise	1918
Brownson, Mrs. Willard H.	1918	Crocker, C. T.	1917
Bruun, Charles A.	1918	Crocker, Mrs. Edmons	1912
Buhl, Arthur H.	1917	Crosby, Marshall S.	1907
Burnham, William	1906	Cross, Mrs. R. J.	1915
Burr, I. Tucker	1911	Crosser, Mrs. J. Lewis	1906
Burrall, Mrs. E. M.	1918	Cudworth, Mrs. J. B.	1911
Bushnell Mrs. Harriet L.	1918	Curtis, Mrs. Anna Shaw	1917
Butler, Mrs. Paul	1916	Curtis, Roy A.	1917
Butterworth, Frank S. Jr.	1911	Cutting, Mrs. W. Bayard	1915
Butterworth, Mrs. William	1918	Cuyler, Miss Eleanor DeGraft	1907
Cabot, Mrs. A. T.	1913	Dalbey, F. L.	1917
Camden, J. N.	1914	Dahlstrom, Mrs. C. A.	1916
Camden, Mrs. J. N.	1914	Dase, Edward	1912
Campbell, Miss Helen Gordon	1909	Dane, Ernest Blaney	1912
Campbell, John Boylston	1916	Dane, Ernest Blaney, Jr.	1912
Carew, Mrs. Lucie B.	1917	Dane, Mrs. E. B.	1913
Carhartt, Hamilton	1916	Daniel, J. F.	1917
Carr, General Julian S.	1907	Davis, David D.	1911
Cary, Miss Kate	1916	Davis, William T.	1909
Case, Miss Louise W.	1914	David, Miss Florence W.	1906
Cate, Mrs. Isaac M.	1918	Day, Mrs. Frank A.	1907
Chahoon, Mrs. George, Jr.	1917	Dean, Charles A.	1906
Chapin, Mrs. Charles A.	1917	Deering, Charles	1912
Chapin, Chester W.	1910	Deering, James	1917
Chapman, Clarence E.	1908	Depew, Chauncey M., Jr.	1905
Chase, Miss Helen E.	1918	DeWolf, Wallace L.	1917
Chase, Mrs. Phillip A.	1913	Dick, Albert B.	1917
Ch—, E. S.	1913	Dietz, Charles N.	1917
Childs, Eversley	1916	Dietz, Mrs. C. N.	1918
Childs, John Lewis	1905	Dinock, Mrs. Henry F.	1917
Clark, George H.	1916	District of Columbia Audubon Soc.	1911
Clark, Hopewell	1917	Dohyze, Miss Margaret M.	1917
Clarke, Mrs. W. N.	1912	Dodge, Cleveland H.	1906
Clementson, Mrs. Sidney	1916	Doupey, Mrs. William F.	1906
Clow, William E.	1917	Dommerich, Otto L.	1917
Clyde, William P.	1908	Dows, Tracy	1914
Cockcroft, Miss Elizabeth V.	1917	Draper, Mrs. Henry	1911
Coates, Miss Catherine A.	1917	Drummond, Miss Mary	1911
Coe, Miss Ella S.	1918	Dunbar, William H.	1917
Coe, Thomas Upham	1917	Duer, Mrs. Denning	1911
Cooper, Miss Nancy E.	1915	Dunbar, F. L.	1912
Cole, Miss Ella M.	1918	duPont, Alexis I.	1917
Colfelt, Mrs. Rebecca McM.	1917	duPont, H. A.	1917
Colgate, Henry A.	1917	duPont, P. S.	1917
Colgate, Richard M.	1916	Earle, Carlos V. Postevant	1904
Colgate, William	1917	Earle, Miss E. Postevant	1907
Collins, Charles H.	1918	Eastman, George	1906
Collins, Thomas H.	1916	Edison, Charles	1906
Comstock, Miss Clara E.	1914	Edgar, Daniel	1908
Comstock, Robert H.	1918	Elliot, Mrs. J. W.	1911
Converse, Mrs. Costello C.	1915	Ellis, Ralph	1911
Converse, E. C.	1916	Ellis, William D.	1911
Coolidge, J. Randolph	1913	Ellsworth, James W.	1917
Coloidge, Oliver H.	1912	Elser, Albert C.	1911
Coollidge, T. Jefferson, 3rd.	1907	Emerson, Mrs. G. D.	1918
Coollidge, T. Jefferson	1918	Emery, Miss Georgia Hill	1918
Cooper, Mrs. Theresa Bussinger	1918	Emmons, Mrs. R. W., 2nd.	1908
Coorgan, James W.	1917	Enlanti, H. B.	1908
Cotton, Mrs. Elizabeth A.	1911	Erbe, Gustave	1917
Covell, Dr. H. H.	1916	Eustis, Mrs. Herbert H.	1917
Cowl, Mrs. Clarkson	1916	Everett, Edward H.	1917

LIFE MEMBERS, continued

Everett, Miss Dorothy	1916	Hancock, Mrs. James Denton	1916
Falls, Herman W.	1917	Hanna, H. M., Jr.	1917
Farral, Mrs. Franklin	1913	Hanna, Mrs. H. M., Jr.	1916
Farwell, John V.	1917	Hanna, Miss Mary	1917
Fas, Dudley B.	1913	Hansen, Miss Emilie L.	1918
Fas, Mrs. Flora Ward	1905	Harbeck, Mrs. Emma Gray	1916
Fennis, Mrs. I. Carteret	1913	Hardy, Mrs. Richard	1918
Field, Carlisle de P.	1915	Harrah, Mrs. Charles J.	1913
Fiske, William Mann, Jr.	1916	Harral, Mrs. Ellen W.	1914
Flattery, Miss Anne L.	1917	Harriman, Mrs. J. Low	1918
Floreschmann, Julius	1913	Harrison, Alfred C.	1914
Flot, Mrs. Jessie S. P.	1913	Hasbrouck, H. C.	1915
Folsom, B. G.	1911	Haskell, J. Amory	1915
Fulton, M. D.	1918	Havemeyer, Mrs. H. O., Jr.	1907
Fulton, Miss M. G.	1918	Hawkins, Rush C.	1913
Furber, Mrs. William H.	1914	Hayes, Edmund	1917
Furbush, Edward Howe	1910	Hearst, Mrs. P. A.	1900
Furr, Mrs. Bruce	1917	Hecker, Frank J.	1917
Furd, James B.	1913	Hemenway, Augustus	1915
Furthman, Henry F.	1918	Hemenway, Mrs. Augustus	1905
Fyckellton, Mrs. R. J.	1917	Henderson, William	1918
Froeman, Alden	1918	Hentz, Leonard S.	1914
Froeman, C. H.	1917	Higginson, Mrs. James J.	1916
Froeman, Mrs. James G.	1915	Hill, Miss Clara A.	1917
French, Miss Caroline L. W.	1911	Hill, Hugh	1915
Funtingham, John W.	1913	Hill, Mrs. James	1917
Funtingham, Mrs. L. A.	1916	Hill, Mrs. Susie R.	1917
Gallatin, F. Jr.	1908	Hinckley, Mrs. M. V.	1918
Gardner, Mrs. John Lowell	1917	Hitch, Mrs. Frederic Delano	1915
Garrison, Joseph	1913	Hoe, Richard M.	1917
Garrison, Francis P.	1917	Hoff, Mrs. Grace Whitney	1915
Garrett, Mrs. P. C.	1918	Hoffman, Samuel V.	1907
Gard, E. Palmer	1917	Hopewell, Frank	1911
Gazam, Mrs. Antoinette E.	1908	Hornbroke, Mrs. Frances B.	1913
Gelpcke, Miss A. C.	1918	Hostetter, D. Herbert	1907
Gelsman, Miss Marie	1918	Houghton, Miss Elizabeth G.	1914
Gifford, Dr. Harold	1917	Howard, Miss Edith M.	1915
Gifford, James M.	1917	Hubbard, Joshua C., Jr.	1911
Gifford, Mrs. Robert I.	1908	Hubbard, Richard	1913
Gladfing, Mrs. John Russell	1914	Hubby, Miss Ella F.	1918
Glassell, Andrew	1918	Hunnewell, Mrs. Arthur	1918
Glasser, Henry S.	1916	Hunnewell, H. S.	1905
Godfrey, Mrs. Abbie P.	1917	Hunnewell, Walter	1915
Godfrey, Miss Adelaide E.	1918	Hunter, Anna F.	1917
Goodwin, Walter L., Jr.	1914	Huntington, Archer M.	1905
Goodwin, Mrs. Donald	1918	Huntington, Howard	1918
Gould, George H.	1917	Huntington, H. E.	1917
Grant, W. W.	1910	Hyde, Mrs. Clarence M.	1917
Grasselli, C. A.	1917	Iselin, Mrs. C. Oliver	1918
Gray, Miss Elizabeth F.	1915	Iselin, Columbus O'D	1917
Graydon, Mrs. Cledeny	1913	Jackman, Edwin S.	1916
Greene, Stephen, and	1917	Jackson, Mrs. James	1908
Greenway, Mrs. James C.	1913	Jaffray, Robert	1917
Grew, Mrs. H. S.	1913	James, Ellerton	1918
Gribbel, Mrs. John	1918	Jamison, Margaret A.	1914
Griswold, Mrs. E. S.	1915	Jenkins, Mrs. Jon. W.	1916
Guggenbourn, Hon. Simon	1917	Jennings, Oliver G.	1917
Haberle, Reinhold	1911	Jones, Jerome	1905
Haggin, Mrs. J. B.	1917	Jones, Mrs. Lawrence	1917
Haggin, L. I.	1917	Jordan, Miss Jeannette A.	1917
Hamilton, Miss Elizabeth S.	1918	Joslyn, Mrs. George A.	1916
Hamilton, Mrs. H. R.	1918	Kren, Miss Florence	1916
Hamlin, Mrs. Eva S.	1916	Keith, Mrs. D. M.	1916

LIFE MEMBERS, continued

Kent, Sherman	1917	Mitchell, Mrs. John G.	1916
Kettle, Mrs. L. N.	1913	Mitchell, Miss Mary	1916
Kidder, Nathaniel T.	1905	Moore, Clarence B.	1909
Kilmer, Willie Sharpe	1907	Moore, Mrs. William H.	1916
Kimball, Mrs. Arthur R.	1918	Morgan, Miss Caroline L.	1917
King, Miss Ellen	1915	Morgan, Mrs. J. P., Jr.	1916
Kingsbury, Miss Alice E.	1916	Morison, Robert S.	1916
Kinney, Morris	1913	Morrill, Miss Amelia	1917
Kittredge, Miss Sara N.	1914	Morris, Elizabeth B.	1917
Knight, Miss A. C.	1913	Morse, Mrs. Waldo G.	1918
Kochan, Emil F.	1918	Morton, Miss Mary	1906
Kuser, John Dryden	1911	Mott, Mrs. John B.	1918
Lancashier, Mrs. J. H.	1918	Mudd, Dr. Harvey G.	1917
Lane, Benjamin C.	1909	Mulliken, Alfred H.	1917
Lang, Albion E.	1918	Munson, Mrs. W. D.	1918
Langdon, Woodbury G.	1916	Murphy, Franklin	1909
Lansing, Mrs. G. V.	1916	Neave, Miss Jane C.	1916
Lauder, Mrs. E. S.	1918	Nevins, Mrs. Davis	1916
Lawrence, Emben	1916	Newberry, W. F.	1916
Lawrence, Rosewell B.	1916	Newcomer, Waldo	1917
Lawson, Victor F.	1917	New Jersey Audubon Society	1913
Lefferts, M. C.	1914	Newman, Mrs. R. A.	1914
Liesching, Bernhard	1918	Nichols, Mrs. William G.	1918
Lippitt, Mrs. C.	1918	Norris, Mrs. E. L. Broese	1918
Logan, Stuart	1917	North Carolina Audubon Society	1905
Longyear, John M.	1917	Noyes, Mrs. Davis A.	1916
Loring, Miss Helen	1918	O'Brien, Mrs. Michael W.	1917
Loring, Mrs. W. Caleb	1913	Oldberg, Mrs. Emma	1918
Low, Miss Nathalie P.	1916	Olds, R. E.	1917
Loyd, Miss Sara A. C.	1914	Oliver, Mrs. James B.	1916
McClymonds, Mrs. A. R.	1914	Osborn, Frederick	1917
McConnell, Mrs. Annie B.	1908	Osborn, Professor Henry Fairfield	1917
McCormack, Mrs. R. S.	1917	Osborn, Mrs. William C.	1916
McCormack, Mrs. R. T.	1918	Pagenstecher, Albrecht	1918
McGraw, Mrs. Thomas S.	1908	Palto, F. W.	1917
McKim, LeRoy	1918	Parker, A. H.	1908
McLane, Guy R.	1916	Parker, Mrs. Gordon	1918
McOwen, Frederick	1917	Parker, Edward L.	1909
Mackey, Clarence H.	1908	Parsons, Mrs. J. D.	1918
MacLean, Mrs. Charles F.	1916	Parsons, Miss Mary W.	1913
Mallery, Mrs. Jane M.	1914	Peabody, Geo. A.	1914
Markly, John	1917	Pearson, T. Gilbert	1905
Margan, Mrs. Elizabeth C.	1916	Peck, Mrs. Walter L.	1909
Marshall, Louis	1906	Perkins, Miss Ellen G.	1914
Marshall, Thomas K.	1915	Perkins, Mrs. George C.	1913
Martin, Mrs. Bradley	1918	Perkins, Mrs. Gilman H.	1918
Masson, Miss Ellen F.	1913	Perkins, William H.	1917
Masson, Miss Fanny P.	1912	Peterson, Arthur	1916
Masson, George Grant	1914	Phelps, Mrs. J. W.	1914
Massachusetts Audubon Society	1915	Phillips, Mrs. Eleanor H.	1908
Mead, Mrs. Charles Marsh	1915	Phillips, John C.	1905
Misby, Andrew D.	1910	Phillips, Mrs. John C.	1905
Merrill, Mrs. Mary E.	1917	Pickman, Mrs. Dudley L.	1907
Merriam, A. Ware	1918	Pierrepont, Anna J.	1905
Merriman, Mrs. Daniel	1915	Pierrepont, John J.	1905
Mershon, Hus. W. B.	1914	Pierrepont, Mrs. R. Stuyvesant	1914
Meyer, Mrs. August R.	1917	Poland, James P.	1909
Meyer, Charles F.	1917	Pomeroy, Mrs. Nelson	1916
Meyer, Miss Heloise	1916	Pope, Willard	1918
Miles, Mrs. Flora E.	1916	Porter, Mrs. A. B.	1918
Miller, Charles Kingsbury	1917	Powers, Thomas H.	1918
Miller, Mrs. E. C. T.	1916	Pratt, Geo. D.	1911
Mishall, Miss Helen	1918	Prentiss, F. F.	1916

List of Members

531

LIFE MEMBERS, continued

Prime, Miss Cornelia	1909	Stillman, Chauncy D	1916
Procter, Mrs. William C.	1918	Stone, Charles A.	1911
Quier, Mrs. Edwin A.	1917	Stone, Miss Ellen J.	1914
Quincy, Mrs. H. P.	1915	Strong, Charles Hamot	1917
Rainford, Dr. W. S.	1913	Strong, Mrs. J. R.	1915
Ragbourne, Richard C.	1919	Stuart, F. A.	1916
Rand, Mrs. William Howell	1908	Sturgis, Mrs. F. K.	1917
Ransom, Miss Elizabeth	1916	Swift, Charles H.	1917
Rauwick, Mrs. William W.	1914	Swift, Louis F.	1917
Reynolds, R. J.	1908	Taft, Elihu B.	1911
Richardson, Mrs. Charles F.	1918	Talbott, H. E.	1917
Richardson, S. O., Jr.	1917	Talbot, George S.	1917
Ricker, John J.	1916	Taylor, Charles H., Jr.	1908
Roberts, Miss Frances A.	1914	Thaw, J. C.	1916
Rockwood, Mrs. George I.	1918	Thayer, Mrs. Edward D.	1917
Rockefeller, Wm. G.	1912	Thayer, Mrs. Ezra R.	1909
Rodewald, P. L.	1916	Thayer, John E.	1909
Roehling, Mrs. John A.	1916	Thompson, Mrs. Frederick F.	1908
Rosbling, Washington A.	1917	Tingley, S. H.	1914
Rogers, Charles H.	1912	Torrey, Mrs. Elbridge	1913
Rogers, Dudley P.	1914	Troesch, A. F.	1917
Rogers, Miss Ella A.	1917	Tucker, Carl	1917
Rogers, Miss Julia	1918	Tuckerman, Alfred	1918
Ropes, Mrs. Mary G.	1913	Tufts, Leonard	1907
Rosengarten, George D.	1917	Tuttle, Arthur J.	1913
Rug, Mrs. Frank A.	1917	Turner, Mrs. George M.	1917
Rumsey, Mrs. Charles C.	1918	Turner, Mrs. William J.	1917
Russell, Mrs. Gordon W.	1914	Tyson, Mrs. George	1915
Sage, Mrs. Russell	1905	Underwood, H. O.	1916
Salmestad, John L.	1908	Upham, Frederick W.	1917
Sanger, Mrs. C. R.	1916	Ujmann, Albert	1907
Sarmiento, Mrs. F. J.	1918	Upton, Mrs. Henry S.	1916
Satton, Mrs. Herbert L.	1906	Van Brunt, Mrs. Charles	1914
Schroeder, Miss Lizzie H.	1911	Vanderbilt, Mrs. French	1914
Seabury, Miss Sara E.	1915	Van Name, Willard G.	1908
Seaman, L. W.	1912	Van Norden, Warner M.	1917
Seas, William R.	1915	Vaux, George Jr.	1908
Seaton, Ernest T.	1916	Vaux, Miss Meta	1917
Severance, John L.	1916	Vehe, Charles D.	1918
Sharpe, Miss Ellen D.	1913	Voss, Miss Alice McKim	1917
Shattuck, Mrs. F. C.	1906	Wadsworth, Clarence S.	1911
Shaw, Mrs. Lucia W.	1915	Wakeman, Miss Frances	1918
Shepard, Mrs. Elizabeth D.	1918	Walker, Miss Alice L.	1918
Sherman, Miss Althen R.	1909	Walker, Mrs. Cyrus	1917
Short, William	1915	Wallace, Mrs. Augustus H.	1914
Sibley, Horace W.	1915	Wallace, Col. Cranmore N.	1917
Silber, Thomas	1918	Warburg, F. M.	1917
Simpson, Alexander, Jr.	1917	Ward, Charles Willis	1910
Slattery, John R.	1916	Ward, Marcus L.	1908
Slone, Henry T.	1918	Warner, Lucien C.	1917
Smith, Francis Drexel	1918	Warren, George H.	1917
Smith, Frank A.	1912	Warren, Mrs. E. Walpole	1918
Smith, Mrs. Heber	1911	Watson, Mrs. J. Henry	1916
Spaulding, S. S.	1917	Watson, Mrs. James S.	1914
Speed, Mrs. J. B.	1918	Watson, Mrs. Thomas J.	1916
Speed, William S.	1917	Watt, Mrs. Henry C.	1918
"Luna Friend"	1916	Webb, J. Griswold	1913
Stahl, Adolfo	1917	Webster, F. G.	1908
Stambaugh, H. H.	1917	Webster, Mrs. Sidney	1914
Starweather, Mrs. J. N.	1918	Weeks, Henry De Forest	1909
Stetson, Francis Lynde	1916	Weeks, Hon. John W.	1917
Stewart, Mrs. Edith A.	1913	Weld, Miss Elizabeth F.	1909
Stillman, B. G.	1916	Wells, Mrs. Frederick L.	1911

LIFE MEMBERS, continued

Welch, Frances Keston	1917	Winchester Repeating Arms Co.	1918
Westcott, Miss Margery D.	1913	Wiman, Dwight Deane	1917
Wetherill, S. P.	1917	Winter, John C.	1917
Wetmore, George Peabody	1914	Wood, Mrs. Antoinette Eno	1918
Wharton, William P.	1907	Wood, Walter	1917
White, Windsor T.	1916	Woodman, Miss Mary	1914
Whitfield, Miss Estelle	1917	Woodward, Mrs. George	1918
Whiting, Miss Gertrude	1918	Woodward, Edward	1916
Whitman, William	1917	Work, Mrs. A.	1917
Williams, Mrs. C. Duane	1918	Wyman, Mrs. Alfred E.	1914
Williams, John D.	1900	Zabriskie, Mrs. Cornelius	1917
Wilson, M. Orme	1917		

ANNUAL MEMBERS AND CONTRIBUTORS TO THE GENERAL FUND

Albee, Miss H. C.	\$1.00	Alexandre, Mrs. J. J.	\$5.00	Appleton, W. S.	\$1.00
Albee, Dr. Robert	5.00	Algon, James W.	1.00	Archer, Mrs. G. A.	5.00
Abley, Mrs. F. K.	5.00	Allen, Atkinson	5.00	Arnot, Miss G. I.	5.00
Abbott, Miss M. S.	5.00	Allen, Miss C.	10.00	Armitage, Lucius	5.00
Abbott, Elizabeth T. and Hope	2.00	Allen, Clarence J.	5.00	Arnson, A. V.	5.00
Abbott, Mrs. F. V.	5.00	Allen, C. L.	10.00	Armstrong, H. L.	5.00
Abbott, Walker	1.00	Allen, Miss E. H.	5.00	Armstrong, J. G.	5.00
Abbott, Mrs. John J.	5.00	Allen, John H.	5.00	Arnold, Mrs. A. H.	1.00
Abbott, Mrs. F. J.	5.00	Allen, Dr. J. W.	5.00	Arnold, Clarence M.	10.00
Abert, Benjamin	5.00	Allen, Miss Lucy E.	1.00	Arnold, Mrs. G. C.	5.00
Abrams, Mrs. A. E.	2.00	Allen, Miss M. W.	10.00	Arnold, Miss M.	5.00
Achelin, Fritz	5.00	Allen, Miss Mateal	5.00	Arnold, W. J.	5.00
Achilles, Mrs. G. S.	5.00	Alley, Mr. and Mrs. George H.	2.00	Arnold, Mrs. W. K.	2.00
Acton, Miss A. A.	5.00	Allison, Mrs. M. D.	1.00	Arthur, James B.	5.00
Adams, Brooks	5.00	Altar, Mrs. F.	5.00	Aski, Mrs. Paul	5.00
Adams, Mrs. Brooks	1.00	Alluise, H. W.	35.00	Ashley, Miss E. M.	5.00
Adams, C. Q.	10.00	Altshul, Frank	5.00	Ashley, J. S.	5.00
Adams, Miss E. B.	5.00	Amernan, Rev. J. L.	5.00	Aspinwall, John	10.00
Adams, Miss E. L.	5.00	Ames, Mrs. Hobart	5.00	Astor, Vincent	5.00
Adams, Mrs. F.	5.00	Amos, Mrs. J. B.	10.00	Alherton, E. H.	5.00
Adams, H. W.	5.00	Amos, John S.	5.00	Atkins, Edson E.	5.00
Adams, Mrs. J. D.	5.00	Amory, John S.	5.00	Atkins, Mrs. E. F.	5.00
Adams, Mrs. M. W.	25.00	Anderson, Andrew	10.00	Atwater, Charles B.	5.00
Adams, William C.	1.00	Anderson, Mrs. B.	5.00	Auchincloss, Mrs. F. S.	5.00
Adger, Miss E. J.	5.00	Anderson, John	5.00	Auchincloss, J. W.	5.00
Adler, Mrs. Leon N.	5.00	Anderson, J. C.	5.00	Audubon Association of the Pacific	5.00
Adler, Mrs. Max	5.00	Anderson, Mrs. J. C.	5.00	Audubon Bird Club of Erasmus Hall	5.00
Adler, Miss A.	5.00	Anderson, Mrs. J. W.	5.00	Audubon Bird Club of Indiana	5.00
Ade, Albert A.	2.00	Anderson, Misses Kate L. and Sallie	10.00	Audubon Society of Buffalo	5.00
Adams, Rudolph L.	5.00	Andre, Mrs. F. B.	1.00	Audubon Society of Evansville (Ind.)	5.00
Agnew, Mrs. M. W.	5.00	Andrews, Mrs. H. E.	5.00	Audubon Society of Ft. Smith	5.00
Alken, John A.	5.00	Andrews, Col. J. M.	5.00	Audubon Society of Missouri	5.00
Alken, Miss S. C.	1.00	Andrews, Mrs. J. M.	5.00	Audubon Society of New Hampshire	5.00
Aling, Miss Edith M.	5.00	Andrews, Miss K. R.	5.00	Audubon Society of Sewickley Valley	10.00
Almille, Miss Maud	5.00	Andrews, Rev. T.	5.00	Audubon Society of Skaneateles	5.00
Alks, Thomas	5.00	Andrews, Mrs. W. L.	5.00		
Alden, Miss F. E.	1.00	Anger, Roswell P.	5.00		
Aldred, Mrs. W. F.	5.00	Angyrtman, Mrs. C. S.	6.00		
Aldrich, Mrs. B. F.	5.00	Anonymous	5.00		
Aldrich, Frank W.	5.00	Anthony, Prof. A. W.	5.00		
Aldrich, Miss G. M.	1.00	Anthony, Miss E. J.	5.00		
Aldrich, Spencer	10.00	Anthony, G. W.	10.00		
Aldridge, George W.	5.00	App, Miss O. L.	5.00		
Alexander, George	2.00	Appleby, Mrs. J. S.	5.00		
Alexander, James	1.00	Appleton, Miss M. E.	5.00		
Alexandre, Mrs. J. E.	5.00				

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Asheboro Society of South Carolina	\$5 00	Baralt, Luis A., Jr.	\$5 00	Barne, Mrs. H.	\$5 00
Asheboro Society of Western Pa.	5 00	Barber, Mrs. H. M.	2 00	Barne, Mrs. L. P.	5 00
Auerbach, Joseph S.	5 00	Barber, W. V.	1 00	Bayne, Paul	5 00
Augusta Bird Club	5 00	Barbour, W. T.	5 00	Beach, Mrs. H. H. A.	10 00
Augustus, A. A.	5 00	Barclay, Miss E.	5 00	Beagle, Miss L. R.	5 00
Austin, Francis R.	5 00	Barclay, Ed. F.	5 00	Beahm, Mrs. G. T.	5 00
Averill, Miss F. M.	5 00	Barling, Thomas	5 00	Beal, Mrs. J. H.	5 00
Avery, Mrs. M. S.	5 00	Barker, A. O.	1 00	Beall, Mrs. I. A.	5 00
Avery, Samuel P.	10 00	Barker, Mrs. L.	5 00	Beals, Mrs. P. P.	1 00
Avin, Edward	5 00	Barker, Miss Nellie	5 00	Beardale, Mrs. L. R.	5 00
Ayer, C. F.	5 00	Barlow, H. M.	10 00	Beardley, Mrs. O. D.	5 00
Ayers, Harry M.	5 00	Barlow, Mrs. F. R.	5 00	Beaux, Miss Cortha	5 00
Baker, Miss C.	5 00	Barnard, Hon. Job	5 00	Beckett, Mrs. C. H.	5 00
Bachman, K. C.	5 00	Barnes, Miss A. H.	5 00	Beckwith, T., Jr.	5 00
Bachmann, N. H.	5 00	Barnes, H. B.	1 00	Bedford Audubon Society (The)	5 00
Bachman, L. F.	5 00	Barnes, J. Sanford	5 00	Bebe, Walter	5 00
Bachman, Alexander	5 00	Barney, Mrs. C. T.	5 00	Bebe, Mrs. W.	5 00
Bacon, Miss E. S.	5 00	Bartey, Mrs. J. S.	5 00	Bebe, Mrs. W. H. H.	5 00
Bacon, Mrs. F. E.	10 00	Barnstein, Lydia	5 00	Beemer, Mrs. W. H.	5 00
Bacon, Miss H. R.	5 00	Barnum, W. M.	5 00	Beer, Mrs. Edwin	5 00
Bacon, The Misses	2 00	Barnum, Mrs. W. M.	5 00	Beer, Mrs. G. L.	5 00
Bacon, Miss M. P.	5 00	Barr, Miss C. F.	6 50	Beer, Mrs. Julius	5 00
Bachman, Joseph N.	5 00	Barr, Mrs. T. F.	5 00	Behrens, Dr. O. F.	10 00
Bair, Harry I.	5 00	Barrell, Finley	5 00	Behrens, J. H. M. D.	5 00
Baird, Mrs. F. H.	5 00	Barrere, Masters Claude & Gabriel	1 00	Beitz, R. A.	5 00
Bailey, George G.	5 00	Barrett, Mrs. R. R.	5 00	Belknap, E. W.	5 00
Bailey, Mrs. A. T.	5 00	Barrett, W. H.	5 00	Bell, Mrs. D. M.	10 00
Bailey, Mrs. C. F.	5 00	Barri, Mrs. John A.	5 00	Bell, Mrs. Gordon	5 00
Bailey, Henry T.	5 00	Barrie, Mrs. E. S.	5 00	Bell, John C., Jr.	5 00
Bain, Hugh A.	5 00	Barroll, H. C.	5 00	Beller, William F.	5 00
Bainbridge, Mrs. M. H.	5 00	Batrull, Joseph R.	5 00	Bellinger, Miss M. E.	5 00
Baird, Wyllys W.	5 00	Barton, George D.	5 00	Bellins, Mrs. L. J.	5 00
Baker, Mrs. C. M.	10 00	Barrows, Mrs. F. K.	5 00	Bemont, Mrs. G.	5 00
Baker, George L.	5 00	Barrows, Mrs. M.	5 00	Bemont, Mrs. W. P.	5 00
Baker, Iru H.	5 00	Bartow, Mrs. F. O.	5 00	Bemis, Mrs. F. B.	5 00
Baker, W. E.	5 00	Bartow, Mrs. M. W.	4 00	Bernish, Mrs. W. H.	5 00
Baird, Henry G.	5 00	Bartlett, Mrs. C. T.	5 00	Benedict, Anne L.	5 00
Baird, J. M.	5 00	Bartlett, Clay	5 00	Benedict, Mrs. C. E.	5 00
Bairden, Mrs. A. D.	5 00	Bartlett, Mrs. H.	10 00	Benedict, Miss C. J.	5 00
Baldwin, A. H.	5 00	Bartlett, Mrs. J. W.	5 00	Benedict, Theo. H.	5 00
Baldwin, Mrs. C. R.	5 00	Bartlett, Master W. T.	1 00	Benedict, Mrs. W. L.	5 00
Baldwin, Mrs. E. I.	5 00	Bartod, Miss E. H.	5 00	Benoche, Henry	5 00
Baldwin, George J.	5 00	Bartod, Mrs. H. G.	1 00	Benoit, Miss Lillian	5 00
Baldwin, Miss M. E.	5 00	Bartod, Mrs. J. W.	5 00	Bonjamin, Mrs. A. B.	5 00
Baldwin, Miss S. R.	5 00	Barton, Mrs. Bolling	5 00	Bonjardin, Mrs. J.	5 00
Baldwin, Mrs. W. F.	5 00	Barton, Miss E. R.	10 00	Bonkard, Harry H.	5 00
Balk, R. F.	1 00	Barton, Mrs. F. O.	1 00	Bonkard, J. Phillip	5 00
Balk, Miss Alice J.	5 00	Barton, Mrs. H. H., Jr.	5 00	Bonnett, Mrs. D. C.	5 00
Balk, Miss Helen A.	5 00	Barton, Mrs. N. B.	5 00	Bonnett, John H.	15 00
Balk, T. Arthur	5 00	Bartow, Mrs. H. B.	5 00	Bonnett, John Ira	5 00
Balchman, Isabel A.	5 00	Bass, Mrs. Perkins	5 00	Bonninghoben, Miss Carrie	5 00
Balchman, S. M.	5 00	Bassford, Mrs. L. C.	5 00	Bonson, Miss Mary	5 00
Baldin, Hugo	5 00	Bartholow, Miss Inez	5 00	Bost, Arthur C.	5 00
Balchberger, Miss	5 00	Bates, Miss K. L.	5 00	Bost, Miss C. M.	5 00
Balchrott, Mrs. W. P.	10 00	Bates, V. W.	5 00	Bostley, Mrs. S. M.	5 00
Banks, F. R.	10 00	Bauch, Mrs. J. P.	2 00	Bostin, Andrew A.	5 00
Banks, M. and Mrs. George W.	10 00	Bauneh, William	2 00	Bercovich, H.	1 00
Banks, The Misses	5 00	Baxter, H. F.	5 00	Borg, Miss M. T.	5 00
Banning, Leland G.	5 00	Bayard, Mrs. J. F.	5 00	Borlan, Mrs. D. B.	5 00
		Bayne, Mrs. E. S.	5 00	Borheim, H. J.	5 00
		Bayless, Edmund L.	5 00		

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Bernheim, Mrs. I. J.	\$5.00	Blake, Mrs. T.	\$5.00	Bowditch, James H.	\$4.00
Bernheim, I. W.	2.00	Blake, Mrs. T. W.	5.00	Bowdoin, Miss F. G.	10.00
Bernheim, Mrs. Lee	2.00	Blakely, Theron J.		Bowen, Mrs. J. A.	2.00
Berrien, Mrs. F. D.	10.00	(In Memoriam)...	10.00	Bowen, Miss J. H.	3.00
Berry, Miss E. M.	3.00	Blakiston, Miss E.	5.00	Bower, C. P.	3.00
Berry, Miss L. D.	3.00	Blanchard, Miss Anne		Bowles, Miss F.	1.00
Betta, Alfred	3.00	K.	5.00	Bowles, Mrs. H. L.	10.00
Betta, Mrs. E. K.	1.00	Blanchard, Mrs. E. J.	5.00	Bowles, Mrs. S.	3.00
Betta, Samuel R.	3.00	Blanchard, John A.	3.00	Bowman, James	1.00
Beveridge, Mrs. A. J.	3.00	Bannay, Miss H. C.	1.00	Bowstead, H. G.	1.00
Bevier, Miss K.	1.00	Blashfield, Mrs. F. H.	5.00	Boyd, Mrs. H. W.	3.00
Bevin, Leander A.	10.00	Blatz, William C.	5.00	Boyd, Dr. James P.	3.00
Beyer, Eugene O.	1.00	Bliss, Harriet M.	5.00	Boyd, Mrs. John Y.	1.00
Bickmore, Mrs. A. S.	3.00	Bliss, Mrs. W. P.	5.00	Boyer, Mrs. F. N.	3.00
Bicknell, Miss E. C.	1.00	Block, Dr. E. Bates	5.00	Boyle, Edward J.	5.00
Bicknell, Mrs. F. I.	10.00	Blocki, Mrs. F. W.	5.00	Boyles, Mrs. C. D.	5.00
Biddle, Miss F. W.	3.00	Blodgett, Mrs. W. T.	10.00	Bradford, Miss F. F.	10.00
Birkle, Mrs. George	3.00	Blood, Mrs. C. O.	5.00	Bradford, Mrs. C. M.	1.00
Birkle, William C.	5.00	Bloodgoodale, Miss		Bradford, Miss D. S.	5.00
Bigwell, Addison B.	3.00	Laura A.	5.00	Bradford, Mrs. G. C.	1.00
Bigwell, Mrs. M. B.	3.00	Blus, Mrs. C. E.	5.00	Bradlee, Mrs. E. C.	2.00
Bierwerth, Mrs. H. A.	5.00	Bumenthal, F.	5.00	Bradley, F. J.	10.00
Bignow, Miss E. B.	3.00	Boardman, Miss C		Bradley, A. C.	5.00
Bigger, Dr. H. F.	5.00	W.	5.00	Bradley, Almira F.	5.00
Bigler, Mrs. F. S.	5.00	Boardman, Miss E.		Bradley, Mr. and	
Biglow, Mrs. L. H.	11.00	D.	5.00	Mrs. E. A.	10.00
Bign, Abraham	5.00	Boardman, Mrs. L.	5.00	Bradley, F. R.	5.00
Bill, Nathan D.	5.00	Boardman, Miss S.	2.00	Bradley, Mrs. M. A.	3.00
Billard, Mrs. J. L.	5.00	Boardman, Mrs. W.		Bradley, Dr. M. S.	5.00
Billings, Elizabeth	5.00	D.	5.00	Bradley, Peter B.	10.00
Billings, Franklin S.	5.00	Boercke, Mrs. G.	5.00	Bradley, Robert S.	3.00
Bingham, Miss M.	5.00	Boesicke, Mrs. J. J.	5.00	Bradley, Mrs. W. B.	3.00
Binney, Mrs. John	5.00	Boemann, Henry	3.00	Bradley, William P.	3.00
Birch, Hugh T.	5.00	Boettger, Mrs. I.	1.00	Bradshaw, F.	3.00
Bird, Miss Anna C.	5.00	Bole, Ben P.	5.00	Brady, Dr. J. E.	5.00
Bird, Charles S.	5.00	Bole, Mrs. Ben P.	15.00	Brady, Paul T.	5.00
Bird Club of Long		Bolling, R. C.	10.00	Braden, J. W.	5.00
Island (The)	5.00	Bolling, Stanhope	10.00	Bradley, Joseph	5.00
Bird Conservation		Bolter, Miss A. F.	3.00	Bradlee, Mrs. E. D.	5.00
Club (The)	5.00	Boltz, Miss Clara M.	1.00	Bradlee, Miss E. S.	5.00
Bird, Mrs. J. B.	5.00	Bond, Henry	5.00	Bradlee, Miss F. S.	5.00
Birdlovers' Club of		Bond, S. S.	5.00	Bradlee, Miss K.	5.00
Brooklyn	5.00	Bonnett, Charles P.	5.00	Bradless, Mrs. A.	5.00
Bishop, Miss A. H.	10.00	Boscock, Miss M.	3.00	Brandes, Julius	5.00
Bishop, Dr. L. B.	2.50	Boody, Mrs. Edgar	3.00	Brandt, Mrs. Carl	5.00
Bishopric, Mrs. A.	5.00	Bouth, Mrs. H. M.	5.00	Brayton, Mrs. H. A.	5.00
Black, Mrs. Frank S.	3.00	Bouth, H. W.	3.00	Brazen, Jacob	5.00
Black, George P.	5.00	Bourden, Mrs. E. L.	10.00	Brazier, H. Bartol	5.00
Blackburn, N. T.	5.00	Borg, Mrs. Solney C.	5.00	Brewer, Mrs. J. H.	5.00
Blackinton, Mrs. R.	2.00	Borland, William G.	5.00	Brockner, Leonard C.	5.00
Blackmer, Mrs. F. B.	5.00	Borne, Mrs. John E.	5.00	Brockenridge, Miss	
Blackstone, Jessie E.	1.00	Borst, George H.	5.00	Annie I.	2.00
Blade, Mrs. William		Bosworth, Mrs. W.		Brend, H. L.	1.00
M. Jr.	5.00	W.	5.00	Brenner, S. G.	5.00
Blagden, Miss L.	5.00	Bouer, Mrs. E. A.	5.00	Brett, Everett J.	5.00
Blair Co. Game, Fish		Boulton, William B.	5.00	Breachard, Mrs. J.	1.00
and Forestry Asso-		Bourne, Frederick G.	5.00	Brewer, Edward M.	25.00
ciation	5.00	Bourne, Mrs. H. E.	5.00	Brewer, Mr. and	
Blair, C. Ledyard	5.00	Bouton, Mrs. E. H.	5.00	Mrs. Joseph	10.00
Blair, Gist	2.00	Bowden, J. G.	5.00	Brewer, Miss L. S.	5.00
Blair, T. S., Jr.	5.00	Bowdish, B. S.	5.00	Brewer, Miss R.	5.00
Blake, Miss Isabel	3.00	Bowditch, Charles P.	25.00	Brewington, Julia R.	5.00
Blake, Mrs. S. P.	5.00	Bowditch, Edward	5.00	Brewster, Mrs. B. E.	5.00

List of Members

535

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Brewster Mrs T F	\$ 20	Brown, Mrs T M	\$ 5 00	Burton, Master H	\$ 5 00
Brewster, Mrs W S	5 00	Browne, D L	10 00	Burton, Robert M	10 00
Brewster, W T	5 00	Browning, Mrs J H	5 00	Bush, W T	5 00
Bridge, Edmund	5 00	Browning, Mrs K	5 00	Bushnell, Mrs H L	10 00
Briggs, Mrs E	5 00	Browning W C	5 00	Bushnell, Robert G	5 00
Briggs, F W	10 00	Browning W H	5 00	Bushnell, Mrs W G	5 00
Briggs, Miss I	5 00	Bruce, Mary A	5 00	Butcher, Howard	5 00
Briggs, Mrs L V	5 00	Bruen, Frank	5 00	Butler, Mrs A W	5 00
Briggs, Mrs P D	5 00	Bruette, William	5 00	Butler, Miss F O	5 00
Brighton, Mrs C	5 00	Bruner, Mrs H L	5 00	Butler, Miss F C	5 00
Brightman, Mrs H L	5 00	Brunson, Mrs A G	5 00	Butler, Mrs H R	5 00
Brill, Dr A A	5 00	Brunswick, Mrs I	5 00	Butler, Wilbur F	5 00
Brinsell, C A (In		Bryant, Dr C H	5 00	Butterworth Mrs W	25 00
Memoriam)	5 00	Bryant, M L	5 00	Button, Mrs W H	5 00
Bristol, Mrs E S	5 00	Buckner, M N	5 00	Buttrick, Helen B	5 00
Bristol, John L D	5 00	Buel, Miss K L	10 00	Butts, Mrs E P	5 00
Brook, Mrs K C H	5 00	Buffum, Mrs W P	5 00	Byers, J Frederic	5 00
Brookman, Andrew	5 00	Bugbee, Miss E D		Byington, Mrs L J	5 00
Brookman, Irving	5 00	and F H Becker	15 00	Byrne, James	5 00
Bronley, Joseph H	5 00	Bulkeley, Alpheus T	10 00	Cabot, Amy W	5 00
Bronk, Mrs Henry	5 00	Bulkeley, Jonathan	5 00	Cabot, Henry	5 00
Bronson, Dr E B	5 00	Bull, Archibald H	5 00	Cabot, Mrs H B	10 00
Bronson, Mrs J H	5 00	Bull, M	5 00	Cabot, Mary R	5 00
Brownsville Bird Club	5 00	Bullard, Mrs E P	5 00	Cabot, Powell M	5 00
Brown, H J	20 00	Bullard, Miss K E	5 00	Cabot-Ward, Mrs	
Brownline Bird Club		Bunce, James H	5 00	George	5 00
(The)	5 00	Bunn, C W	5 00	Caduc, Eugene E	5 00
Brown, Miss M W	5 00	Bunting, W M	1 00	Cady, Mrs G W	1 50
Brown, Paul A	1 00	Burckhardt, Miss E	5 00	Cady, Walter G	1 00
Brown, W	5 00	Burden, James A	10 00	Cady, William H	5 00
Brown, Walter D	5 00	Burdick, Miss M G	10 00	Camar, Henry A	5 00
Brown, Mrs W T	2 00	Burgess, John K	5 00	Cahoone, W B	1 00
Brown, Mrs T	5 00	Burgess, Miss S K	5 00	Caldwell, Mrs J H	5 00
Brown, Miss L S	5 00	Burgoyne, C I	5 00	Caldwell, R J	15 00
Brown, Abbott	5 00	Burke, Mrs A	5 00	Caldwell, Dr S L	5 00
Brown, Mrs A M	5 00	Burke, Mrs S	5 00	California Audubon	
Brown, Mrs B	5 00	Burnett, Mrs F M	2 00	Society	5 00
Brown, Mrs C A	5 00	Burnett, Miss F H	1 00	Calkins, Mrs A H	5 00
Brown, C M	5 00	Bursham, Mrs C L	5 00	Calkins, F G	2 00
Brown, Mrs C S	6 00	Bursham, Mrs E P	10 00	Calkins, Mrs W	1 00
Brown, Clarence H	2 00	Bursham, Mrs G		Callaway W T	5 00
Brown, Devonport	5 00	Jr	5 00	Callery, Mrs D	5 00
Brown, Elisha R	5 00	Bursham, Mrs J A	5 00	Cammann, Miss I M	5 00
Brown, Miss Ella	5 00	Bursham, J B	5 00	Campbell, Donald	5 00
Brown, Mrs F G	2 00	Bursham, Mrs J K	5 00	Campbell, Mrs T B	5 00
Brown, Mrs F F	10 00	Bursham, Miss M C	5 00	Candy, Mrs E T	5 00
Brown, F Q	5 00	Burns, Olivia P	5 00	Candle, Lyman	1 00
Brown, Mrs F Q	2 00	Burpee, David	2 00	Cannon, Gabriel	5 00
Brown, Mrs G A	1 00	Burr, Winthrop	10 00	Carey, Arthur A	5 00
Brown, George W	5 00	Burrill, Prof A C	5 00	Carey, H T	5 00
Brown, Harry W	5 00	Burrill, M S	5 00	Carey, Miss M DeP	5 00
Brown, J Adams	5 00	Burrill Mrs C P	5 00	Carline, Mrs W A	10 00
Brown, Mrs J S	5 00	Burrington Audubon		Carlton, Gen C H	5 00
Brown, Mrs J T	5 00	Nature Club	5 00	Carnold, Mrs W	5 00
Brown, Dr L	5 00	Burrington Junior		Carnan, Mr and	
Brown, L S	1 00	Audubon Society	5 00	Mrs C W	5 00
Brown, Miss M B	1 00	Burrington, Miss L		Carnan, Mrs N G	5 00
Brown, Miss M C	1 00	C	5 00	Carne, Mrs C E	5 00
Brown, Dr M M	1 00	Burt, Miss Edith	5 00	Carnes, W F	5 00
Brown, Nathan C	5 00	Burt, Mrs John H	1 00	Carns, Arthur D	5 00
Brown, Philip G	1 00	Burt, Miss M T	5 00	Carola and Her Bro-	
Brown, Emanuel K	1 00	Burtch, Vereti	5 00	thers	5 00
Brown, Samuel B	5 00	Burton, Mrs E F	2 00	Carolan, Francis	5 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Carpenter, Alice E....	\$5 00	Chandler, Mrs. J. B.	\$5 00	Cimmons, Mrs. T....	\$5 00
Carpenter, C. L....	10 00	Chandler, Miss Jane.	5 00	Civic League	5 00
Carpenter Mrs. E. M.	2 00	Chapin, Mrs. E. F....	5 00	Civic League of	
Carpenter, Mrs. G.		Chapin, Mrs. H. B....	5 00	Benefactor	1 00
O	1 00	Chapin, Homer C....	5 00	Clapp, George H....	1 00
Carpenter, Ralph G.	5 00	Chapin, Mrs. H. C....	5 00	Clapp, Miss Helen	1 00
Carr, Moses F.	5 00	Chapin, Miss M. B....	5 00	Clark, Miss Anna B.	5 00
Carr, Mrs. S. C.	6 00	Chapin, Mrs. Rufus.	5 00	Clark, Miss A. M....	5 00
Carson, Robert D....	5 00	Chapman, B. G.	5 00	Clark, Mrs. C. D....	5 00
Carstens, Dr. J. H....	5 00	Chapman, Mrs. E....	5 00	Clark, Mrs. C. E....	5 00
Carter, Mrs. E. A....	5 00	Chapman, Dr. F. M.	5 00	Clark, Mrs. C. H....	5 00
Carter, F. H.	5 00	Chapman, H. H....	5 00	Clark, Dr. C. F....	1 00
Carter, Howard W....	1 50	Chapman, John D....	5 00	Clark, Mrs. D. R....	5 00
Carter, John E....	5 00	Chapman, Mrs. J. J.	10 00	Clark, E. F., Jr....	5 00
Carter, Mrs. J. W....	5 00	Chapman, Silas, Jr..	2 00	Clark, Miss E. M....	5 00
Carter, Mr. and Mrs.		Chapman, Mrs. S. H.	5 00	Clark, Edward H....	5 00
Richard B.	10 00	Chappell Mrs. D....	5 00	Clark, Mrs. E. H....	5 00
Carter, S. T., Jr....	5 00	Chappell, Wm. S....	5 00	Clark, Miss E. B....	5 00
Carter, S. T., Sr....	5 00	Chase, Mrs. F. M....	5 00	Clark, Miss E. M....	10 00
Carver, Mrs. Charles	5 00	Chase, Frederick S..	10 00	Clark, F. M. L....	5 00
Cary, Fred A.	5 00	Chase, Mrs. H. E....	5 00	Clark, Miss E. V....	5 00
Case, Mrs. Frank C.	4 00	Chase, Irving H....	5 00	Clark, P. Anderson	5 00
Case, Mrs. G. B....	10 00	Chase, Mrs. M. C. B.	5 00	Clark, George H....	10 00
"L. L. C."	10 00	Chase, Sidney	5 00	Clark, Mrs. G. M....	2 00
Case, Miss M. R....	10 00	Chase, Mrs. T....	5 00	Clark, Geneva L....	5 00
Casebolt, E. T....	1 00	Chatard, Miss E. A..	10 00	Clark, Henry A....	5 00
Casement, Mrs. F. M.	5 00	Chautauqua Bird and		Clark, Howard L....	5 00
Cassey, Edward P....	5 00	Tree Club	5 00	Clark, Dr. John D.	5 00
Caskey, Paul D....	5 00	Cheesman, M. R....	1 00	Clark, Mrs. J. D....	10 00
Casey, R. C.	2 00	Cheever, James G....	5 00	Clark, Mrs. L. E....	5 00
Castle, Dr. F. E....	2 00	Cheney, Mrs. A....	5 00	Clark, Miss L. F....	5 00
Castleman, Mrs. G.		Cheney, Frank, Jr..	5 00	Clark, Miss L. H....	1 00
A	5 00	Cheney, Mr. and		Clark, Mrs. N....	1 00
Catlin, Miss L. E....	5 00	Mrs. George L....	5 00	Clark, Walter L....	5 00
Caulkins, B. B....	5 00	Cheney, Mrs. Howell	1 00	Clarke, Mrs. F. M....	5 00
Cayuga Bird Club		Cheney, Louis R....	5 00	Clarke, Miss H. E....	5 00
(The)	5 00	Cheney, Miss Mary	5 00	Clarke, Miss L. F....	10 00
Cazzam, Olivia	1 00	Cheney, Mrs. M. R..	5 00	Clarke, Mrs. P. O....	5 00
Ceballos, Lieut., J.		Child, Mrs. A. D....	1 00	Clarke, Mrs. T. B.	
M.	5 00	Child, Rev. D. R....	1 00	Jr.	5 00
Cerf, Mrs. L. A....	5 00	Child, John H....	5 00	Clarke, Thomas S..	5 00
Chace, Fenner A....	1 00	Childs, Mrs. C. H....	5 00	Clarke, Dr. Wm. C.	5 00
Chadbourne, Mrs. T.		Childs, Mrs. H. B....	5 00	Clarke, Mr. and Mrs.	
L.	10 00	Childs, S. W....	5 00	W. H.	10 00
Chadwick, E. D....	5 00	Childs, William, Jr.	5 00	Clarkson, David A.	5 00
Chafee, Mrs. Z....	5 00	Chiles, R. A.	5 00	Clary, Miss E. F....	5 00
Chalfant, Miss I. C..	5 00	Chilton, H. P....	10 00	Clauder, Rudolph	5 00
Chamberlain, C. W.	5 00	Choate, Miss C....	5 00	Clayburgh, Albert	5 00
Chamberlain, E. F....	5 00	Choate, Miss Mabel.	5 00	Cleaver, Mrs. A. N.	5 00
Chamberlain, H. P..	5 00	Choate School (The)	1 00	Clements, Mrs. G. H.	5 00
Chamberlain, Mrs.		Chouteau, Pierre, Jr.	5 00	Clerk, Mrs. A. G....	5 00
Joseph P.	5 00	Christian, Arthur... 1 50		Cleveland Bird	
Chamberlain, Miss		Christian, Miss E....	5 00	Lovers' Associa-	
Mary L.	5 00	Christian, Mrs. M. H.	1 50	tion	5 00
Chamberlaine, Mrs.		Christian, Susan....	11 00	Cleveland, Mrs. C.	5 00
C. F.	5 00	Christie, Mrs. R. E..	5 00	Clifford, Mrs. F. H.	5 00
Chamberlin, Miss A.		Christ Memorial		Clift, Mrs. C. E....	5 00
M.	25 00	Church School....	1 00	Cinch, Judge E. S.	5 00
Chamberlin, Mrs. E.		Church, C. T.	10 00	Cisco, J. W., Jr....	5 00
F. P.	5 00	Church, E. D....	10 00	Cliss, Fred H....	5 00
Chamberlin, G. N....	5 00	Church, F. S....	5 00	Clisson, E. W....	5 00
Chambers, F. R....	5 00	Church, Mrs. G....	5 00	Clisson, H. B....	25 00
Chandler, Alexander.	5 00	Church, Morton L....	5 00	Cloves, F. J....	5 00

List of Members

537

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Clyde, Mrs. G. W.	\$3 00	Coney, Mrs. G. H.	\$5 00	Cowperthwait, J. H.	\$5 00
Cobb, Miss A. W.	5 00	Coney, Miss K. E.	5 00	Cox, Douglas F.	5 00
Cobb, Edward H.	1 00	Congdon, Mrs. H. L.	2 50	Cox, John L.	5 00
Cobb, Mrs. J. S.	5 00	Conklin, Mrs. W. B.	1 00	Coxe, Mrs. Brinton	10 00
Coburn, Dr. L. F.	5 00	Conley, Louis D.	5 00	Coze, Mrs. C. B.	5 00
Cochran, G. D.	5 00	Connecticut Audubon		Coykendall, Mrs. E.	5 00
Cochran, Mrs. I. W.	1 00	Society	5 00	Coyle, Miss C. L.	10 00
Cochran, Alexander	5 00	Connell, Herbert S.	5 00	Coyle, Mrs. J. E.	5 00
Cochran, W. S.	5 00	Constable, Mrs. F. A.	5 00	Coyle, Mrs. W. R.	5 00
Cock, Charles A.	5 00	Converse, Miss M. E.	25 00	Crabb, Robert	5 00
Cockroft, Miss M. T.	5 00	Cook, Mrs. A. E.	2 00	Crabbe, Miss L. R.	5 00
Cockerill, Charles G.	5 00	Cook, Mrs. C. T.	5 00	Crabbe, Miss M. G.	5 00
Cochran Grove		Cook, Frederic W.	5 00	Crafts, John W.	5 00
Audubon Society	5 00	Cook, Mrs. H. N.	5 00	Cragin, Miss C. I.	5 00
Codman, Miss C. A.	5 00	Cook, Mrs. Joa.	2 00	Cramer, Mrs. A.	5 00
Coe, Mrs. Kate F.	2 00	Cook, Mildred E.	1 00	Cramer, Mrs. Joseph	1 00
Coffel, Hal H.	5 00	Cook, Paul	5 00	Crane, Mrs. A. A.	5 00
Collins, I. S.	5 00	Cook, Mrs. R. H.	5 00	Crane, Miss C. L.	20 00
Collins, Peter A.	5 00	Cooke, Mrs. H. P.	5 00	Crane, Mrs. C. R.	5 00
Collins, Miss M. E.	10 00	Cooley, Charles P.	5 00	Crane, Mrs. Ellen J.	5 00
Collins, Mrs. J. M.	5 00	Cooley, Miss E. S.	5 00	Crane, Mrs. H. W.	2 00
Collins, Major J. L.	5 00	Coolidge, Elizabeth		Crane, Mrs. J. H.	10 00
Collins, Mrs. N. E.	10 00	and Lawrence	2 00	Crane, R. T., Jr.	5 00
Collis, Mrs. F. B.	5 00	Coolidge, Francis L.	5 00	Crans, Miss L. C.	5 00
Collis, Mrs. Abolina A.		Coolidge, J. R.	10 00	Cranshaw, Mr. and	
(In Memoriam)	10 00	Coolidge, Mrs. L. A.	5 00	Mrs. J. T.	5 00
Collis, Mrs. Ansel O.	5 00	Coolidge, Miss O. P.	5 00	Cranston, Miss L.	5 00
Collis, Mrs. C. J.	5 00	Coonley, Mrs. P.	5 00	Craven, Frank	5 00
Collis, Mrs. R. C.	5 00	Cooper, Howard M.	5 00	Crawford, G. E.	5 00
Collis, Miss J. W.	5 00	Cooper Mrs. J. C.	5 00	Crawford, R. L.	10 00
Collgate, Mrs. A. W.	10 00	Cooper, Rev. J. F.	3 00	Crawford, William	5 00
Collgate, Hope H.	5 00	Coors, A.	10 00	Crawford, W. H.	5 00
Collgate, R. R.	10 00	Cope, Miss E.	5 00	Creevey, Mrs. J. K.	5 00
Collins, Mrs. Milton	1 00	Cope, F. R., Jr.	5 00	Crehore, Miss E. T.	5 00
Collins, Miss Clara	5 00	Cope, Mrs. Walter	5 00	Crehore, Frederic M.	5 00
Collins, Barron G.	5 00	Cope, Mrs. W. B.	5 00	Crehore, Miss Sybil	5 00
Collins, Robert J.	5 00	Copeland, Mrs. C.	5 00	Creighton, Miss E. S.	5 00
Collins, E. S.	5 00	Corbin, Richard B.	5 00	Crenshaw, Mrs. W.	
Collins, Homer	1 00	Corbin, Mrs. W. H.	1 00	G., Jr.	5 00
Collins, Mrs. L. D.	5 00	Cordes, William	5 00	Cristadoro, Alex.	5 00
Collins, Miss M. C.	5 00	Core, John D.	5 00	Crittenden, Miss V.	
Collins, Mrs. L. A.	1 00	Coriethers, Mrs. M.	5 00	E.	2 00
Collins, George F.	5 00	Corlies, Miss M. L.	5 00	Crocker, David	5 00
Colorado Audubon		Corlies, Mrs. S. F.	5 00	Crocker, Mrs. D.	10 00
Society	10 00	Corlias, Miss M. L.	5 00	Crocker, G. A., Jr.	5 00
Colorado Museum of		Cornell, H. P.	5 00	Crocker, Mr. and Mrs.	
Natural History	10 00	Cornell, Mrs. H. P.	5 00	Kendall F.	5 00
Collins, Miss C. W.	5 00	Cornet, Henry S.	5 00	Crocker, W.	10 00
Collins, Mrs. Subin		Cornett, Gardner	5 00	Crocker, Wm. H.	10 00
W., Jr.	5 00	Corning, Miss E. A.	5 00	Crocker, Rev. W. T.	5 00
Columbia Bird Club	5 00	Corning, John H.	5 00	Crockett, Mrs. J. B.	5 00
Combs, Miss Annie	5 00	Corning, Miss M. I.	50 00	Cromie, Mrs. G. H.	5 00
Combs, Robert R.	5 00	Cornwall, G. H.	2 00	Crompton, Miss C. E.	4 00
Comstock, Miss F.	5 00	Cornwall, H. C.	5 00	Crompton, Miss M.	2 00
Comstock, Miss E. C.	5 00	Cory, Daniel W.	5 00	Crosby, G. S.	5 00
Comstock, J. F.	5 00	Cotting, Charles E.	5 00	Crosby, John C.	5 00
Comstock, Mrs. R. B.	5 00	Cottingham, Mrs. W.		Crosby, Mrs. S. V. R.	5 00
Comstock, W. J.	5 00	H.	5 00	Crosby, William S.	5 00
Conant, Miss C. H.	5 00	Coulby, Mrs. Harry	5 00	Cross, Mrs. H. P.	5 00
Conant, Ernest L.	5 00	Cousens, John A.	5 00	Crossett, Mrs. L. A.	5 00
Concord School	5 00	Cover, Harvey S.	5 00	Crouse, George, Jr.	5 00
Conrad, Mrs. T. D.	5 00	Cowdin, Winthrop	5 00	Crouse, J. Robert	5 00
		Cowles, W. H.	5 00	Crow, Prof. J. W.	5 00

ANNUAL MEMBERS AND CONTRIBUTORS continued

Crossell, Mrs. G. F.	\$1.00	Danville Bird Club.	\$5.00	Delamar, Miss Alice	\$1.00
Crossenfield, Mrs.		Danziger, J. M.	1.00	Delano, Mrs. F. A.	1.00
Francis B.	1.00	Danziger, Max	1.00	Delano, Leman	5.00
Craft, George T.	1.00	Darlington, Mrs. C. F.	1.00	Del Duca, Giovanni	5.00
Cruikshank, Warren	1.00	Darlington, Mrs. H. S.	1.00	Dellenbaugh, Mrs. F.	
Crump, B. F.	1.00	Darlington, Miss M.		S. Jr.	10.00
Crump, Dr. Walter		O'Hara	5.00	DeLoach, Prof. R.	
Gray, Jr.	1.00	Daunt, J. H.	1.00	J. H.	1.00
Culbertson, Dr. E. B.	1.00	Davenport, Mrs. E.		Delta Duck Club	1.00
Cullman, Miss Z.	1.00	B.	1.00	DeMilt, Miss A. R.	1.00
Cumberland County		Davenport, Fred	1.00	Deming, I. C.	1.00
Audubon Society.	5.00	Davidge, William H.	5.00	Dempsey James H.	1.00
Cummings, Mrs. C.		Davidson, Mrs. G.		Dengre, William P.	1.00
A., Jr.	1.00	G., Jr.	5.00	Dennen, Rev. E. J.	1.00
Cummins, Miss Anne		Davis, Mrs. H. J.	6.50	Dennie, Mrs. M. H.	1.00
M.	1.00	Davis, Mrs. J. C.	5.00	Dennis, Mrs. C. C. R.	1.00
Cunha, Miss E. L.	1.00	Davis, Miss Alice	5.00	Dennis, Dr. L.	1.00
Curtis, Charles	1.00	Davis, Mrs. A. P.	1.50	Donnagan, Henry S.	1.00
Currier, B. H.	1.00	Davis, Mrs. A. R.	5.00	Donny, Miss F. I.	1.00
Curry, Mrs. J. B.	1.00	Davis, C. H.	5.00	Doutson, Rev. H. M.	
Curtis, Mrs. C. B.	15.00	Davis, E. R.	5.00	D. D.	1.00
Curtis, Frederick B.	1.00	Davis, George	2.00	DePree, Dr. S. B.	1.00
Curtis, Mrs. F. S.	1.00	Davis, George P.	5.00	Derby, Mrs. G. S.	1.00
Curtis, Miss J. B.	10.00	Davis, Mrs. H. G.	5.00	Derr, Max K.	1.00
Curtis, Mrs. M. M.	1.00	Davis, Henry J.	5.00	deSchmiedt, R. M.	1.00
Curtis, Mrs. Warren	1.00	Davis, Mrs. Jeffrey	5.00	deSola, Mrs. J. C.	1.00
Curtis, William E.	1.00	Davis, Mrs. J. C.	5.00	Despard, C. L.	10.00
Curtis, A. S.	1.00	Davis, Mrs. J. E.	5.00	Despard, W. D.	1.00
Curtiss, Louis L.	1.00	Davis, J. Stuart	1.00	Detroit Audubon	
Curtiss, Miss Sophia	1.00	Davis, William T.	5.00	Society	1.00
Cushing, Mrs. E. F.	5.00	Davis, Winfield S.	5.00	Detroit Bird Protec-	
Cushing, F. W.	5.00	Davison, Miss A. M.	5.00	ing Club	1.00
Cushing, J. C.	1.00	Davison, Miss E. T.	5.00	Detroit Zoological	
Cushing, Miss M. W.	1.00	Davison, Mrs. S. T.	5.00	Society	5.00
Cushing, Milton L.	1.00	Davol, Charles J.	5.00	Dettmer, J. G.	5.00
Cushman, Miss A.	5.00	Davol, Mrs. Joseph	5.00	Deerborn, R. J.	1.00
Cushman, Mrs. H. I.	5.00	Dawes, Miss E. B.	25.00	Devlin, Mrs. J. F.	1.00
Cutler, Mr. and Mrs.		Dawes, Miss E. M.	10.00	DeVos, Miss M. R.	1.00
Dwight	5.00	Day, Mrs. A. M.	2.00	Dewey, Dr. C. A.	10.00
Cutler, Edward H.	1.00	Day, Miss Carrie E.	5.00	Dewey, Mrs. G. I.	1.00
Cutler, Elbridge G.	1.00	Day, Mrs. G. H., Sr.	5.00	DeWalt, Halcy	1.00
Cutler, Mrs. R. W.	1.00	Day, Joseph P.	5.00	DeWalt, Mrs. H.	1.00
Cutler, Miss S. B.	1.00	Day, Miss K. S.	5.00	Dexter, Mrs. W. D.	1.00
Cutler, Mrs. T. D.	1.00	Day, Miss Mary E.	2.00	Dibble, Mrs. R. W.	1.00
Cutter, Dr. G. W.	1.00	Day, Miss Sarah J.	5.00	Dick, Miss E. M.	1.00
Cutter, Ralph L.	1.00	Day, Stephen S.	5.00	Dick, Master S.	1.00
Cutting, A. Wayland	1.00	Daykin, E. B.	5.00	Dickey, Donald R.	1.00
Cutting, Robert F.	1.00	Dean, Mrs. W. J.	5.00	Dickson, Mrs. C. P.	1.00
Cuyler, Mrs. T. DeW.	1.00	de Barry, A.	10.00	Dickson, F. R.	1.00
Daft, A. C.	10.00	Decker, Mrs. F. A.	3.00	Dickson, William C.	1.00
Dake, Mrs. Wm. W.	1.00	Decker, Robert G.	5.00	Dietz, Mrs. C. N.	1.00
Dalton, Mrs. Wm.	1.00	de Coppet, Mrs. E. J.	5.00	Dill, Mrs. James B.	5.00
Dana, Miss Ada	1.00	DeForest, Charles S.	5.00	Dillingham, Mrs. I.	
Dana, Miss E. A.	1.00	De Forest, H. W.	5.00	M.	5.00
Dana, E. S.	1.00	De Forest, Lee	15.00	Diman, Miss Louise	1.00
Dana, Mrs. H. W.	1.00	Degner, J. F.	10.00	Dimock, George E.	1.00
Dana, Miss M. T.	1.00	DeGraf, James W.	5.00	Dimock, S. K.	1.00
Dana, R. H.	1.00	deGroot, Miss E. P.,		Dinart, Mrs. J. S.	1.00
Dana, S. F.	1.00	Jr.	5.00	Dixon, Mrs. C. H.	1.00
Dane, Mrs. F. S.	1.00	De Hart, Miss K. S.	1.00	Dittmann, Mrs. G.	
Danforth, Mrs. G. H.	1.00	Deibel, Fred	5.00	W.	1.00
Danforth, Mrs. H. G.	1.00	deKoven, Mrs. John	5.00	Dixey, Mrs. R. C.	1.00
Danner, Mrs. M. S.	1.00	DeLafield, Mrs. J. R.	1.00	Dobbins, Miss L. E.	1.00

List of Members

539

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Dalton, Richard L.	\$5 00	Dunn, Mrs. G. B.	\$5 00	Emerson, Mrs. E. W.	\$5 00
Dalton, D. Stuart	10 00	Dunn, John W. G.	5 00	Emerson, Julia T.	5 00
Dalton, Francis P.	5 00	Dunshoe, Mrs. W. H.	5 00	Emerson, Lowell P.	5 00
Dalton, Mrs. J. M.	5 00	DuPont, Eugene	5 00	Emerson, Sarah H.	1 00
Dalton, Louis L.	5 00	DuPont, Mrs. P. S.	10 00	Emery, Miss A.	5 00
Dalton, Emma	5 00	duPont, Mrs. T. C.	25 00	Emery, A. H.	10 00
Dalton, F. C.	5 00	DuPont, Mrs. V., Sr.	5 00	Emery, Frederick L.	10 00
Dalton, K. Mrs. M.		duPont, Miss W. H.	5 00	Emery, Miss G. H.	5 00
W.	5 00	Durand, Mrs. W.	1 00	Emery, Miss G.	10 00
Darold, Mrs. F. C.	1 00	Duryee, Miss A. B.	5 00	Emery, Miss L. J.	10 00
Daromas, Mrs. E. P.	25 00	Dutcher, Abram S.	5 00	Emmerich, Miss M.	5 00
Daromas, Mrs. F. W.	5 00	Dutton, Harry	5 00	Emmet, Mrs. L. F.	5 00
Dart, John V. N.	5 00	Du Villard, H. A.	5 00	Emmet, W. L. R.	5 00
Darwin, Lt. S. M.	5 00	Dwight, John E.	5 00	Emmons, Arthur B.	50 00
Darwin, F. N.	125 00	Dwight, Dr. J.	5 00	Emmons, Mrs. A. B.	10 00
Darwin, Mrs. W. H.	5 00	Dyer, Mrs. G. R.	5 00	Engan, Mrs. B.	5 00
Darwin, Miss F.	5 00	Dyer, Mrs. Ruth C.	5 00	Englewood Bird Club	
Darwin, Mrs. James	15 00	Eager, Mrs. Olive G.	5 00	(The)	5 00
Darwin, Mrs. W. L.	5 00	Earle, Henry M.	5 00	Ennis, General Wm.	
Darwin, Mrs. C.	10 00	Earle, Osborne	10 00	U. S. A.	1 00
Darwin, R. D.	5 00	Earle, Samuel L.	5 00	Enos, Louisa I.	5 00
Dart, Miss C. B.	1 00	Eastman, Miss S. C.	3 00	Erbacher, Mrs. F. H.	1 00
Dart, Homan	5 00	East Tennessee		Erslob, Rudolph	5 00
Dart, Tracy	5 00	Audubon Society	5 00	Erickson, Mrs. A. W.	10 00
Dart, Mrs. Tracy	5 00	Eaton, Mrs. D. C.	50 00	Erlanger, Abraham	5 00
Dartmouth Nature		Eaton, Howard	5 00	Ernst, Mrs. H. C.	5 00
Club	5 00	Eaton, Mary S.	10 00	Ernst, Richard P.	5 00
Dart, Isabel A.	10 00	Ebeling, Willi H.	5 00	Erving, W. A.	5 00
Dart, C. A.	5 00	Eckstein, Mary E.	1 00	Erving, Wm. V. R.	5 00
Dart, George A.	5 00	Eddy, Mrs. F. W.	5 00	Eshbaugh, Mrs. M.	
Dart, William S.	5 00	Eddy, William H.	5 00	F.	5 00
Dart, J. Colman	5 00	Edgar, William C.	5 00	Eshbaugh, T. K.	5 00
Dart, Theodore	5 00	Edmonds, Mrs. F.	3 00	Eshner, Mrs. A. A.	1 00
Dart, Wm. M.	5 00	Edmonds, Mrs. W.		Essick, William S.	2 00
Dart, Mrs. H. W.	1 00	D.	5 00	Estes, Webster C.	5 00
Dart, John	5 00	Edson, W. L. G.	5 00	Ettorre, Mrs. F. F.	2 00
Dart, Charles	1 00	Edwards, Mrs. A. D.	10 00	Eurich, Mrs. E. F.	5 00
Dart, W. B.	5 00	Edwards, Miss I. S.	10 00	Eustis, Frederick A.	5 00
Dart, Miss H.	5 00	Edwards, Miss H. C.	5 00	Eustis, Mrs. George	5 00
Dart, Miss E. M.	5 00	Edwards, Henry A.	17 00	Eustis, Mrs. M. H.	5 00
Dart, Miss L. M.	5 00	Edwards, Miss L. J.	5 00	Eustis, The Misses	5 00
Dart, Bird Club		Edwards, L. S.	1 00	Evans, Dr. Edward	5 00
(The)	5 00	Edwards, Mrs. L. S.	1 00	Evans, Frank C.	5 00
Dart, Mrs. G.	5 00	Eells, Mrs. M. S.	5 00	Evans, Mrs. I. N.	5 00
Dart, Dr. M. B.	10 00	Ehrich, Robert	3 00	Evans, Miss Mildred	2 00
Dart, W. L.	5 00	Ehrich, Mrs. W. J.	5 00	Evans, Wilmot P.	10 00
Dart, F. T.	5 00	Elmer, Miss Meta	5 00	Everett, J. E.	5 00
Dart, Miss Stella	5 00	Eimer, Mrs. M. L.	10 00	Evers, Rev. S. J.	5 00
Dart, G. E. Jr.	5 00	Einig, Miss Kate	5 00	Ewart, Richard H.	5 00
Dart, Miss L. F.	5 00	Eldredge, C. J.	1 00	Ewen, Miss Eliza M.	5 00
Dart, Miss T.	5 00	Elgin Audubon		Ewing, Mrs. Charles	1 00
Dart, Mrs. W. B.	1 00	Society	5 00	Fabricius, Dr. J. R.	1 00
Dart, Miss S. G.	10 00	Elliot, Charles W.	5 00	Fackler, David P.	1 00
Dart, F. C.	5 00	Elliot, Mrs. C. W.	5 00	Fahnestock, William	1 00
Dart, Mrs. J. B.	5 00	Elliot, Mrs. Ellsworth	5 00	Faby, Mrs. John	1 00
Dart, Miss L. H.	5 00	Elliot, George B.	3 00	Fairbanks, Miss C. T.	1 00
Dart, Oliver E.	5 00	Elliot, G. F.	5 00	Fairbanks, Mrs. N. B.	1 00
Dart, A. Butler	5 00	Ellis, Mrs. L. E.	5 00	Fairchild, B. T.	1 00
Dart, Arthur I.	5 00	Ellsworth, J. M.	5 00	Fairchild, Mrs. C. S.	1 00
Dart, Mrs. C.	5 00	Ellsworth, Mrs. E. W.	1 00	Fairchild, Fred E.	10 00
Dart, Edward K.	5 00	Ely, Miss Anna W.	5 00	Falk, Alexander D.	1 00
Dart, Horace C.	5 00	Emanuel, J. H., Jr.	5 00	Falk, H. A.	1 00
Dart, D. A.	5 00	Embury, Miss E. C.	5 00	Farley, Arthur C.	1 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Farmington, Henry	\$5 00	Fisk, Arthur L.	\$5 00	Foster, Mrs. C. O.	\$4 00
Farnham, Wallace S.	5 00	Fisk, Mrs. E. G.	5 00	Foster, Miss E. P.	5 00
Farnsworth, Mrs. C. I.	5 00	Fisk, Mrs. H. G.	5 00	Foster, Miss Fanny	5 00
Farnum, Henry W.	5 00	Fiske, E. W.	10 00	Foster, Frank B.	25 00
Farnum, Mrs. H. W.	5 00	Fitch, Miss D. C.	5 00	Foster, Miss J. R.	5 00
Farquhar, Arthur	5 00	Fitchburg Outdoor Club	5 00	Foster, Miss M. C.	5 00
Farrar, Miss E. W.	5 00	Fitz, Mrs. W. Scott	20 00	Foster, M. G.	5 00
Farrar, Miss Estelle	5 00	Fitzgerald, M. C.	5 00	Foster, Miss S. C.	5 00
Farrel, Mrs. F., Jr.	5 00	Fitzhugh, John D.	5 00	Foster, William B.	5 00
Farrel, Miss L. E.	25 00	Fitzpatrick, T. B.	5 00	Fowler, Seth A.	5 00
Farrell, Mrs. C. P.	5 00	Flagg, Miss E. L.	5 00	Fowler, Mrs. E. M.	5 00
Farrell, James C.	5 00	Flagg, Dr. Elisha	5 00	Fowler, George F.	5 20
Farrington, L. W.	5 00	Flagg, Miss H. V.	5 00	Fowler, Mrs. M. K.	5 00
Farrish Dr. R. C.	5 00	Flagg, Mrs. S. G., Jr.	5 00	Fowler, Ralph N.	5 00
Fassett, J. S.	5 00	Flack, Henry S.	5 00	Fowler, Robert A.	5 00
Fassitt, Miss M.	10 00	Fleet, Mrs. J. M. L.	10 00	Fowler, Mrs. R. L.	
Fassitt, Dr. T.	5 00	Fleischer, Edward	5 00	Jr.	5 00
Faulmer, Miss F. M.	10 00	Fleischmann, Mrs. C.	6 00	Fowler, Mrs. T. P.	10 00
Fauntleroy, Miss J.	5 00	Fleisher, Edward	5 00	Fox, Mrs. A. J.	5 00
Faxon, Henry M.	5 00	Fleitmann, H. C.	5 00	Fox, Miss Hannah	10 00
Fay, Frank S.	5 00	Fletcher, Miss A. C.	5 00	Fox, Dr. Henry	5 00
Fay, Mrs. H. H.	5 00	Fletcher, Mrs. J. L.	10 00	Fox, Mrs. H. W.	5 00
F——, Ormond	200 00	Fletcher, Mrs. T. G.	5 00	Fox, Mrs. M. J.	10 00
Fay, S. Prescott	10 00	Flinn, Mrs. Ralph E.	5 00	Fox, William	5 00
Fearhake, Mrs. E. R.	5 00	Flinn, William	5 00	Francis, Henry S.	5 00
Fearing, Daniel B.	5 00	Flint, Mrs. Austin	5 00	Frank Brothers	5 00
Fearing, Mrs. M. P.	5 00	Flint, Charles R.	5 00	Frank, Mrs. F. J.	10 00
Fearon, Mrs. Charles	5 00	Florida Audubon Society	5 00	Frankenheim, Samuel	5 00
Fell, Emma T.	5 00	Flood, Mrs. E. D.	2 00	Franklin, Miss L. I. P.	5 00
Fendall, Mrs. R.	5 00	Floyd, Mrs. W. T.	5 00	Franklin Marsh Wren Club	5 00
Fenenden, R. G.	5 00	Floyd-Jones, E. H.	5 00	Francis, R. A.	5 00
Fentress, Mrs. C.	5 00	Fluhrer, Dr. Wm. F.	5 00	Francis, Aug.	5 00
Ferguson, A. L., Jr.	5 00	Fobes, William H.	5 00	Francis, Mrs. Herman	5 00
Ferguson, Miss E. D.	5 00	Follett, Richard E.	5 00	Fraser, Miss J. K.	5 00
Ferguson, Forrest	5 00	Folsom, Elizabeth K.	5 00	Fraser, Miss M.	5 00
Ferguson, Mrs. H.	5 00	Folsom, Mrs. G. W.	5 00	Fray, John S.	5 00
Ferguson, Mrs. M. Van I.	5 00	Foot, Dr. N. C.	5 00	Freedman, Edgar A.	5 00
Ferguson, Mrs. W.	10 00	Foot, Sandford D.	5 00	Freedman, Miss H. E.	10 00
Ferris, E. S.	5 00	Foot, Mrs. E. B.	5 00	Freedman, W. W.	5 00
Ferris, Miss I. J.	5 00	Foot, George L.	5 00	Froer, A. F.	10 00
Fessenden, Judge F. G.	5 00	Forbes, Mrs. A.	5 00	French, Allen	5 00
Festman, L. P.	5 00	Forbes, Edward W.	5 00	French, Miss C. A.	5 00
Fiebing, J. H.	5 00	Forbes, Ellen	10 00	French, Daniel C.	5 00
Field, Charles H.	5 00	Forbes, Mrs. J. M.	5 00	Frerays, Mrs. G.	5 00
Field, Miss Elizabeth	5 00	Forbes, Mrs. M. J.	10 00	Fresh, A.	5 00
Field, E. B.	5 00	Forbes, Mrs. P. R.	5 00	Freund, John C.	5 00
Field, Mrs. W. B. O.	10 00	Forbes, Ralph E.	5 00	Frey, Miss C. D.	5 00
Finck, Abbie H. C.	5 00	Ford, A. E.	15 00	Friend, T. W.	5 00
Finegan, Mrs. T. E.	5 00	Ford, Edw. R.	5 00	Frissell, A. S.	5 00
Finley, William L.	5 00	Ford, Mrs. John B.	10 00	Frost, Edward I.	5 00
Finney, Mrs. E. S.	8 00	Fordyce, George L.	5 00	Frothingham, E. V.	5 00
Firth, Mrs. John	2 00	Fordyce, Mrs. J. A.	5 00	Frothingham, Mrs. J. S.	5 00
Fischer, Dr. Wm. J.	6 50	Foreman, Miss Grace	5 00	Frothingham, Dr. L.	5 00
Fish, Albert R.	5 00	Forest Hills Gardens Audubon Society	5 00	Frothingham, Mrs. L.	5 00
Fisher, Miss E. W.	5 00	Forsyth, Mrs. H.	5 00	Frothingham, Mrs. R.	5 00
Fisher, Frederic A.	2 00	Fortnightly Club (The)	2 00	Fry, Mrs. Henry	5 00
Fisher, G. Clyde	5 00	Fosburgh, James W.	5 00	Fry, H. M.	5 00
Fisher, Mrs. I. T.	5 00	Fosby, Dr. P. M.	5 00	Fuessenich, F. F.	5 00
Fisher, Miss Maud	5 00	Foster, Miss Alice	5 00	Fuguet, Stephen	10 00
Fisher, R. T.	10 00			Fuller, Mrs. A. G.	5 00

List of Members

541

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Faller, Mrs. A. O.	\$4.00	George, Edwin S.	\$5.00	Goodell, Mrs. J. F.	\$5.00
Faller, B. A. G.	10.00	George, Mrs. W. W.	5.00	Goodenough, F. W.	5.00
Faller, Mrs. Eugene	10.00	Gerdtzen, G. A.	5.00	Goodfellow, Mrs. A. R.	5.00
Faller, Mrs. G. A.	1.00	Gere, Mrs. K. G.	5.00	Goodman, Mrs. F. A.	1.00
Faller, Mrs. G. F.	5.00	Gerry, Mrs. M. J. H.	1.00	Goodin, S. Horace	25.00
Faller, Harriet A.	5.00	Gest, Mrs. Wm. P.	5.00	Goodman, J. C.	5.00
Faller, Mrs. H. A.	5.00	Gherardi, B.	5.00	Goodrich, Miss M. L.	5.00
Faller, W. E.	2.00	Ghouque, Florian	1.00	Goodrich, Mrs. N. L.	2.00
Fallon, Mrs. W. S.	5.00	Gibbs, George	5.00	Goodspeed, Mrs. W. F.	5.00
Fane, Mrs. C. W.	5.00	Gibbs, H. E. A.	5.00	Goodwillie, Mrs. M. B.	5.00
Fargues, Prof. C. E.	5.00	Gibbs, Mrs. R. M.	5.00	Goodwin, Miss	5.00
Gay, Z. F.	10.00	Gibson, Mrs. J. H.	10.00	Goodwin, Dr. A. H.	10.00
Gage, Mrs. Mabel C.	6.00	Gifford, Miss M. N.	1.00	Goodwin, Mrs. H. M.	5.00
Gage, Mrs. S. E.	5.00	Gifford, Paul C.	5.00	Goodwin, James L.	5.00
Gailhard, Mrs. W. D.	10.00	Gilbert, Miss A. H.	10.00	Goodwin, Miss M. S.	5.00
Gale, C. C.	5.00	Gilbert, Mrs. C.	1.00	Goodyear, Mrs. C. W.	10.00
Gale, Charles H.	5.00	Gilbert, Mrs. L. D.	5.00	Goodyear, Dr. H. C.	5.00
Gale, Philip B.	5.00	Gilbert, William A.	5.00	Gordon, J. R.	5.00
Gale, Mrs. T. K.	5.00	Gilberston, J. S.	5.00	Gore, John K.	5.00
Galle, Miss Louise	5.00	Gilchrist, Miss A. T.	10.00	Goss, Mrs. C. P., Jr.	2.00
Galligly, E. E.	5.00	Gilchhaus, H. W.	5.00	Goss, Elise F.	5.00
Gallman, Mrs. A. F.	5.00	Gilholm, Elgin	5.00	Gotthel, Mrs. Paul	5.00
Galt, H. L.	5.00	Gillett, Dr. H. W.	2.00	Gotthold, Arthur F.	5.00
Gambale, James N.	5.00	Gillett, Lucy D.	10.00	Goucher, John F.	5.00
Gambino, Mrs. R. I.	15.00	Gillette, Mrs. C.	5.00	Gould, Charles A.	5.00
Gambler, Miss L. J.	5.00	Gillmore, Frank	5.00	Grafflin, Mrs. W. H.	5.00
Gambler Club of Evanson	5.00	Gillmore, Mrs. James	5.00	Graham, Charles I.	2.00
Gardner, C. C., Jr.	5.00	Gilman, Miss C. T.	5.00	Graham, Charles J.	10.00
Gardner, Miss S. D.	10.00	Gilman, Miss C.	5.00	Graham, Mrs. E. J.	5.00
Gardner, Mrs. A. P.	5.00	Gilmore, Clinton G.	5.00	Graham, Mary D.	5.00
Gardner, Dr. C. H.	5.00	Gilmore, Mrs. A. F.	5.00	Grammer, W. A.	5.00
Gardner, Mrs. F. P.	2.00	Gilpin, F.	5.00	Grammar, Mrs. M. W. P.	2.00
Gardner, Mrs. G. W.	5.00	Gilpin, Mrs. J. C.	5.00	Grandin, Mrs. G. W.	5.00
Gardner, P. H.	5.00	Gin, Frank H.	5.00	Grandin, Mrs. J. L., Jr.	5.00
Gardner, Mrs. T. V.	2.00	Gladding, John R.	15.00	Grant, Claudius B.	2.00
Gardis, Miss E. W.	5.00	Gladwin, Harold S.	5.00	Grant, Mrs. M. K.	5.00
Garrett, Mrs. F. W.	4.00	Glaizer, Mrs. W. S.	5.00	Grasselli, Miss J.	5.00
Garrett, Miss H. S.	5.00	Glenn, John M.	5.00	Gratwick, W. H.	5.00
Garrett, Mrs. P. C.	6.00	Glens Falls Local Bird Club	5.00	Gravenhorst, F. W.	1.00
Garrett, Robert	5.00	Glenville Normal Bird Club	5.00	Graves, Mrs. E. A.	1.00
Garrett, Mrs. J. H.	5.00	Glessner, Mrs. J. J.	5.00	Graves, Mrs. H. S.	1.00
Garrett, Mrs. F. P.	5.00	Gibbin, Mrs. F. A.	5.00	Gray, Charles H.	5.00
Garrison, Mrs. W. F.	5.00	Gibbin, Mary G.	5.00	Gray, Miss Emily	5.00
Garrison, John A.	10.00	Gidby, Arthur	5.00	Gray, George M.	5.00
Gates, Dr. A. J.	5.00	Giddard, Mrs. F. N.	5.00	Gray, Miss I. E.	5.00
Gates, Mrs. John	10.00	Giddard, Mrs. F. W.	5.00	Gray, Mrs. Maria	5.00
Gates, M. H. D. D.	5.00	Giddard, Mrs. G. H.	5.00	Gray, Mrs. P. H.	5.00
Gates, R. F.	5.00	Giddard, Miss J.	2.00	Gray, Roland	5.00
Gaudin, Charles E.	5.00	Giddard, Mrs. W.	25.00	Gray, Russell	1.00
Gaudin, Mrs. E. P.	5.00	Godfrey, Mrs. W. H. K.	10.00	Grayson, Mrs. F. W.	1.00
Gavin, Miss I. N.	1.00	Goodwin, Mrs. H.	5.00	Greff & Co.	5.00
Gavett, William S.	5.00	Gostze, Mrs. Otto	5.00	Greff, Donald C.	5.00
Gayland, Mrs. F. H.	5.00	Goff, Mrs. F. H.	5.00	Greeley, W. R.	1.00
Geddes, F. L.	1.50	Goggin, John	5.00	Greer, Mrs. B. R.	1.00
Gee, Mrs. Walter	5.00	Goldberg, Paul	5.00	Greene, Arthur D.	5.00
Geler, Frederic A.	5.00	Goffrank, Mrs. M.	10.00	Greene, A. E.	1.00
Geyer, Miss Helen	1.00	Goler, Mrs. F. H.	5.00	Greene, Miss C. C.	1.00
Geyser, Mrs. T.	5.00	Gomes, William E.	10.00	Greene, Miss C. S.	1.00
Geyser, Miss M. T.	5.00	Good, Miss M. J.	5.00		
Gedlaty, John	5.00	Goodale, Levi C.	5.00		
Gedlake, Miss A. C.	10.00				
Gemmell, R. C.	5.00				

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Greene, Gardiner	\$1.00	Hall, William L.	\$1.00	Harris, George W.	\$2.00
Greene, Miss M. A.	1.00	Hall, W. W., Jr.	2.00	Harris, Mrs. J. C.	2.00
Greene, Mrs. R. H.	5.00	Halle, S. Portland	5.00	Harris, John F.	10.00
Greenbaum, Mrs.		Hallett, Mrs. E. F.	5.00	Harris, Mrs. J. F.	5.00
James E.	5.00	Hallett, William R.	5.00	Harris, Lenora U.	3.00
Greenough, D. S.	5.00	Halsey, Mrs. F. R.	5.00	Harris, Tracy H.	5.00
Greenwood, Miles	5.00	Halsey, H. V. W.	5.00	Harris, Mrs. W. H.	5.00
Greer, Mrs. Almeta	5.00	Halsed, David C.	5.00	Harrison, Archibald	5.00
Gregory, Mrs. A. K.	1.00	Hammann, William A.	7.00	Harrison, B. J.	5.00
Gregory, C. F.	5.00	Hambleton, Mrs. Jos.		Harrison, George L.	5.00
Gregory, Mrs. R. H.	5.00	W.	5.00	Harrison, G. L., Jr.	5.00
Grison, Albert P.	1.00	Hampersley, I. G.	10.00	Harrison, Master H.	
Griss, Mrs. I. W.	5.00	Hamill, Mrs. F. A.	5.00	W.	5.00
Griffin, Mrs. E. C.	5.00	Hamilton, Mrs. C. S.	5.00	Harrison, Miss J.	2.00
Griffin, Miss S. B.	5.00	Hamilton, Miss E. S.	5.00	Harrison, Mrs. M. J.	5.00
Griffith, Miss S. D.	5.00	Hamilton, Mrs. H. R.	5.00	Harrison, Mrs. M. L.	5.00
Grisham, C. A.	10.00	Hamilton, Mrs. W.	5.00	Harrison, Mrs. P.	5.00
Grissom, Mrs. C. A.	5.00	Hamilton, Mrs. W. P.	5.00	Harrison, Master H. L.	2.00
Grissinger, Elwood	5.00	Hanson, Mrs. J. C.	5.00	Harrison, Mrs. A. K.	5.00
Groesbeck, Telford	5.00	Hamilin, Mrs. C. S.	5.00	Harry, Mrs. Lough	5.00
Grossmann, Mrs. E.		Hamilin, Mrs. E. F.	5.00	Hart, Mrs. Harry	5.00
A.	5.00	Hamilin, G. P., Jr.	10.00	Hart, Mrs. Jay H.	5.00
Grosvenor, G. H.	2.00	Hamilin, Mrs. H. L.	5.00	Hart Lane S.	5.00
Groton Bird Club	1.00	Hamlin T. G.	1.00	Hart, Miss M. T.	5.00
Grover, Mrs. A. B.	5.00	Hammond, Mrs. I. P.	2.00	Harte, Mrs. R. H.	5.00
Grunder, M.	5.00	Hammond, Mrs. J. H.	5.00	Hartford Bird Study	
Guernsey, Henry W.	10.00	Handy, Mrs. M. A.	5.00	Club	5.00
Guild, Mrs. C. E., Jr.	2.00	Hanks, Miss L. T.	5.00	Hartson, Mrs. Jas.	5.00
Gund, Mrs. G. A.	5.00	Hanna, Miss M. M.	5.00	Hartshorn, H. Ios.	1.00
Gunderson, Mrs. G.		Hansford, J. M.	5.00	Hartshorn, Mrs. S.	2.00
B.	2.00	Hannah, Charles G.	5.00	Hartwell, Mrs. C. S.	5.00
Gunn, Elisha	5.00	Hannam, W. E.	5.00	Harvey, Edward J.	5.00
Guzze, Mrs. W. S.	5.00	Harblson, Ralph W.	5.00	Harvey, J. S. C.	10.00
Gurney, Mrs. M. S.	1.00	Harbison, W. A.	10.00	Harvey, LeRoy	5.00
Guthrie, Mrs. T. W.	4.00	Hardenbagh, Miss		Harwood, G. F.	5.00
Gutzman, DeWitt	5.00	Adelaide C.	5.00	Hasbrouck, Mrs. H.	
Haas, Mrs. C. W.	5.00	Hardenbergh, Mrs		C.	5.00
Haass, Mrs. L. H.	25.00	W. P.	5.00	Haskell, Mrs. A. S.	10.00
Haaslen, Alexander	5.00	Hardon, Mrs. H. W.	2.00	Haskell, Miss H. P.	5.00
Hadley, Miss M. H.	1.00	Hardy, Mrs. L. C.	5.00	Haskell, Mrs. L. A.	
Haerth, Mrs. G. C.	5.00	Hardy Garden Club		(In Memoriam)	5.00
Haessler, H. A.	2.00	of Ruxton	5.00	Haskell, Miss S. F.	5.00
Hafer, Miss E. N.	5.00	Hardy, Mrs. R.	5.00	Hauber, Frederick F.	2.00
Hagaman, Miss E. A.	5.00	Harkness, Miss C. R.	10.00	Hastings, Miss A. G.	5.00
Hager, Karl	5.00	Harkness, David W.	10.00	Hastings, Mrs. C.	
Hadley, Mrs. A. P.	5.00	Harkness, Edward S.	25.00	(In Memoriam)	5.00
Hagerty, George V.	5.00	Harkness, Miss M. G.	10.00	Hastings, Mrs. M. J.	5.00
Hagin, Mrs. B. A.	1.00	Harnon, Mrs. C.	5.00	Hastings, Mrs. T.	3.00
Haigh, Henry A.	5.00	Harnon, Mrs. F. D.	5.00	Hastings, W. R.	10.00
Haight, Miss F.	5.00	Harnon, Judson	5.00	Hatch, Miss C. C.	5.00
Haiman, J. D.	1.00	Harnon, J. M.	1.00	Hatch, Mrs. H. R.	2.00
Haines, Charles D.	1.00	Harnon, Miss L.	5.00	Hatch, Walter, E.	3.00
Haines, Miss Emily	1.00	Harr, O. C.	5.00	Hathaway, Mrs. H.	5.00
Hale, Mrs. A. M. P.	5.00	Harriman, Mrs. H.		Hathaway, Miss M.	
Hale, Mrs. Clarence	1.00	M.	5.00	V.	5.00
Hall, A. Neely	1.00	Harriman, Mrs. J. L.	10.00	Hatch, Louis J.	5.00
Hall, Miss C. M.	1.00	Harrington, C. M.	5.00	Haugen, William	2.50
Hall, Edward F.	10.00	Harrington, G. W.	5.00	Hauge, Mrs. C.	5.00
Hall, Gaylord C.	1.00	Harrington, M. H.	5.00	Haupt, Dr. Louis	5.00
Hall, Lewis S.	5.00	Harris, Alfred	5.00	Havenmeyer, Mrs. H.	5.00
Hall, Miss M. E.	2.00	Harris, Miss A. E.	5.00	Havenover, John C.	20.00
Hall, Orlando	5.00	Harris, A. H., and...	5.00	Hawkes, Miss Eva	10.00
Hall, Mrs. Sarah C.	10.00	Harris, Miss F. K.	5.00	Hawkes, Mrs. McD.	5.00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Hankins, Mrs. F. D.	\$5.00	Herthel, George W.	\$10.00	Hoffman, F. B.	\$5.00
Hankins, James	5.00	Hera, Mrs. F. W.	5.00	Hoffman, R. C.	5.00
Hankins, Miss R.	5.00	Hess, Victor R.	5.00	Hoggen, Miss L. P.	5.00
Hawley, Mrs. J. L.	10.00	Hessenbruch, Mrs. H.	5.00	Hoggen, Mrs. E. J.	5.00
Hay, O. P.	5.00	Hewitly, Arthur	5.00	Hoggen, W. J.	5.00
Hayden, Mrs. H. V.	5.00	Hewitt, Miss E. G.	5.00	Hollan, Thomas	5.00
Hays, Mrs. O. H.	5.00	Heydrick, Miss H.	5.00	Hollbrook, Mrs. Edw.	5.00
Hays, Mrs. W. Van	5.00	Heyn, Miss Emma	5.00	Hollbrook, Mrs. F.	5.00
V.	5.00	Heywood, Mrs. H. B.	5.00	Hollbrook, Mrs. N. D.	5.00
Haynes, Miss C. C.	5.00	Hibbard, Mrs. A. S.	5.00	Holcombe, Mrs. J.	5.00
Hays, F. V.	5.00	Hibbard, Mrs. L. B.	5.00	M.	5.00
Hays, Kaufmann &		Hibbard, Thomas	2.00	Hollen, Miss E. M.	5.00
Leibman	5.00	Hibben, Mrs. T.	5.00	Hollen, Mrs. I. D.	5.00
Hayward, Mrs. M. E.		Hibba, Mrs. R. A.	5.00	Hollen, Miss M. A.	5.00
Smith	0.50	Hicks, H. M.	1.00	Holland, R. A.	5.00
Hayward, T. B.	5.00	Higbie, James S.	5.00	Hollenbach, Miss A.	
Hayward, Miss T. L.	2.00	Higgins, Charles M.	5.00	B.	10.00
Haywood, F. H.	5.00	Higgins, James L.	5.00	Hollenbach, J. W.	5.00
Hazard, R. Gibson	5.00	Higgins, Mr. and		Hollerthi, Herman	5.00
Hazen, Miss E. H.	5.00	Mrs. John W.	2.00	Hollister, Mrs. H. C.	5.00
Hazen, S. Miss F.	5.00	Hildebrandt, John J.,		Hollister, Miss M. T.	5.00
Hend, Mrs. W. L.	5.00	Co.	5.00	Holmes, Mrs. C. B.	1.00
Hendy, A. Augustus	5.00	Hildreth, Emily E.	6.00	Holmes, C. J.	5.00
Hendy, Mrs. D. B.	5.00	Hilken, Henry G.	5.00	Holmes, F. T.	5.00
Hendy, Dr. Mary A.	5.00	Hill, Donald M.	10.00	Holmes, Mrs. H. D.	1.00
Hendry, Mrs. P. O.	5.00	Hill, James A.	5.00	Holmes, Edward	5.00
Hendy, J. A.	10.00	Hill, Mrs. Lysander	5.00	Holmes, Mrs. J. R.	5.00
Hendy, Miss H. E.	5.00	Hill, Miss Susie E.	10.00	Holl, Miss Celia	5.00
Henge, Henry R.	5.00	Hill, Dr. William P.	5.00	Holt, Mrs. Henry	5.00
Henington, Mrs. A. F.	5.00	Hillard, Miss M. R.	5.00	Holt, H. C.	5.00
Holt, Mrs. N. H.	5.00	Hillard, Oliver C.	5.00	Holt, Mrs. R. S.	5.00
Hogeman, Mrs. M. A.	5.00	Hilliard, Thomas G.	5.00	Holt, Sidney S.	10.00
Holde, Henry	10.00	Hills, Mrs. Geo. F.	1.00	Holter, Mrs. S. S.	5.00
Holbert, Van Campen	5.00	Hills, Mrs. James M.	2.00	Holzer, Mrs. P. L.	5.00
Holmes, John B.	5.00	Hines, D. L.	1.00	Homans, Mrs. John	5.00
Holms, Louis	5.00	Hinkle, Mrs. A. H.	5.00	Homer, Francis T.	5.00
Holme, Mrs. G. A.	5.00	Hinkley, Mrs. A. G.	2.00	Homer, Mrs. F. T.	5.00
Holmbeck, Mrs. G.	5.00	Hinman, Miss E.	5.00	Hood, Mrs. C. H.	5.00
Holmes, Mrs. A. C.	5.00	Hinson, W. G.	5.00	Hood, Mrs. J. M. Sr.	5.00
Holmes, Geo. M.	5.00	Hippach, Mrs. Ida S.	5.00	Hooker, Mrs. K.	5.00
Holmstrom, Yasnell	5.00	Hippach, Miss Jean	5.00	Hooker, Mrs. T. Jr.	5.00
Holmstrom, William	5.00	Hittinger, Jacob	10.00	Hopper, Miss L. R.	5.00
Holmstrom, J. H.	5.00	Hoadby, H. A.	5.00	Hopper, Mrs. J. R.	5.00
Holmstrom, W. F.	5.00	Hoadley, Frank E.	5.00	Hopper, Mrs. Neelin	5.00
Hondry, Mrs. E. W.	5.00	Hoag, Mrs. Ella W.	5.00	Hopper, William F.	10.00
Honn, Richard L.	5.00	Hobbs, Mrs. C. A.	5.00	Hoppers, Mrs. M.	5.00
Honold, Mrs. H. I.	5.00	Hobson, S. S.	5.00	Hoppers, Mrs. F. W.	5.00
Henry, S. J.	5.00	Hockaday, R. M.	5.00	Hort, William B.	5.00
Henry, W. G.	5.00	Hodenpyl, Mrs. A. G.	5.00	Hosner, Joseph W.	5.00
Hendshaw, F. W.	10.00	Hodemply, Mrs. E.	5.00	Hosner, W. H.	10.00
Hendrick, H. W.	5.00	Hodgdon, Mrs. A. S.	5.00	Hope, J. L.	10.00
Henta, Henry	5.00	Hodgdon, F. M.	5.00	Hopedale Park Com-	
Henta, Leonard S.	5.00	Hodge Mrs. W. F.	4.00	mission	5.00
Herget, John	5.00	Hodges, Harrison B.	5.00	Hopekirk, Mme. H.	5.00
Hering, W. E.	10.00	Hodgman, Marshall	5.00	Hopkins, Mrs. E. L.	5.00
Herry, Miss A. P.	5.00	Hodson, Mrs. H. P.	5.00	Hopkins, Mrs. J. C.	5.00
Herr, Edwin M.	5.00	Hoe, Mrs. R. M.	5.00	Hopkins, R. Brooks	5.00
Herrick, Francis H.	5.00	Hoe, William J.	5.00	Hoppin, Charles A.	5.00
Herrick, Harold	15.00	Hoening, Mrs. C.	5.00	Hoppin, Mrs. S. C.	
Herrick, Newbold L.	5.00	Hofer, Miss E. J.	5.00	W.	5.00
Herrick, Mrs. W. W.	5.00	Hofer, Walter B.	5.00	Hopson, Mrs. W. F.	5.00
Hershey, The Misses	5.00	Hoffecker, Mrs. G. R.	5.00	Hord, John H.	5.00
H—, 2 Wall St.	5.00	Hoffman, Mrs. C. A.	10.50	Hornblower, Henry	5.00

ANNUAL MEMBERS AND CONTRIBUTORS continued

Hartwood, Miss E.		Holtzcloper, Edgar	\$2 00	Lucin, Mrs. C. O.	\$20 00
Hornby, Mrs. A.	5 00	Hulbert, G. Bertram	5 00	Lubin, Miss G.	5 00
Horner, Charles S.	5 00	Hull, Mrs. Baker	10 00	Lucin, Mrs. W. F.	2 00
Hosfall, R. Bruce	5 00	Hulse, Margaret H.	2 00	Lucin, Mrs. F. S.	2 00
Horsford, Miss C. C.		Hulst, Mrs. G. D.	2 00	Lucin, Joseph S.	1 00
F.	5 00	Humphrey, A. L.	10 00	Lucin, W. H.	1 00
Horsky, L. O.	5 00	Hun, Mrs. L. M. H.	10 00	Loomis, E. C.	1 00
Horsman, Edward L., Jr.	5 00	Hungerford, Mrs. L. L.	5 00	Lusk, Dr. J. L.	1 00
Horton, L. M.	2 00	Hunnehan, Wm. C.	2 00	Jackson, Miss A. P.	10 00
Horton, Mrs. M. B.	5 00	Hunt, Dr. E. W.	5 00	Jackson, R. A.	2 00
Hortsman, Miss I. E.	5 00	Hunt, Dr. Emily G.	5 00	Jackson, Mrs. C.	2 00
Hosmer, Mrs. E. deP.	5 00	Hunt, Mrs. Thomas	5 00	Jackson, Miss M. C.	10 00
Hotchkiss, Frank A.	5 00	Hunter, A. M., Jr.	5 00	Jackson, Martin F.	1 00
Hotchkiss, Henry L.	5 00	Hunter, A. M., Sr. (In Memoriam)	25 00	Jackson, Miss M. L.	1 00
Houghton, C. S.	5 00	Hunter, Mrs. W. R.	20 00	Jackson, S. Y.	1 00
Houghton, Miss F. G.	25 00	Hunting, Mrs. N. S.	2 00	Jackson, Mrs. I. G.	10 00
Houghton, Mrs. G. N.	1 00	Huntington, Mrs. E. A.	5 00	Jacoby, Lawrence	2 00
Houser, H. M.	5 00	Huntington, F. J.	5 00	Jacoby, Dr. H. B.	1 00
Hutcheon, Mrs. A. A.	1 00	Huntington, Mrs. R. P.	5 00	Jacoby, Miss M.	1 00
Hovey, Burton M.	5 00	Hurd, Miss E.	5 00	Jacoby, Samuel K.	1 00
Howard, Jerome	1 00	Hurd, Miss H. J.	2 00	Jacoby, S. K., ad.	1 00
Howd, F. E.	5 00	Hurd, Dr. Lee M.	1 00	Jacobus, John S.	1 00
Howe, Albert	1 00	Harburt, Mrs. A. M.	1 00	James, Miss A. A.	2 00
Howe, Mrs. G. D.	1 00	Harst, Miss P. B.	5 00	James, Mrs. E. F.	2 00
Howe, Prof. H. M.	1 00	Husney, Mrs. C. B.	5 00	James, Mrs. W.	2 00
Howe, Mrs. Lucien	5 00	Hussey, Frederick K.	2 00	Jarvison, Mrs. S. B.	1 00
Howe, S. H.	5 00	Hussey, William H.	5 00	Jarvison, Mrs. J. W.	1 00
Howe, Mrs. Sarah P.	5 00	Husson, Mrs. M.	1 00	Jarvison, Harry	1 00
Howes, F. L.	5 00	Hutchins, Mrs. E. W.	5 00	Jarvison, Mrs. H. W.	1 00
Howes, Mary E.	1 00	Hutchinson, J. B.	5 00	James, Miss A. A.	1 00
Howland, Miss C. E.	5 00	Hutchinson, J. P.	5 00	James, Henry, Jr.	2 00
Howland, Emily	5 00	Hutchinson, Mrs. M. R.	1 00	Jarvis, H. P.	2 00
Howland, Miss L.	5 00	Hutsler, George H.	5 00	Jarotaki, Mrs. A.	2 00
Howland, Dr. John	5 00	Huxley, J. S.	3 00	Jarvis, Miss Flora	10 00
Howland, Mrs. J. G.	5 00	Hyde, Mrs. A. S.	5 00	Jay, Mrs. Augustus	5 00
Hoxie, Mrs. J. R.	5 00	Hyde, Mrs. E. P.	5 00	Jenkins, Mrs. A. C.	5 00
Hoyt, Mrs. Alex. C.	5 00	Hyde, F. Pratt	5 00	Jenkins, A. W.	5 00
Hoyt, Mrs. A. M.	5 00	Hyde, Dr. F. E.	5 00	Jenkins, Miss E.	5 00
Hoyt, George H.	5 00	Hyde, Miss M. L.	2 00	Jenkins, Marion G.	2 00
Hoyt, George S.	5 00	Idair, Mrs. Oscar	1 00	Jenkins, Robert H.	2 00
Hoyt, Gerald L.	5 00	Ide, Henry C.	1 00	Jenks, Miss C. E.	10 00
Hoyt, L. Landon	5 00	Ide, Mrs. J. M.	5 00	Jenks, Miss Lydia D. (In Memoriam)	2 00
Hoyt, Miss R. S.	5 00	Ill, Dr. E. J.	5 00	Jenks, William	5 00
Hoyt, Theodore R.	5 00	Illinois Audubon Society	54 50	Jenks, Mrs. W. F.	5 00
Hoyt, Miss V. S.	5 00	Indiana Audubon Society	5 00	Jennison, Charles G.	5 00
Hoyt, Walter S.	5 00	Inglis, Fay	1 00	Jennings, Miss A. B.	2 00
Hoyt, Mrs. William	5 00	Inness, Mrs. G., Jr.	11 00	Jennings, Edward B.	5 00
Hubbard, Mrs. C. W.	10 00	Insler, Stephen D.	1 00	Jennings, Mrs. F. C.	10 00
Hubbard, Miss M. F.	2 00	Ireland, Miss C. I.	5 00	Jennings, Dr. G. H.	2 00
Hubbard, Miss M. W.	5 00	Irvine, Frank	5 00	Jennings, Mrs. O. G.	5 00
Hubbard, Miss M. G.	10 00	Irving, John	1 00	Jennings, Walter	5 00
Hubbard, Walter C.	1 00	Irwin, A. D., Jr.	5 00	Jensen, John	5 00
Hubbard, W. P.	1 00	Irwin, John V.	5 00	Jermiah J.	5 00
Hubbard, James T.	5 00	Isaac, Mrs. I.	5 00	Jerman, Miss M. C.	5 00
Huber, Mrs. J. M.	5 00	Iselin, Mrs. A.	5 00	Jesup, Charles M.	5 00
Hudnut, Mrs. R. A.	5 00			Jesup, Richard M.	5 00
Hudson, Miss M. M.	5 00			Jewett, E. H.	10 00
Hudson, P. K.	5 00			Jewett, William K.	1 00
Humer, F. I.	5 00			Jlison, Miss F. B.	2 00
Hufnagel, B. M.	5 00			Job, Herbert K.	5 00
Hugot, Miss M. E., ad.	5 00			Johnson, Rev. A. F.	5 00
				Johnson, Miss A. R.	5 00

List of Members

545

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Johnson, Mrs. A. S.	\$5 00	Kaibel, Mrs. Charles	\$5 00	King, Burnham W.	\$5 00
Johnson, B. F.	5 00	Kaith, Edward D.	5 00	King, Miss Carol	5 00
Johnson, Mrs. C. H.	1 50	Kaith, Harold H.	5 00	King, Miss C. W.	10 00
Johnson & Co., C. J.	5 00	Kaith, Mrs. H. P.	2 00	King, Charles S.	5 00
Johnson, Mrs. C. S.	1 00	Kaith, Mrs. L. K.	1 50	King, Mrs. David	5 00
Johnson, Mrs. C. M.	5 00	Kalley, Mrs. A. F.	5 00	King, E. F.	5 00
Johnson, Edward C.	5 00	Kallogg, C. V. W.	5 00	King, Miss M. D.	5 00
Johnson, Mrs. F. R.	1 50	Kallogg, Francis J.	5 00	King, Mrs. Ralph	5 00
Johnson, Mrs. F. S.	5 00	Kallogg, Frederick R.	5 00	Kina, R. N.	5 00
Johnson, Miss H. F.	5 00	Kallogg, Howard	1 00	King, Mrs. W. V.	5 00
Johnson, Mr. and		Kallogg, Miss M. W.	2 00	Kingsford, Daniel P.	5 00
Mrs. H. H.	10 00	Kallogg, William S.	5 00	Kinsley, Mrs. W. L.	2 00
Johnson, J. M.	5 00	Kallogg, Mrs. W. S.	2 00	Kissel, Louis M.	5 00
Johnson, Lewis J.	5 00	Kameys, Walter S.	2 00	Kinney, Mrs. I. A.	5 00
Johnson, Miss M. A.	5 00	Kampeter, James	5 00	Kinney, Mrs. Warren	5 00
Johnson, Miss M. W.	5 00	Kanfall, Miss G.	5 00	Kirk, Walter R. . .	5 00
Johnson, John W.	5 00	Kandall, Mrs. S. D.	5 00	Kirkham, Mrs. J. W.	5 00
Johnson, Norwood	10 00	Kanard, Frederic H.	5 00	Kirkham, William B.	5 00
Johnson, James A.	5 00	Kanedy, David A.	5 00	Kite, Miss A. E. . . .	5 00
Johnson, Mrs. A. L.	5 00	Kennedy, Elijah R.	5 00	Kittredge, S. D. . . .	5 00
Johnson, A. W., Jr.	5 00	Kennedy, Dr. Harris	5 00	Kletzsch, Dr. G. A.	5 00
Johnson, Miss A. H.	5 00	Kennedy, Mrs. N.		Klingenstein, Mrs. C.	
Johnson, Miss A. D.	2 00	Van R.	5 00	K.	5 00
Johnson, Arthur F.	2 00	Kennedy, W. M.	5 00	Knapp, Mrs. M. H.	5 00
Johnson, Arthur G.	5 00	Kemerly, Mrs. C. S.	5 00	Kneeland, Frances	5 00
Johnson, Boyd B.	5 00	Kent, Edward G. . . .	5 00	Knight, Mrs. A. S. . .	5 00
Johnson, Charles H.	5 00	Kent, Edwin C.	5 00	Knight, Mrs. H. E. . .	5 00
Johnson, Mrs. C. W.	5 00	Kentucky Audubon		Knight, Mrs. W.	10 00
Johnson, Miss F. C.	5 00	Society	5 00	Knaedler, Roland F.	5 00
Johnson, Miss Grace A.	10 00	Kenworthy, I. M.	1 00	Knowlton, Eben B.	5 00
Johnson, Mrs. H. K.	1 00	Keppel, David	5 00	Knowlton, Mrs. M. R.	5 00
Johnson, Miss H. L.	5 00	Kerfoot, Mrs. S. B.	5 00	Knowlton, W. M.	5 00
Johnson, Mrs. J. B.	10 00	Kerley, Dr. C. G.	5 00	Knox, Francis H.	5 00
Johnson, Dr. J. W. L.	2 00	Kerr, Mrs. John C.	10 00	Koch, A. W.	5 00
Johnson, Josephine G.	5 00	Kerr, Miss Lois	5 00	Koch, Mrs. H.	5 00
Johnson, Laura G.	5 00	Kerwin, Mrs. A. S.	5 00	Koehler, H. J.	5 00
Johnson, Charles L.	5 00	Ketherlinus, Mrs. J.		Kohler, Mrs. M. F.	25 00
Johnson, Pamoray	5 00	Louis	5 00	Kohlsaat, Miss E.	
Johnson, Mrs. W.	5 00	Kettle, Mrs. L. N.	50 00	M.	5 00
Johnson, Isaac	5 00	Kauffel, W. G.	5 00	Kohn, Miss C. M. . . .	5 00
Johnson, Mrs. J. G.	5 00	Keyes, Mrs. F. L., Jr.	5 00	Kountze, Luther . . .	10 00
Johnson, Mrs. L.	1 00	Keyser, Leander S.	5 00	Krausse, Emil B. . . .	5 00
Johnson, Harold Lee	5 00	Keyser, M. A.	5 00	Kreta, George H.	10 00
Johnson, Mrs. M. F.	5 00	Key-bi-cone Camp		Kreta, George O. . . .	5 00
Johnson, Mrs. F. B.	1 00	Fire Girls	5 00	Krohn, Irwin M.	5 00
Johnson, Henry I.	5 00	Kibbe, Mrs. H. G. . .	1 00	Krumbhaar, G. D.	5 00
Johnson, Karl	15 00	Kier, Mrs. W. L. . . .	5 00	Kudlich, Miss M.	5 00
Johnson, Henry	5 00	Kilmer, Mrs. W. S.	5 00	Kuehn, Otto L.	5 00
Kaestner, Edward	5 00	Kilner, S. E.	5 00	Kuser, Anthony R. . .	10 00
Kahn, Albert	5 00	Kimball, Mrs. D. P.	25 00	Kuser, Mrs. A. R. . . .	5 00
Kahn, Otto H.	10 00	Kimball, Mrs. E. P.	5 00	Kuser, Miss C. G. . . .	10 00
Kahn, Dr. B. J.	5 00	Kimball, Fred M.	5 00	Kutz, Miss L. A. . . .	5 00
Kalb, Charles R.	5 00	Kimball, Helen F.	5 00	Kyle, William S.	5 00
Kadonoff, Miss M. F.	5 00	Kimball, Mrs. L. C.		Lacey, Milton S.	5 00
Kadoffman, R. K., Jr.	5 00	(In Memoriam)	10 00	La Farge, Mrs. C. G.	5 00
Kahn, Mrs. H. F.	5 00	Kimball, Miss L. S.	5 00	Lagowitz, Miss H. L.	5 00
Kaestler, Mrs. J. F.	1 00	Kimball, Miss M. S.	5 00	Laidlaw, James L.	10 00
Kack, Miss M. W.	5 00	Kimball, Mrs. R. B. . .	5 00	Laird, Mrs. W. H.	5 00
Kadon, George W.	5 00	Kimball, Rosamond	1 00	Lake, B. G.	5 00
Kadon, Miss H. L.	1 00	Kimball, W. F.	1 00	Lake Placid Club	5 00
Kadon, Charles M.	2 00	Kimball, Mrs. W. L.	1 00	Lake, Mrs. W. E.	5 00
Keep, Mrs. C.	20 00	Kimberlin, Dr. A. C.	5 00	Lamb, Gilbert D.	5 00
Keep, Mrs. F. A.	5 00	Kimberly, Miss M.	5 00	Lamont, Miss G.	5 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

La Montagne, Mrs M	\$1 00	Leland, Mrs. Amory.	\$5 00	Littell, Hardin H.	\$4 00
Lamprecht, T. H.	1 00	Leland, Wilford C....	5 00	Little, Miss A. A.	1 00
Lamprecht, Mrs. T. H.	1 00	Lemp, Mrs. W. J....	5 00	Little, H. W.	1 00
Lamprey, Miss M. F.	1 00	Lenta, William O....	5 00	Little Lake Club	5 00
Lanahan, Frank J.	1 00	Leonard, Charles A..	5 00	Littfield, Miss M.	
Landau, Mrs. C. S.	1 00	Leonard, A. F.....	5 00	H.....	5 00
Lane, David H.	1 00	Leonard, J. Henry...	5 00	Livermore, Robert	5 00
Lane, Henry B.	1 00	Lester, Miss C. D....	5 00	Livingston, Miss A.	
Lane, James W., Jr.	5 50	Lester, Miss M. E....	5 00	P	20 00
Lane, Miss M. I.	5 00	Lester, William C.		Livingston, Mrs. H.	5 00
Lane, Mrs. W. B.	5 00	and A. Edw.....	5 00	Lloyd, Mrs. F. H.	5 00
Lane, Henry	10 00	Levenson-Gower, Mrs.		Lloyd, John Uri	5 00
Lane, H. H.	5 00	H. M.....	5 00	Lloyd, S. Ashley	2 00
Lane, Louis P.	2 00	Levey, Mrs. W. M....	5 00	Lloyd, Walter	5 00
Lanquar, Mrs. G.	5 00	Levine, Edmund J....	5 00	Locher, Mrs. M. McC.	5 00
Lanier, Charles	5 00	Levinson, E. D.....	5 00	Lochman, Mrs. I. I.	2 00
Lansing, Gerritt Y.	10 00	Levia, Nelson.....	5 00	Lodewald, Henry S.	5 00
Lapham, Mrs. I. M.	5 00	Lever, G.....	5 00	Lodge, H. Edwison	5 00
Lapham, Mrs. L. H.	5 00	Levy, Mrs. E. J.....	5 00	Lough, Frank J.	5 00
Larkin, Charles H.	5 00	Levy, Harry M.....	5 00	Louise, Mrs. Lila I.	5 00
Lathrop, Mrs. Bryan	5 00	Lewis, A. N.....	5 00	Louise, Miss Barbara	5 00
Lathrop, Mrs. W. A.	5 00	Lewis, Mrs. C. E....	5 00	Lutts, Mrs. M. H.	10 00
Law, Mrs. B. W.....	5 00	Lewis, Mrs. E. W....	5 00	Lumhard, The Misses	2 00
Law, Rev. Marion	5 00	Lewis, Mrs. F. E....	5 00	Lumhardt, C.	5 00
Lawrence, Miss E. A.	5 00	Lewis, Mrs. H. D....	5 00	Long, Charles I.	5 00
Lawrence, Mrs. G. R.	5 00	Lewis, Miss H. G....	2 00	Long, F. I....	5 00
Lawrence, H. V.	5 00	Lewis, Miss H. R....	5 00	Long, Harry V.	5 00
Lawrence, Mrs. J....	5 00	Lewis, Mrs. H. E....	5 00	Long, W. H.	5 00
Lawrence, John B....	5 00	Lewis, Mrs. J. F....	5 00	Longfellow, Miss A.	
Lawrence, John S.	5 00	Lewis, Miss N. F....	5 00	M	2 00
Lawrence, Miss M. S.	5 00	Lewis, Richard V....	5 00	Lord, Mrs. A. M.	5 00
Lawrence, Townsend	5 00	Lewis, Shapen	5 00	Lord, Miss Conner	5 00
Lawrence, Mrs. W. H.	1 50	Lewisohn, Samuel A.	5 00	Lord, Miss M. W.	1 00
Laws, Mrs. H. L.	5 00	Lewistein, Mrs. E....	1 00	Lord, Mrs. Samuel	5 00
Lawton, Frederick A.	5 00	Lichtenstein, Paul...	5 00	Lord, Mrs. W. W.	5 00
Lawton, Mrs. R. M.	5 00	Lidgewood, Miss H.		Loring, Miss Helen	5 00
Lawton, Mrs. W.	5 00	B.....	5 00	Loring, J. Alden	5 00
Leach, Mrs. A. E.	5 00	Lieb, Dr. Charles C..	5 00	Loring, Lindsay	5 00
Lea, Miss Florence	5 00	Liesching, Bernhard.	5 00	Loring, Mrs. L.	5 00
Lea, Prof. F. S.	5 00	Ligget, Mrs. G. S....	5 00	Loring, Mrs. W. C.	5 00
Lea, Mrs. George B.	5 00	Lilienthal, J. W., Jr.	5 00	Los Angeles Audubon	
Lea, Mrs. J. C.	5 00	Lilley, Mrs. L. S....	5 00	Society	5 00
Lea, Joseph	5 00	Lilly, James E.....	10 00	Louis, Charles H.	5 00
Lea, Miss M. T.	5 00	Lilly, Joseph T.....	5 00	Lovell, George B.	5 00
Lea, Samuel	5 00	Limbart, Miss C. T..	5 00	Low, Mrs. C. E.	5 00
Lea, Mrs. W. C.	5 00	Lincoln, Alexander..	5 00	Lowe, Mrs. Frank	5 00
Leggett-Abel, Miss May	1 00	Lincoln, Mrs. F. W..	5 00	Lowell, Carlotta H.	5 00
Lehman, Miss Emily	2 00	Lincoln, Mrs. L....	5 00	Lowell, Miss G.	2 00
Lehman, Meyer H.	2 50	Lincoln, Mrs. R. P.	5 00	Lowell, James A.	5 00
Lehmer, Mrs. I. M.	1 00	Lindemann, O., and		Lowell, Lucy	5 00
LeHuray, Miss L.	2 00	G.	5 00	Lowell, Miss M.	1 00
Leidy, Carter R....	5 00	Lindenberg, Miss C.	5 00	Lowell Paper Tube	
Leigh, B. Watkins	2 00	Linder, Mrs. George.	10 00	Corp.....	5 00
Leigh, Mrs. E. L.	5 00	Lindley, Mrs. M. P.	5 00	Lowell, Sidney V....	2 00
Leiper, Mrs. J. G.	2 00	Lindsley, Stuart	10 00	Lowrie, Mrs. A. F.	1 00
Leister, Mrs. B. P.	5 00	Linn, Mrs. W. R.	5 00	Lowry, Mrs. W. C..	5 00
Leiter, Joseph	5 00	Linsley, Mrs. Noah	1 00	Lowry, Mrs. R. J....	10 00
		Lippincott, Mrs. J.		Lucas, Dr. F. A.	5 00
		Bertram	5 00	Luce, Mrs. F. P.	5 00
		Lippincott, J. W....	5 00	Luce, Matthew	5 00
		Lippincott, Mrs. R.		Luchsinger, Mrs. F.	
		C.....	5 00	B	5 00
		Litchfield, Mrs. G. D.	5 00	Luden, William H.	5 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Eastington, Mrs. C. H.	\$4.00	McIlhenny, E. A.	\$5.00	Manitowoc Co., Fish	
Eashaw, Mrs. E. L.	3.00	McIntire, Mrs. H. B.	5.00	& Game Protection	
Easling, F. W.	5.00	McKee, Mrs. J. R.	5.00	Association	\$4.00
Easman, B. R.	5.00	McKee, Mrs. W. L.	5.00	Mam, Miss C. L.	3.00
Easman, J. H.	5.00	McKelvy, Mrs. R.	5.00	Mam, F. P.	3.00
Easman, E. W.	2.00	McKeon, Mrs. J. C.	10.00	Mam, Miss J. A.	1.00
Easman, Lex S.	5.00	McKinney, Mrs. H.		Manning, Mrs. L. L.	1.00
East, C. K.	5.00	N	5.00	Maples, James C.	1.00
Eath, Mrs. L. T.	2.00	McKittrick, T. H., Jr.	5.00	Marburg, Miss E.	1.00
Eaton, Arthur	5.00	McKittrick, Mrs. T.		Marckwald, Mrs. A. H.	1.00
Eaton, Emily R.	1.00	H	5.00	Markley, J. E. E.	1.00
Eaton, F. W.	5.00	McLane, Miss C. M.	10.00	Markus, Mrs. John	10.00
Eaton, Theodore	10.00	McLane, Miss E.	10.00	Martling, Alfred E.	5.00
Eaton, Mrs. W. L.	2.00	McLane, Thomas S.	5.00	Martson, Mrs. E. C.	10.00
Eaton, Charles J.	5.00	McLaughlan, Mrs. W.	5.00	Mason, Otto	10.00
Eaton, Miss E. deV.	5.00	McLaughlin, Miss E.	5.00	Matts, Mrs. K.	5.00
Eaton, Miss B. C.	1.00	McLean, Hon. G. P.	20.00	Marsh, Mrs. E. T. T.	5.00
Eaton, Charles O.	5.00	McMahon, Walt. F.	5.00	Marsh, Ruth	3.00
Eaton, Mrs. J. A.	5.00	McMillan, F. W.	5.00	Marshall, Mrs. C. H.	5.00
Eaton, Mrs. P. W.	5.00	McMullen, Mrs. J.	5.00	Marshall, Mrs. E. O.	5.00
Eaton, Mrs. T. R.	5.00	McMurray, W.	5.00	Marshall, F. C.	5.00
McAlpin, Charles W.	5.00	McNeil, Mrs. A.	5.00	Marshall, W. A. (Ga.)	1.00
McAlpin, Dr. D. H.	5.00	McNeil, Charles F.	5.00	Marshall, W. A.	1.00
McAlpin, Dr. D. H., Jr.	1.00	McNider, Mrs. C. H.	5.00	Marston, Thomas B.	3.00
McAlpin, Mrs. D. H. Jr.	5.00	McPhail, L. C.	5.00	Martin, Mrs. E.	10.00
McBride, Mrs. Lee	5.00	McQuide, Mrs. G. T.	5.00	Martin, Mrs. J. H.	5.00
McBride, Robert W.	10.00	McQueen, Finley R.	5.00	Martin, Mrs. J. W.	10.00
McCampbell, Theron	5.00	McQuesten, Mrs. G. E.	5.00	Marvin, Charles D.	10.00
McClary, Mrs. M. J.	5.00	MacDonald, J. A.	5.00	Marvin, Dwight E.	1.00
McClellan, Hon. G. B.	5.00	MacEason, J. F.	5.00	Maryland Br. Nat'l Association	5.00
McClelland, A. H.	5.00	MacFadden, C. K.	5.00	Mason, Mrs. C. O.	5.00
McClelland, Norman	5.00	MacGowan, W. L.	5.00	Massachusetts Audubon Society	100.00
McClelland, Mrs. C. B. J.	5.00	MacKay, Mrs. M. S.	5.00	Massey, Mrs. R.	5.00
McCord, Miss Belle	5.00	Maclay, M. W., Jr.	5.00	Masters, Francis R.	1.00
McCord, Mrs. W. E.	5.00	MacLeod, Mrs. F. N.	1.00	Mastick, Mrs. S. C.	10.00
McCormack, Mrs. R. Hall	5.00	Macnamara, Charles	5.00	Mather, Dan	1.50
McCornick, R. T.	5.00	Macpherson, W. A., Jr.	5.00	Mather, Miss K. L.	1.00
McCoskey, Mrs. W.	5.00	Macy, V. Everit	5.00	Matheson, William J.	1.00
McCullough, Miss M. G. B.	5.00	Macy, Mrs. V. E.	5.00	Mathews, Dr. F. S.	1.00
McCulloch, W. F.	1.00	Maddock, Miss E.	5.00	Mathews, G. S., M.D.	2.00
McCullin, J. W.	5.00	Maddock, Mrs. J. B.	5.00	Mathews, Mrs. J. R.	3.00
McCurdy, E. H.	5.00	Madeira, Mrs. L. C.	5.00	Mathews, W. M.	3.00
McDonald, J. H.	5.00	Maehl, Mrs. L. R.	5.00	Mata, Mrs. Rudolph	1.00
McDonnell, Mrs. F. T.	5.00	Magee, Mrs. E. S.	5.00	Maund, Miss M. E.	1.00
McDougall, Mrs. W.	5.00	Magee, Michael J.	5.00	Mauran, Mrs. J. L.	1.00
McElbowney, Mrs. H. C.	5.00	Maghee, John H.	5.00	Maurer, Mrs. Oscar	1.00
McFadden, J. F.	5.00	Magnes, J. C.	5.00	Maury, Mrs. A. C. deP. P.	3.00
McGinnis, Rev. W. F.	5.00	Maher, C. A.	5.00	Maury, Dr. R. B.	1.00
McGonigle, Mrs. W. A.	1.00	Mahl, William	5.00	Maxwell, Miss M.	1.00
McGowan, Mrs. J. E.	5.00	Millard, J. W.	5.00	May, Miss E. G.	2.00
McGraw, H. D.	5.00	Main, Frank H.	5.00	May, George H.	2.00
McGraw, T. A., Jr.	1.00	Maitland, R. L.	5.00	Mayer, Mrs. B.	1.00
McGregor, Mrs. G. H.	1.50	Malcom, Mrs. A. V.	5.00	Mayer, Louis	3.00
McGregor, T. W.	5.00	Mallery, Otto T.	5.00	Mayer, Mrs. R. del.	3.00
		Mallikrodt, Edward	1.00	Maywood Bird Club	5.00
		Mallory, Mrs. J. M.	5.00	Mead, Henry O.	10.00
		Malone, Mrs. C. B.	5.00	Mead, Miss M.	1.00
		Malone, Mrs. L. H.	13.00	Means, Charles J.	5.00
		Manchester, H.	5.00	Mears, B. F.	10.00
		Manierre, George	5.00	Mebane, B. Frank	10.00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Mason, H. P.	\$2.00	Minor, F. G.	\$5.00	Morris, Mrs. J. B.	\$2.00
Meeker, Claude	5.00	Miner, W. H.	10.00	Morris, Dr. I. R.	2.00
McInrath, Mrs. J.	3.00	Mink, Miss H. C.	3.00	Morris, Miss L. T.	2.00
Meinshelbach, A. F.	5.00	Minneapolis Audu-		Morris, Robert O.	2.00
Melish, Mrs. T.	5.00	bon Society	10.00	Morris, Dr. R. J.	2.00
Meißel, Mrs. G. P.	1.00	Minnesota Game Pro-		Morris, Mrs. F. E.	2.00
Mendenhall, Rev. H.		tective League	5.00	Morris, Mrs. W.	2.00
G.	5.00	Minor, Mrs. C. G.	5.00	Morrison, R. T.	2.00
Meriden Bird Club	10.00	Mitchell, Miss H.	5.00	Morrison, Miss S.	2.00
Merkle, Mrs. G. M.	5.00	Miss Hattie Audu-		Morrison, Mrs. T.	2.00
Merrill, F.	5.00	bon Society (The)	5.00	Morse, C. T.	2.00
Merriam, F. L.	5.00	Missoula Bird Club	5.00	Morse, Miss F. R.	10.00
Merriman, Mrs. W. H.	2.00	Mitchell, Mrs. A. O.	5.00	Morse, Henry Lee	2.00
Merrill, Miss B. V.	2.00	Mitchell, J. K.	5.00	Morse, Miss V. M.	2.00
Merrill, Florence D.	4.00	Mitchell, Mrs. J. M.	5.00	Morse, Wm. F.	2.00
Merrill, Arthur W.	10.00	Mitchell, Mrs. Leeds	5.00	Morton, Miss I.	2.00
Merrill, Mrs. C. W.	2.00	Mitchell, Dr. M. P.	5.00	Morton, Mrs. L. P.	2.00
Merrill, Edwin G.	3.00	Mitchell, Wesley C.	5.00	Moscowitz, Mrs.	
Merrill, Mrs. H. W.	5.00	Mitchell, William	5.00	A. V.	5.00
Merriman, Miss H.	5.00	Mitchell, Mrs. W.	5.00	Mossley, Miss F. F.	10.00
Merriman, Mrs. M.	2.00	Mix, Robert J.	5.00	Mossley, F. S.	2.00
A.	5.00	Mohr, Mrs. C. S.	5.00	Moses, Bert M.	2.00
Merrimann, F. L.	2.00	Moderwell, H. M.	5.00	Moses, Mrs. E.	2.00
Merritt, Mrs. D. P.	2.00	Moulton, Marion	5.00	Moses, Mrs. James	2.00
Merritt, Mrs. J. H.	1.00	Murk, Miss C. A.	5.00	Mosle, Mrs. A. H.	2.00
Mesa, Carl	2.00	Munroe, Mrs. L. B.	1.00	Mosman, P. A.	2.00
Metcalf, Mrs. J. T.	1.00	Montague, C. D.	5.00	Mutley, Thomas	2.00
Metcalf, Marion B.	2.00	Montgomery, M. A.	5.00	Mayer Albert	2.00
Metcalf, Stephen O.	2.00	Montell, Mr. and		Mudd, H. S.	2.00
Meyer, Miss H.	1,000.00	Mrs. J. M.	5.00	Mudd, John Alexis	2.00
Meyerhoff, Mrs. J.	2.00	Moon, Miss R. I.	5.00	Mudge, E. W. Jr.	2.00
Meyn, Mrs. H.	5.00	Moore, Alfred	5.00	Mudge, Leonard S.	2.00
Miami Audubon		Moore, Mrs. B.	5.00	Mudley, Walter J.	2.00
Society	5.00	Moore, Mrs. E. C.	1.00	Muedel, Miss C.	2.00
Michigan Audubon		Moore, Miss E. M.	5.00	Muhleman, W. G.	2.00
Society	5.00	Mosier, Mrs. G. W.	5.00	Mulford, Mr. and	
Mirth, George W.	5.00	Moore, Mrs. H.V.D.	5.00	Mrs. Ren. Jr.	1.00
Milburn, John G.	5.00	Moore, Miss K. T.	5.00	Mulhauser F. P.	1.00
Mildrum, Henry G.	5.00	Moore, Mrs. Paul	10.00	Muller, Adam	2.00
Millbrook Garden		Moore, Mrs. R. P.	5.00	Muller, Carl	5.00
Club	5.00	Moore, Mrs. T. L.	5.00	Mulligan, Mrs. F. W.	2.00
Miller, Arthur E.	5.00	Moorhead, H. R.	5.00	Munro, Miss A. B.	4.00
Miller, Miss B. S.	2.00	Moon, Mrs. J. B.	10.00	Munro, Miss M. H.	5.00
Miller, Burr C. Jr.	2.00	Mora, Mrs. Edward	2.00	Munson, Mrs. E. G.	2.00
Miller, Clifford L.	5.00	Morwood, Mrs. A. P.	10.00	Murlock, J. B.	2.00
Miller, Mrs. C. R.	5.00	Morgan, C. C.	5.00	Murson, Mrs. C. E.	2.00
Miller, Carl W.	2.00	Morgan, Mrs. E. S.	10.00	Murphy, F. Jr.	10.00
Miller, Mrs. D. H.	5.00	Morgan, Mrs. J. S. Jr.	5.00	Murphy, William H.	2.00
Miller, Mrs. Eliza	2.00	Morgenthau, Mrs. M.		Murray, Miss C.	1.00
Miller, Mrs. G. Jr.	2.00	L.	5.00	Murray, F. F.	2.00
Miller, Miss Matilda	2.00	Morrison, George B.	5.00	Muther, L. F.	2.00
Miller, Paulina C.	2.00	Morley, Mrs. W. G.	2.00	Myers, Mrs. H. W.	2.00
Miller, Mrs. R. F.	5.00	Morrill, Miss A.	5.00	Myers, Mrs. H. E.	2.00
Miller, Mrs. R. F.	5.00	Morrill, Miss A. W.	5.00	Myers, J. R., Jr.	5.00
Miller, Mrs. R. F.	10.00	Morris, Miss Anna	5.00	Mygatt, Mrs. R. K.	5.00
Milligan, Mrs. R.	5.00	Morris, C. W.	6.00	Myrick, Dr. H. G.	10.00
Mills, Dr. Adelbert	10.00	Morris, Charles C.	5.00	Naramore, W. W.	5.00
Mills, Fess A.	2.00	Morris, Mrs. D. H.	2.00	Natural History Soc-	
Mills, Frederic C.	2.00	Morris, Dudley M.	5.00	ety of British Col-	
Mills, Mrs. F. V.	2.00	Morris, Miss Ellen	2.00	umbia	5.00
Mills, Dr. H. R.	5.00	Morris, Dr. Fred W.	1.00	Nature Study Society	1.00
Mills, Miss Jean	2.00	Morris, Harrison S.	5.00	Nazzo, Mrs. A. P.	2.00
Mills, Rev. John N.	2.00	Morris, Mrs. J. A.	5.00	Neely, James C.	2.00

List of Members

549

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Neighborhood Nature Club	\$10 00	Norton, Miss M. F.	\$5 00	Palme, Mrs. F. W.	\$3 00
Nelson, Mrs. F. C.	1 00	Norland, Mrs. O.	2 00	Palme, Rev. G. L.	10 00
Nelson, Mrs. F.	15 00	Nugent, James R.	5 00	Palme, Mrs. R. P.	5 00
Nelson, James	5 00	Nelson, F. E.	5 00	Palme, Mrs. R. F., ad	5 00
Nelson, Charles W.	5 00	Nutting, Mrs. F. Z.	5 00	Palmer, Miss H. W.	5 00
Nelson, L. W.	5 00	Oakley, Thornton	5 00	Palache, Whitney	5 00
Neelley, Miss P.	5 00	Oakley, Mrs. T.	5 00	Palmer, Anna I.	5 00
Neomith, Miss Mary	5 00	O'Brien, David	5 00	Palmer, Mrs. J. I.	10 00
Northon, A. E.	5 00	O'Brien, Mary E.	5 00	Palmer, Miss M. T.	5 00
Northon, C. H.	10 00	Oettinger, Dr. P. J.	5 00	Palmer, Nicholas P.	5 00
Northon, J. S.	2 00	Ogilvie, Prof. I. H.	10 00	Palmer, Dr. I. S.	5 00
Northon, Harry I.	1 00	Ogden, W. Howard	5 00	Palmer, Mrs. W. P.	5 00
Neumann, Mrs. G. A.	5 00	Ohio Audubon Society	5 00	Pardee, Wm. S.	5 00
Neustadt, Mrs. S.	20 00	Oil City Audubon Club	5 00	Pardon, Ella F.	5 00
New, Miss I. R.	5 00	O'cott, Dudley	5 00	Paris, Mrs. F. U.	5 00
New Bedford Woman's Club	5 00	O'cott, Mrs. Marvin	10 00	Parker, Louis H.	5 00
Newberry, Mrs. W. F.	5 00	O'Heary, Mrs. Emma	5 00	Parker, A. S.	5 00
Newburyport Bird Club	5 00	O'Leary, P. J.	5 00	Parker, A. W.	5 00
Newcomb, C. A. Jr.	5 00	Olin, Stephen H.	5 00	Parker, Mrs. A. W.	5 00
Newcomb, Dr. W. W.	5 00	Oliver, Dr. Henry K.	10 00	Parker, Edward L.	100 00
Newcomer, Mrs. C. W.	5 00	Opdycke, Mrs. E.	5 00	Parker, Miss F. S.	5 00
Newcomer, Miss N. I.	1 00	Opdycke, Mrs. L. E.	5 00	Parker, Mrs. G. F.	5 00
Newell, Mrs. E. I.	5 00	Oppenheimer, Mrs. M. E.	5 00	Parker, Mrs. H. J.	5 00
Newell, Mrs. J. F.	5 00	Oregon Audubon Society	5 00	Parker, James F.	10 00
Newman, Mrs. R. A.	25 00	Orr, Mrs. E. N.	25 00	Parker, Mrs. J. J.	5 00
Newman, Thos.	5 00	Orr, Miss E. von E.	10 00	Parker, Neilson T.	5 00
Newman, C. C.	1 00	Orr, Ulysses, G.	5 00	Parker, Mrs. Robert	5 00
Newton, Mrs. C. P.	2 00	Orrman, H. L.	5 00	Parker, Mrs. W. L.	10 00
Nichols, C. W.	5 00	Osburn, Mrs. J. B.	5 00	Parker, Mrs. W. N.	5 00
Nichols, Mrs. F.	5 00	Osburn, Arthur A.	5 00	Parker, Mrs. W. R.	5 00
Nichols, John W. T.	5 00	Oswald, Edward	5 00	Parmer, Robert M.	5 00
Nichols, Mrs. J. W. T.	5 00	Oswald, Edward	5 00	Parrish, James C.	5 00
Nichols, Mrs. M. C.	5 00	Otis, Harrison G.	5 00	Parrish, M. L.	5 00
Nicholson, Rebecca and Sarah	5 00	Otis, Mrs. Joseph K.	5 00	Parsons, Miss Alice	5 00
Nield, Mrs. B.	7 00	Owerton, Dr. Frank	5 00	Parsons, Edmund H.	5 00
Nield, Mrs. Fancher	5 00	Owington, Mrs. F.	5 00	Parsons, Miss K. L.	5 00
Nibbet, Mrs. T. B.	1 00	Owen, Miss J. A.	5 00	Parsons, Robert L.	10 00
Nitfeld, Mary P. E.	5 00	Owen, Samuel	5 00	Partridge, H. J.	5 00
Nixon, H. L.	2 00	Owen, Stanton	5 00	Pateron, Mrs. A. W.	5 00
Norman, W. T.	2 00	Oxley, Edward M.	5 00	Patten, Mrs. H. J.	5 00
Norstrom, G. H.	5 00	Pabst, F.	2 00	Patterson, Miss E. C.	5 00
Norris, Mrs. C. W.	5 00	Palmt, Mrs. F.	5 00	Patterson, T. H. H.	5 00
Northwestern Audubon Club	5 00	Palmt, Mrs. Gustavo	5 00	Patterson, Mrs. W. A.	5 00
North, Anna W.	5 00	Park, Mrs. C. L.	5 00	Patterson, W. F.	5 00
North Dakota Audubon Society	10 00	Packard, Mrs. G. R.	5 00	Paul, Mrs. D. Arvy	5 00
North East Nature Study Club	5 00	Packard, Horace	5 00	Paul, Prof. H. M., C. S. N.	5 00
North, George B.	5 00	Page, A. B.	5 00	Pauly, J. P., Jr.	5 00
North, Mrs. E. H.	5 00	Page, A. D.	5 00	Peabody, Rev. E.	10 00
Northrup, Mrs. J. L.	5 00	Page, Mrs. H. W.	5 00	Peabody, George F.	10 00
Norton, Mrs. C. D.	5 00	Page, Miss M. C.	15 00	Peabody, Mrs. H.	5 00
Norton, Charles W.	5 00	Page, Parker W.	5 00	Peabody, Wm. W.	5 00
Norton, Miss E. M.	5 00	Pagenstecher, Miss F.	5 00	Pearman, Barbara P.	5 00
Norton, Miss Ida M.	5 00	Paine, A. G., Jr.	5 00	Pease, Mrs. A. D.	5 00
Norton, Mrs. Jenn C.	10 00	Paine, Mrs. A. G.	10 00	Pease, H. B.	5 00
		Paine, Cyrus I.	5 00	Peck, Mrs. C. C.	5 00
		Paine, Miss E. L.	5 00	Peck, Miss Dorothy	5 00
				Peck, Mrs. F. I.	5 00
				Peck, H. H.	5 00
				Peck, Stanton B.	5 00
				Peckham, M. J.	5 00
				Peckham, Prof. F. M.	5 00
				Peet, Mrs. W. C.	5 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Peckham, Mrs. E. S.	\$5 00	Pillsbury, A. E.	\$1 00	Polla, Mrs. W. H.	\$1 00
Peckham, Walter, Jr.	10 00	Pilsbury, Frank O.	5 00	Polla, Mrs. W. M.	1 00
Pell, James D.	5 00	Pinney, Lucius	5 00	Pomander, Harry	1 00
Pellew, Miss M. J.	5 00	Piquet, Miss Lily S.	5 00	Powell, Mrs. S. A.	1 00
Pendleton, Miss E. F.	5 00	Pirie, G. L.	5 00	Powell, Mps. T. C.	10 00
Penhallow, C. T.	5 00	Pirie, Miss Isobel	5 00	Power, I. B.	1 00
Pennie, John C.	5 00	Pitbin, Mrs. N. W.	5 00	Power, Thomas H.	1 00
Pennington, Mrs. A.	1 00	Pitman, Miss E. H.	1 00	Pratt, B.	1 00
Pennsylvania Audubon Society	5 00	Pitman, Miss M. A.	1 00	Pratt, Mrs. C. M.	1 00
Pentz, A. M.	15 00	Planten, W. R. J.	5 00	Pratt, Miss Elizabeth	1 00
Peoria Audubon Society	5 00	Platt, Ada L.	5 00	Pratt, Miss E. A.	1 00
Perin, Mrs. F. L.	10 00	Platt, Miss C. M.	5 00	Pratt, Miss Florence	1 00
Perkins, Mrs. E. R.	5 00	Platt, Mrs. Dan F.	5 00	Pratt, Mrs. F. B.	1 00
Perkins, Miss E. S.	5 00	Platt, Miss L. N.	5 00	Pratt, Mrs. F. L.	1 00
Perkins, Mrs. F. E.	5 00	Platt, Lewis A.	5 00	Pratt, Miss Harriet	1 00
Perkins, Mrs. G. W.	25 00	Plumb, Mrs. Julia D.	1 00	Pratt, Luella	5 00
Perkins, Harry A.	5 00	Plummer, Dr. C. G.	1 50	Pratt, Samuel	1 00
Perkins, H. F.	5 00	Plummer, Mrs. C. W.	2 00	Pratt, Miss Sarah E.	1 00
Perot, T. M., Jr.	5 00	Poe, Margaretta	5 00	Prentiss, Miss Clara	1 00
Perrin, Marshall L.	1 00	Polhemus, Miss R. A.	5 00	Prentiss, Miss J. P.	1 00
Perry, George P.	1 00	Pollock, George E.	5 00	Prentiss, F. F.	10 00
Perry, Mrs. J. G.	5 00	Pollock, Mrs. W.	5 00	Prentiss, Mrs. F. F.	1 00
Perry, Mrs. W. A.	5 00	Pomeroy, Daniel E.	5 00	Prentiss, William A.	1 00
Peskind, Mrs. A.	5 00	Pomroy, H. K.	5 00	Prescott, Mrs. C. H.	1 00
Peter, Julius C.	5 00	Pomroy, Mrs. H. K.	5 00	Preston, Mrs. F. L.	1 00
Petermann, G. H.	5 00	Pond, Miss F. L.	5 00	Preston, Mrs. W. L.	1 00
Peters, Miss E.	1 00	Poole, Miss G. H.	5 00	Preston, Mrs. W.	1 00
Peters, Theodore	5 00	Poole, Mrs. G. S.	5 00	Price, L. B.	1 00
Peters, Mrs. Theo.	5 00	Poole, Ralph H.	5 00	Prout, Miss F. M.	1 00
Peters, W. E.	5 00	Poor, Miss Ella S.	1 00	Prout, Mrs. F. H.	10 00
Peters, William R.	5 00	Poor, Roger M.	5 00	Prince, I. M.	1 00
Peterson, Charles S.	5 00	Pope, Mrs. Albert S.	5 00	Prinz, Mrs. A.	1 00
Peterson, Mrs. W.	10 00	Pope, Miss Edith A.	5 00	Proctor, William	1 00
Petty, E. R.	1 00	Pope, Harriet B.	5 00	Proctor, Mrs. W. C.	1 00
Pfautzer, Mrs. O. D.	5 00	Pope, Willard	5 00	Proctor, Mrs. C. I.	1 00
Pfarrer, Mrs. A. E.	5 00	Porter, A. Kingsley	5 00	Proctor, Thomas R.	1 00
Pfeifer, Frederick	1 00	Porter, Alex. S., Jr.	10 00	Proctor, Mrs. Seward	1 00
Pforzheimer, C. H.	5 00	Porter, Mrs. Clarence	5 00	Provo, W. F.	1 00
Phelps, Dryden W.	5 00	Porter, H. K.	5 00	Provost, Mrs. C. W.	1 00
Philergians Club	5 00	Porter, Mrs. W. H.	5 00	Pruyn, R. C.	1 00
Phillipp, P. B.	10 00	Port Huron Bird Club	10 00	Puffer, Miss Isabel	1 00
Phillips, A. V.	1 00	Post, Abner	5 00	Purvis, Mrs. A. M.	1 00
Phillips, W. A.	1 00	Post, A. S.	5 00	Pussy, Mrs. Howard	1 00
Phillips, Dr. C. E. H.	5 00	Post, Mrs. A. Y.	5 00	Putnam, Mrs. A. S.	1 00
Phillips, Mrs. C. E. H.	5 00	Post, Mrs. C. J., Jr.	5 00	Putnam, Miss E.	1 00
Phillips, E. S.	5 00	Post, Miss E. M.	5 00	Putnam, George P.	1 00
Phillips, Hon. J. M.	5 00	Post, Mrs. James H.	5 00	Puxton, Mrs. M. W.	1 00
Phillips, Stephen W.	5 00	Post, John R.	5 00	Pyle, James M. A.	1 00
Phinney, Miss M. A.	1 00	Post, Sylvester	5 00	Pyne, Mrs. M. I.	1 00
Phipps, Miss Ada	5 00	Post, William S.	5 00	Quar, Mr. and Mrs. J. I.	1 00
Phypers, C. J.	1 50	Potter, Miss C.	5 00	Quinby, W. H.	1 00
Pickard, Mrs. M. V.	2 00	Potter, Frederick G.	5 00	Quincy, C. F.	1 00
Piel, Mrs. M.	5 00	Potter, J. M.	5 00	Rabe, Dr. R. T.	1 00
Pierce, Mrs. F. A.	10 00	Potter, Hamilton F.	10 00	Racine Bird Club	1 00
Pierce, Frank L.	5 00	Potter, Julian K.	5 00	Rackemann, C. S.	1 00
Pierce, Henry C.	5 00	Potter, L. B.	5 00	Radcliffe, Mrs. W.	10 00
Pierce, William L.	5 00	Potter, Malcol L.	1 00	Kallison, K. I.	1 00
Pilling, James H.	5 00	Potter, Mark W.	1 00	Rabe, Mrs. R.	1 00
Pilling, John	5 00	Potts, Mrs. F. M.	5 00	Ralph, Mrs. C. F.	1 00
Pilling, William S.	5 00	Potts, Mrs. G. C.	5 00	Ramsay, Mrs. W. G.	10 00
		Potts, Master Harry	5 00	Rand, Mrs. H. S.	5 00
		Potts, Robert B.	5 00	Rand, Dr. J. P.	1 00

List of Members

551

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Rochester, J. P.	\$1.00	Rhoades, J. S.	\$5.00	Robinson, T. W.	\$2.00
Randall, Mrs. C. H.	1.00	Rhoads, Miss L. W.	10.00	Robinson, T. A.	1.00
Randolph, Mrs. F.	1.00	Rhoads, Mrs. S. W.	5.00	Robinson, Wm. A.	1.00
Randolph Bird Club at Westfield	1.00	Rhode Island Audu- bon Society	5.00	Robison, Dr. A. A.	10.00
Randolph, Evan	1.00	Rice, Miss E. J.	1.00	Robison, A. R.	10.00
Rankin, Miss C. A. S.	1.00	Rice, Miss E. P.	5.00	Rohlin, Mrs. J. H.	1.00
Rankin, Mrs. Hugh	2.00	Rice, H. I.	5.00	Robotham, Charles	1.00
Rankins, Mrs. W. B.	2.00	Rice, William G.	1.00	Roch, Mrs. and Mrs. A.	1.00
Raney, Mrs. J. R.	1.00	Ries, William N.	1.00	Rochester, Miss E.	1.00
Rarick, F. H.	1.00	Rich, Mrs. J. A.	5.00	Rockaway Branch of the National Associa- tion of Audubon Societies	1.00
Rash, A. S.	1.00	Rich, William L.	5.00	Rockefeller, J. D., Jr.	5.00
Rauert, Fred	1.00	Richards, Miss A. A.	5.00	Rockefeller, Mrs. J. D., Jr.	5.00
Rawlinson, Miss I.	1.00	Richards, Miss A. M.	2.00	Rockefeller, William	5.00
Raymond, Mrs. C. F.	2.00	Richards, Anna M.	1.00	Rock Island County Bird Club	1.00
Raymond, Mrs. J.	1.00	Richards, Mrs. E. F.	1.00	Rodewald, F. L.	1.00
Raymond, M. H.	1.00	Richards, Miss H. E.	5.00	Rodman, Miss E.	1.00
Raymond, Mrs. G. F.	1.00	Richards, Henry	10.00	Roebling, Mrs. J. A.	10.00
Rea, Mrs. H. R.	1.00	Richards, Mrs. L. S.	5.00	Roesler, Mrs. F.	1.00
Rea, James C.	1.00	Richards, T. D.	1.00	Rogan, Mrs. John	1.00
Rea, Mrs. James C.	1.00	Richards, Mrs. T. D.	5.00	Rogan, Mrs. M. K.	1.00
Reckard, J. H.	1.00	Richardson, Dr. E. P.	5.00	Rogers, Archibald	1.00
Reid, Miss E. W.	1.00	Richardson, Mrs. G. F.	5.00	Rogers, Mrs. F.	1.00
Reid, H. W.	10.00	Richardson, H. H.	5.00	Rogers, George J.	1.00
Reid, Mrs. H. G.	1.00	Richardson, W. D.	5.00	Rogers, Mrs. G. S.	1.00
Reid, Mrs. J. I.	1.00	Richie, Miss Sarah	5.00	Rogers, James	1.00
Reid, Miss Clara	1.00	Ricketson, Walton	2.50	Rogers, Mrs. J. G.	1.00
Reid, Miss G. M.	1.00	Ricketts, Miss Jean	1.00	Rogers, Miss Julia	1.00
Reid, J. J.	1.00	Ridgway, Robert	1.00	Rogers, Mrs. H. E.	10.00
Reid, Mrs. L. H.	1.00	Riggs, Mrs. Austen F.	5.00	Rogers, Misses	1.00
Reid, Lewis B.	5.00	Riggs, George C.	5.00	Rogers, Richard	1.00
Reid, William I.	5.00	Riglander, Mrs. M. M.	5.00	Rogers, Mrs. T. W.	1.00
Reiss, John S. 4th	5.00	Riley, Mrs. W. W.	5.00	Rogers, William B.	1.00
Reiss, Mrs. R. G.	5.00	Ripley, Ebel L.	5.00	Roland, Miss A. N.	1.00
Reiss, Miss E. N.	1.00	Ripley, Miss J. T.	10.00	Rolfe, Mrs. P. B.	1.00
Rieger, H. Severn	5.00	Ritchey, Miss M.	5.00	Rollo, A. J.	1.00
Richardt, Arthur C.	5.00	Rittembush, E. S.	1.00	Romer, Alfred	1.00
Richardson, Mrs. Victor M.	1.00	River, Dr. W. C.	11.00	Ronsault, T., Jr.	1.00
Richardson, Louis	1.00	Robb, Mrs. John T.	1.00	Rood, Miss Mary W.	1.00
Rid, Miss C.	1.00	Robbins, Miss A.	5.00	Roome, William P.	1.00
Ridinger, Carl H.	1.00	Robbins, Miss N. P. H.	5.00	Roosevelt, Mrs. H. L.	1.00
Ridman, Mrs. G. Jr.	1.00	Robbins, R. C.	5.00	Roosevelt, Mrs. J.	1.00
Ridman, Mrs. L. W.	5.00	Robert, Samuel	5.00	Roosevelt School	1.00
Ridmington, Seth P.	5.00	Roberts, Mrs. A. B.	1.00	Root, Elhu	1.00
Riess, Schmidt and Passauer	5.00	Roberts, Mrs. E. B.	5.00	Root, Towner B.	1.00
Ritchie, Mrs. A. H.	5.00	Roberts, Owen F.	5.00	Root, Miss W. E.	1.00
Ritchie, Mrs. I. H.	10.00	Roberts, Thomas S.	5.00	Ropkins, Mrs. E. L.	10.00
Ritchie, Mrs. W.	5.00	Robertson, Miss J.	5.00	Rose, Mrs. A. S.	1.00
Ritchie, Mrs. W. C.	5.00	Robertson, R. H.	15.00	Rose, Mrs. J. H.	1.00
Riviera Circle of the King's Daughters	5.00	Robertson, Mrs. R. A.	5.00	Rosenthal, Mrs. W. M.	1.00
Ray, Miss Marie V.	1.00	Robertson, R. H.	10.00	Rosenbaum, Mrs. N.	1.00
Reynolds, Dorrance	1.00	Robertson, Mrs. W. A.	1.00	Rosenthal, Mrs. E. L.	1.00
Reynolds, Mrs. G. W.	5.00	Robinson, Miss A. H.	1.00	Rosenbaum, Mrs. A. F.	1.00
Reynolds, Walter S.	1.00	Robinson, C. A.	5.00	Rosenthal, Mrs. O.	1.00
Rison, John Jr.	1.00	Robinson, Mrs. C. L. F.	1.00	Rosenwald, Mrs. J.	1.00
Ritchie, Bird Club	1.00	Robinson, E. P.	1.00		
Rhoads, Miss H.	1.00	Robinson, E. S.	1.00		
Rhoads, Mrs. L.	5.00	Robinson, Miss H. B.	1.00		
		Robinson, S. Mary and E. S.	5.00		

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Rosa, Dr. L. H.	\$5 00	Sanford, Mrs. R. B.	\$5 00	Savvill, Mr and Mrs.	
Ross, Reuben J.	5 00	Saratoga Springs Bird		Henry W.	5 00
Rotch, Mrs. Merton	8 00	Club	5 00	Scribner, Mrs. A. H.	2 00
Rotch, Mrs. W. J. . .	15 00	Sargent, Mrs. Francis		Scudder, Miss S. J.	2 00
Roth, J. E.	5 00	W., Jr.	10 00	Scully, Henry R.	2 00
Rothmund, J. J.	5 00	Sargent, Mrs. J. B.	5 00	Seabrook, Mrs. H. H.	5 00
Rothwell, J. F.	1 00	Sargent, Mrs. S. W.	2 00	Seabury, C. W.	2 00
Ruttschafer, Mrs. H.	1 00	Sarver, Mrs. Jessie M.	2 00	Seabury, Miss S. J.	10 00
Rusland, Thomas	3 00	Saul, Charles R.	5 00	Seaman, William W.	5 00
Rusby, John	1 00	Saunders, W. E.	5 00	Seash, Mrs. A. I.	1 00
Ruxes, J. C.	3 00	Sauter, Fred	5 00	Sears, Miss A. I.	3 00
Ruhl, Maeter C. A.	1 00	Savannah Audubon		Sears, Miss Mary P.	1 00
Rulnick, C. H.	1 00	Society	5 00	Sears, Mrs. P. S.	1 00
Rugles, Mrs. I. F.	1 00	Saville, Mrs. A. H.	1 00	Seattle Audubon Sa-	
Rumsey, Mrs. D. P.	2 00	Savin, William M.	2 00	ciety	2 00
Rumsey, Mrs. L. D.	1 00	Sawtelle, Mrs. E. M.	10 00	Seaver, Benj. F.	1 00
Rumson Bird Club	1 00	Sawyer, Mrs. C. A.	2 00	Seaver, C. F. I.	1 00
Ruperti, Justus	1 00	Sawyer, F. B.	10 00	See, Alonzo B.	2 00
Rupprecht, F. K.	1 00	Sawyer, Mrs. H. J.	5 00	Sealey, Mrs. C. B.	1 00
Rusch, Mrs. H. A.	1 00	Sayles, Mrs. R. W.	5 00	Sealye, L. Clark	1 00
Rushmore, Mary D.	1 00	Sayre, Mrs. C. D.	15 00	Seinsheimer, Mrs.	
Ruskey, Mr and Mrs		Sayre, R. & Co.	1 00	Henry H.	1 00
Cecil	1 00	Scarborough, R. B.	5 00	Seipp, Mrs. C.	1 00
Rus, Mrs. E. C.	1 00	Schafer, Mrs. Ella L.	5 00	Selden, Mrs. E. G.	1 00
Russell, B. F. W.	1 00	Schafer, George G.	5 00	Selridge, Mrs. G. S.	1 00
Russell, Mrs. C. L. P.	1 00	Schafer, Oscar F.	5 00	Seligman, George W.	1 00
Russell, Charles H.	1 00	Schall, William	5 00	Seligman, Mrs. I. N.	5 00
Russell, Mrs. E. L.	1 00	Schank, George J.	5 00	Sellers, Frank H.	1 00
Russell, Miss M. L.	10 00	Schattgen, William	3 00	Senken, Miss K. E.	3 00
Russell, T. M. Jr.	1 00	Scharrer, Mrs. A. G.	5 00	Sennison, John F.	1 00
Russell, Mrs. W. A.	5 00	Schleffelin, Mrs. H.		Serrill, William J.	1 00
Russell, Mrs. W. D.	1 00	M.	5 00	Severance, John I.	15 00
Rust, David W.	1 00	Schirmer, Mrs. R. I.	1 00	Seward, W. R.	5 00
Ryerson, Mrs. E. L.	1 00	Schley, Grant B. ad	1 00	Seaton, Mrs. E. E.	3 00
Ryman, J. J.	2 00	Schmidt, C. Tessa	5 00	Sevall, Miss Helen D.	10 00
Sabin, Mrs. D. D.	2 00	Schmidt, Hans	5 00	Seymour, L. H.	3 00
Saline, Dr. G. K.	3 00	Schmidt, William H.	2 00	Shaffer, Miss Alice B.	1 00
Sackett, Mrs. F. M.	1 00	Schmiedell, Mrs. E. G.	2 00	Shaller, William G.	5 00
Sackett, Mrs. F. M.,		Schow, A.	5 00	Shattwald, Mrs.	
Jr.	5 00	Schrotter, Henry	5 00	Ralph L.	5 00
Sage, Mrs. Homer	1 00	Schroder, William H.	5 00	Shaker Lakes Garden	
Sage, John H.	1 00	Schroeder, Arthur	5 00	Club (The)	15 00
Sagebrush and Pine		Schroeder, Mrs. A. W.	5 00	Shannon, Mrs. W. C.	2 00
Club	3 00	Schultz, John D. H.	5 00	Sharpe, Miss E. M.	1 00
St. John, Edward P.	1 00	Schurz, Miss M.	2 00	Sharpe, Henry D.	1 00
St. John, Mrs. Jesse	1 00	Schuster, Mrs. C.	3 00	Shattuck, A. F.	3 00
St. Louis Bird Club	1 00	Schutz, B.	5 00	Shattuck, Dr. G. C.	5 00
Saltmattall, Mrs. P. L.	1 00	Schwab, Louis	5 00	Shaver, Mrs. B. J.	2 00
Saltmattall, Robert	5 00	Schwab, Louis E., Jr.	5 00	Shaw, Miss Eleanor	1 00
Saltmattall, Mrs. R. M.	1 00	Schwartz, George F.	5 00	Shaw, Francis	3 00
Sampson, Mrs. A. A.	2 00	Schwartz, Mrs. H. I.	5 00	Shaw, Mrs. G. H.	1 00
Sampson, Albin	10 00	Schwartz, Herbert F.	10 00	Shaw, Mrs. George R.	1 00
Sampson, John A.	1 00	Schwab, Harry J.	5 00	Shaw, Henry S., Jr.	3 00
Samsals, Mrs. F. S.	1 00	Sittante Woman's		Shaw, Mrs. John C.	2 00
Sandern, Mrs. C. F.	1 00	Club	1 00	Shaw, Louis Agassiz	25 00
Sandern, Mrs. E. L.	10 00	Sisfeld, Miss Marion	5 00	Shaw, Mrs. Q. A.	1 00
Sandern, Mrs. W. R.	1 00	Scott, Albert L.	5 00	Shaw, Mrs. Robert G.	5 00
Sanders, J.	1 00	Scott, Clement	2 00	Shaw, S. P., Jr.	3 00
Sanderson, E. F.	1 00	Scott, Donald	2 00	Shaw, Mrs. Louis W.	5 00
Sanderson, Miss M.	5 00	Scott, Mrs. John Wm.	5 00	Shawyer, Mrs. Wm. L.	5 00
Sandy, Mrs. Phillip J.	1 00	Scott, Mrs. L. G.	5 00	Shearman, Miss M. H.	2 00
Sanford, Mrs. C. G.	1 00	Scott, Mrs. M. B.	5 00	Shearman, Mr and	
Sanford, Dr. L. G.	1 00	Scott, Mrs. Robert T.	5 00	Mrs. W. H.	15 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Shadle, Mrs. Frank J	\$5.00	Simmons, Miss S. L.	\$5.00	Smith, Judt	\$5.00
Shadle, Mrs. J. G.	5.00	Simons, William C.	5.00	Smith, Laura I.	5.00
Shadoff, G. St. J.	5.00	Simonsen, Mrs. W. A.	5.00	Smith, Miss Lillian	10.00
Shadon, Mrs. E. B.	5.00	Simpkins, Miss M. W.	10.00	Smith, I. F.	5.00
Shadon, James	10.00	Simpson, Miss Helen	12.00	Smith, Mrs. Louis F.	5.00
Shaw, Miss A. R.	5.00	Simpson, Miss J. W.	10.00	Smith, Mrs. Louise M.	5.00
Shaw, Miss Clara	5.00	Simpson, John B.	5.00	Smith, Mrs. Mary B.	5.00
Shaw, C. S.	25.00	Sinclair, Miss I. T.	5.00	Smith, Miss Mary J.	5.00
Shaw, Miss F. B.	5.00	Sinclair, H. R.	5.00	Smith, Nellie M.	5.00
Shaw, Mrs. F. E.	5.00	Sinclair, Mrs. W., Jr.	5.00	Smith, Pierre J.	5.00
Shaw, F. M. J.	5.00	Sisler, L. F.	5.00	Smith, Mrs. R. P. Jr.	5.00
Shaw, W. Hubbard	5.00	Sitgreaves, Miss M. J.	5.00	Smith, Samuel W. Jr.	5.00
Shaw, A. O.	10.00	Slau, Mrs. Edward A.	5.00	Smith, Simlaire	5.00
Shaw, Mrs. C. J.	15.00	Skol, Mrs. Frank D.	5.00	Smith, Mrs. S. Lewis	5.00
Shaw, Mrs. Owen	5.00	Skol, Mrs. R. Jr.	10.00	Smith, Theo. H.	5.00
Shaw, Mrs. M.	5.00	Skolmore, Samuel T.	5.00	Smith, Mrs. Wallis C.	5.00
Shaw, William B.	5.00	Skinner, Albert	5.00	Smith, Walter E.	5.00
Shaw, George J.	5.00	Skinner, M. P.	5.00	Smith, Wilbur F.	5.00
Shaw, Mrs. L. A.	5.00	Skoglund, Walter L.	5.00	Smith, William H.	5.00
Shaw, Mrs. J. C.	5.00	Slade, David F.	5.00	Smith, W. H. Lie	5.00
Shaw, Mrs. F. J.	5.00	Slade, Mrs. F. H.	2.00	Smith, William W.	5.00
Shaw, Mrs. G.	5.00	Slade, Francis L.	5.00	Smithland Audubon	
Shaw, Mrs. J. D.	5.00	Slater, William A. . . .	10.00	Society	5.00
Shaw, John P. R.	5.00	Sloughs, Mrs. K.	2.00	Smosk, John C.	5.00
Shaw, Mrs. J. P. R.	5.00	Slout, Dr. Earl S.	5.00	Smyth, Ellison A.	5.00
Shaw, Miss J. F.	5.00	Slouane, Mrs. William	5.00	Smyth, Henry L. Jr.	5.00
Shaw, A. P.	5.00	Sloutin, William H.	5.00	Smythe, Mrs. A. B.	5.00
Shaw, A. G.	5.00	Slouson, Mrs. A. T.	5.00	Smythe, Mrs. Hugh	5.00
Shaw, Miss A. F.	5.00	Slouson, Mrs. H. I.	5.00	Snyder, John H.	5.00
Shaw, Mrs. H. A.	5.00	Small, Miss C. M.	1.00	Snook, Mrs. T. L.	7.00
Shaw, A. Trade C.	5.00	Small, Miss Cora	2.50	Snyder, Mrs. J.	5.00
Shaw, William	5.00	Smiley, Daniel	5.00	Snyder, Mrs. M. S.	10.00
Shaw, Richard D.	5.00	Smiley, Mrs. Emily	5.00	Snyder, Watson	5.00
Shaw, Hon. Geo. sd.	5.00	Smillie, James C.	5.00	Soley, Fred W.	5.00
Shaw, Mrs. S. L.	5.00	Smith, Mrs. A. G.	15.00	Somerset Hills Bird	
Shaw, C. W.	5.00	Smith, Miss A. M. . . .	5.00	Club	5.00
Shaw, Mrs. H. P.	5.00	Smith, Mrs. A. J.	5.00	Somerville, Robert	5.00
Shaw, Henry W.	15.00	Smith, Mrs. Byron L.	5.00	Soub, Mrs. F. P. . . .	5.00
Shaw, Miss M.	5.00	Smith, Carlisle B.	5.00	South Bend Humane	
Shaw, Miss		Smith, Charles F. . . .	5.00	Society	5.00
Shaw, Mary W.	5.00	Smith, Mrs. Chas. H.	5.00	South Haven Bird	
Shaw, Thos. H.	5.00	Smith, Mrs. C. C. . . .	5.00	Club	5.00
Shaw, Dr. H. T.	5.00	Smith, Mrs. C.	5.00	Southworth, Mrs. O. S.	10.00
Shaw, Mrs. J. L.	5.00	Smith, Dr. C. Ernst	5.00	Sovereign, Mrs. E. P.	5.00
Shaw, Miss Ellen M.	5.00	Smith, Mrs. DeCost	5.00	Sowash, Dr. W. H.	5.00
Shaw, F. P.	5.00	Smith, Dubois	5.00	Spafford, Joseph H.	5.00
Shaw, Mrs. H. T.	5.00	Smith, Dudley W.	5.00	Spalline, Mrs. P. L.	5.00
Shaw, Ellen M.	10.00	Smith, Prof. Frank	5.00	Sparks, E. Abby	5.00
Shaw, Mrs. R. A.	5.00	Smith, Frank A.	5.00	Sparks, Thomas W.	5.00
Shaw, Ralph H.	5.00	Smith, Mrs. F. C. Jr.	5.00	Sparr, Mrs. May H.	5.00
Shaw, Mrs. R. Jr.	5.00	Smith, Mrs. F. D.	5.00	Sparrow, Mrs. E. W.	5.00
Shaw, William	5.00	Smith, F. E.	5.00	Spaulding, Walter M.	5.00
Shaw, Miss Annie M.	5.00	Smith, Mrs. Frank J.	5.00	Spaw, Mrs. L. V.	5.00
Shaw, Henry J.	5.00	Smith, Mrs. F. H.	5.00	Spaw, Mrs. L. R.	5.00
Shaw, Miss J. W.	5.00	Smith, Mrs. Fred W.	5.00	Spaw, Mrs. Jas. M.	5.00
Shaw, Mrs. William	10.00	Smith, George A. . . .	5.00	Speir, Louis Dean . . .	5.00
Shaw, B. F.	5.00	Smith, George G.	5.00	Spelman, Mrs. I. L. E.	5.00
Shaw, Mrs. E. D.	5.00	Smith, George O.	5.00	Spencer, Mrs. A. W.	5.00
Shaw, John S.	5.00	Smith, H. A. H.	5.00	Spencer & Isaak	5.00
Shaw, Alfred L.	5.00	Smith, Henry P.	5.00	Spencer, Mrs. Edw.	5.00
Shaw, Charles	5.00	Smith, Mrs. H. L. . . .	5.00	Spencer, Mrs. Robert	5.00
Shaw, Charles C.	5.00	Smith, H. Minnow (H)	5.00	Spencer, Thos. H.	5.00
Shaw, Kay	5.00	Smith, Mrs. Joe N.	5.00	Squary, H. Lewis	5.00

ANNUAL MEMBERS AND CONTRIBUTORS continued

Sprague, Mrs. James	5 00	Stinson, Mrs. C. E.	5 00	Sturtevant, Miss M. I.	5 00
Spokane Bird Club	5 00	Stix, A. I.	5 00	Sturton, Miss E. W.	5 00
Sprang, Mrs. J. J. R.	2 00	Stix, Ernest W.	5 00	Stutgen, Herman	5 00
Spokane, Miss E. O.	2 00	Stoddard, Miss E. T.	2 00	Stutgen, Mrs. Herman	5 00
Spooner, Miss M. L.	5 00	Stoddard, Prof. F. H.	2 00	Sublett, W. H.	2 00
Sprague, Dr. F. P.	10 00	Stoehr, Max Wm.	5 00	Supple, Arthur W.	2 00
Sprague, Howard B.	5 00	Stokes, Mrs. Ellen O.	5 00	Sullivan, Mrs. F. S.	5 00
Sprague, H. L.	5 00	Stokes, Mrs. I. N. P.	5 00	Sullivan, Mrs. N. F. W.	5 00
Sprague, Mrs. Isaac	10 00	Stokes, J. G. Phelps	5 00	Sunbstrand, Mrs. G. D.	5 00
Sprague, Shaw	5 00	Stone, Miss Abbie M.	2 00	Sunus, Mrs. B. F.	2 00
Spring, Mrs. Isabel B.	5 00	Stone, Mrs. Arthur L.	5 00	Sunderly, Louis A.	2 00
Spruance, Lt. Col. W. C. Jr.	5 00	Stone, Miss E. B.	5 00	Sunset Gunner, N.A. Star Study Club	5 00
Staehler, Mrs. E. F.	2 00	Stone, Mrs. E. M.	5 00	Sutton, A. S.	2 00
Stafford, Mrs. Wm. F.	5 00	Stoss, Mrs. F. H.	5 00	Sutton, H. W.	2 00
Stallman, F. L.	5 00	Stone, Herbert F.	5 00	Sutton, B. H.	5 00
Stanley, Mrs. M. R.	1 00	Stone, Mrs. R. B.	5 00	Swain, Charles F.	2 00
Staples, Frank T.	5 00	Storey, Richard C.	5 00	Swain, Mrs. J. A.	5 00
Starr, Miss Minna D.	1 00	Storey, Mrs. R. M.	5 00	Swain, Mrs. R. I.	2 00
Staten Island Bird Club	5 00	Storrs, Mary R.	5 00	Swain, Thomas W.	2 00
Statham, Mrs. Noel	11 00	Stout, Andrew V.	5 00	Swain, William D.	5 00
Staudt, John	5 00	Stout, Mrs. C. H.	5 00	Swann, Mrs. A. W.	5 00
Stearns, Alfred E.	2 00	Stout, F. C.	5 00	Swartz, S. L.	5 00
Stearns, Charles H.	2 00	Strader, Benj. W.	10 00	Swartz, Mrs. A. M.	5 00
Stearns, Mrs. K. D.	5 00	Strait, Mrs. W.	5 00	Swartz, F. R.	10 00
Stearns, Mrs. W. H.	2 00	Stratburger, Mrs. E.	5 00	Sweet, Miss Ora D.	2 00
Stebbins, Miss A. C.	5 00	Strattan, Mrs. G. W.	5 00	Sweet, Mrs. P. P.	5 00
Steedman, Mrs. C. J.	5 00	Stratton, Charles E.	5 00	Sweeney, Mrs. F. A.	1 00
Steele, Miss Grace	5 00	Stratton, J. Ford	5 00	Swift, Mrs. James	1 00
Stehr, Mrs. F. W.	5 00	Straus, Mrs. H. N.	5 00	Swift, Mrs. Louisa F.	2 00
Stearns, Mrs. F. K.	5 00	Straus, Mrs. H. G.	5 00	Swift, Mrs. Sarah J.	5 00
Stearns, Mrs. F. W.	5 00	Straus, Oscar S.	5 00	Swift, W. F.	5 00
Stearns, William S.	5 00	Strauss, Albert	5 00	Swinerton, Miss I. D.	2 00
Steinberg, M. C.	1 00	Strauss, Charles	10 00	Swope, Dr. Eugene	1 00
Steinmetz, Charles P.	10 00	Strauss, Frederick	10 00	Swope, Mrs. M. M.	5 00
Steinway, F. T.	3 00	Strauss, Mrs. William	5 00	Sylvester, Mrs. H. J.	2 00
Stephens, Miss Ada	1 00	Strawbridge, Miss Mary D.	2 00	Symons, Amelia M.	3 00
Stephens, Mrs. N. S.	3 00	Streater, Miss K. J.	5 00	Tabor, Henry	1 00
Stephenson, Fred M.	3 00	Street, Mrs. K. A.	5 00	Tabor, Miss Mary	2 00
Stephenson, Mrs. I.	2 00	Street, Mrs. W. D. C.	2 00	Tabor, Mrs. S. R.	2 00
Stephenson, Rob't S.	3 00	Streich, Charles A.	3 00	Tag, Albert	3 00
Sterling, Willis B.	3 00	Stringer, Mrs. E. C.	2 00	Taggart, Rash T.	1 00
Sternberg, Mrs. Anna	1 00	Strong, Mrs. Edw. A.	5 00	Taghlaboe, Charles J.	10 00
Sterna, Alred J.	1 00	Strong, I. I.	2 00	Talbot, Charles W.	2 00
Stevens, Miss B. T.	2 00	Strong, E. W.	5 00	Talbot, Henry S.	5 00
Stevens, Mrs. J. W.	3 00	Strong, Mrs. H. A.	5 00	Talbot, Mrs. H. S.	5 00
Stevens, Leo E.	3 00	Strong, Richard A.	5 00	Talbot, Dr. Fritz B.	2 00
Stevenson, Miss A.	1 00	Strong, Selah B.	5 00	Talbot, Miss Mary	3 00
Stevenson, Mrs. R. H.	1 00	Strong, Theron G.	5 00	Talbot, Richmond	3 00
Steward, Campbell	3 00	Strong, Thomas W.	10 00	Talbot, Mrs. James	10 00
Steward, Miss S.	3 00	Struthers, Miss M. S.	3 00	Talley, Harold B.	2 00
Stewart, A. M.	2 00	Stryker, Miss E. W.	1 00	Tallman, Mrs. F. G.	10 00
Stickley, Mrs. B. F.	2 00	Stuart, Mrs. C. C.	5 00	Tanenbaum, Clara	1 00
Stickney, Mrs. E. C.	3 00	Stuart, F. A.	20 00	Tanenbaum, Moses	3 00
Stillman, Mrs. J. F.	1 00	Studbaker, C. Jr.	5 00	Tapley, Miss A. P.	5 00
Stillman, Miss Laska	1 00	Studley, Helen E.	1 00	Tappan, Mrs. W. H.	5 00
Stillwell, Mrs. L. B.	1 00	Stump, H. Arthur	3 00	Tappan, Charles I.	5 00
Stilwell, Miss M. C.	1 00	Sturges, Frederick Jr.	5 00	Tate, Miss Mary D.	1 00
Stimson, Louis A.	2 00	Sturges, Dr. E. M.	5 00	Taylor, Mrs. A. A.	1 00
Stimson, Miss M. A.	1 00	Sturges, J. H.	5 00	Taylor, F. M. P.	5 00
Stinson, Mrs. C.	1 00	Sturges, Miss L. C.	5 00	Taylor, Dr. James W.	5 00
		Sturys, S. W.	3 00	Taylor, John	5 00
		Stursberg, Julius A.	10 00	Taylor, Mary L.	1 00

List of Members

555

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Taylor, Samuel L.	\$5 00	Trooker, Edmund C.	\$5 00	Vail, Carl M.	\$5 00
Taylor, Mrs. Wm. R.	5 00	Topfll, Miss Anna E.	5 00	Vail, Miss Sara A.	5 00
Taylor, Mrs. W. R. K.	5 00	Tough, John S.	5 00	Valentine, Miss Myra	5 00
Temple, Miss A. B.	5 00	Tower, Mrs. Kate D.	5 00	Valentine, Dr. W. A.	5 00
Tennet, Mrs. George E.	5 00	Tower, Mrs. R. G.	5 00	Van Antwerp, Rev.	
Tennoy, Dr. Benj.	5 00	Townsend, Mrs. C.	5 00	F. J.	5 00
Tennon, Chas. B.	5 00	Townsend, J. B. Jr.	5 00	Van Antwerp, Miss	
Thacher, Mrs. T. D.	5 00	Townsend, J. Henry.	5 00	Gertrude A.	5 00
Thaw, Mrs. Wm., Jr.	5 00	Townsend, Mrs. R.	5 00	Van Bergen, R. E.	5 00
Thayer, John	5 00	Townsend, William S.	5 00	Van Briant, Miss C.	5 00
Thayer, Mr. and Mrs.		Townsend, Henry H.	5 00	Van Brunt, J. R.	10 00
Frank B.	2 00	Tracy, C.	1 00	Vanderbilt, Miss L.	5 00
Thayer, Mrs. Geo. A.	5 00	Tracy, Mrs. J. J., Sr.	5 00	Vanderzift, S. H.	5 00
Thayer, Mrs. George		Traiton, Mrs. F. D.	2 00	Vanderzool, A. E.	5 00
A. Ohio	1 00	Trainer, Charles W.	5 00	van Dyke, Dr. T.	5 00
Thayer, Mrs. G. R.	5 00	Traut, G. N.	5 00	van Eek, B. A.	5 00
Thayer, H. B.	5 00	Traut, George W.	5 00	Van Gerbig, Mrs. B.	5 00
Thayer, Mrs. S. E.	5 00	Travelli, Mrs. C. I.	5 00	Van Ingen, Mrs. F. H.	5 00
Thibault, Mrs. N. J.	5 00	Trostel, Albert I.	5 00	Vann, Hon. Irving G.	5 00
Thorne, Doro F.	10 00	Trotta, Dominic A.	5 00	Van Name, R. G.	10 00
Thomas, Miss B. H.	5 00	Trowbridge, Mrs. N. F.	5 00	Van Name, W. G.	15 00
Thomas, Mrs. F.	5 00	Trowbridge, Wm. B.	5 00	Van Norden, O. H.	5 00
Thomas, Mrs. G. C.	5 00	Truber, Mrs. W. E.	5 00	Van Santvoord, S.	5 00
Thomas, Dr. H. G.	1 50	Trussell, Arthur J.	5 00	Van Sinderen, Mrs.	
Thomas, Mrs. H. N.	5 00	Tucker, Miss B. H.	5 00	A. J.	5 00
Thomas, Miss M. P.	5 00	Tucker, Gilbert M.	1 00	Van Sinderen, Mrs.	
Thomas, Mrs. Theo.	5 00	Tucker, Mrs. H. St.		H. B.	5 00
Thompson, Mrs. D. B.	5 00	George	5 00	Van Sinderen, Mrs.	
Thompson, Mrs. E. F.	5 00	Tuckerman, Alfred	5 00	W. L.	5 00
Thompson, Miss G. S.	5 00	Tuckerman, L. C.	5 00	Van Voorhis, Mrs.	
Thompson, H. Oliver	5 00	Tufts, Mrs. J. A.	5 00	H. N.	5 00
Thompson, Mrs. J. W.	5 00	Tullsen, H.	5 00	Van Wagenen, Mrs.	
Thompson, Miss L. C.	5 00	Turk, Mrs. Walter	10 00	G. A.	2 00
Thompson, Dr. L. M.	5 00	Turnbull, Mrs. R.	5 00	Van Wagenen, H. W.	5 00
Thompson, Miss M. B.	5 00	Turner, Miss H. L.	5 00	Van Wagenen, Mrs.	
Thompson, R. B.	5 00	Turner, Mrs. H. S.	1 00	H. W.	5 00
Thomson, Mrs. J. L.	10 00	Turner, Miss Mary E.	5 00	Van Winkle, E. B.	5 00
Thornbake, Albert	5 00	Tuttle, Carlisle B.	5 00	Van Winkle, Miss	
Thorne, Edwin	5 00	Tuttle, Miss Jane	2 00	Mary D.	5 00
Thorne, Jonathan	5 00	Tuvesson, Nels A.	5 00	Van Wyck, Philip	10 00
Thorne, Samuel, Jr.	5 00	Tweedy, Edgar	5 00	Van Wyck, Prescott	10 00
Thorne, W. V. S.	10 00	Twentieth Century		Varick, Dr. and Mrs.	
Thornton, Miss M. C.	10 00	Club of Detroit	5 00	William R.	10 00
Thorp, Mrs. J. G.	5 00	Twining, Julia	10 00	Vasile, Miss Renee	5 00
Thowless, Herbert L.	5 00	Twitchell, Mrs. H. F.	5 00	Vassar Wake Robin	
Thrall, Mrs. W. G.	5 00	Tyler, H. W.	5 00	Club	5 00
Thresher, J. B.	1 00	Tyler, Mrs. Victor M.	5 00	Vaughan, Mrs. H. G.	5 00
Thurlburt, Mrs. F. B.	5 00	Tyler, Mrs. W. G.	5 00	Vesler, Curtis H.	5 00
Tibbels, Mrs. S. J.	5 00	Tyzer, Dr. F. E.	5 00	Viel, Charles D.	5 00
Tibbitts, Dudley	20 00	Ueland, Mrs. Andreas	5 00	Venill, John	5 00
Tibbitts, Mrs. N. L.	2 00	Uhlen, Edward G.	5 00	Vermont Bird Club	5 00
Tibbitts, Miss S. B.	5 00	Ulman, Ludwig	5 00	Vernon, Miss M.	5 00
Tiemann, Miss E. W.	5 00	Ulmann, Mrs. C. J.	5 00	Vernon, Mrs. R. R.	10 00
Tiffney, Mrs. C. L.	5 00	Underhill, Mrs. W. M.	5 00	Vronn, Charles, Jr.	2 00
Tillinghast, Mrs. C. F.	5 00	Underhill, W. P.	5 00	Vibert, C. W.	2 00
Tinkham, Julian R.	25 00	University Society		Vibort, Miss Evoline	5 00
Twas, E., Jr.	5 00	Inc. (The)	10 00	Vickers, Mrs. H. F.	5 00
Tyler, Miss M. I.	5 00	Upmann, H.	10 00	Victor, Edward W.	5 00
Tabin, B. F.	2 00	Upson, Mrs. Wm. H.	5 00	Victor, Mrs. E. G.	5 00
Tud, J. Kennedy	10 00	Uptegrad, Alex. G.	5 00	Vigo County Bird	
Todd, A. M.	5 00	Usher, C. J.	5 00	Club (The)	5 00
Todd, George W.	5 00	Usher, R. C.	1 00	Voigt, Frederick	5 00
Tompkins, Miss E. M.	5 00	Utley, Mrs. Samuel	5 00	Volger, B. G.	5 00

ANNUAL MEMBERS AND CONTRIBUTORS continued

von Arnim, Miss A.	\$5 00	Waring, Edw. J.	\$5 00	Weiss, Mrs. Amelia K.	\$5 00
von Brecht, Chas. E.	10 00	Warner, Edward P.	5 00	Wells, Mrs. Corde S.	5 00
von Brecht, Frank	5 00	Warren, Frederick W.	5 00	Wellington, Wm. W.	5 00
Vonnegut, George	5 00	Warren, Mrs. G. M.	5 00	Welch, Mrs. A. A.	5 00
Von Saal, R. E.	5 00	Warner, Mrs. H. A.	5 00	Welch, Charles W.	5 00
Von Stade, F. S.	5 00	Warner, Mrs. I. DeV.	5 00	Welch, Dr. George T.	5 00
von Wetberg, F. E.	5 00	Warren, Mrs. L. C.	5 00	Welch, H. K. W.	5 00
Vosburg, Paul S.	5 00	Warren, Miss C.	5 00	Welch, Lewis S.	5 00
Vuilleumier, Dr. J. A.	5 00	Warren, Mrs. E. K.	5 00	Welch, Miss Mary C.	5 00
Wade, J. W.	5 00	Warren, George C.	5 00	Welch, Louise N.	5 00
Wadleigh General Organization	5 00	Warren, Mrs. H. M.	5 00	Welch, Mrs. P. N. Sr.	5 00
Wadsworth, C. S.	35 00	Warren, Mrs. S. D.	5 00	Weld, Mrs. C. Minor	5 00
Wadsworth, R. C. W. (In Memoriam)	15 00	Warren, Mrs. W. P.	5 00	Weld, Mrs. Edw. M.	5 00
Wadsworth, Samuel	5 00	Washington, Mrs. B.	5 00	Weld, Rev. Geo. F.	5 00
Wadsworth, William	5 00	Washington Infirmary Audubon Society	5 00	Wellesley College Bird Club	5 00
Wadsworth, Mrs. W. Austin	10 00	Washington State Federation of Women's Clubs	5 00	Wellington, Mrs. Helen M.	5 00
Wadsworth, W. M.	5 00	Watson, Lawrence W.	5 00	Wellington, Sarah W.	5 00
Wagner, Paul Geo.	5 00	Watson, Leonard C.	5 00	Wells, Mrs. John	5 00
Wald, D. Everett	5 00	Watson, J. A.	5 00	Wells, W. S.	5 00
Wainwright, Miss Abigail E.	5 00	Waterbury Bird Club	5 00	Wells, Robert F.	5 00
Waite, Frank A.	5 00	Waterhouse, Mrs. F. A.	5 00	Welman, H. A.	5 00
Wakely, Dr. W. A.	5 00	Waterman, Miss M. E.	10 00	Weldon, Miss N. M.	5 00
Wakeman, S. H.	5 00	Watertown Bird Club	5 00	Wemple, William Y.	5 00
Wakely, Freden. C.	5 00	Watkins, Miss F.	5 00	Wendell, H. P.	5 00
Walcott, Mrs. M. Y.	5 00	Watnough, Miss A. C.	5 00	Westworth, Mrs. C. F.	5 00
Waldick, J. C. C.	5 00	Watson, L. A.	5 00	Westworth, Ellen L.	5 00
Walden, Mrs. P. T.	5 00	Watrous, Mrs. E.	5 00	Westworth, Mrs. T. F.	5 00
Wales, Edward H.	5 00	Watrous, George D.	5 00	Wescher, Anita N.	5 00
Walker, Carole D.	5 00	Watson, Miss J. C.	5 00	Wessell, Arthur J.	5 00
Walker, Charles C.	5 00	Watson, Mrs. J. S.	10 00	Wesson, Mrs. W. H.	5 00
Walker, C. E.	5 00	Watson, Jane S.	5 00	West, Albert S.	10 00
Walker, Edwin H.	5 00	Watson, Mr. and Mrs. J. V.	5 00	West, Mrs. Charles L.	5 00
Walker, Grant	5 00	Watson, Mrs. R. C.	10 00	West, H. J.	5 00
Walker, Miss H. D.	5 00	Watt, Mrs. H. C.	5 00	West, Dr. William	5 00
Walker, Miss M. C.	5 00	Watts, Mrs. R. W.	5 00	West, Dr. Wm. E.	5 00
Walker, Miss M. C.	5 00	Watts, E. J.	5 00	Westcott, Mrs. R. E.	5 00
Walker, Mrs. T.	10 00	Wearne, Henry	5 00	Westervelt, Louisdas	5 00
Walker, W. L.	5 00	Weaver, Mrs. B. P.	5 00	Winton, Dr. Edward	5 00
Wallace, Frank B.	50 00	Weaver, Dr. W. B.	5 00	Wyatt, Mrs. M. F.	5 00
Wallace, Miss H. E.	5 00	Webb, Dr. Gerald B.	5 00	West Tennessee Au- dubon Society	5 00
Wallace, Herbert I.	5 00	Webb, Mrs. John W.	5 00	West Virginia Au- dubon Society	5 00
Wallace, James N.	5 00	Webb, Mrs. J. W. S.	5 00	Wetmore, Mrs. C. W.	5 00
Wallace, James S.	5 00	Webber, R. H.	5 00	Wetmore, Miss E. M.	5 00
Wallace, Mrs. L. H.	5 00	Webster, Mrs. W. G.	5 00	Wharton, Wm. P.	5 00
Wallner, Louis W.	5 00	Webster, Edwin S.	5 00	Wherry, Mrs. Corodon	10 00
Walter, Mrs. A. M.	5 00	Webster, Mrs. E. S.	5 00	Whitland, Mrs. Ann Maria	5 00
Walter, Clarence R.	10 00	Webster, George K.	10 00	Whoober, C. W. B.	5 00
Walter, Mrs. H. L.	5 00	Webster, Janet S.	5 00	Whoober, Frank P.	5 00
Walton, Frank S.	5 00	Webster, Mrs. J. E. B.	5 00	Whoober, Harvey C.	5 00
Walton, Miss Lily E.	5 00	Webster, L. F.	5 00	Whoober, J. D.	5 00
Wampler, F. C.	5 00	Weeks, Andrew G.	5 00	Whoober, Mrs. J. F.	5 00
Wanamaker, John	5 00	Weeks, Dr. Julia E.	5 00	Whoober, Mrs. O. A.	5 00
Warburg, Mrs. F. M.	5 00	Weeks, W. B. P.	5 00	Whoober, Taz Maass	5 00
Ward, Mrs. Edgar B.	5 00	Weeks, Mrs. W. W.	5 00	Whoober, Mrs. O. A.	5 00
Ward, Edward L.	5 00	Wehrhane, Charles	5 00	Whoober, Mrs. S. H.	5 00
Ward, John	10 00	Wehrle, August	5 00	Whoober, S. H.	5 00
Ward, R. F.	5 00	Wehrle, Augustus I.	5 00	Whoober, Chas. R.	5 00
Warfield, Mrs. W. S. Jr.	5 00	Weld, Mrs. Harriet	5 00	Whoober, William E.	10 00
		Weller, Henry C.	5 00		

List of Members

687

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Woodwright, Mrs. Andrew	\$10 00	Wilcox, Mrs. F. L.	\$5 00	Winslow, Miss Maria L. C.	\$5 00
Woodwright, Miss M. C.	5 00	Wilcox, Mrs. F. P.	10 00	Winston, Owen	1 00
Wright, Caroline A.	2 00	Wilcox, F. P.	2 00	Winton, Helen A.	1 00
Wright, Mrs. H. B.	3 00	Wilcox, Mrs. J. T.	1 00	Winton Society	1 00
Wright, Mrs. C. H.	1 00	Wilcox, T. J.	10 00	Winthrop, Bookman	1 00
White, A. M.	5 00	Wilder, Charles P.	1 00	Winthrop, G. L.	1 00
White, Alfred T.	2 00	Wild Life Protective Society of Milwaukee	10 00	Winthrop, H. R.	1 00
White, Miss Alice	3 00	Wilkinson, Miss G. S.	2 00	Wisconsin Game Protective Association	3 00
White, Fred V. Jr.	3 00	Wilkins, H. A. J.	5 00	Wizer, Mrs. James	1 00
White, Charles E.	3 00	Wilcox, Miss K. A.	2 00	Witherbee, E. W.	2 00
White, Miss H.	3 00	Willcox, William G.	3 00	Witherspoon, Mrs. Eleanor E.	10 00
White, Mrs. H. C.	3 00	Willenbrock, Mrs. F.	3 00	Wittmann, Joseph	5 00
White, Miss H. H.	25 00	Willits, Mrs. J. T.	5 00	Witwer, Mohler	5 00
White, Mrs. H. K. Jr.	3 00	Willits, S. P. Taber	5 00	Wolf, Martin J.	5 00
White, Mrs. J. Wm.	10 00	Williams, Alex. A.	3 00	Wolf, Mrs. L. S.	5 00
White Memorial Foundation	5 00	Williams, Mrs. B. T.	5 00	Woman's Club	5 00
White, Roger S.	5 00	Williams, C. F.	5 00	Wood, Mrs. A. B.	5 00
White, Mrs. Thos. H.	5 00	Williams, Mrs. D. W.	5 00	Wood, Rev. Charles	5 00
White, Mrs. W. C.	5 00	Williams, E. A.	5 00	Wood, Guilford S.	5 00
White, William M.	5 00	Williams, Miss E. F.	5 00	Wood, Henry H.	5 00
White, Mrs. W. T.	5 00	Williams, Dr. E. R.	5 00	Wood, Miss Juliana	10 00
Whitson, Mrs. J. H.	1 00	Williams, Mrs. F. H.	10 00	Wood, Miss Sarah L.	1 00
White, Mr. and Mrs. Arthur F.	20 00	Williams, Frank C.	5 00	Wood, Mrs. R. L.	5 00
Whiting, Sarah E.	5 00	Williams, Mrs. G. H.	5 00	Wood, Mrs. W. A. Jr.	5 00
Whiting, Miss G.	5 00	Williams, George L.	3 00	Wood, Mrs. W. D.	3 00
Whiting, Mrs. J. K.	3 00	Williams, Mrs. G. R.	5 00	Woodbury, Mrs. W. L.	1 00
Whiting, Mrs. S. B.	3 00	Williams, Gibson T.	5 00	Woodcock, John	5 00
Whitson, Alfred R.	3 00	Williams, Martha T.	10 00	Woodcock, Miss M.	5 00
Whitson, Casper	3 00	Williams, Moses Jr.	10 00	Woodruff, Mr. and Mrs. Frederick A.	2 00
Whitney, David C.	3 00	Williams, Ralph B.	5 00	Woods, Edward F.	5 00
Whitney, Mrs. Eli	3 00	Williams, Mrs. S. M.	5 00	Woodsome, Mrs. C. W.	1 00
Whitney, Frank	1 00	Williamstown Bird Club	5 00	Woodward, K. N.	5 00
Whitney, Mrs. G. G.	10 00	Willis, Miss Adeline	5 00	Woodward, Lemiel F.	5 00
Whitney, Mrs. H. O.	5 00	Willis, W. P.	5 00	Woodward, Miss Q.	5 00
Whitson, Joseph B.	3 00	Williston, Mrs. M. L.	2 00	Woodward, Miss S. I.	5 00
Whitson, Thomas H.	15 00	Willson, Miss L. B.	10 00	Woolley, Mrs. P. M.	3 00
Whitson, Miss Mary B. and Miss Bangs	2 00	Willmarth, Mrs. H. M.	5 00	Woolman, H. N., Jr.	5 00
Whitson, Mrs. S. G.	5 00	Wilson, Miss A. E.	5 00	Worcester, Mrs. A.	5 00
Whitson, Abraham D.	5 00	Wilson, Miss A. M.	5 00	Worcester, Wm. L.	2 00
Whittemore, Miss G. B.	5 00	Wilson, Mrs. Etta S.	10 00	Wortherpoon, General W. W.	5 00
Whittemore, Harris	5 00	Wilson, Mrs. Frank	5 00	Wrenn, Philip W.	5 00
Whittemore, James	5 00	Wilson, Mrs. G. G.	15 00	Wright, A. B.	30 00
Whittemore, J. Q. A.	10 00	Wilson, M. Orme	5 00	Wright, Mrs. E. K.	5 00
Whitlow, H. C.	3 00	Wilson, Mrs. M. O.	10 00	Wright, Miss E. M.	10 00
Wier, Mrs. F. L.	3 00	Wilson, Orme Jr.	5 00	Wright, Glen	5 00
Wilberg, F. B.	2 00	Winnett, W. A.	5 00	Wright, Miss Harriet H.	5 00
Wicks, Miss Louise	5 00	Winchendon Woman's Club	1 00	Wright, Miss H. H.	1 00
Wideman, Otto	5 00	Winchester Repeat-Our Arms Co.	1 00	Wright, Mrs. Jas. N.	3 00
Wierman, Miss Sarah	3 00	Windsor, M.	3 00	Wright, Mrs. John D.	1 00
Wigglsworth, Geo.	10 00	Wing, Am S.	3 00	Wright, Mrs. M. A.	1 00
Wigglsworth, Mrs. G.	10 00	Wing, DeWitt C.	20 00	Wright, Mrs. M. O.	1 00
Wigglsworth, S. W.	10 00	Wing, John M.	2 00	Wright, Mrs. M. R.	10 00
Wilmer, Theodora	3 00	Winn, Herbert J.	3 00	Wright, Minturn T.	1 00
Wilbur, Mrs. F. M.	10 00	Winn, Mrs. C. K.	1 00	Wright, Mrs Theo. F.	1 00
Wilbur, Mr. and Mrs. H. O.	5 00	Winship, C. N.	1 00	Wright, W. H. G.	1 00
Wilson, J. B.	2 00	Winslow, Miss I. (In Memoriam)	5 00	Wright, Mrs. Wm. L.	1 00
				Wulsin, Mrs. L. Jr.	1 00

ANNUAL MEMBERS AND CONTRIBUTORS, continued

Wyatt, W. S.	\$ 2.00	York, Miss Georgia.	\$ 5.00	Zabriske, Mrs. A. C.	\$ 5.00
Wyckoff, Mrs. P. B.	5.00	Young, Miss Annette	10.00	Zastrow, George W.	5.00
Wyman, Mrs. C. L.	5.00	Young, Benj. L.	5.00	Zenk, Miss Lillian	5.00
Wyncote Bird Club.	5.00	Young, C. I.	5.00	Ziegler, Frank P.	5.00
Wynne, Mrs. T. A.	5.00	Young, Miss F. W.	3.00	Ziegler, Mrs. Henry	5.00
Wyoming Valley Audubon Society.	5.00	Young, Mrs. F. B.	1.00	Zimmermann, John	5.00
Yale, Mrs. W. T.	5.00	Young, Frank W.	5.00	Zidlikoff, Mrs. O. F.	5.00
Yardley, Miss E. W.	5.00	Young, Harriet G.	10.00		
		Young, Miss M. R.	2.00	Total	\$26,616.54

CONTRIBUTIONS TO THE DEPARTMENT OF APPLIED ORNITHOLOGY

Ams, Charles M.	\$300.00	Haynes, W. DeF.	\$50.00	Robbins, Mr. and Mrs. R. E.	\$5.00
Boulton, Wm. B.	10.00	Hooker, Mrs. E. H.	10.00	Robertson, R. H.	10.00
Cerio, Mrs. George.	20.00	Kahn, Otto H.	25.00	Schermerhorn, F. A.	75.00
Davis, Julian T.	25.00	Lancashire, Mrs. S. H.	25.00	Seville, Robert	100.00
Dows, Tracy	200.00	McCracken, Mrs. J. H.	1.00	Sears, Miss A. I.	5.00
Ewart, Richard H.	100.00	Meyer, Miss H.	100.00	Sprague, Mrs. J.	5.00
Frothingham, Mrs. L. A.	25.00	Miscellaneous	50.00	Thorne, Edwin	50.00
Gibbs, George	50.00	Pagenstecher, Miss F.	10.00	Walcott, F. C.	27.00
Harriman, W. A.	50.00	Proceeds of Lectures	675.36		
Harrison, Alfred C.	300.00			Total	\$3,016.36

CONTRIBUTORS TO THE EGRET FUND

Balance unexpended		Bishop, Miss A. H.	\$ 5.00	Cox, John L.	\$ 5.00
October, 19 1917.	\$870.15	Blackwelder, Elbot	1.00	Cristy, Mrs. H. W.	2.00
Adams, William C.	1.00	Bliss, Miss L. B.	4.00	Crosby, Maunsel S.	10.00
Albright, J. J.	5.00	Bond, Miss M. L.	1.00	Cummings, Mrs. B.	1.50
Allen, Miss E. H.	1.00	Bonham, Miss E. M.	25.00	Cummings, Mrs. H. K.	1.00
Allen, Miss G.	15.00	Bonham, Miss E. S.	5.00	Curie, Charles	5.00
Allen, Miss M. P.	17.40	Bonham, Mrs. H.	25.00	Curtis, Clara K.	2.00
Ames, Mrs. J. B.	5.00	Boydton, Mrs. C. H.	1.00	Cushing, Miss M. W.	1.00
Anderson, F. A.	3.00	Breed, S. A.	2.00	Cutter, Ralph Ladd	5.00
Anderson, Miss M. B.	3.00	Brent, Mrs. D. K.	3.00	Dabney, Robert	2.00
Anonymous	435.00	Brewster, Mrs. B.	10.00	Daniels, Mrs. E. A.	1.00
Auchincloss, Mrs. E. S.	5.00	Bridge, Mrs. L. E.	10.00	Davis, Miss L. B.	3.00
Auchincloss, Mrs. H. D.	5.00	Brock, Mrs. R. C. H.	5.00	Day, Miss Carrie E.	5.00
Audubon Society of Skaneateles	5.00	Brooks, Mrs. S.	5.00	DeForest, Mrs. R. W.	5.00
Ayres, Miss M. A.	10.00	Brown, D. J.	3.00	de la Rive, Miss R.	5.00
Babson, Mrs. C. W.	1.00	Brown, T. Hannal	10.00	Dennie, Miss M. H.	2.00
Bainbridge, Mrs. M. H.	5.00	Browne and Nicholas Bird Club	18.20	DeNormandie, James	5.00
Ballantine, Mrs. R. F.	25.00	Burgess, E. Phillips	3.00	Detroit Bird Protecting Club	5.00
Barnley, Miss Emily	5.00	Burt, Miss Edith	2.00	Dexter, Stanley W.	5.00
Barnes, R. Magoon.	10.00	Bush, W. T.	5.00	District of Columbia Audubon Society	50.00
Baruch, Bernard M.	10.00	Busk, Fred T.	5.00	Doering, O. C.	10.00
Bates, Clifford L.	5.00	Button, Conyers	10.00	Douglass, Mrs. C.	5.00
Baxter, Miss L. W.	5.00	Campbell, Donald	3.00	Durham, J. E.	2.00
Beall, Mrs. L. A.	5.00	Carroll, E. H.	10.00	Dwight, Mrs. M. E.	2.00
Benninghofen, Miss Carrie	5.00	Cass, Miss Harriet	2.00	Eaton, Mary S.	5.00
Biddle, E. C. and C. M.	5.00	Cass, Mrs. James B.	10.00	Edwards, Miss L. M.	5.00
Bignell, Mrs. Effie	1.00	Chittenden, Mrs. S. B.	2.00	Embury, Miss F. C.	5.00
Bird Lovers' Club of Brooklyn	2.00	Christian, Miss S.	10.00	Emery, Miss G. H.	25.00
		Clark, Mrs. Louise	2.00	Emery, Miss G.	1.00
		Clarke, Mrs. E. A. S.	5.00	Emery, Miss L. J.	1.00
		Cochran, J. D.	5.00	Eamons, Mrs. A. H.	10.00
		Cohen, Judge W. N.	5.00	Erasmus, Mrs. R. W.	10.00
		Colton, Miss C. W.	2.00	ad	10.00
		Cotner, Miss M. A.	5.00		

CONTRIBUTORS TO THE EGRET FUND, continued

Ensign, Charles S. (In Memoriam).....	\$2 00	Joslin, Ada L.....	\$2 00	Randolph, Evan.....	\$5 00
Estabrook, Arthur F.....	10 00	Kennedy, Mrs. J. S.....	10 00	Rae, Mrs. James C.....	2 50
Estroff, Mrs. F. F.....	2 00	Kerr, Mrs. J. C.....	5 00	Redmond, Miss E.....	10 00
Foxon, William B.....	4 00	Kerr, Mrs. T. B.....	1 00	Reeves, Dr. W. C.....	10 00
Fowers, Miss Mary.....	5 00	Knowlton, Mrs. M. R.....	13 00	Renwick, E. B.....	5 00
Fowler, Mrs. H. E.....	2 00	Kuhn, Arthur K.....	5 00	Rhoads, S. N.....	1 50
Faulkner, Miss F. M.....	10 00	Kutiban, Fasil F.....	25 00	Rich, Master H. L.....	5 00
Fenster, Miss F. G.....	25 00	Lagowitz, Miss H. L.....	1 00	Richard, Miss E.....	15 00
Ferguson, Alex. C.....	2 00	Lang, Henry.....	5 00	Richards, Mrs. L. S.....	5 00
Ferris, Miss Ida J.....	1 00	Lehman, Meyer H.....	2 50	Richter, William S.....	5 00
Frost, Mrs. Alonzo.....	1 00	Levey, W. C. (In Memoriam).....	5 00	Robins, Miss N. P. H.....	3 00
Furber, Mrs. M. J.....	5 00	Levy, Ephraim B.....	2 00	Robbins, Mr. and Mrs. R. E.....	30 00
Fuster, Mrs. Cora D.....	1 00	Lewis, Mrs. August.....	10 00	Roesler, Mrs. E.....	2 00
Franklin, Mrs. M. L.....	10 00	Lewis, Edwin J., Jr.....	1 00	Rowe, Mrs. H. E.....	20 00
Friedman, Mrs. Max From a "Friend" M. C. A.....	2 00 5 00	Lewis, J. B.....	2 00	Russell, Mrs. W. D.....	3 00
Fries, Miss Emilie.....	1 00	Lincoln, Mrs. Lowell	2 00	Sampson, Miss L. S.....	1 50
Frazier, Stephen.....	5 00	Luchsinger, Mrs. F. B.....	2 00	Saunders, Charles G.....	2 50
Galpin, Miss Ruth.....	5 00	Luttgen, Walther.....	5 00	Savage, A. L.....	5 00
Gard, Julius.....	2 00	McGowan, Mrs. J. E.....	5 00	Schweppe, Mrs. H. M.....	1 00
Gault, B. I.....	2 00	Mann, James R.....	1 00	Seafield, Miss M.....	15 00
Gilbert, Miss Marie.....	2 00	Mansfield, Miss H.....	2 50	Seattle Audubon Society.....	50 00
Gilbert, Mrs. F. M.....	5 00	Marra, Mrs. K.....	5 00	Sexton, Mrs. E. B.....	5 00
Godfrey, Mrs. F. H.....	10 00	Marsh, J. A.....	5 00	Shaw, Mrs. G. H.....	5 00
Goodwin, George R.....	5 00	Marsh, Spencer S.....	1 00	Shepard, Mrs. E. D.....	50 00
Gould, Edwin.....	100 00	Marshall, Mrs. E. O.....	2 00	Shoemaker, H. W.....	10 00
Graves, Miss J.....	2 00	Mason, G. A.....	5 00	Simpson, Miss J. W.....	5 00
Greene, A. E.....	3 50	Mason, Mrs. G. G.....	10 00	Small, Miss A. M.....	2 00
Griffin, Mrs. S. B.....	1 00	Mason, H. L., Jr.....	5 00	Spachman, Miss E. S.....	2 00
Gwalter, Mrs. H. L.....	4 00	May, Miss A.....	2 00	Spalter, Mrs. F. B.....	1 50
Hage, Daniel S.....	1 00	Mellins, J. T.....	2 00	Spong, Mrs. J. J. R.....	50 00
Hager, George W.....	5 00	Miller, Ernest L.....	2 00	Stanton, Mrs. T. G.....	2 00
Hall, Mrs. F. A.....	5 00	Milwaukee Downer College Students.....	15 00	Stewart, Mrs. E. A.....	10 00
Hackness, Miss C. R.....	2 00	Montell, Mr. and Mrs. F. M.....	2 50	Struthers, Miss M. S.....	10 00
Hackness, David W.....	2 00	Moore, Alfred.....	5 00	Sturgis, F. K.....	5 00
Hackness, Miss M. G.....	2 00	Moore, Henry D.....	100 00	Swan, Mrs. J. A.....	5 00
Hackell, Miss H. P.....	2 00	Moore, Robert T.....	50 00	Tate, J. M., Jr.....	1 00
Hastaway, Harry S.....	2 00	Mosle, Mrs. A. H.....	5 00	Thomas, Miss E. H.....	10 00
Henderson, Alexander.....	2 00	Mott, Miss Marian.....	5 00	Thorndike, Mrs. A.....	1 00
Hennrich, Mrs. H.....	5 00	Murray, J. I., Jr.....	1 00	Timmerman, Miss E. E.....	1 50
Hills, Mrs. J. M.....	3 00	Netherland Society for Protection of Birds.....	5 00	Tapefil, Miss A. E.....	5 00
Hindman, Anton G.....	10 00	Nice, Mrs. M. M.....	3 00	Toussaint, Mrs. L. H.....	3 00
Hindman, Miss E. M.....	5 00	Oppenheim, M. H.....	1 00	Tower, Miss E. M.....	5 00
Holt, Mrs. Frank.....	1 00	Osborne, Arthur A.....	1 00	Tower, Mrs. K. D.....	1 00
Hopkins, Miss A. D.....	1 00	Parker, Edward L.....	50 00	Townley, Mrs. J. L.....	1 00
Horr, Miss Elizabeth.....	5 00	Parker, Mrs. W. R.....	3 00	Treat, Miss N. F.....	2 00
Horton, Miss F. E.....	2 00	Patton, Mrs. M. S.....	5 00	Turnbull, Sarah A.....	2 00
Hoyt, Miss G. L.....	5 00	Peck, Dr. E. L.....	1 00	Tyler, W. G.....	2 00
Hughson, Mrs. W.....	10 00	Penfold, Edmund.....	10 00	Upham, Miss E. A.....	1 00
Humphreys, R. S.....	10 00	Pennymer, Mrs. F. G.....	3 00	Vaillant, Mrs. G. H.....	3 00
Hunter, Mrs. W. H.....	2 00	Petty, E. R.....	5 00	van Dyke, Dr. T.....	5 00
Hunter, W. T., Jr.....	2 00	Phelps, Miss Frances.....	10 00	Van Name, W. G.....	30 00
Hugdel, J. C. G.....	5 00	Phillips, Mrs. J. C.....	10 00	Varile, Miss Renee.....	2 00
Jackson, P. T., Jr.....	25 00	Phinney, Charles G.....	3 00	Vermilyea, Miss J. T.....	2 00
James, Walter B.....	10 00	Potter, Hamilton F.....	3 00	Von Zedlitz, Mrs. A.....	2 00
Jewett, William K.....	5 00	Potts, Mrs. W. M.....	5 00	Wadworth, R. C. W. (In Memoriam).....	5 00
Johansen, Mrs. E. R.....	10 00	Putnam, Mrs. A. S.....	1 00	Wadworth, Mrs. W. Annex.....	1 00
Jones, Miss Ella H.....	1 00	Raht, Charles.....	5 00	Wagner, W. A.....	5 00
Joyson, Dr. and Mrs. Julia H.....	1 00			Walker, Mrs. A. H.....	5 00
Jordan, A. H. B.....	20 00				

CONTRIBUTORS TO THE EGRET FUND, continued

Walker, Miss M. A. \$2 00	Whitney, Miss E. F. \$3 00	Wilson, Mrs. G. G. \$2 00
Warfield, Mrs. W. S. 3 00	Whitney, Thomas H. 2 00	Woodward, Dr. S. R. 1 00
Jr. 3 00	Wilkins, Miss L. 2 00	Wright, Miss M. A. 2 00
Watrous, Mrs. E. 1 00	Wilcox, Miss M. A. 10 00	Wright, Mrs. W. F. 1 00
Wharton, William P. 100 00	Williams, George F. 2 00	Young, Miss F. W. 10 00
Whinner, Wilfred 3 00	Williams, Mrs. S. M. 2 00	
Whitehead, T. H. 3 00	Willis, Miss Adeline 15 00	
		\$3,215 75

CONTRIBUTORS TO THE CHILDREN'S EDUCATIONAL FUND

Alms, Mrs. F. H. \$275 00	Duer, Mrs. D. . . . \$45 00	Pirkman, Mrs. D. L. \$40 00
Anonymous Benefactor 20,000 00	DuPont, Gen. C. . . 1,000 00	Reed, Mrs. W. H. . . . 20 00
Bary, James H. . . . 100 00	Eastman, George . . 1,000 00	Russell, W. E. 25 00
Boardman, R. C. . . . 2 00	Emery, Mrs. T. J. . . 100 00	Sage, Mrs. Russell . . . 1,000 00
Bowdoin, Edith G. . . 100 00	Johnson, F. C. . . . 10 00	Sanger, Mrs. C. R. . . . 10 00
Bristol, J. L. D. . . . 5 00	Lang, Albion F. . . . 50 00	Thayer, Mrs. L. R. . . . 25 00
Cate, Louise W. . . . 10 00	MacArthur, J. R. . . . 25 00	Trotter, Mrs. E. 100 00
Coe, Richard M. . . . 100 00	Mitchell, Mary. . . . 100 00	Underwood, H. O. . . . 100 00
Corning, Mary L. . . . 25 00	Mudge, F. W. 100 00	Williams, J. D. 20 00
Dane, Mrs. L. B. . . . 200 00	Parke, Edward L. . . 100 00	
Drummond, Mary. . . 50 00	Phillips, Mrs. J. C. 25 00	Total \$26,275 00

⑤ 192-A6
 VB

QL
671
A82
v.20

Audubon

Biological
& Medical
Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

STORAGE

