

Report of the Spring Migration of 1912

COMPILED BY WITMER STONE

Forty-nine schedules were returned in 1912. We again thank those who are aiding in this important work and urge them to interest others in the study. Names of capable observers should be sent to Mr. Wm. E. Roberts, Chairman of the D. V. O. C. Migration Committee, Academy of Natural Sciences, Logan Square, Phila., who will furnish schedules or answer inquiries regarding the work.

The record increases in value with each year and should not be allowed to deteriorate. The observers for 1912 were as follows.

New Jersey.

Cape May, H. Walker Hand.
Atlantic City, Norma S. Cromie.
Vineland, Mrs. Alice K. Prince.
Downtown, Wm. W. Fair.
Yardville, Rachel E. Allinson.
Bordentown, Minnie V. Flynn.
Three miles S. E. of Trenton, Richard M. Abbott.
Beverly, J. Fletcher Street.
Bernardsville, J. D. Kuser.
Englewood, W. W. Grant.
Rancocas, Frances B. Stokes and Emily Haines.
Moorestown, Anna A. Mickle.
Moorestown, M. Albert Linton.
Moorestown, Margaret S. Roberts.
Moorestown, Elizabeth A. Roberts.
Moorestown, Agnes M. Wierman.
Haddonfield, Mr. and Mrs. Robert T. Moore.
Camden, Julian K. Potter.

Pennsylvania.

Kennett Square, Charles J. Pennock.
 Concordville, Katherine R. and Elizabeth P. Styer.
 West Chester, Isaac G. Roberts.
 West Chester (near), Mrs. Hugh P. Brinton.
 Westtown, Miss Sarah C. De Haven.
 Swarthmore, Mary S. Pusey.
 Swarthmore, Eleanor A. Bye.
 Swarthmore, Samuel C. Palmer.
 Crum Creek, S. Earl Riddle.
 Lansdowne, John D. Carter.
 Lansdowne, Edwin L. Nicholson.
 Media, Lydia G. Allen.
 Moylan, Benj. F. Whitson.
 Ardmore, Wm. L. Baily.
 Haverford, Wm. J. Serrill.
 Wayne, Mary K. Baker.
 Wayne, Leonard S. Pearson.
 Rosemont, Saml. Scoville, Jr.
 Bryn Mawr, Emily H. Thomas.
 West Philadelphia, Leonard S. Pearson.
 West Philadelphia, Thomas R. Hill.
 Darby, Jesse E. Packer.
 Holmesburg, Henry W. Fowler.
 Frankford, Richard F. Miller.
 Fox Chase, Alexander Patman.
 George School, W. W. Swayne.
 Collegeville, Henry Fox.
 Doylestown, Russell Mason.
 Norristown, Martha Simpson.
 Harrisburg, A. F. and Elizabeth A. Satterthwait.
 Lopez, Otto Behr.

The month of February was marked by temperature slightly below normal. The first half of the month was the colder and snow and ice covered the ground until the 18th. A marked rise in temperature occurred on the 25th bringing numbers of Purple Grackles and Robins. Then the temperature fell, reach-

ing the lowest point March 2-4, with a mean of 24° and snow fall on March 4, 5 and 6. No migration was noted until the 8th when the snow had disappeared and flocks of Red-winged Blackbirds passed north. A gradual rise culminating on the 18th brought many Fox Sparrows, Field Sparrows, Kildeers and Flickers.

A sudden fall brought the mean temperature to 32° on the 21st and more or less rain prevailed. In spite of this a marked rise in temperature culminating on March 29 brought a flight of Flickers, Field, Chipping and Vesper Sparrows.

A marked warm wave on April 6 brought the Hermit Thrushes and one on April 16 the Ruby-crowned Kinglets. The great migration waves of the month however were on the 22d and 27th with but slight rise in temperature and cloudy weather. The former movement consisted of House Wrens, Thrashers, Yellow Palm Warblers, Barn Swallows, Chimney Swifts and Towhees; the latter of Wood Thrushes, Catbirds, Maryland Yellow-throats, Ovenbirds, and Black and White Warblers.

Then came a period of cold rain, the temperature rising again by May 2, and an immense migration of Warblers, etc. on May 3 and 4 then rain until May 9 and the greatest movement of the season on May 11, closing the migration.

The fact brought out in last year's report, that birds moving at the same time are affected in the same way by weather conditions so that early migrants may be late and late migrants early or vice versa, is clearly demonstrated by this year's record as well as the fact that the time of arrival except in the early migrants, which winter just to the south of us, does not vary to any great extent.

These facts may be seen by glancing down the appended list in which the species are arranged in order of their arrival, the dates being the average of eleven years' bulk arrivals at Philadelphia computed in the usual way. The + or - figures represent the number of days that the 1912 dates were earlier or later than the average.

Purple Grackle	Feb. 28	+	1
Robin	Mar. 1	-	5
Meadowlark	" 7	-	8
Fox Sparrow	" 7	-	9
Red-winged Blackbird	" 9	-	5
Flicker	" 14	-	6
Phoebe	" 21	-	2
Cowbird	" 24	-	3
Kingfisher	" 29	-	7
Vesper Sparrow	" 30	-	1
Chipping Sparrow	" 31		0
Sapsucker	Apr. 7	-	2
Hermit Thrush	" 11	+	5
Ruby-crowned Kinglet	" 14		0
Yellow Palm Warbler	" 17		0
Towhee	" 19	-	2
Barn Swallow	" 22	+	1
Bank Swallow	" 23	+	2
Chimney Swift	" 23	+	3
Brown Thrasher	" 23	+	2
House Wren	" 26	-	1
Black and White Warbler	" 26	-	1
Spotted Sandpiper	" 27	-	1
Maryland Yellow-throat	" 28		0
Grasshopper Sparrow	" 29	-	3
Yellow Warbler	" 30	+	2
Catbird	" 30	+	2
Ovenbird	" 30	+	2
Wood Thrush	" 30	+	2
Redstart	May 4	+	2
Black-throated Blue Warbler	" 4		0
Parula Warbler	" 4	+	1
Crested Flycatcher	" 4	+	1
Kingbird	" 5	+	1
Baltimore Oriole	" 5	-	2
Scarlet Tanager	" 6	+	2
Blue-winged Warbler	" 6	+	3
Chestnut-sided Warbler	" 7	+	3

Red-eyed Vireo	"	8	+	3
Chat	"	8	-	3
Rose-breasted Grosbeak	"	8	-	1
Indigobird	"	8	-	2
Magnolia Warbler	"	8	-	3
Bobolink	"	9	-	2
Olive-backed Thrush	"	9	-	2
Hummingbird	"	10		0
Wood Pewee	"	11		0
Yellow-billed Cuckoo	"	11	-	3
Blackpoll Warbler	"	12	+	1
Canada Warbler	"	12	+	1

Two striking features of this spring's migration were the scarcity of Bluebirds and the unusual abundance of Goldfinches in April.

NAME.	Ranococas, N. J. E. 16; N. 4.	Moorestown, N. J. E. 12.	Camden, N. J. N. 0; E. 2.	Media, Pa. S. 2; W. 12.	Swarthmore, Pa. S. 3; W. 10.	Lansdowne, Pa. S. 1; W. 6.	Darby, Pa. S. 4; W. 8.	Haverford- Ardmore, Pa. N. 4; W. 8.	Bryn Mawr- Rosemont, Pa. N. 4; W. 9.	Wayne, Pa. N. 6; W. 11.	West Phila. N. 0; W. 2.	Frankford, Phila. N. 5; E. 5.	Fox Chase, Phila. N. 9; E. 4.	Bulk Arrival Phila., 1912.
Canada Goose	Feb. 26	Mar. 8	Mar. 24	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Green Heron	May 1	May 3	Apr. 20	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Night Heron	Apr. 14	Apr. 21	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Spotted Sandpiper	Apr. 27	Apr. 28	Apr. 21	Apr. 28	Apr. 25	Apr. 21	May 7	. . . . .	May 6	May 18	Apr. 20	. . . . .	Apr. 28
Solitary Sandpiper	May 2	May 19	May 4	May 18	May 18	Apr. 26	. . . . .	. . . . .	May 5	May 18	May 1	. . . . .	May 3
Killdeer	Mar. 18	Mar. 14	Apr. 23	Mar. 18	Mar. 18	Mar. 30	Mar. 18	. . . . .	Apr. 12	. . . . .	May 6	. . . . .	Mar. 18
Dove	Mar. 18	Apr. 1	Mar. 17	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar. 27	. . . . .	Mar. 23
Osprey	Apr. 11	Apr. 20	. . . . .	. . . . .	Apr. 2	Apr. 7	. . . . .	. . . . .	. . . . .	Apr. 14	. . . . .	. . . . .
Turkey Vulture	Res.	Mar. 29	. . . . .	. . . . .	. . . . .	Apr. 5	Mar. 16	. . . . .	. . . . .	. . . . .	May 15	. . . . .	May 14
Yellow-billed Cuckoo	May 9	May 28	May 7	. . . . .	. . . . .	May 5	Mar. 16	. . . . .	. . . . .	. . . . .	May 18	. . . . .	. . . . .
Black-billed Cuckoo	May 12	. . . . .	. . . . .	. . . . .	. . . . .	Apr. 5	Mar. 16	. . . . .	. . . . .	. . . . .	May 18	. . . . .	. . . . .
Kingfisher	Apr. 13	Mar. 31	. . . . .	. . . . .	. . . . .	Apr. 28	Apr. 5	Mar. 16	Mar. 29	Apr. 7	May 4	. . . . .	Apr. 5
Yellow-bellied Sapsucker	Apr. 16	. . . . .	. . . . .	. . . . .	Apr. 14	Apr. 27	Apr. 26	. . . . .	. . . . .	Apr. 6	. . . . .	Apr. 9
Red-headed Woodpecker	Apr. 14	. . . . .	. . . . .	. . . . .	May 12	May 9	May 19	. . . . .	. . . . .	Apr. 1	Apr. 9	Apr. 9
Flicker	Mar. 27	Mar. 20	Apr. 27	Mar. 19	Mar. 23	Feb. 18	. . . . .	. . . . .	Mar. 19	Mar. 30	Res.	Mar. 25	Mar. 20
Whip-poor-will	Apr. 30	May 2	. . . . .	. . . . .	. . . . .	Apr. 30	May 1	. . . . .	Apr. 27	May 26	Apr. 27	. . . . .	Apr. 30
Nighthawk	May 16	. . . . .	. . . . .	. . . . .	. . . . .	May 3	. . . . .	May 9	. . . . .	Apr. 27	. . . . .	May 6
Chimney Swift	Apr. 16	Apr. 20	Apr. 21	Apr. 16	Apr. 15	Apr. 24	Apr. 20	Apr. 1	Apr. 24	Apr. 28	Apr. 20	Apr. 27	Apr. 20
Hummingbird	May 11	May 3	. . . . .	May 20	May 19	Mar. 11	. . . . .	. . . . .	. . . . .	. . . . .	May 6	. . . . .	May 10
Kingbird	May 7	May 3	May 11	May 5	May 1	May 1	May 4	. . . . .	May 4	. . . . .	. . . . .	. . . . .	May 4
Crested Flycatcher	May 4	Apr. 28	May 4	Apr. 28	May 4	May 4	May 3	May 3	May 5	May 11	May 1	. . . . .	May 3
Phoebe	Mar. 28	. . . . .	Mar. 23	Mar. 23	Mar. 23	Mar. 31	Mar. 27	Mar. 19	Mar. 27	Apr. 13	Mar. 23	Apr. 3	Mar. 23

¹ One seen Feb. 20.

NAME.	Ranocas, N. J.	Moorestown, N. J.	Camden, N. J.	Media, Pa.	Swarthmore, Pa.	Lansdowne, Pa.	Darby, Pa.	Haverford and Ardmore, Pa.	Bryn Mawr and Rosemont, Pa.	Wayne, Pa.	West Phila.	Frankford, Phila.	Fox Chase, Phila.	Bulk Arrival Phila., 1912.
Cliff Swallow	Apr. 22	Apr. 21	Apr. 21	May 3	Apr. 14	Apr. 11	May 1	Apr. 28	May 19	Apr. 19	May 18	Apr. 20	May 7	Apr. 21
Barn Swallow	Apr. 15	May 2	Apr. 27	Apr. 14	Apr. 14	Apr. 11	Apr. 11	Apr. 13	Apr. 25	Apr. 25	Apr. 13	Apr. 13	May 10	Apr. 15
Tree Swallow	Apr. 15	May 2	Apr. 27	Apr. 14	Apr. 14	Apr. 11	Apr. 11	Apr. 13	Apr. 25	Apr. 25	Apr. 13	Apr. 13	May 10	Apr. 15
Bank Swallow	Apr. 15	May 2	Apr. 27	Apr. 14	Apr. 14	Apr. 11	Apr. 11	Apr. 13	Apr. 25	Apr. 25	Apr. 13	Apr. 13	May 10	Apr. 15
Rough-winged Swallow	Apr. 15	May 2	Apr. 27	Apr. 14	Apr. 14	Apr. 11	Apr. 11	Apr. 13	Apr. 25	Apr. 25	Apr. 13	Apr. 13	May 10	Apr. 15
Cedarbird	Apr. 15	May 2	Apr. 27	Apr. 14	Apr. 14	Apr. 11	Apr. 11	Apr. 13	Apr. 25	Apr. 25	Apr. 13	Apr. 13	May 10	Apr. 15
Red-eyed Vireo	May 4	May 2	May 5	May 4	May 4	May 4	May 4	June 8	May 11	May 4	May 11	May 5	May 4	May 4
Warbling Vireo	May 4	May 11	May 5	May 4	May 4	May 4	May 4	May 5	May 3	May 3	May 1	May 14	May 4	May 4
Yellow-throated Vireo	May 4	May 11	May 5	May 4	May 4	May 4	May 4	May 5	May 3	May 3	May 1	May 14	May 4	May 4
Solitary Vireo	May 4	May 11	May 5	May 4	May 4	May 4	May 4	May 5	May 3	May 3	May 1	May 14	May 4	May 4
White-eyed Vireo	Apr. 30	Apr. 28	Apr. 27	May 3	May 4	Apr. 28	Apr. 28	Apr. 28	Apr. 28	Apr. 28	Apr. 27	Apr. 27	Apr. 27	Apr. 28
Black and White Warbler	Apr. 28	Apr. 20	Apr. 20	Apr. 28	Apr. 28	Apr. 26	Apr. 16	Apr. 28	Apr. 28	Apr. 28	Apr. 27	Apr. 27	Apr. 30	Apr. 27
Worm-eating Warbler	May 12	May 5	May 8	May 4	May 4	May 9	May 5	May 4	May 4	May 4	May 11	May 5	May 4	May 4
Blue-winged Warbler	May 12	May 5	May 8	May 4	May 4	May 9	May 5	May 4	May 4	May 4	May 11	May 5	May 4	May 4
Parula Warbler	May 7	Apr. 28	Apr. 27	May 5	May 5	Apr. 26	May 1	May 5	May 3	May 3	Apr. 28	May 14	May 3	May 3
Yellow Warbler	Apr. 26	Apr. 28	Apr. 24	May 5	May 5	Apr. 27	Apr. 25	May 5	May 3	May 3	Apr. 27	May 14	May 10	Apr. 28
Black-throated Blue Warbler	May 11	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4
Myrtle Warbler	Apr. 28	Apr. 21	Apr. 7	May 1	Apr. 21	Apr. 26	Apr. 26	Mar. 17	Apr. 17	Apr. 21	Apr. 27	Apr. 27	Apr. 20	Apr. 26
Magnolia Warbler	May 12	May 8	May 15	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 11
Chestnut-sided Warbler	May 9	May 4	May 8	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4	May 4
Black-poll Warbler	May 10	May 11	May 19	May 11	May 11	May 11	May 18	May 9	May 12	May 12	May 4	May 4	May 10	May 11
Blackburnian Warbler	May 10	May 10	May 8	May 11	May 11	May 11	May 18	May 9	May 12	May 12	May 4	May 4	May 10	May 11
Black-throated Green Warbler	Apr. 30	May 4	May 1	May 4	May 4	May 4	May 4	May 4	May 4	May 2	May 4	May 4	May 4	May 4

NAME.	Hancock, N. J.	Moorestown, N. J.	Camden, N. J.	Media, Pa.	Swarthmore, Pa.	Lansdowne, Pa.	Darby, Pa.	Haverford and Ardmore, Pa.	Bryn Mawr and Rosemont, Pa.	Wayne, Pa.	West Phila.	Frankford, Phila.	Fox Chase, Phila.	Bulk Arrival at Phila., 1912.
Pine Warbler	May 11	Apr. 16					Apr. 15	Apr. 20	Apr. 11	Apr. 12	Apr. 12	Apr. 15		Apr. 17
Yellow Palm Warbler	Apr. 17	Apr. 21	Apr. 19		Apr. 21		Apr. 15	Apr. 20	Apr. 11	Apr. 12	Apr. 12	Apr. 15		Apr. 17
Prairie Warbler	Apr. 28	May 1			May 12		May 4				Apr. 27			
Ovenbird	Apr. 29	Apr. 27	Apr. 27	Apr. 28	Apr. 21	Apr. 28	Apr. 28	Apr. 28	Apr. 28	Apr. 27	May 4			Apr. 28
Water Thrush	May 14	May 5	May 5	Apr. 28	May 5	May 12	May 1	May 12	Apr. 21	Apr. 27	May 10			May 5
Kentucky Warbler				May 5	May 4	May 4	May 11	May 5	May 9	May 5	May 11			May 5
Maryland Yellow-throat	May 1	Apr. 27	Apr. 21	Apr. 28	Apr. 28	Apr. 27	Apr. 21	Apr. 28	Apr. 28	Apr. 21	May 1			Apr. 28
Chat	May 11	May 1		May 17	May 4	May 11	May 11		May 19	May 19	May 18			May 11
Canada Warbler		May 10	May 10		May 11		May 11		May 12	May 11	May 11			May 11
Redstart	May 10	Apr. 28	Apr. 27	May 5	Apr. 28		May 4	May 5	May 5	Apr. 28	May 4			May 2
Catbird	Apr. 30	Apr. 27	Apr. 28	Apr. 27	Apr. 28	Apr. 30	Apr. 28	Apr. 28	Apr. 28	Apr. 28	Apr. 28	May 1		Apr. 27
Brown Thrasher	Apr. 19	Apr. 21	Apr. 16	Apr. 18	Apr. 21	Apr. 27	Apr. 16	Apr. 20	Apr. 15	Apr. 14	Apr. 14			Apr. 21
House Wren	Apr. 14	May 2	Apr. 28	Apr. 17	Apr. 27	Apr. 24	Apr. 21	Apr. 26	Apr. 28	Apr. 24	Apr. 28			Apr. 27
Long-bill'd Marsh Wren		May 19	May 17											May 1
Ruby-crowned Kinglet		Apr. 14	Apr. 16	Apr. 14	Apr. 14	Apr. 12	Apr. 6	Apr. 15	Apr. 29	Apr. 13	Apr. 13			Apr. 14
Wood Thrush	May 10	Apr. 30	Apr. 27	Apr. 28	Apr. 27	Apr. 27	Apr. 27	Apr. 28	May 3	Apr. 27	May 5			May 1
Wilson's Thrush	May 5	May 4		Apr. 28	Apr. 30	Apr. 27	Apr. 28	May 5	May 3	Apr. 27	May 4			May 1
Gray-checked Thrush		May 11					May 19	May 18			May 18			
Olive-backed Thrush		May 14			May 25			May 18		May 8	May 18			May 11
Hermit Thrush	Apr. 3	Apr. 15	Apr. 6	Apr. 28	Apr. 4	Mar. 15	Apr. 6	Apr. 5	Apr. 13	Apr. 12	Mar. 23			Apr. 6
Robin	Res.	Mar. 18	Res.	Mar. 10	Feb. 27	Feb. 27	Mar. 18	Mar. 15	Mar. 12					Mar. 6
Bluebird	Res.	Mar. 17	Mar. 17	Feb. 25	Feb. 11	Mar. 3	Mar. 20	Feb. 17	Mar. 12	Mar. 14	Mar. 18			Mar. 14

Holboell's Grebe, *Colymbus holboelli*. Kennett Square, one killed, February 15 (*Pennock*).

Horned Grebe, *Colymbus auritus*. Fish House, N. J., April 20 (*Potter*).

Pied-billed Grebe, *Podilymbus podiceps*. Delaware River at Riegelsville, March 30 (*Carter*); Fish House, N. J., March 31–April 6 (*Potter*); George School, April 1 (*Swayne*); Beverly, April 9 (*Street*); Maurice River, N. J., Oct. 12 (*Prince*).

Loon, *Gavia immer*. Petty's Island, N. J., one shot February 21 (*Miller*); Fish House, N. J., May 4–5 (*Potter*).

Herring Gull, *Larus argentatus*. Bridesburg, September 1–May 19 (*Miller*); Delaware River, Oct. 4 to May 25 (*Mickle*); Oct. 12 to May 13 (*Potter*); one at Swarthmore, March 23 (*Palmer*); up the Delaware as far as Holland, March 29 (*Carter*); five flying northeast over Darby, April 6 (*Packer*); Yardville, N. J., one, April 14 (*Allinson*).

Caspian Tern, *Sterna caspia*. Two shot on the Brandywine at Lenape, Chester Co., Pa., September 28 (*R. P. Sharples*).

Common Tern, *Sterna hirundo*. Four on Delaware at Chester, May 17 (*Carter*); Fish House, N. J., May 7, 9 and 12, one or two each day (*Miller*).

Wilson's Petrel, *Oceanites oceanicus*. Cross Ledge Light, Delaware Bay, many flying about fishing boats, July 4 (*Prince*).

Merganser, *Mergus americanus*. Fish House, N. J., Feb. 12–May 25 (*Potter*); Schuylkill River, Phila., January 2–February 24 (*Fowler*); Buckshutem, N. J., May 28 (*Prince*).

Black Duck, *Anas rubripes*. A pair, Rancocas, N. J., January 31 (*F. B. Stokes*).

Green-winged Teal, *Nettion carolinense*. Doylestown, March 30 (*Mason*).

Pintail, *Dafla acuta*. Fish House, N. J., large flocks, February 21 (*Miller*).

Wood Duck, *Aix sponsa*. Holmesburg, April 9 (*Miller*); Doylestown, May 14 (*Mason*).

Redhead, *Marila americana*. Pensauken Creek, N. J., common, November 4–5 (*Miller*); Fish House, N. J., March 23–May 10 (*Potter*).

Canvasback, *Marila valisineria*. Fish House, N. J., March 23–31 (*Potter*).

Florida Gallinule, *Gallinula galeata*. Moorestown, N. J. Male found dead May 4 (*Mickle*); Richmond, nest and ten highly incubated eggs June 1; Bridesburg, nest with eight eggs June 12 (*Miller*).

Coot, *Fulica americana*. Caught in dense fog, Aramingo, November 11 (*Miller*).

Woodcock, *Philohela minor*. Cape May, N. J., scarce only saw 7 or 8 during the entire spring (*Hand*); Maurice River, April 25 (*Prince*); George School, April 13 (*Swayne*).

Wilson's Snipe, *Gallinula delicata*. Arrived Cape May, N. J. March 17, large flight May 7 and 8 (*Hand*); Barnegat, N. J. April 8 (*Pearson*); Beverly, N. J., April 7 (*Street*); Tinicum and Bridesburg, March 23 (*Miller*).

Least Sandpiper, *Pisobia minutilla*. Cape May, N. J., May 8 (*Hand*); Camden, N. J., May 8–May 26 (*Potter*); Bridesburg, May 18 (*Miller*); Doylestown, May 5 (*Mason*).

Semipalmated Sandpiper, *Ereunetes pusilla*. Camden, N. J., May 19 (*Potter*).

Field Plover, *Bartramia longicauda*. Bred at Westtown, Spring 1910 (*S. N. Rhoads*).

Hudsonian Curlew, *Numenius hudsonicus*. Cape May, N. J., April 14 and May 21 (*Hand*).

Greater Yellow-legs, *Totanus melanoleucus*. Pensauken Creek, N. J., May 4 (*Miller*).

Willet, *Catoptrophorus semipalmatus semipalmatus*.¹ Cape May, N. J., March 22, also flocks August 20–24, 1911 (*Hand*); Cape May, N. J., one Aug. 27, 1911 (*Potter*).

Black-bellied Plover, *Squatarola squatarola*. Cape May, N. J., May 8 and 21 (*Hand*).

Killdeer, *Oxyechus vociferus*. Buckshutem, N. J., some remained all winter (*Prince*); Pensauken, N. J., common November 4 and 5, and two pair bred at Holmesburg (*Miller*).

Semipalmated Plover, *Aegialitis semipalmata*. Three flying up Delaware River at Chester, May 16, weather foggy, wind N. E. (*Carter*); Camden, N. J., two frequented a meadow May 21–May 26 (*Potter*).

¹ Western Willet, *C. s. inornatus*?

Bob-white, *Colinus virginianus virginianus*. Plentiful at Cape May, N. J., keeping to the woods feeding on acorns (*Hand*).

Mourning Dove, *Zenaidura macroura carolinensis*. Moorestown, December 25, 1911 (*Hallett*).

Marsh Hawk, *Circus hudsonius*. Doylestown, November 11 and April 5 (*Mason*).

Cooper's Hawk, *Accipiter cooperi*. Gladwyn, eggs May 13 (*Miller*).

Red-tailed Hawk, *Buteo borealis borealis*. Camden, N. J., last seen March 2 (*Potter*).

Red-shouldered Hawk, *Buteo lineatus lineatus*. Camden, N. J., last seen March 3 (*Potter*).

Broad-winged Hawk, *Buteo platypterus*. Wayne, arrived April 21 (*Pearson*); Darby, one on April 25 (*Packer*); Holmesburg, nest with two eggs, May 20 (*Miller*); pair bred at Gladwyn (*Miller*).

Rough-legged Hawk, *Archibuteo lagopus sanctijohannis*. Tinicum, March 23, and Holmesburg, March 27 (*Miller*); one at Castle Rock, April 5 (*Riddle*); one on Darby Creek, April 20 (*Baily*).

Bald Eagle, *Haliaeetus leucocephalus leucocephalus*. Gathering nesting material, Dennis Creek, Cape May Co., N. J., April 5 (*Hand*); Buckshutem, N. J., May 28, taking fish from Osprey (*Prince*); Beverly, May 30 (*Street*); Holmesburg, November 2 (*Fowler*); seen January 10, 1911, near Stroad's Mill, E. Bradford Twp., Chester Co., Pa., afterwards shot (*S. C. DeHaven*); Bernardsville, N. J., May 31 (*Kuser*).

Golden Eagle, *Aquila chrysaetos*. One shot at Germantown, November 1, and examined by Francis Windle.

Barn Owl, *Aluco pratincola*. Camden, N. J., Jan. 11, 1912 (*Potter*); Lansdowne, January 1 and March 26 (*Carter*); Huntingdon Valley, May 15 (*Miller*).

Long-eared Owl, *Asio wilsonianus*. George School, one found dead, February 16 (*Swayne*).

Barred Owl, *Strix varia varia*. Pensauken, N. J., Oct. 13, 1911 (*Potter*).

Saw-whet Owl, *Cryptoglaux acadica acadica*. Camden, N. J., Dec. 3, 1911 (*Potter*).

Yellow-billed Cuckoo, *Coccyzus americanus americanus*. Cheltenham, eggs, May 31 (Miller).

Black-billed Cuckoo, *Coccyzus erythrophthalmus*. Moorestown, N. J., Aug. 8, 1911, found dead (Mickle).

Belted Kingfisher, *Ceryle alcyon alcyon*. Holmesburg, January 23 (Miller).

Hairy Woodpecker, *Dryobates villosus villosus*. Camden, N. J., nested (Potter); Moorestown, N. J., May 3 (Mickle); two nests with eggs, Holmesburg, May 1 (Miller).

Downy Woodpecker, *Dryobates pubescens medianus*. Nest with eggs Holmesburg, May 10 (Miller).

Yellow-bellied Sapsucker, *Sphyrapicus varius varius*. Doylestown, January 7 (Mason).

Red-headed Woodpecker, *Melanerpes erythrocephalus*. Kennett Sq., January 23, one (Pennock); Buckshutem, N. J., young bird November 3 (Prince).

Flicker, *Colaptes auratus luteus*. Doylestown, seen all winter (Mason); Holmesburg, January 24 and February 26 (Fowler); Ardmore, January 14 (Baily); Haverford, January 27 (Serrill); Vineland, N. J., a few all winter (Prince); Holmesburg, January 23 (Miller).

Chimney Swift, *Chaetura pelagica*. Moorestown, N. J., Oct. 7, 1911 (Mickle).

Ruby-throated Hummingbird, *Archilochus colubris*. Bustleton, nest and eggs June 22 (Miller).

Phoebe, *Sayornis phoebe*. Frankford, December 13 (Miller).

Acadian Flycatcher, *Empidonax acadicus*. Bustleton, eggs June 12 (Miller).

Horned Lark, *Otocoris alpestris alpestris*. Six at Rancocas, N. J., January 29, 30 (Stokes and Haines); Camden, N. J., flock of 20, Feb. 12 (Potter); Kennet Sq., flock of 10, January 5 (Pennock); Concordville, January 4 (Styer); Flock of 75 at Villa Nova, January 14 (Baily); flock of 17 at Darby, February 9 (Packer); Doylestown, flock on January 1 (Mason); Delaware City, Del., February 5 (Pennock).

Blue Jay, *Cyanocitta cristata cristata*. Camden, N. J., two Jan. 14 (Potter); Trenton, N. J., one March 11, common in April; none during winter (Abbott); occasional at Wayne until

April, then common (*Pearson*); Frankford, none from October until April (*Miller*); none until March 30 at Media (*Allen*); none at Swarthmore until March 16 (*Palmer*); Darby not until April 15 (*Packer*).

Crow, *Corvus brachyrhynchos brachyrhynchos*. Young hatched April 20 Frankford (*Miller*).

Fish Crow, *Corvus ossifragus*. Pensauken Creek, N. J., eggs May 19 (*Miller*).

Starling, *Sturnus vulgaris*. Abundant all winter in northeastern Philadelphia, and twenty nests were found in late April and May, usually in Flickers' holes. Young hatched by May 10, second sets laid after middle of June (*Miller*); George School, present all winter, increasing in numbers, several nests (*Swayne*); Phoenixville, two June 9 and breeding at Wayne May 1 (*Pearson*); four at Yardville, N. J., in autumn and early spring (*Allinson*); Westtown, occasionally since January 3, at one time a flock of 20 (*S. C. De Haven*); Holmesburg, flock all winter (*Fowler*); Swarthmore, appeared for the first time January 6 (*Palmer*); Cape May, N. J., nesting March 8 (*Hand*).

Bobolink, *Dolichonyx oryzivorus*. Moorestown, N. J., August 15, 1911 (*Mickle*).

Cowbird. Atlantic City, N. J., January 13 (*Cromie*).

Baltimore Oriole, *Icterus galbula*. One found dead at Haddonfield, N. J., January 16, 1912 (*R. T. Moore*).

Meadowlark, *Sturnella magna magna*. Nest with young just hatching, Mt. Moriah, May 26 (*Hill*).

Purple Grackle, *Quiscalus quiscula quiscula*. Holmesburg, January 22 (*Fowler*).

Purple Finch, *Carpodacus purpureus purpureus*. West Chester, September 10 to April 11, large flocks March 2 to April 11 (*Roberts*); flocks observed at Rosemont February 24, March 3, 10 and 17 (*Scoville*); very common at Haddonfield, N. J., November to January (*Moore*); Doylestown, flock of 11, February 23 (*Mason*); Wayne, March 30–May 11 (*Pearson*); Trenton, N. J., Feb. 9 to April 25 (*Abbott*); Bernardsville, N. J., April 24 (*Kuser*); Moorestown, N. J., Feb. 1–April 7 (*Wierman*); Camden, N. J., Dec. 5 and April 16 (*Potter*); three at Swarthmore January 28 (*Palmer*); Lansdowne, April 20 (*Nicholson*);

Kennett Square, February 4, six (*Pennock*); Concordville, March 5 (*Styer*).

Crossbill, *Loxia curvirostra minor*. George School, January 27, one bird (*Swayne*); four at Media, January 29 (*Allen*); three at Swarthmore, April 30 (*Palmer*); Germantown, February 1 (*F. R. Cope, Jr.*).

Lapland Longspur, *Calcarius lapponicus lapponicus*. Delaware City, Del., specimens obtained February 5, 1912 (*Pennock*).

Redpoll, *Acanthis linaria linaria*. Trenton, N. J., February 13 (*Abbott*); Doylestown, January 1 and February 4 (*Mason*); Rancocas, N. J., January 16 (*Haines*); flock of fifteen, Haddonfield, N. J., January 5-13 (*Moore*).

Goldfinch, *Astragalinus tristis tristis*. Harrisburg, flock of 50 to 100, May 3 to 5, and abundant for three weeks (*Satterthwait*); common after April 6 (*Pearson*); exceptionally abundant in early May at Ardmore (*Baily*); not common at Swarthmore until end of April (*Palmer*); unusually abundant at Downtown, N. J. (*Fair*); unusually plentiful at Yardville, N. J. (*Allinson*).

Pine Siskin, *Spinus pinus*. Doylestown, November 18 and February 23 (*Mason*); irregular, Nov. 19 to Feb. 22, on Upper Crum Creek, Delaware Co., Pa. (*Riddle*); two or three feeding on dandelion seeds, Swarthmore, April 26, 27 and 30 (*Palmer*); Wayne, several, April 27 (*Pearson*); West Chester, March 30 and May 15 (*Roberts*).

Henslow's Sparrow, *Passerherbulus henslowi henslowi*. Buckshutem, N. J., arrived May 7 (*Prince*).

Sharp-tailed Sparrow, *Passerherbulus caudacutus*. Avalon, N. J., eggs, May 30 (*Miller*).

Seaside Sparrow, *Passerherbulus maritimus maritimus*. Mouth of Maurice River, N. J., May 16, last seen 1911 on October 19 (*Prince*); Avalon, N. J., eggs, May 30 (*Miller*).

White-crowned Sparrow, *Zonotrichia leucophrys leucophrys*. Darby, one on May 19 (*Packer*); Concordville, May 11 (*Styer*); Holmesburg, May 10 (*Miller*).

White-throated Sparrow, *Zonotrichia albicollis*. Vineland, N. J., September 29-May 8 (*Prince*); Moorestown, N. J., Sept. 20 to May 15 (*Wierman*); Crum Creek, October 1-May 12

(*Riddle*); Frankford, September 27–May 15 (*Miller*); Westtown, September 19–May 6 (*S. C. De Haven*); West Chester, March 28–May 10 (*Roberts*); Wayne, March 30–May 12 (*Pearson*); last seen Swarthmore May 4 (*Palmer*); Lansdowne, April 20 (*Nicholson*); Camden, N. J., May 10 (*Potter*); George School, May 1 (*Swayne*); Harrisburg, May 19 (*Satterthwait*).

Tree Sparrow, *Spizella monticola monticola*. Westtown, December 25–March (*S. C. De Haven*); arrived at Doylestown November 18, Frankford November 5 (*Miller*); last seen at Darby March 31 (*Packer*); Crum Creek, Dec. 24–March 10 (*Riddle*); Camden, N. J., March 23 (*Potter*); West Chester, March 27 (*Roberts*).

Junco, *Junco hyemalis hyemalis*. Moorestown, N. J., Sept. 20 to May 1 (*Wierman*); Westtown, September 27–April 11 (*S. C. De Haven*); West Chester, October 9–April 17 (*Roberts*); Crum Creek, October 8–April 28 (*Riddle*); Lansdowne until April 12 (*Nicholson*); Holmesburg until April 13 (*Fowler*); Frankford, October 10–April 26 (*Miller*); Doylestown, October 8–May 5 (*Mason*); Downstown, N. J., October 15–April 14 (*Fair*); Yardville, N. J., October 25–April 24 (*Allinson*); last seen Darby, April 28 (*Packer*); Concordville, April 28 (*Styer*); Camden, N. J., April 28 (*Potter*); Trenton, N. J., April 21 (*Abbott*).

Swamp Sparrow, *Melospiza georgiana*. Bridesburg, eggs May 16 (*Miller*).

Fox Sparrow, *Passerella iliaca iliaca*. Atlantic City, N. J., January 21 (*Cromie*).

Chewink, *Pipilo erythrophthalmus erythrophthalmus*. Camden, N. J., Dec. 24, 1911 (*Potter*); Cape May, N. J., some all winter (*Hand*).

Cardinal, *Cardinalis cardinalis cardinalis*. George School, April 1 (*Swayne*); one pair in Elmwood Park, Norristown (*Simpson*); Wayne, regular resident, but local (*Pearson*); Concordville, rather more than usual (*Styer*); Vineland, young just left nest May 8 (*Prince*).

Rose-breasted Grosbeak, *Zamelodia ludoviciana*. Eddington, nest and three half-grown young June 9 (*Miller*).

Scarlet Tanager, *Piranga erythromelas*. Busleton, nest and three eggs June 18 (*Miller*).

Purple Martin, *Progne subis subis*. Moorestown, N. J., Sept. 3 (*Mickle*).

Tree Swallow, *Iridoprocne bicolor*. Avalon, N. J., eggs May 30 (*Miller*).

Red-eyed Vireo, *Vireo olivaceus*. Fox Chase, eggs June 6 (*Miller*).

Northern Shrike, *Lanius borealis*. One at Milford, N. J., November 30, 1911 (*Moore*); one at Beverly, N. J., February 10 (*Beatty*); Moorestown, N. J., March 17 (*Mickle*); Kennett Square, one on January 23 (*Pennock*); Westtown, one seen several times in January (*S. C. De Haven*); one at Swarthmore January 28 (*Palmer*); Frankford, December 13, November 17 (*Miller*).

Migrant Shrike, *Lanius ludovicianus migrans*. New London, Chester Co., September 3, and Landenburg, October 14, one bird each time (*Roberts*).

Black and White Warbler, *Mniotilta varia*. Wissahickon, young left nest June 15 (*Miller*).

Worm-eating Warbler, *Helminthos vermivorus*. Wissahickon, nest and four eggs, June 4 (*Miller*).

Prothonotary Warbler, *Protonotaria citrea*. Seen on Egg Harbor River, May 4, and positively identified (*A. C. Emlen*).

Blue-winged Warbler, *Vermivora pinus*. Cape May Court House, May 25, and nest and eggs at Bustleton, May 23 (*Miller*).

Golden-winged Warbler, *Vermivora chrysoptera*. Kennett Square, May 10 (*Pennock*); Darby, one on May 4 and May 11 (*Packer*); Doylestown, May 6 (*Mason*); Holmesburg, May 10, Bethayres, May 15 (*Miller*).

Nashville Warbler, *Vermivora rubricapilla rubricapilla*. Doylestown, May 3 (*Mason*); Moorestown, N. J., May 4 (*Linton*); West Chester, May 4 (*Roberts*).

Tennessee Warbler, *Vermivora peregrina*. West Chester, May 2, one only (*Roberts*).

Cape May Warbler, *Dendroica tigrina*. Moorestown, N. J., May 11 (*Mickle*); unusually common and seen on four different days (*Linton*); Westtown, May 10, several (*S. C. DeHaven*).

Yellow Warbler, *Dendroica aestiva aestiva*. Building at Vine-land, N. J., May 18 (*Prince*).

Myrtle Warbler, *Dendroica coronata*. Atlantic City, N. J., January 7 (*Cromie*); Doylestown, January 9 (*Mason*).

Cerulean Warbler, *Dendroica cerulea*. Moorestown, N. J., May 14 (*Mickle*). Bird observed continually under most favorable circumstances, and song heard. Same bird seen also by Linton.

Bay-breasted Warbler, *Dendroica castanea*. Doylestown, May 10 (*Mason*); Holmesburg, four on May 10 (*Miller*); West Chester, May 15 (*Roberts*); Kennett Square, May 19 (*Pennock*); one on Crum Creek, May 19 (*Riddle*); common at Swarthmore, May 11 (*Palmer*); Rancocas, N. J., May 12 (*Stokes* and *Haines*); Moorestown, N. J., May 10 (*Mickle*); May 10 and 19 and two intervening days, unusually plentiful (*Linton*); Trenton, N. J., May 6 (*Abbott*); Bernardsville, N. J., May 11 (*Kuser*).

Black-poll Warbler, *Dendroica striata*. Kennett Sq., until May 28 (*Pennock*); Moorestown, N. J., May 29 (*Mickle*).

Blackburnian Warbler, *Dendroica fusca*. Moorestown, N. J., unusually abundant (*Mickle*).

Yellow Palm Warbler, *Dendroica palmarum hypochrysea*. Moorestown, N. J., December 25, 1911 (*Hallett*).

Ovenbird, *Seiurus aurocapillus*. Bustleton, eggs May 27 (*Miller*).

Louisiana Water Thrush, *Seiurus motacilla*. Doylestown, April 18, and one in same place April 8, 1911 (*Mason*); Wissahickon, adults and young June 15 and 19 (*Miller*); Wayne, May 26 (*Pearson*).

Kentucky Warbler, *Oporornis formosus*. Valley Falls, eggs May 29 (*Miller*).

Mourning Warbler, *Oporornis philadelphia*. Westtown, May 25 (*S. C. De Haven*).

Maryland Yellow-throat, *Geothlypis trichas trichas*. Bustleton, eggs May 23 (*Miller*).

Hooded Warbler, *Wilsonia citrina*. Doylestown, one on May 5 and 6 (*Mason*); Collegeville, May 6 (*Fox*); West Chester, May 4 (*Roberts*).

Wilson's Warbler, *Wilsonia pusilla pusilla*. Doylestown, May 6 (*Mason*); West Chester, May 15 (*Roberts*); Bernardsville, N. J., May 11 (*Kuser*); Beverly, N. J., May 19 (*Street*); Moores-

town, N. J., May 18 (*Linton*); Mt. Moriah, May 18 (*Hill*); Darby, one on May 11 and 19 (*Packer*).

Redstart, *Setophaga ruticilla*. Cape May Court House, two birds seen May 25 (*Miller*); South Vineland, N. J., June 29 in full song (*Potter*).

Titlark, *Anthus rubescens*. West Chester, flock on May 2 (*Roberts*), and another some miles west of West Grove, October 8, 1911 (*Roberts*); Cheney, November 3, 1912 (*S. Trotter*); Doylestown, flock of 200 April 6 (*Mason*); Trenton, N. J., March 20 (*Abbott*); Kennett Sq., flock of 100 April 11 (*Pennock*); Concordville, May 1 (*Styer*).

Mockingbird, *Mimus polyglottos polyglottos*. Kennett Square, one observed from about December 15 to January 4 (*Pennock*); Concordville, one seen from December 2 through the winter (*Styer*); same bird observed during very cold weather, January 14, by (*S. C. Palmer*).

Brown Thrasher, *Toxostoma rufum*. Atlantic City, N. J., January 21 (*Cromie*); Pensauken, N. J., eggs May 4 (*Miller*).

Carolina Wren, *Thryothorus ludovicianus ludovicianus*. Concordville, scarcer than usual (*Styer*); Camden, N. J., less common than usual, seen Nov. 14 and Dec. 3 (*Potter*).

Winter Wren, *Nannus hiemalis hiemalis*. Downstown, N. J., January 9-16 (*Fair*); Swarthmore, January 17 and 28 (*Palmer*); Crum Creek, November 7-April 14 (*Riddle*); first seen Frankford, September 18 (*Miller*); last seen Darby, April 20 (*Packer*); Wayne, April 13, scarce (*Pearson*); Trenton, N. J., March 27 (*Abbott*).

Long-billed Marsh Wren, *Telmatodytes palustris palustris*. Richmond, eggs June 1 (*Miller*).

Brown Creeper, *Certhia familiaris americana*. Doylestown, November-April 26 (*Mason*); West Chester, October 14 to April 20 (*Roberts*); Wayne, frequent March 30-April 24 (*Pearson*); Upper Crum Creek, October 12-April 5, not common (*Riddle*); Swarthmore, common in January (*Palmer*); Frankford, October 2-April 24 (*Miller*); Moorestown, N. J., Feb. 26 and March 10 (*Mickle*); Sept. 25 (*Wierman*); Last seen, Darby, April 28 (*Packer*); Camden, N. J., April 20 (*Potter*); Kennett Square, April 14 (*Pennock*).

Black-capped Chickadee, *Penthestes atricapillus atricapillus*. Doylestown, November 15–May 5 (*Mason*); Westtown arrived November 14 (*S. C. De Haven*); More frequent than usual at Media (*Allen*); Common all winter at Swarthmore (*Palmer*).

Carolina Chickadee, *Penthestes carolinensis carolinensis*. West Grove, one pair observed near West Grove July 28–September 11, 1911, none at West Chester (*Roberts*).

Golden-crowned Kinglet, *Regulus satrapa satrapa*. Doylestown, November 19–April 18, not common (*Mason*); Frankford, September 5–April 24 (*Miller*); West Chester, October 3–April 12 (*Roberts*); Crum Creek, October 1 to April 5, not common (*Riddle*); Wayne, March 17–April 13, a few (*Pearson*); arrived Westtown October 12 (*S. C. De Haven*); Moorestown, N. J., Sept. 20 (*Wierman*); last seen at Darby April 15 (*Packer*); more frequent than usual at Media (*Allen*); not common at Swarthmore (*Palmer*).

Hermit Thrush, *Hylocichla guttata pallasi*. Frankford, one December 7 (*Miller*).

Robin, *Planesticus migratorius migratorius*. Atlantic City, N. J., January 7 (*Cromie*); Frankford, January 17 (*Miller*); Downstown, N. J., January 17 (*Fair*); Trenton, large flocks in January (*Abbott*); West Chester, one all winter (*Brinton*); Darby, January 1 (*Packer*); Wayne, January 6 (*Pearson*); Frankford and Holmesburg occasionally during January (*Fowler*); Mt. Moriah, January 28 (*Hill*); Ardmore, January 13 (*Baily*); Lansdowne, January 28 (*Nicholson*); one bird passed the winter at Media (*Allen*); and five were at Concordville January 6 (*Styer*); several at Swarthmore all winter (*Palmer*); West Chester, one all winter (*Brinton*); Doylestown, several wintered, sometimes six seen at once in January and February (*Mason*); also resident at other points (see schedules).

Bluebird, *Sialia sialis sialis*. Common at Swarthmore during January and February, but rarely seen afterwards (*Palmer*); decidedly scarce in northeastern Philadelphia, have not seen more than two dozen this year, and none after April (*Miller*); very scarce at Media (*Allen*). Only two seen at Ardmore after February 17 (*Baily*).