

## Report on the Spring Migration of 1916.

COMPILED BY WITMER STONE.

FIFTY schedules were returned this season and the D. V. O. C. Committee on Migration extends thanks to the observers for their continued co-operation. Information and blank schedules may be had at any time by applying to Dr. Witmer Stone, Academy of Natural Sciences, Logan Square, Philadelphia. We should be glad to have the names of additional observers especially at points within ten miles of Philadelphia. Attention is again called to the "Suggestions for Observers," published in the 1914 Report. A careful study of the dates etc., there presented will guard the observer against many possible errors of identification. The presence of a species long before its regular time of arrival calls for careful study to make sure that it is not something else. Additional copies of the "Suggestions" may be had upon application.

Observers for the Spring of 1916 were as follows :

### *New Jersey.*

Cape May, H. W. Hand.	le, S. S. Haines, M. A. Lin-
Atlantic City, Mrs. N. S.	ton and E. A. Roberts.
Cromie.	Moorestown, Mrs. V. Wierman.
Vineland, Mrs. A. K. Prince.	Rancocas, Miss E. Haines.
Downstown, W. W. Fair.	Mt. Holly, N. D. W. Pumyea.
Camden, J. K. Potter.	Beverly, D. G. Baird.
Audubon, J. W. Tatum.	Bordentown, Miss M. V. Flynn.
Moorestown, Miss A. A. Mick-	Allentown, Miss M. E. Gorden.

*Pennsylvania.*

Concordville, Mrs. K. R., Miss	Frankford, R. F. Miller.
E. P. and J. F. Styer.	Ardmore, W. L. Baily.
Media, S. Omensetter.	Haverford, W. J. Serrill.
Media, J. P. Moore.	Haverford, S. Scoville, Jr.
Media, Miss L. G. Allen.	Bryn Mawr, Miss E. H. Thomas.
Media, Miss M. E. Yarnall.	Oak Lane, S. H. Barker.
Media, Miss H. A. Walker.	Wayne, Mrs. M. V. Alexander.
Moylan, Miss L. M. Jacob.	Wayne, Miss Mildred Cornelius.
Moylan, Miss J. H. Binney,	Wayne, Miss M. K. Baker.
and others.	Westtown, W. B. Evans and
Swarthmore, Dr. S. C. Palmer.	S. C. Jones.
Swarthmore, P. E. Howard.	West Chester, R. P. Sharples.
Ridley Park, R. L. Lloyd.	West Chester, I. G. Roberts.
Ridley Park, C. V. Gross.	West Chester, Miss S. C. De-
Addingham, D. E. Culver.	Haven.
Lansdowne, J. D. Carter.	Newtown, Rev. A. Patman.
Norwood, Dr. J. E. Packer.	Doylestown, G. MacReynolds.
Chestnut Hill, W. H. Trotter.	Forestgrove, Miss A. K. Bewley.
Chestnut Hill, E. Norris.	Buckingham, Miss E. C. Cox.
Fairmount Park, Miss L. M.	Collegeville, W. A. Kline.
Jacob.	Lopez, O. Behr.

Severe weather after the beginning of the year, with snow, checked the early migrants; and those which arrive during February and March were about 10 days late. The later migrants however were about normal. The year was notable for the large numbers of the rarer Warblers which were reported. The Bay-breasted and Golden-winged were especially abundant and were reported from nearly every station. Red-breasted Nuthatches were present all winter at many points and were generally noticed in the spring migration. Another noteworthy occurrence was a great flight of Cedar Waxwings which spread over the country about April 1, and remained as long as there were any berries to be found on either wild or cultivated bushes or vines.

NAME.	Ranocas, N. J. N. 4; E. 16.	M coresto v N. J. N. 1; E. 12.	Camden, N. J. N. 0; E. 2.	Audubon, N. J. S. 4; E. 5.	Media and Moy- lan, Pa. S. 2; W. 12.	Swarthmore, Pa. S. 3; W. 10.	Norwood, Pa. S. 4; W. 7.	Ridley Park, Pa. S. 5; W. 9.	Lansdowne, Pa. S. 1; W. 6.	Addingham, Pa. S. 1; W. 8.	Armore and Haverford, Pa. N. 4; W. 8.	Bryn Mawr, Pa. N. 4; W. 9.	Wayne, Pa. N. 6; W. 11.	Fairmount Park, Phila., Pa. N. 0; W. 2.	Chestnut Hill, Phila. N. 8; W. 1.	Frankford, Phila. N. 5; E. 5.	Oak Lane, Phila. N. 7; E. 2.
Canada Goose	May 6	May 4	Apr. 16	Apr. 30	May 3	Apr. 28	Mar. 26	Apr. 21	Apr. 21	Apr. 21	Apr. 24	Apr. 24	May 4	Apr. 29	Apr. 29	Feb. 25	Apr. 25
Green Heron	May 6	Apr. 20	Apr. 16	Apr. 30	May 3	May 13	Apr. 26	Apr. 21	Apr. 21	Apr. 21	Apr. 30	Apr. 30	May 4	Apr. 29	Apr. 29	Apr. 23	Apr. 23
Night Heron	May 6	Apr. 29	Res.	Apr. 30	Apr. 25	Apr. 29	Apr. 23	Apr. 23	Apr. 23	Apr. 23	Apr. 29	Apr. 29	May 2	May 6	May 6	Apr. 24	Apr. 24
Spotted Sandpiper	May 6	Apr. 30	May 2	Apr. 30	May 6	May 2	Apr. 21	May 21	May 21	May 21	May 6	May 6	May 18	May 20	May 20	May 5	May 5
Solitary Sandpiper	Mar. 13	Mar. 14	Mar. 19	Mar. 12	Mar. 25	Apr. 11	Mar. 12	Apr. 21	Apr. 21	Mar. 25	Mar. 26	Mar. 26	Mar. 20	Apr. 24	Mar. 26	Mar. 5	Mar. 18
Killdeer	Mar. 13	Mar. 7	Mar. 25	Mar. 26	Mar. 26	Mar. 19	Apr. 2	Apr. 2	Apr. 2	Apr. 2	Apr. 2	Mar. 20	Apr. 24	Mar. 25	Mar. 25	Mar. 5	Apr. 15
Dove	Mar. 15	Mar. 15	Apr. 27	Apr. 23	Mar. 13	Apr. 19	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 22	Apr. 22	May 7	May 31	Mar. 31	Apr. 1	Apr. 9
Osprey	Mar. 15	May 6	May 13	Mar. 26	May 14	May 13	May 4	May 4	May 4	May 4	May 14	May 14	May 20	May 30	May 30	May 13	Apr. 9
Turkey Vulture	May 4	May 6	May 28	May 9	May 14	May 13	May 4	May 4	May 4	May 4	May 14	May 14	May 20	May 30	May 30	May 13	Apr. 9
Yellow-billed Cuckoo	Mar. 26	Apr. 2	Mar. 26	Apr. 2	Mar. 25	Jan. 24	Mar. 26	Apr. 16	Apr. 16	Apr. 2	Mar. 25	Mar. 25	Mar. 31	May 9	Apr. 2	Mar. 30	Mar. 26
Black-billed Cuckoo	Mar. 26	Apr. 2	Mar. 26	Apr. 2	Mar. 25	Jan. 24	Mar. 26	Apr. 16	Apr. 16	Apr. 2	Mar. 25	Mar. 25	Mar. 31	May 9	Apr. 2	Mar. 30	Mar. 26
Kingfisher	May 4	May 13	May 12	Jan. 9	Mar. 25	Feb. 23	Apr. 24	Jan. 1	Apr. 1	Apr. 7	Apr. 16	Apr. 16	Mar. 24	Mar. 24	Mar. 24	Apr. 2	Mar. 19
Yellow-bellied Sapsucker	May 4	May 13	May 12	Jan. 9	Mar. 25	Feb. 23	Apr. 24	Jan. 1	Apr. 1	Apr. 7	Apr. 16	Apr. 16	Mar. 24	Mar. 24	Mar. 24	Apr. 2	Mar. 19
Red-headed Woodpecker	Mar. 26	Mar. 14	Mar. 12	Jan. 9	Mar. 20	Mar. 20	Mar. 12	Mar. 26	Mar. 26	Mar. 26	Mar. 25	Mar. 25	Feb. 22	Mar. 21	Mar. 25	Mar. 12	Mar. 26
Flicker	Apr. 28	Mar. 26	Apr. 27	Jan. 9	Mar. 20	Mar. 20	Mar. 12	Mar. 26	Mar. 26	Mar. 26	Mar. 25	Mar. 25	Feb. 22	Mar. 21	Mar. 25	Mar. 12	Mar. 26
Whip-poor-will	Apr. 28	Mar. 26	Apr. 27	Jan. 9	Mar. 20	Mar. 20	Mar. 12	Mar. 26	Mar. 26	Mar. 26	Mar. 25	Mar. 25	Feb. 22	Mar. 21	Mar. 25	Mar. 12	Mar. 26
Nighthawk	Apr. 21	Jun. 11	May 8	Apr. 16	Apr. 20	May 17	Apr. 21	May 26	Apr. 21	Apr. 21	Apr. 21	Apr. 21	May 23	Mar. 21	Mar. 25	Apr. 23	Apr. 23
Chimney Swift	Apr. 21	Jun. 11	May 8	Apr. 16	Apr. 20	May 17	Apr. 21	May 26	Apr. 21	Apr. 21	Apr. 21	Apr. 21	May 23	Mar. 21	Mar. 25	Apr. 23	Apr. 23
Hummingbird	May 19	May 11	May 11	May 12	May 13	May 13	Apr. 21	Apr. 21	Apr. 21	Apr. 21	Apr. 21	Apr. 21	May 30	Apr. 16	May 2	May 6	Apr. 17
Kingbird	May 6	May 3	May 9	May 13	May 6	May 2	May 7	May 7	May 7	May 7	May 5	May 5	May 14	Apr. 16	May 19	May 6	May 6
Crested Flycatcher	May 3	May 3	May 3	Apr. 30	May 3	May 4	May 7	May 21	May 21	May 21	May 10	May 10	May 12	May 6	May 6	May 7	May 7
Phoebe	Mar. 26	Mar. 26	Mar. 25	Mar. 26	Mar. 25	Mar. 25	Apr. 2	Mar. 25	Mar. 25	Mar. 25	Mar. 25	Mar. 25	Mar. 20	Apr. 10	Mar. 25	Mar. 26	Mar. 24

NAME.	Rancocas, N. J.	Moorestown, N. J.	Garden, N. J.	Audubon, N. J.	Media and Moylan, Pa.	Swarthmore, Pa.	Norwood, Pa.	Ridley Park, Pa.	Lansdowne, Pa.	Addingham, Pa.	Armore and Haverford, Pa.	Bryn Mawr, Pa.	Wayne, Pa.	Raimount Park, Pa.	Ohestnut Hill, Phila.	Frankford, Phila.	Oak Lane, Pa.
Wood Pewee . . . . .	May 18	May 8	May 15	. . . . .	. . . . .	May 11	May 13	May 6	May 21	May 18	. . . . .	May 10	. . . . .	May 25	. . . . .	May 19	
Acadian Flycatcher . . . . .	May 14	May 14	May 13	May 13	May 21	May 13	May 19	. . . . .	. . . . .	. . . . .	May 12	. . . . .	. . . . .	. . . . .	. . . . .	Jun. 3	
Least Flycatcher . . . . .	May 9	May 7	Apr. 21	Apr. 21	May 6	May 6	May 6	. . . . .	. . . . .	. . . . .	May 10	. . . . .	. . . . .	. . . . .	. . . . .	May 3	
Bobolink . . . . .	May 4	May 3	. . . . .	. . . . .	Mar. 28	Mar. 26	Apr. 30	Apr. 20	Mar. 31	. . . . .	Mar. 27	. . . . .	. . . . .	Apr. 11	Apr. 23	May 18	
Cowbird . . . . .	Mar. 23	Mar. 22	Mar. 25	May 12	Mar. 25	Mar. 13	Mar. 12	Mar. 12	Mar. 24	Mar. 26	Mar. 25	. . . . .	Mar. 31	Apr. 17	Mar. 25	Mar. 5	Apr. 20
Red-winged Blackbird . . . . .	Res.	Res.	Res.	Jan. 16	Mar. 10	Jan. 11	Res.	Mar. 25	May 17	Feb. 21	Feb. 6	Apr. 7	Feb. 17	May 4	Apr. 21	Mar. 7	Res.
Meadowlark . . . . .	May 2	May 4	May 7	May 6	May 28	May 28	May 4	May 12	Apr. 29	May 5	May 8	May 2	May 2	May 4	May 6	May 7	
Orchard Oriole . . . . .	May 3	May 3	May 4	May 4	May 3	May 4	May 6	May 12	May 2	May 5	May 2	May 2	May 2	May 4	May 6	May 3	May 2
Baltimore Oriole . . . . .	May 3	May 3	May 4	May 4	May 3	May 4	May 6	May 12	May 2	May 5	May 2	May 2	May 2	May 4	May 6	May 3	May 2
Rusty Blackbird . . . . .	Mar. 11	Feb. 23	Mar. 24	Mar. 16	Mar. 10	Feb. 15	Mar. 8	Mar. 18	Mar. 12	Feb. 19	Feb. 13	Mar. 20	Feb. 29	Apr. 10	. . . . .	Mar. 30	Mar. 13
Purple Grackle . . . . .	Apr. 11	Apr. 2	Mar. 25	Apr. 2	Mar. 28	Apr. 16	Apr. 18	. . . . .	Apr. 16	. . . . .	Mar. 28	Mar. 20	Apr. 20	. . . . .	Apr. 21	Mar. 26	Mar. 12
Vesper Sparrow . . . . .	Apr. 5	. . . . .	Apr. 2	Apr. 2	. . . . .	. . . . .	Apr. 21	. . . . .	. . . . .	. . . . .	Apr. 8	. . . . .	. . . . .	. . . . .	. . . . .	Mar. 12	Mar. 12
Savannah Sparrow . . . . .	May 4	May 4	May 4	May 4	May 3	May 6	May 7	. . . . .	. . . . .	. . . . .	Apr. 25	. . . . .	. . . . .	. . . . .	. . . . .	May 7	Apr. 14
Grasshopper Sparrow . . . . .	Apr. 3	Mar. 20	Apr. 7	Apr. 2	Apr. 2	Apr. 1	Apr. 10	Apr. 16	Apr. 1	Apr. 21	Apr. 9	Mar. 31	Apr. 13	Apr. 12	Apr. 20	Apr. 13	Apr. 14
Chipping Sparrow . . . . .	Apr. 4	Apr. 2	Res.	Jan. 16	Mar. 21	Jan. 24	Mar. 12	Apr. 16	Apr. 1	Apr. 2	Mar. 19	. . . . .	Apr. 13	Apr. 11	Apr. 20	Mar. 14	Apr. 5
Field Sparrow . . . . .	May 4	Apr. 20	Res.	Apr. 2	Apr. 2	May 2	Apr. 21	Feb. 2	. . . . .	. . . . .	Apr. 23	. . . . .	Apr. 13	Apr. 11	Apr. 20	Mar. 14	Apr. 5
Swamp Sparrow . . . . .	May 4	Apr. 20	Res.	Apr. 2	Apr. 2	May 2	Apr. 21	Feb. 2	. . . . .	. . . . .	Apr. 23	. . . . .	Apr. 13	Apr. 11	Apr. 20	Mar. 14	Apr. 5
Fox Sparrow . . . . .	Apr. 21	Apr. 13	Apr. 14	Apr. 23	Apr. 16	Mar. 11	Mar. 5	May 2	Apr. 23	Apr. 9	Apr. 22	Apr. 29	Apr. 21	Apr. 17	Apr. 21	Apr. 22	Apr. 22
Chewink . . . . .	May 6	May 6	May 9	May 7	May 7	May 6	May 4	May 1	Apr. 23	Apr. 13	Apr. 22	Apr. 29	Apr. 21	Apr. 17	Apr. 21	Apr. 22	Apr. 22
Rose-breasted Grosbeak . . . . .	May 11	May 7	May 11	May 12	May 3	May 6	May 4	May 1	May 13	May 13	May 3	. . . . .	May 4	May 10	May 6	May 11	May 10
Indigobird . . . . .	May 6	May 5	May 6	May 6	May 3	May 6	May 19	May 28	May 8	May 21	Apr. 29	. . . . .	May 7	May 4	May 6	May 4	May 10
Scarlet Tanager . . . . .	May 6	May 5	May 6	May 6	May 4	May 2	May 7	May 21	May 3	May 4	May 6	May 5	May 6	May 9	May 6	May 13	May 14
Purple Martin . . . . .	Apr. 5	Apr. 5	May 21	May 21	. . . . .	. . . . .	Apr. 20	. . . . .	Apr. 18	. . . . .	. . . . .	. . . . .	. . . . .	May 1	. . . . .	Apr. 16	

NAME.	Rancocas, N. J.	Moorestown, N. J.	Camden, N. J.	Audubon, N. J.	Media and Moylan, Pa.	Swarthmore, Pa.	Norwood, Pa.	Ridley Park, Pa.	Lansdowne, Pa.	Addingham, Pa.	Armore and Haverford, Pa.	Bryn Mawr, Pa.	Wayne, Pa.	Fairmount Park, Phila., Pa.	Chestnut Hill, Phila.	Frankford, Phila.	Oak Lane, Pa.
Chiff Swallow . . . . .	May 18																
Barn Swallow . . . . .	Apr. 16	Apr. 20	Apr. 11	Apr. 16	Apr. 16	Apr. 16	Apr. 29	Apr. 21	Apr. 22	Apr. 22	Apr. 23		May 7		Apr. 21	Apr. 12	Apr. 21
Tree Swallow . . . . .	May 6	Apr. 30	Apr. 22	Apr. 30	Apr. 13	Apr. 1	Apr. 23	Apr. 23			Apr. 15		Apr. 21		Apr. 16	Apr. 16	
Bank Swallow . . . . .	May 11	May 11	May 7	Apr. 16	Apr. 22	Apr. 30	Apr. 30	Apr. 16					Apr. 21		Apr. 22	Apr. 22	
Rough-winged Swallow . . . . .			Apr. 22	May 9		Apr. 29	Apr. 23				Apr. 23		Apr. 21		May 6	Apr. 12	
Cedarbird . . . . .	Apr. 5	Apr. 12	Mar. 18	Apr. 2	Mar. 24	Mar. 16	Mar. 26	Apr. 20		Mar. 25	Mar. 20		Mar. 27	Apr. 14	Feb. 22	Mar. 31	
Red-eyed Vireo . . . . .	May 15	May 7	May 7	May 10	May 6	May 4	May 4		May 8	May 7	May 6	May 19	May 4	May 9	Apr. 23	May 7	May 7
Warbling Vireo . . . . .	May 25	May 2				May 13	May 6		May 2		May 2		Apr. 28		May 18	May 18	
Yellow-throated Vireo . . . . .		May 7	May 14	May 13		May 9			May 14		May 4				May 6	May 19	
Solitary Vireo . . . . .		May 11	Apr. 11	May 6		May 9			May 14		Apr. 30						
White-eyed Vireo . . . . .	May 6	Apr. 29	May 7	May 13	May 14	May 8	Apr. 26		May 3		May 6			May 22		May 6	
Black and White Warbler . . . . .	Apr. 29	Apr. 28	Apr. 23	Apr. 30	Apr. 21	Apr. 21	Apr. 23	Apr. 30	Apr. 29	Apr. 29	Apr. 22	May 2	May 2	Apr. 28	Apr. 23	Apr. 22	Apr. 23
Worm-eating Warbler . . . . .		May 14	May 7	May 10		May 4	May 6			May 7	May 14		May 31		May 6	May 2	
Blue-winged Warbler . . . . .	May 6	May 6	May 7	May 21	May 6	May 2	May 3			May 7	May 3		May 4		May 6	May 2	May 16
Parula Warbler . . . . .	Apr. 30	May 2	May 3	May 3	May 6	May 6	May 6		May 2		May 5	May 2	May 4	May 9	May 6	May 7	
Yellow Warbler . . . . .	Apr. 29	Apr. 22	Apr. 30	Apr. 23	May 4	May 4	Apr. 21	May 2	May 1	May 28	May 2		May 7	May 4	May 6	May 7	
Black-throated Blue Warbler . . . . .		Apr. 30	May 6	May 7	Apr. 27	May 3	May 6	May 7	May 7	May 13	May 2		May 4	May 19	May 13	May 3	May 5
Myrtle Warbler . . . . .	Apr. 29	Apr. 20	Apr. 13	Jan. 9	Apr. 13	Apr. 22	Apr. 19	May 7	Apr. 19	Apr. 21	Apr. 23	May 2	Apr. 29	Apr. 28	May 6	Apr. 22	May 7
Magnolia Warbler . . . . .		May 4	May 7	May 6	May 12	May 4	May 9	May 12	May 6	May 13	May 5	May 2	May 6	May 4	May 6	May 18	May 7
Chestnut-sided Warbler . . . . .	May 10	May 6	May 6	May 7	May 6	May 2	May 9	May 21	May 6		May 3		May 4	May 15	May 4	May 9	May 7
Black-poll Warbler . . . . .	May 13	May 10	May 7		May 20	May 13		May 18	May 4	May 7	May 6	May 19	May 28	May 12	May 18	May 11	
Blackburnian Warbler . . . . .		May 11	May 13	May 13	May 5	May 5	May 3		May 15	May 21	May 8	May 19	May 6	May 16	May 13	May 10	
Black-throated Green Warbler . . . . .	May 11	Apr. 30	Apr. 30	Apr. 30	May 7	May 7	Apr. 27	Apr. 30	Apr. 29	Apr. 22	Apr. 30	May 10	May 8	May 12		May 2	

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Pine Warbler . . . . .	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 16	Apr. 21	Apr. 16	May 2	May 7	Apr. 23	Apr. 23	Apr. 23	
Yellow Palm Warbler . . . . .	Apr. 30	Apr. 30	Apr. 13	Apr. 2	Apr. 16	Apr. 20	Apr. 21	Apr. 16	Apr. 16	Apr. 21	Apr. 16	May 2	May 7	Apr. 14	Apr. 14	Apr. 14	
Prairie Warbler . . . . .	May 3	May 3	May 6	May 6	Apr. 26	May 2	May 6	May 2	May 3	May 6	Apr. 30	May 2	May 15	May 13	May 13	May 13	
Ovenbird . . . . .	May 3	Apr. 30	May 2	May 6	Apr. 26	May 3	May 3	May 2	May 3	May 6	Apr. 30	May 2	May 15	May 10	Apr. 23	May 2	May 7
Water Thrush . . . . .	May 9	May 10	May 10	May 13	May 6	May 3	Apr. 26	May 21	May 7	May 13	May 5	May 4	May 4	May 4	May 6	May 5	May 7
Kentucky Warbler . . . . .	May 4	Apr. 25	May 2	Apr. 23	Apr. 30	May 3	May 19	Mar. 7	May 11	May 13	Apr. 23	May 2	May 6	May 4	May 6	May 13	May 7
Maryland Yellow-throat . . . . .	May 4	Apr. 25	May 2	Apr. 23	Apr. 30	Apr. 29	Apr. 21	Mar. 7	Apr. 29	May 7	Apr. 23	May 2	May 6	May 4	May 6	Apr. 29	May 7
Chat . . . . .	May 22	May 22	May 11	May 11	May 6	May 13	Apr. 21	May 18	Apr. 29	May 7	May 14	May 2	May 6	May 18	May 18	May 11	May 7
Canada Warbler . . . . .	May 15	May 9	May 6	May 12	May 20	May 13	May 4	May 21	May 13	May 13	May 5	May 12	May 12	May 15	May 14	May 14	May 7
Redstart . . . . .	Apr. 30	Apr. 30	May 6	May 6	May 7	May 4	May 4	May 7	May 13	May 13	May 5	May 12	May 6	May 18	Apr. 27	May 7	May 7
Catbird . . . . .	Apr. 30	Apr. 30	May 2	May 6	Apr. 29	May 1	May 3	May 1	May 2	Apr. 21	May 2	Apr. 29	Apr. 29	May 2	Apr. 23	May 2	May 4
Brown Thrasher . . . . .	Apr. 20	Apr. 21	Apr. 20	Apr. 23	Apr. 16	Apr. 16	Apr. 21	Apr. 21	Apr. 23	Apr. 21	Apr. 18	Apr. 29	Apr. 29	Apr. 17	Apr. 17	Apr. 21	Apr. 21
House Wren . . . . .	Apr. 26	Apr. 25	Apr. 23	Apr. 23	Apr. 23	Apr. 26	Apr. 21	Apr. 20	Apr. 25	Apr. 22	Apr. 24	Apr. 29	Apr. 29	Apr. 28	Apr. 27	Apr. 23	May 3
Long-bill'd Marsh Wren . . . . .	Apr. 21	Apr. 11	Apr. 13	Apr. 2	Apr. 16	Apr. 16	Apr. 7	Apr. 16	Apr. 21	Apr. 15	Apr. 19	Apr. 19	Apr. 4	Apr. 12	Apr. 13	May 17	May 7
Ruby-crowned Kinglet . . . . .	May 4	May 4	Apr. 30	May 6	Apr. 28	Apr. 23	May 3	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 7
Wood Thrush . . . . .	May 13	May 6	May 13	May 13	May 4	May 7	May 4	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 1
Wilson's Thrush . . . . .	May 13	May 6	May 13	May 13	May 4	May 7	May 4	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 4
Gray-checked Thrush . . . . .	May 21	May 21	May 26	May 7	May 4	May 7	May 4	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 4
Olive-backed Thrush . . . . .	May 8	May 4	May 13	May 13	May 4	May 7	May 4	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 4
Hermit Thrush . . . . .	Apr. 3	Apr. 21	Apr. 11	Apr. 2	Apr. 7	Apr. 22	Apr. 7	Apr. 21	Apr. 22	Apr. 30	Apr. 30	Apr. 29	Apr. 24	May 3	Apr. 23	May 2	May 4
Robin . . . . .	Feb. 23	Feb. 20	Mar. 18	Mar. 25	Mar. 13	Mar. 7	Mar. 12	Feb. 26	Mar. 13	Mar. 19	Mar. 18	Mar. 8	Mar. 3	Apr. 11	Mar. 13	Mar. 14	Mar. 9
Bluebird . . . . .	Mar. 14	Feb. 23	Mar. 8	Mar. 12	Mar. 6	Res.	Mar. 23	Mar. 13	Mar. 13	Mar. 24	Mar. 11	Mar. 3	Mar. 11	Apr. 11	Mar. 25	Feb. 1	Mar. 15

*List of Other Species Reported by Observers during 1916, and  
Additional Notes on Species Contained in the Schedule.  
Autumn Dates Refer to Autumn of 1915 Unless  
Otherwise Stated.\**

HOLBOELL'S GREBE, *Colymbus holboelli*, Fish House, N. J., April 2 (*Potter*).

HORNED GREBE, *Colymbus auritus*, Fish House, N. J., April 16 (*Potter*).

PIED-BILLED GREBE, *Podilymbus podiceps*, Westtown, April 16 (*Jones and Evas*); Neshaminy Creek near Chalfont, August 26, 1915 (*MacReynolds*); West Chester, one, April 16-19 (*Roberts*).

LOON, *Gavia immer*, Fish House, N. J., May 7 (*Potter*).

HERRING GULL, *Larus argentatus*, Atlantic City, N. J., August 26, 1915—May 25, 1916 (*Cromie*), Port Norris, N. J., August 9, 1915 (*Prince*); Mount Holly, N. J., one flew over, March 20 (*Pumyea*); Beverly, N. J., October 23—April 30 (*Baird*); Lansdowne, two flew over, March 25 (*Carter*).

RING-BILLED GULL, *Larus delawarensis*, Delaware River, Bridesburg to Gloucester, common in March (*Miller*).

LAUGHING GULL, *Larus atricilla*, Atlantic City, N. J., May 5 (*Cromie*); Cape May, N. J., April 25 (*Hand*); last seen at mouth of Maurice River, N. J., October 18, 1915 (*Prince*).

COMMON TERN, *Sterna hirundo*, Little Beach Island, N. J., July 7, 70 nests, one with 4 eggs, 31 with 3 eggs, 30 with 2 eggs, and 8 with 1 egg (*Scoville*).

BLACK TERN, *Hydrochelidon nigra surinamensis*, a flock of four, May 14 (*Potter*).

WILSON'S PETREL, *Oceanites oceanicus*, mouth of Maurice River, N. J., August 23, 1915, two driven into harbor by high winds (*Prince*).

GANNET, *Sula bassana*, Cape May, N. J., April 17 (*Hand*).

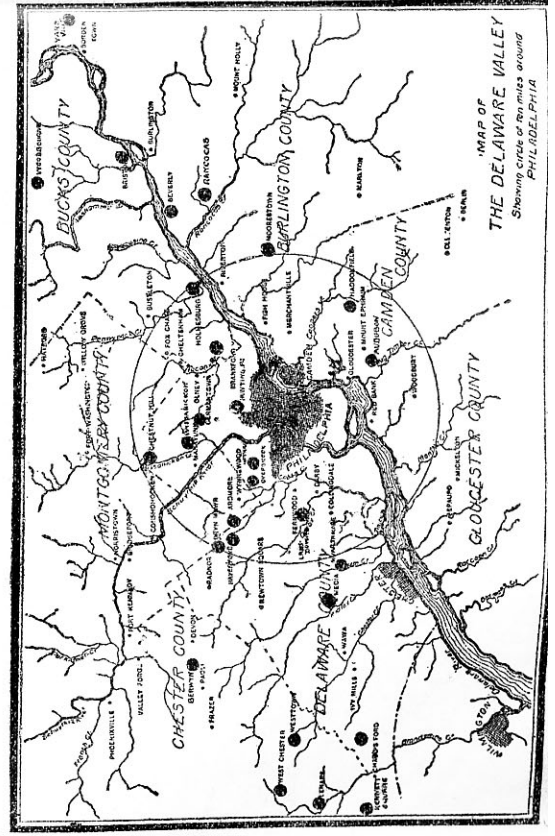
DOUBLE-CRESTED CORMORANT, *Phalacrocorax auritus auritus*, Cape May, N. J., April 20 (*Hand*).

MERGANSER, *Mergus americanus*, Audubon, N. J., April 2 (*Tatum*); Fish House, N. J., March 18—May 7 (*Potter*).

\* Localities are in Pennsylvania unless otherwise marked.

NAMES.	Cape May, N. J. E. 13; S. 12.	Atlantic City, N. J. E. 42; S. 42.	Vineyard, N. J. E. 7; S. 32.	Downtown, N. J. E. 11; S. 28.	Mr. Holly, N. J. E. 19; S. 3.	Concordville, Pa. W. 20; S. 5.	West Chester, Pa. W. 24; N. 0.	Westtown, Pa. W. 21; S. 2.	Newtown, Pa. N. 19; E. 10.	Beverly, N. J. E. 13; N. 8.	Bordentown, N. J. E. 25; N. 13.	Allentown, N. J. E. 31; N. 16.	Doylstown, Pa. E. 1; N. 26.	Buckingham, Pa. E. 4; N. 26.	Forest Grove, Pa. E. 2; N. 28.	Collegeville, Pa. W. 16; N. 18.	Lopez, Pa. W. 60; N. 103.
Flicker.....	Res.	Mar. 25	Res.	Mar. 27	Feb. 29	Apr. 1	Mar. 26	Mar. 31	Apr. 28	Mar. 26	.....	Mar. 10	Mar. 26	Mar. 31	Mar. 24	Apr. 3	Apr. 15
Whip-poor-will.....	Apr. 30	.....	Apr. 16	May 5	May 1	May 5	.....	.....	.....	.....	May 15	.....	.....	Apr. 25	May 12	Apr. 3	Apr. 30
Nighthawk.....	.....	.....	Apr. 29	May 1	May 26	May 25	May 13	.....	.....	May 14	Jun. 1	.....	.....	Apr. 25	May 11	.....	.....
Chimney Swift.....	Apr. 21	.....	Apr. 19	Apr. 19	Apr. 19	Apr. 19	Apr. 11	Apr. 11	Apr. 20	Apr. 24	Apr. 20	.....	.....	Apr. 26	Apr. 21	Apr. 25	.....
Hummingbird.....	Apr. 30	.....	May 11	May 4	May 18	May 18	May 4	May 8	.....	May 14	.....	.....	.....	May 25	May 12	Apr. 25	.....
Kingbird.....	Apr. 30	.....	May 6	May 3	May 11	May 11	May 4	May 8	.....	May 14	.....	.....	.....	Apr. 30	Apr. 30	May 5	May 7
Crested Flycatcher.....	Apr. 30	.....	Apr. 30	May 4	May 2	May 1	May 4	May 4	.....	Apr. 30	.....	.....	.....	Apr. 29	May 8	May 5	May 9
Phoebe.....	Mar. 19	.....	Apr. 20	.....	Mar. 26	Mar. 21	Mar. 26	Apr. 1	Mar. 24	Mar. 26	.....	.....	.....	Mar. 26	Mar. 25	Mar. 30	Mar. 26
Bobolink.....	May 7	.....	.....	.....	May 14	May 8	May 4	Apr. 10	Mar. 20	Mar. 20	.....	.....	.....	May 13	May 12	May 6	.....
Cowbird.....	Mar. 16	.....	.....	.....	May 2	Mar. 30	Apr. 2	Apr. 1	Apr. 10	Apr. 10	.....	.....	.....	Apr. 30	Apr. 28	Apr. 30	.....
Red-winged Blackbird.....	Feb. 18	Apr. 7	Res.	Mar. 21	May 2	Mar. 13	Mar. 12	Apr. 5	Mar. 20	Mar. 10	.....	.....	.....	May 2	May 3	May 2	Mar. 26
Baltimore Oriole.....	May 2	May 25	.....	May 4	May 7	May 2	May 3	May 10	Apr. 20	May 7	.....	.....	.....	May 3	May 2	May 2	.....
Purple Grackle.....	Feb. 18	.....	Res.	.....	Mar. 12	Mar. 12	Mar. 12	Mar. 10	Mar. 13	Mar. 12	.....	.....	.....	Res.	Mar. 13	Jan. 1	Mar. 8
Chipping Sparrow.....	Apr. 16	.....	.....	Mar. 31	Apr. 2	Apr. 10	Apr. 13	Apr. 13	Apr. 7	Apr. 2	.....	.....	.....	Apr. 3	Apr. 13	Apr. 25	Apr. 25
Chewink.....	Res.	Mar. 12	Apr. 21	Apr. 30	Apr. 23	Apr. 21	Apr. 15	Apr. 21	Apr. 25	Apr. 23	.....	.....	.....	Apr. 2	Apr. 17	Apr. 20	Apr. 30
Indigobird.....	May 8	.....	.....	May 10	May 11	May 5	May 8	May 9	.....	May 19	.....	.....	.....	May 10	May 17	May 12	May 9
Scarlet Tanager.....	May 8	.....	.....	May 15	May 14	May 11	May 10	May 9	.....	May 9	.....	.....	.....	May 18	May 14	May 15	May 15
Purple Martin.....	Apr. 14	.....	.....	Apr. 13	Apr. 5	Apr. 5	Apr. 30	Mar. 30	Apr. 26	Apr. 20	.....	.....	.....	Apr. 20	Apr. 14	Apr. 6	Apr. 14
Barn Swallow.....	Apr. 27	.....	.....	Apr. 20	May 14	Apr. 16	Apr. 16	Apr. 16	Apr. 29	Apr. 26	.....	.....	.....	Apr. 7	Apr. 20	Apr. 17	Apr. 18
Red-eyed Vireo.....	.....	.....	.....	May 9	May 12	May 4	May 6	May 8	.....	May 6	.....	.....	.....	May 26	May 6	May 7	Apr. 16
Black and White Warbler.....	Apr. 30	.....	.....	Apr. 29	May 11	May 11	Apr. 22	Apr. 26	Apr. 29	Apr. 23	.....	.....	.....	Apr. 30	Apr. 29	Apr. 30	May 1
Chestnut-sided Warbler.....	Apr. 30	.....	.....	May 1	May 3	Apr. 25	Apr. 30	Apr. 30	.....	May 2	.....	.....	.....	May 5	May 3	May 2	Apr. 30
Orenbird.....	Apr. 30	.....	.....	May 6	Apr. 30	Apr. 22	May 1	Apr. 30	.....	May 2	.....	.....	.....	May 5	May 10	May 11	May 8
Maryland Yellow-throat.....	Apr. 28	.....	.....	May 1	May 6	Apr. 30	Apr. 22	May 1	.....	Apr. 27	.....	.....	.....	May 5	May 10	May 11	May 4
Chat.....	.....	.....	.....	May 15	Apr. 30	May 11	May 6	May 9	.....	May 14	.....	.....	.....	May 5	May 31	May 10	.....
Catbird.....	May 7	.....	.....	Apr. 30	Apr. 30	May 2	May 1	.....	Apr. 29	May 3	.....	.....	.....	May 3	May 4	May 5	.....
Brown Thrasher.....	Apr. 23	.....	.....	Apr. 22	Apr. 23	Apr. 13	Apr. 20	Apr. 23	Apr. 29	Apr. 23	.....	.....	.....	Apr. 21	Apr. 19	Apr. 24	Apr. 23
House Wren.....	May 2	.....	.....	Apr. 30	Apr. 28	Apr. 25	Apr. 21	Apr. 28	.....	Apr. 26	.....	.....	.....	Apr. 15	Apr. 7	Apr. 18	Apr. 30
Wood Thrush.....	Apr. 30	.....	.....	May 16	May 1	Apr. 28	Apr. 26	Apr. 30	Apr. 26	Apr. 28	.....	.....	.....	May 5	Apr. 13	Apr. 24	.....
Hermit Thrush.....	.....	.....	.....	Apr. 15	Apr. 13	Apr. 13	Apr. 16	Apr. 16	.....	Apr. 15	.....	.....	.....	Apr. 11	Apr. 12	Apr. 10	Apr. 16
Robin.....	Res.	Jan 18	Res.	Mar. 24	Mar. 8	Mar. 12	Feb. 29	Mar. 11	Mar. 13	Mar. 12	.....	.....	.....	Mar. 9	Mar. 13	Mar. 13	Mar. 8
Bluebird.....	Res.	Mar. 9	Res.	Mar. 13	Mar. 12	Jan. 26	Mar. 11	Mar. 11	Mar. 12	Mar. 25	.....	.....	.....	Mar. 25	Mar. 26	Mar. 11	Res.

TABLE II.  
EARLIEST DATES OF ARRIVAL OF  
THIRTY-TWO SPECIES AT SEVENTEEN  
STATIONS OUTSIDE THE PHILADEL-  
PHIA CIRCLE.



MALLARD, *Anas platyrhynchos*, Audubon, N. J., May 10 (*Tatum*); Little Timber Creek, Gloucester, N. J., April 23 (*Miller*); Pensauken Creek, N. J., April 23 (*Miller*).

BLACK DUCK, *Anas rubripes*, Neshaminy Creek, Doylestown, March 26 (*MacReynolds*); Tinicum, March 12 and May 29, and Gloucester, N. J., April 23 (*Miller*).

PINTAIL, *Dafila acuta*, Tinicum, March 12 and 26 (*Miller*).

WOOD DUCK, *Aix sponsa*, Mill Creek, Forrest Grove, March 27 (*Bewley*); Neshaminy Creek, near Doylestown, five birds March 26, first record for 12 years (*MacReynolds*); West Chester, April 15 (*Sharples*).

SCAUP, *Marila marila*, Fish House, N. J., March 26–May 7 (*Potter*).

LESSER SCAUP, *Marila affinis*, Maurice River below Maurice-town, N. J., October 11, 1915 (*Prince*).

RUDDY DUCK, *Erismatura jamaicensis*, Leesburg, N. J., September 27, 1915 (*Prince*).

CANADA GOOSE, *Branta canadensis*, Cape May, N. J., resident all winter 1915-16 (*Hand*), also one all winter in the inlet of Maurice River at Buckshutem, N. J. (*Prince*); Chester, March 21, 27 birds (*Carter*).

BITTERN, *Botaurus lentiginosus*, Camden, N. J., April 3 (*Potter*); Moorestown, N. J., March 19 (*Mickle*); Haverford, April 22 (*Serrill*); Media, April 20 (*Allen*).

LEAST BITTERN, *Ixobrychus exilis*, Cape May, N. J., May 7 (*Hand*); Camden, N. J., April 22, also nest with 5 eggs May 10 (*Potter*); Woodbury, N. J., three nests with eggs May 27 and eight pairs bred at Lester (*Miller*); Bridesburg, eggs on May 28 (*Miller*).

GREAT BLUE HERON, *Ardea herodias herodias*, Buckshutem, N. J., August 7 to November 18 (*Prince*); Woodbury, N. J., May 27 (*Miller*); Moorestown, N. J., April 11 (*Wierman*); Audubon, N. J., April 2 (*Tatum*); Haverford, April 2 (*Serrill*); Concordville, April 5 (*Styer*); Neshaminy Creek, For-estgrove, April 14, six seen (*Bewley*); Lopez, April 11 (*Behr*).

LITTLE BLUE HERON, *Florida carulea*, Tohickon Creek, Doylestown, August 8, 1915 (*MacReynolds*); Cape May, N. J., September 3, 1916, 7 birds (*Hand and Stone*).

NIGHT HERON, *Nycticorax nycticorax naevius*, Peermont, N. J., colony of a dozen parents and young, and eggs (second sets), June 4, 1916 (*Miller*).

YELLOW-CROWNED NIGHT HERON, *Nyctinassa violacea*, Atlantic City, N. J., April 13 (*Cromie*) (examined under very favorable circumstances and accurately described).

KING RAIL, *Rallus elegans*, Cape May, N. J., resident winter of 1915-1916 (*Hand*); Tinicum, May 29 (*Miller*).

CLAPPER RAIL, *Rallus crepitans*, Cape May, N. J., resident; large spring flight, April 25 (*Hand*); Stone Harbor, N. J., June 4, five nests with eggs (*Miller*).

VIRGINIA RAIL, *Rallus virginianus*, Bridesburg, two sets of eggs June 9 and one June 13 (*Miller*).

SORA, *Porzana carolina*, Bridesburg, one seen May 28 (*Miller*).

FLORIDA GALLINULE, *Gallinula galeata*, Bridesburg, two pair, and Richmond, one pair nesting; nest and eggs at Lester, June 11 (*Miller*).

WOODCOCK, *Philohela minor*, Cape May, N. J., March 16 (*Hand*); Fish House, N. J., April 22 (*Potter*); Audubon, N. J., May 13 (*Tatum*); Frankford, April 25, and Holmesburg, April 15 (*Miller*); Rosemont, March 25 and April 15 (*Scoville*); Concordville, May 12 (*Styer*); Buckingham, March 29 (*Cox*); Forestgrove, April 30 (*Bewley*); Doylestown, March 29, and May 1 (*MacReynolds*).

WILSON'S SNIBE, *Gallinago delicata*, Richmond, April 20 and May 28 (*Miller*); Audubon, N. J., May 14 (*Tatum*).

DOWITCHER, *Macrorhamphus griseus griseus*, Cape May, N. J., May 7 (*Hand*).

LEAST SANDPIPER, *Pisobia minutilla*, Cape May, N. J., April 22 (*Hand*); Atlantic City, N. J., May 15 (*Cromie*); Camden, N. J., May 6-21 (*Potter*); Frankford, May 11 (*Miller*); Concordville, April 21 (*Styer*).

SEMIPALMATED SANDPIPER, *Ereunetes pusillus*, Stone Harbor, N. J., June 4 (*Miller*).

GREATER YELLOWLEGS, *Totanus melanoleucus*, Cape May, N. J., March 21 (*Hand*); Atlantic City, N. J., April 22 (*Cromie*); Camden, N. J., flocks of 2 to 20, May 2-June 1

(*Potter*); Tinicum, April 21, 20-30 (*Packer*); Bridesburg, May 2 and 16 (*Miller*).

UPLAND PLOVER, *Bartramia longicauda*, Mount Holly, N. J., eight observed July 21–August 17 (*Pumyea*); Forestgrove, April 16 (*Bewley*); Doylestown, increasing in numbers, bred in the northern part of the county (*MacReynolds*).

HUDSONIAN CURLEW, *Numenius hudsonicus*, Cape May, N. J., April 14 (*Hand*).

BLACK-BELLIED PLOVER, *Squatarola squatarola*, Cape May, N. J., May 7 (*Hand*).

KILLDEER, *Oxyechus vociferus*, Buckshutem, N. J., nest with 2 eggs April 5, 5 eggs April 15 (*Prince*); Beverly, N. J., wintered (*Baird*); Bridesburg, December 28, and Harrogate, nest and eggs June 12 (*Miller*).

SEMPALMATED PLOVER, *Aegialitis semipalmata*, Cape May, N. J., April 27 (*Hand*); Moorestown, N. J., May 16 (*Mickle*).

PIPING PLOVER, *Aegialitis meloda*, Stone Harbor, N. J., August 22, 1915 (*Potter*).

TURNSTONE, *Arenaria interpres*, Cape May, N. J., May 7 (*Hand*); Stone Harbor, N. J., August 22, flock of six (*Potter*).

BOB-WHITE, *Colinus virginianus virginianus*, Fish House, N. J., covey of eight April 23 (*Miller*); Audubon, N. J., May 14 (*Tatum*).

RUFFED GROUSE, *Bonasa umbellus umbellus*, Audubon, N. J., May 12 (*Tatum*).

RING-NECKED PHEASANT, Audubon, N. J., May 21 (*Tatum*).

MOURNING DOVE, *Zenaidura macroura carolinensis*, Ridley Park, April 30, nest and eggs (*Lloyd*).

BROAD-WINGED HAWK, *Buteo platypterus*, Riverton, N. J., June 3, 1916, nest and three eggs (*Potter*); Frankford, March 21 (*Miller*); Westtown, April 16 (*Jones and Evans*); West Chester, March 19 (*Roberts*).

ROUGH-LEGGED HAWK, *Archibuteo lagopus sanctijohannis*, Bridesburg, several, December–March 1 (*Miller*).

BALD EAGLE, *Haliaeetus leucocephalus leucocephalus*, Millville, N. J., November 2, 1916 (*Potter*); Dias Creek, N. J., May 21 (*Miller*); Media, April 22 (*Moore*).

DUCK HAWK, *Falco peregrinus anatum*, Chester, February 24 (*Carter*).

PIGEON HAWK, *Falco columbarius columbarius*, Richmond, October 15, 1915 (*Miller*).

OSPREY, *Pandion haliaetus carolinensis*, four occupied nests at Buckshutem, N. J., 1916, two birds arrived January 28 during a warm spell (*Prince*); Neshaminy Creek near Forestgrove, April 22 (*Bewley*).

BARN OWL, *Aluco pratincola*, Holmesburg, nest with three eggs and one young just hatched, May 6, young full grown July 8 (*Miller*); Gloucester, N. J., November 20, 1915-April 7 (*Potter*).

LONG-EARED OWL, *Asio wilsonianus*, Gloucester, N. J., March 11 (*Potter*); Swarthmore, April 16 (*Palmer*); Haddonfield, N. J., April 1 (*Miller*); Forestgrove, six in a cedar grove, January 6 (*Bewley*).

SHORT-EARED OWL, *Asio flammeus*, Gloucester, N. J., February 12 (*Potter*); Camden, N. J., December 19, 1915-April 8, two (*Potter*); Tinicum, March 12 (*Miller*).

BELTED KINGFISHER, *Ceryle alcyon alcyon*, Mt. Holly, N. J., December 12, 1915 (*Pumyea*); Mill Creek, Forestgrove, several wintered 1915-16 (*Bewley*); several also wintered on Neshaminy Creek, near Doylestown (*MacReynolds*).

YELLOW-BELLIED SAPSUCKER, *Sphyrapicus varius varius*, Mt. Holly, N. J., October 17, 1915 (*Pumyea*); West Chester, April 13-23 (*Roberts*); Concordville, February 14 (*Styer*); Ridley Park, January 1-15 (*Gross*); Swarthmore, February 23 (*Palmer*); Audubon, N. J., January 9 (*Tatum*).

RED-HEADED WOODPECKER, *Melanerpes erythrocephalus*, Mt. Holly, N. J., two September 12, 1915 (*Pumyea*); Camden, N. J., starting a nest in a telegraph pole on the outskirts of the city May 29 (*Potter*); Fish House, N. J., May 7 (*Miller*).

NIGHTHAWK, *Chordeiles virginianus virginianus*, Moorestown, N. J., numerous October 7-10, 1915 (*Mickle*).

CHIMNEY SWIFT, *Chaetura pelagica*, last seen, Wayne, October 11 (*Baker*); Moorestown, N. J., October 16, 1915 (*Mickle*).

RUBY-THROATED HUMMINGBIRD, *Archilochus colubris*, last seen, Doylestown, September 16, 1915 (*MacReynolds*).

PHOEBE, *Sayornis phoebe*, nest and five eggs, Forestgrove, April 30 (*Bewley*).

YELLOW-BELLIED FLYCATCHER, *Empidonax flaviventris*, Ardmore, May 14 (Baily); Doylestown, pair, September 26, 1915 (MacReynolds).

BOBOLINK, *Dolichonyx oryzivorus*, Moorestown, N. J., passing south August 20, 1915 (Mickle).

COWBIRD, *Molothrus ater ater*, Mill Creek, June 10, 1916, egg in nest of Acadian Flycatcher (Miller).

RED-WINGED BLACKBIRD, *Agelaius phoeniceus phoeniceus*, Norwood, January 9, flock of 30 (Packer).

RUSTY BLACKBIRD, *Euphagus carolinus*, West Grove, about 12 feeding in a muddy leaf-covered flat near a stream, October 24, 1915 (Roberts).

PURPLE GRACKLE, *Quiscalus quiscula quiscula*, a flock wintered with Starlings at Doylestown, about 40 being found dead during the winter in the roost (MacReynolds); a flock noticed at Forestgrove several times in December, on January 1 and 6, and early in February (Bewley)—doubtless the one above mentioned; Media, January 26 and 27 (Moore); Concordville, January 4, 100 birds (Styer); West Chester, January 29 (Roberts), and January 15 (Sharples).

STARLING, *Sturnus vulgaris*, nested at Buckshutem, N. J., feeding young May 16 (Prince).

BLUE JAY, *Cyanocitta cristata cristata*, Concordville, none until April 4 (Styer); West Chester, none until May 1 (Roberts); Media, none until April 16 (Allen), and not common until May (Moore); Haverford, none until April 30, then common (Scoville); Wayne, none until March 27 (Alexander).

CROW, *Corvus brachyrhynchos brachyrhynchos*, roost in Black's woods half a mile south of Mt. Holly, N. J. (Pumyea), 5,000-6,000 birds have roosted there for the last 50 years.

PURPLE FINCH, *Carpodacus purpureus purpureus*, Media, March 31, very abundant (Allen); Mt. Holly, N. J., March 26 (Pumyea); Concordville, April 20-May 12 (Styer); Doylestown, April 11-May 5 (MacReynolds); West Chester, March 26-May 12 (Roberts); last seen, Atlantic City, N. J., April 20 (Cromie); Lansdowne, April 20 (Jacob); Norwood, April 30 (Packer).

REDPOLL, *Acanthis linaria linaria*, Wayne, at feeding station February 14 (*Alexander*).

GOLDFINCH, *Astragalinus tristis tristis*, Downstown, N. J., one seen March 21, few in winter (*Fair*).

PINE SISKEN, *Spinus pinus pinus*, Audubon, N. J., January 16 (*Tatum*); Moorestown, N. J., April 30 and May 22 (*Mickle*).

HENSLOW'S SPARROW, *Passerherbulus henslowi*, many heard along Maurice River, N. J., May 11 (*Prince*).

WHITE-CROWNED SPARROW, *Zonotrichia leucophrys leucophrys*, Buckingham, May 9-13, a pair (*Cox*); West Chester, May 8 on bird, May 13 a pair (*Roberts*).

WHITE-THROATED SPARROW, *Zonotrichia albicollis*, Vineland, N. J., September 25-April 29 (*Prince*); Moorestown, N. J., September 27-May 15 (*Wierman*); Mt. Holly, N. J., October 12-May 12 (*Pumyea*); Concordville, September 30-May 24 (*Styer*); West Chester, October 13 (*DeHaven*) and March 11-May 27 (*Roberts*); Wayne, October 11-May 17 (*Baker*); Frankford, September 24-May 15 (*Miller*); Buckingham, September 22-December 15, and April 27-May 17 (*Cox*); Doylestown, October 18-May 21 (*MacReynolds*); Moorestown, N. J., October 11-May 11 (*Mickle*); Beverly, N. J., October 27-May 20 (*Baird*); last seen, Atlantic City, N. J., April 20 (*Cromie*); Camden, N. J., May 19 (*Potter*); Ridley Park, May 7 (*Gross*); Swarthmore, May 13 (*Howard*); Moylan, May 6 (*Jacob*); Norwood, May 19, Fairmount Park, May 10 (*Jacob*); Haverford, May 19 (*Scoville*); Forestgrove, April 24 (*Bewley*); arrived at Lopez, April 20 (*Behr*).

TREE SPARROW, *Spizella monticola monticola*, Mt. Holly, N. J., October 15-April 2 (*Pumyea*); Beverly, N. J., October 28-April 2 (*Baird*); Frankford, October 22-April 5 (*Miller*); last seen, Haverford, April 25 (*Scoville*); West Chester, March 26 (*Roberts*).

JUNCO, *Junco hyemalis hyemalis*, Vineland, N. J., October 11-April 6 (*Prince*); Moorestown, N. J., October 3-April 28 (*Wierman and Mickle*); Mt. Holly, N. J., October 26-May 2 (*Pumyea*); Beverly, N. J., September 26-April 16 (*Baird*);

Concordville, October 18–April 29 (*Styer*); West Chester, October 8–April 30 (*Roberts and DeHaven*); Buckingham, September 20–April 17 (*Cox*); Doylestown, October 17–April 27 (*MacReynolds*); last seen, Atlantic City, N. J., April 24 (*Cromie*); Downstown, N. J., April 16 (*Fair*); Camden, N. J., April 25 (*Potter*); Ridley Park, April 21 (*Gross*); Swarthmore, April 30 (*Howard*); Lansdowne, April 20 (*Jacob*); Norwood, April 26 (*Packer*); Fairmount Park, April 26 (*Jacob*); Haverford, April 28 (*Scoville*); Wayne, first seen October 11, 1915 (*Baker*); Pocono Lake, July 22, 1916, two nests containing young and 4 eggs (*Scoville*).

ROSE-BREASTED GROSBEAK, *Zamelodia ludoviciana*, Mt. Holly, N. J., May 8–June 27 (*Pumyea*).

SCARLET TANAGER, *Piranga erythromelas*, last seen at Wayne, September 22, 1915 (*Baker*).

TREE SWALLOW, *Iridoprocne bicolor*, many hundreds on telegraph wires and cornstalks, Mauricetown, N. J., September 10, 1915 (*Prince*).

CEDAR WAXWING, *Bombycilla cedrorum*, unusual numbers reported from nearly every station during April; Moorestown, N. J., flocks of 35-125 (*Mickle*); Wayne, flocks of 13-20, March 27-30 (*Alexander*); Haverford, flocks, March 25, and April 15–May 7 (*Scoville*); West Chester, in great numbers, April 2–June 15 (*Roberts*); West Philadelphia, flock of 13 remained a week at First and Hazel Ave., April 1-8 (*Stone*); Doylestown, several flocks remained February 29–May 26 (*MacReynolds*).

NORTHERN SHRIKE, *Lanius borealis*, Buckingham, February 24 (*Cox*).

MIGRANT SHRIKE, *Lanius ludovicianus migrans*, Mt. Holly, N. J., March 11 and 12 (*Pumyea*); Vineland, N. J., April 13 (*Prince*).

BLUE-WINGED WARBLER, *Vermivora pinus*, Dias Creek, N. J., May 21, two birds at different localities (*Miller*); Bustleton, eggs June 1 (*Miller*); Mt. Holly, N. J., October 17, 1915 (*Pumyea*).

GOLDEN-WINGED WARBLER, *Vermivora chrysoptera*, Moorestown, N. J., May 8 (*Wierman*); Mt. Holly, N. J., May 14

(*Pumyea*); Audubon, N. J., May 13 (*Tatum*); Concordville, May 4 (*Styer*); West Chester, May 10-11 (*Roberts*); Camden, N. J., May 6 (*Potter*); Swarthmore, May 13 (*Howard*); Haverford, May 3 (*Serrill*); Buck Hill Falls, one bird seen several times in full song, May 29 and after (*Roberts*); Greenwood Lake, nest with half-grown young, June 15, 1916 (*Potter*).

NASHVILLE WARBLER, *Vermivora rubricapilla*, Moorestown, N. J., May 19 (*Wierman*); Audubon, N. J., May 19 (*Tatum*); Camden, N. J. (*Potter*); West Chester, May 4, 6, 10 and 11 (*Roberts*); University of Pennsylvania, Botanic Garden, May 6 (*Packer*); Frankford, May 19 (*Miller*).

TENNESSEE WARBLER, *Vermivora peregrina*, Moorestown, N. J., May 19-28, at least three individuals (*Wierman*, *Evans*, and *E. Roberts*); Concordville, May 10 and after (*Styer*); West Chester, May 10 and 11 (*Roberts*); Lansdowne, May 17 (*Carter*); Darby, May 23 (*Carter*), and several times later, unusually numerous.

CAPE MAY WARBLER, *Dendroica tigrina*, Atlantic City, N. J., May 9 (*Cromie*); Mt. Holly, N. J., May 12 (*Pumyea*); Moorestown, N. J., May 11 (*Mickle*); Audubon, N. J., May 10 (*Tatum*); Camden, N. J., May 9-21 (*Potter*); Rancocas, N. J., May 23 (*Haines*); Concordville, May 8-24 (*Styer*); Westtown, May 10 (*Jones and Evans*); West Chester, May 8, quite abundant (*Roberts*); May 11 (*DeHaven*); Swarthmore, May 8 (*Howard*); Haverford, May 6, 13, 14 (*Serrill*); Frankford, May 18 (*Miller*); Ardmore, May 17 (*Baily*); Wayne, May 8 (*Cornelius*); Chestnut Hill, May 20 (*Norris*).

BAY-BREASTED WARBLER, *Dendroica castanea*, Cape May, N. J., May 20-21 (*Miller*); Downstown, N. J., May 14 and 21 (*Fair*); Concordville, May 10-24, very common (*Styer*); Audubon, N. J., May 12 (*Tatum*); West Chester, May 16 (*DeHaven*); common May 21 and later (*Sharples*); Media, May 25 (*Allen*); May 6 (*Yarnell*); Wallingford, May 19 (*Walker*); Moylan, May 20-21 (*Jacob*); Ridley Park, May 20 (*Gross*); Swarthmore, May 13 (*Howard*); May 14 and 19 (*Palmer*); Addingham, May 18, abundant (*Culver*); Norwood, May 27 (*Packer*); Lansdowne, May 14 (*Carter*); Ches-

ter, May 13 (*Carter*); Fairmount Park, May 18-26 (*Jacob*); Frankford, May 13-21 (*Miller*); Ardmore, abundant, May 5-25 (*Baily*); Haverford, May 13, and abundant May 14 and 21 (*Serrill*); Bryn Mawr, May 2-28, common (*Thomas*); Wayne, May 14 (*Baker*); Doylestown, May 21 and 24 (*MacReynolds*); Collegeville, May 19 (*Kline*); Moorestown, N. J., May 11-27, very common (*Mickle*).

WATER-THRUSH, *Seiurus noveboracensis noveboracensis*, Vineland, N. J., August 20, 1915 (*Prince*).

MOURNING WARBLER, *Oporornis philadelphia*, Moorestown, N. J., May 14 (*Linton*); Holmesburg, May 19, and Frankford, May 19 (*Miller*); Buckingham, May 19 (*Cox*).

HOODED WARBLER, *Wilsonia citrina*, Mt. Holly, N. J., May 7 (*Pumyea*); Moorestown, N. J., May 7 (*Wierman*); Camden, N. J., May 2-11 (*Potter*); Swarthmore, May 4 (*Palmer*), and May 6 (*Howard*).

WILSON'S WARBLER, *Wilsonia pusilla pusilla*, Mt. Holly, N. J., May 21 (*Pumyea*); Audubon, N. J., May 21 (*Tatum*); Concordville, May 13 (*Styer*); Camden, N. J., May 25 (*Potter*); West Chester, May 8 (*Roberts*); Addingham, May 18 (*Culver*); Holmesburg, May 19 (*Miller*); Haverford, May 14, 18 and 21 (*Serrill*); Ardmore, May 14 (*Baily*); Doylestown, May 15 and 21 (*MacReynolds*).

TITLARK, *Anthus rubescens*, Concordville, April 22-May 1 (*Styer*); West Chester, April 5, about 30 (*Roberts*); Haverford, April 17, flock (*Scoville*); Bridesburg, April 1 (*Miller*); Forestgrove, March 25 (*Bewley*); Doylestown, April 2-10 (*MacReynolds*).

CATBIRD, *Dumetella carolinensis*, Wayne, October 5 (*Baker*); Forestgrove, nest in a pear tree 10 feet from the ground (*Bewley*).

MOCKINGBIRD, *Mimus polyglottos polyglottos*, Concordville (*Styer*); Cape May, N. J., one in full song (*Baird*).

BROWN THRASHER, *Toxostoma rufum*, Mt. Holly, N. J., December 5, 1915 (*Pumyea*).

WINTER WREN, *Nannus hiemalis hiemalis*, Mt. Holly, N. J., October 29-February 22 (*Pumyea*); Westtown, March 18-April 7 (*Jones and Evans*); Frankford, September 23-April

23 (*Miller*); West Chester, October 10–April 13 (*DeHaven*); Buckingham, December 10–March 15 (*Cox*); arrived at Moorestown, N. J., October 10, 1915 (*Mickle*); Wayne, September 29, 1915 (*Baker*); last seen at Concordville, April 14 (*Styer*); Forestgrove, March 20 (*Bewley*); Doylestown, March 19 (*MacReynolds*); Media, April 16 (*Allen*); Swarthmore, April 16 (*Howard*).

BROWN CREEPER, *Certhia familiaris americana*, Mt. Holly, N. J., October 12–April 16, plentiful (*Pumyea*); Beverly, N. J., October 14–April 27 (*Baird*); Frankford, September 30–April 23 (*Miller*); West Chester, October 10–April 29 (*DeHaven and Roberts*); arrived at Vineland, N. J., September 29, 1915 (*Prince*); Wayne, September 25, 1915 (*Baker*); last seen at Atlantic City, N. J., April 16 (*Cromie*); Camden, N. J., April 23 (*Potter*); Ridley Park, April 21 (*Gross*); Swarthmore, April 25 (*Howard*); Concordville, April 22 (*Styer*); Chestnut Hill, April 23 (*Norris*); Forestgrove, April 16 (*Bewley*); Doylestown, April 16 (*MacReynolds*), Moorestown, N. J., October 10–March 22 (*Mickle*).

RED-BREASTED NUTHATCH, *Sitta canadensis*, Vineland, N. J., October 12–November 11 (*Prince*); Mt. Holly, N. J., October 17 (*Prince*); Concordville, October 4–29 (*Styer*); Moorestown, N. J., all winter (*Mickle*); Wayne, October 15–November 8 (*Baker*); last seen at Atlantic City, N. J., April 16 (*Cromie*); Vineland, N. J., March 18 (*Prince*); Audubon, N. J., May 6 (*Tatum*); West Chester, May 4 and 10 (*Roberts*); Haverford, May 4 and 6, a pair (*Serrill*); University of Pennsylvania, Botanic Garden, May 3 (*Packer*); Fairmount Park, May 3 (*Jacob*); Ashbourne, January 21, and Frankford, May 5 (*Miller*); Moorestown, N. J., May 11 (*Mickle*).

TUFTED TITMOUSE, *Baeolophus bicolor*, Doylestown, observed several times in June, no doubt nested (*MacReynolds*).

BLACK-CAPPED CHICKADEE, *Penthestes atricapillus atricapillus*, Westtown, February 28 (*Jones and Evans*); Doylestown, very abundant October 24–March 5, not seen previously since May 17, 1914 (*MacReynolds*).

GOLDEN-CROWNED KINGLET, *Regulus satrapa satrapa*, Mt.

Holly, N. J., October 17–April 16 (*Pumyea*); Frankford, September 23–April 28 (*Miller*); West Chester, October 20–April 13 (*DeHaven*); Wayne, September 29–April 20 (*Baker*); last seen at Atlantic City, N. J., April 13 (*Cromie*); Swarthmore, April 16 (*Howard*); Haverford, April 15 (*Scoville*); Forestgrove, April 19 (*Bewley*); Doylestown, April 19 (*MacReynolds*); arrived at Moorestown, N. J., September 25, 1915 (*Mickle*).

RUBY-CROWNED KINGLET, *Regulus calendula calendula*, arrived at Mt. Holly, N. J., October 12, 1915 (*Pumyea*); Moorestown, N. J., two on December 18, 1915 (*Mickle*).

BLUE-GRAY GNATCATCHER, *Poliophtila caerulea caerulea*, Atlantic City, N. J., April 15 (*Cromie*).

WOOD THRUSH, *Hylocichla mustelina*, arrived at Wayne, October 5 (*Baker*).

HERMIT THRUSH, *Hylocichla guttata pallasi*, Wayne, October 24–November 8 (*Baker*); Mt. Holly, N. J., two on December 19, 1915 (*Pumyea*).

ROBIN, *Planesticus migratorius migratorius*, nest and four eggs, Forestgrove, April 28; young left the nest May 28 (*Bewley*).