



32nd Year, Bulletin No. 3
June, July, August, 1936

Prepared
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Bird Calendar of the

CLEVELAND BIRD CLUB

A summary of the weather conditions during June, July, and August is as follows:

Month	Mean temperature	Normal temperature	Total precipitation	Normal precipitation
June	66.2°F	61.7°F	2.32 inches	3.12 inches
July	74.6°	71.4°	2.23	3.45
August	73.8°	70.0°	2.92	2.77

Temperatures and precipitation were slightly below normal in June (.9° and .8 inches below normal, respectively). July and August were hot, temperatures being 3.2° and 3.8° above normal, respectively. The second week in July averaged 16° above normal. Precipitation during July was 1.22 inches below normal, that of August slightly in excess of normal.

The following people sent in records that are reported in this bulletin:

J.W. Aldrich	Ralph O'Reilly, Jr.
Benjamin P. Bole, Jr.	Merit B. Skaggs
Franklin Jedlicka	Arthur B. Williams
Philip Molthrop	

To Mr. Bole and Mr. Molthrop, working together, go the honor of special mention for their activity during the past summer, as the reports they turned in on nesting censuses, roadside censuses via automobile, and field trips on foot were very voluminous.

The following table gives the number of trips, etc., for each month of the summer session:

	June	July	August
Number of trips	30	25	24
Observers per trip	1.4	1.6	1.6
Total mileage on foot per trip	3.3	2.8	2.2
Hours per trip	3.5	3.4	2.5
Total hours observation in dense woods	70	5.2	29
Total hours observation in open country	26	23	18
Total hours observation in marshes, along lakes and streams	10	10	13

The total number of trips recorded to date in 1936 is 314. This is less than the number taken in 1935 at this time, which was 317. However, the activity during the three summer months considered separately was much greater this year than last, as evidenced by the number of trips being 79 and 46, respectively.

The total number of species reported from the regular field trips taken on foot during the summer is 122, exactly the same number as was recorded in 1935. Three new species, American egret, sanderling, and olive-sided flycatcher, were added to the year's list, bringing the number on this list up to 212, two more than last year.

Many species were observed so few times that their entire record is here given:

American Egret (M.B.S.) – August 15 (1)
Least Bittern (J.A., B.P.B.) – June 26 (1)
American Bittern (A.B.W.; J.A.; B.P.B.) – June 4 (1), August 20 (1)
Black Duck (A.B.W., B.P.B.) – August 20 (2)
Blue-winged Teal (M.B.S.) – August 15 (4)
Ruddy Duck (M.B.S.) – August 15 (10)
Cooper Hawk (A.B.W.; F.J.; J.A.; B.P.B.) – June 8 (1), July 7 (1), Aug. 24 (1)
Red-tailed Hawk (J.A.; B.P.B.) – July 8 (1), August 14 (1), 27 (1)
Marsh Hawk (J.A.; B.P.B.) – June 29 (1)
Broad-winged Hawk (B.P.B.) – June 20 (1), August 10 (1)
Osprey (F.J.) – August 8 (1)
Ruffed Grouse (B.P.B.) – June 20 (1)
Semipalmated Plover (F.J.) – June 6 (1)
Wilson Snipe (A.B.W.) – August 20 (1)
Solitary Sandpiper (A.B.W.; M.B.S.; B.P.B.) – August 8 (1), 12 (1), 14 (1), 15 (1), 18 (1), 19 (1), 26 (1),
29 (1)
Lesser Yellow-legs (M.B.S.) – August 15 (10)
Least Sandpiper (M.B.S.) – August 15 (2)
Semipalmated Sandpiper (M.B.S.) – August 15 (10)
Sanderling (B.P.B.) – August 4 (4), 7 (4), 8 (3)
Caspian Tern (B.P.B.) – August 7 (1)
Red-bellied Woodpecker (J.A.; B.P.B.) – June 8 (1)
Yellow-bellied Sapsucker (F.J.) – August 15 (1), Hinkley Park, a female.
Olive-sided Flycatcher (J.A.; B.P.B.) – June 8 (1)
Cliff Swallow (J.A.; B.P.B.) – July 11 (1)
Brown Thrasher (O'R) – June 17 (1)
Migrant Shrike (F.J.) – July 19 (2)
Warbling Vireo (B.P.B.) – August 7 (2)
Black and White Warbler (A.B.W.) – August 20 (1), 30 (1)
Sycamore Warbler (B.P.B.) – July 28 (1)
Canada Warbler (B.P.B.) – June 8 (1)
Swamp Sparrow (B.P.B.) – August 7 (1)

Mr. O'Reilly states that on August 16, Purple Martins and Bank Swallows were observed migrating along the Lake Shore and that this flight continued daily until the 28th, when apparently the peak was reached.

Mr. Eugene Odum and Mr. Russell Huggins report repeatedly hearing and seeing a Least Flycatcher in the valley at Gates Mills through June and early July, but are uncertain as to whether it nested.

Mr. Merit Skaggs lists the following species of ducks breeding at Pymatuning Lake: Ruddy Duck, Pintail, Shoveller, Black Duck, and Mallard. Most of their nests were on the Pennsylvania side, but some were within the Ohio border.

Breeding Censuses

The following censuses of breeding birds are of considerable interest in various respects. In looking them over note how different species are found nesting in different habitat so that each habitat has its own characteristic birds. The difference in the abundance of the nesting birds in each habitat is very pronounced, varying as it does from 15 pairs on one acre of shrub and garden to only one pair per acre in an open grassy field. Comparing the number of birds this year and last year shows that many species decreased in abundance, possibly due to the cold winter, while other species did not. In general it appears that the warblers came through the winter better than the other groups. Perhaps this is to be correlated with their migration further south, even into Central and South America, so they escaped the cold weather of last winter.

I. Census by Arthur B. Williams of nesting pairs on 65 acre tract of beech and sugar maple woods, North Chagrin Metropolitan Park, from repeated observation during April, May, June, and July.

	Number of pairs			Number of Pairs	
	1936	1935		1936	1935
1 Red-eyed Vireo	24	30	13 Black-cp. Chickadee	2	2
2 Ovenbird	14	8	14 Cardinal	2	4
3 Redstart	13	19	15 Crested Flycatcher	2	2
4 Hooded Warbler	10	9	16 Downy Woodpecker	2	2
5 Wood Thrush	8	14	17 Hairy Woodpecker	2	3
6 Scarlet Tanager	7	8	18 Yellow-th. Vireo	1	3
7 Wood Pewee	5	7	19 Red-eyed Towhee	1	1
8 Acadian Flycatcher	5	2	20 Robin	1	1
9 Black-thr. Green Warbler	4	3	21 Barred Owl	1	1
10 Tufted Titmouse	3	4	22 Rose-br. Grosbeak	1	1
11 White-br. Nuthatch	3	4	23 La. Water Thrush	?	1
12 Cerulean Warbler	3	0	24 Phoebe	0	1
			25 Cowbird	<u>present</u>	<u>present</u>
			Total number of pairs	114	133
			Pairs per acre	1.7	2.0

“In the five years during which this nesting survey has been carried on, 1936 shows the lowest number of nesting pairs. 1934 was the high year with 2.7 pairs to the acre, - one pair per acre more than this year.

Species absent this year which have nested in other years were Phoebe, Pileated Woodpecker, Flicker, Ruffed Grouse, and Red-bellied Woodpecker.”

II. Nesting census on 15 acres of open woods, orchards, lawns, gardens, and buildings of the Baldwin Bird Sanctuary, Gates Mills (Kendeigh, Baldwin, Odum, and Huggins).

	Number of pairs			Number of Pairs	
	1936	1935		1936	1935
1 Robin	32	56	13 Bluebird	1	1
2 English Sparrow	30	31	14 Red-eyed Vireo	1	0
3 House Wren	16	16	15 Goldfinch	1	2
4 Chipping Sparrow	14	12	16 Chimney Swift	1	0
5 Starling	11	10	-- White-br. Nuthatch	0	1
6 Catbird	9	10	-- Crested Flycatcher	0	1
7 Song Sparrow	8	10	-- Barn Swallow	0	1
8 Mourning Dove	6	8	-- Yellow Warbler	0	1
9 Cedar Waxwing	4	3	-- Wood Pewee	0	1
10 Phoebe	3	5	-- Black-bill Cuckoo	0	1
11 Purple Martin	3	12	-- Blue Jay	<u>0</u>	<u>1</u>
12 Flicker	2	1			
			Total number of nests	142	184
			Approximate number of pairs	82	119
			Number of pairs per acre	5.5	7.9

III. Mr. Ralph O’ Reilly, Jr. made a census in late May and early June on a 44 acre area, of which 2 acres consisted of an old apple orchard, the remainder being well drained rolling grassland. He found the soil to be poor and sandy, producing principally grasses, cinquefoil, and blackberries.

1 Field sparrow	10 pairs	8 Henslow Sparrow	2 pairs
2 Grasshopper Sparrow	6	9 Goldfinch	2
3 Song Sparrow	5	10 Starling	2
4 Northern Yellowthroat	3	11 House Wren	2
5 Ring-necked Pheasant	2	12 Bobolink	1
6 Bob-white	2	13 Meadowlark	1
7 Vesper Sparrow	2	14 Bluebird	1
		15 Alder Flycatcher	<u>1</u>
		Total number of pairs	42
		Number of pairs per acre.	1.0

The following censuses of breeding birds in a wide variety of habitats were made by Mr. Benjamin P. Bole, Jr.:

IV. Breeding Birds of Little Mountain, Geauga Co., Ohio, season of 1936. The entire 300 acre mountain region includes pine-hemlock woods, oak-chestnut woods, beech-maple woods, besides some disturbed and semi-open areas. The 75-acre portion censused is mostly pine and hemlock woods only.

Species	Pairs 300- acre Mt., 1936	Pairs in 75- acre N. end, 1936	Pairs in 75- acre N. end, 1935
1 Black-throated Green Warbler	21	19	15
2 Hooded Warbler	17	12	9
3 Ovenbird	16	10	9
4 Red-eyed Vireo	15	7	5
5 Hairy Woodpecker	14	6	4
6 Black-capped Chickadee	10	4	2
7 Scarlet Tanager	9	5	4
8 Rose-breasted Grosbeak	8	3	1
9 White-breasted Nuthatch	8	4	3
10 Slate-colored Junco	8	8	9
11 Redstart	8	0	0
12 Robin	7	7	11
13 Cerulean Warbler	7	1	1
14 Wood Thrush	6	4	3
15 Wood Pewee	6	5	3
16 Phoebe	5	5	11
17 Crested Flycatcher	5	2	0
18 House Wren	4	4	4
19 Chipping Sparrow	4	4	5
20 Louisiana Water-Thrush	4	3	2
21 Indigo Bunting	5	3	1
22 Yellow-throated Vireo	3	1	1
23 Blue Jay	3	1	1
24 Mourning Dove	2	2	2
25 Pileated Woodpecker	2	1	1
26 Broad-winged Hawk	2	1	1
27 Great Horned Owl	1	0	1
28 Ruffed Grouse	1	0	1
29 Turkey Vulture	1	0	0
30 Crow	1	0	0
31 Cedar Waxwing	1	1	0
32 Song Sparrow	1	1	1
33 Purple Finch	1	1	0(?)
34 Ruby-throated Hummingbird	1	0	1
35 Downy Woodpecker	1	0	0
--- Acadian Flycatcher	<u>0</u>	<u>0</u>	<u>1</u>
Total number of pairs	206	125	113
Number of pairs per acre	1.5	1.7	0.7

“Besides the above listed species, Chimney Swifts and Cowbirds bred on the Mountain, the former in the chimneys of the clubhouse. Young Cowbirds were raised by the following pairs: Red-eyed Vireo, 2; Slate-colored Junco [no number in original]; Hooded Warbler, 2; Chipping Sparrow, 1; Indigo Bunting, 1; Song Sparrow, 1; Ovenbird, 1; and Scarlet Tanager, 1. The Tanager case was very interesting as there were two young tanagers in the brood as well as the Cowbird. All were about the same size.”

V. Breeding birds of Holden Memorial Arboretum, Kirtland, Ohio. Total area, 110 acres about one-third beech-maple and beech-hemlock forest, including a deep, cool ravine with running stream; also a bog of one-acre area and a cat-tailed fringed pond.

1 Field Sparrow	16 pairs	29 Green Heron	1 pair
2 Red-winged Blackbird	10	30 Mallard	1
3 Song Sparrow	7	31 Wood Duck	1
4 Red-eyed Vireo	6+	32 Sharp-shin Hawk	1
5 Wood Thrush	5	33 Red-shouldered Hawk	1
6 Northern Yellowthroat	5	34 Bob-white	1
7 Hooded Warbler	4+	35 Black-billed Cuckoo	1
8 Bluebird	4	36 Barred Owl	1
9 Towhee	4	37 Hummingbird	1
10 Vesper Sparrow	4	38 Flicker	1
11 Wood Pewee	3+	39 Pileated Woodpecker	1
12 Downy Woodpecker	3	40 Red-bellied Woodpecker	1
13 Yellow Warbler	3	41 Red-headed Woodpecker	1
14 Cerulean Warbler	3	42 Hairy Woodpecker	1
15 Cardinal	3	43 Kingbird	1
16 Henslow's Sparrow	3	44 Crested Flycatcher	1
17 Tufted Titmouse	2+	45 Phoebe	1
18 Black-thr. Green Warbler	2+	46 White-breasted Nuthatch	1
19 Mourning Dove	2	47 House Wren	1
20 Catbird	2	48 Cedar Waxwing	1
21 Yellow-throated Vireo	2	49 Starling	1
22 La. Water Thrush	2	50 Blue-winged Warbler	1
23 Redstart	2	51 Rose-br. Grosbeak	1
24 Bobolink	2	52 Chipping Sparrow	1
25 Meadowlark	2	53 Blue Jay	?
26 Goldfinch	2	54 Crow	?
27 Grasshopper Sparrow	2	55 Chickadee	?
28 Pied-billed Grebe	1	56 Robin	?
		57 Ovenbird	?
	Total number of pairs		129 plus
	Number of pairs per acre		1.2 plus

“10 pairs (approx.) of Barn Swallows, 6 (approx.) of Rough-winged, 1 of Cliff and 1 of Bank hawked over the Arboretum regularly during breeding season, but nested off it.

“Fifteen or twenty Cowbirds could be seen on the property all summer. To my knowledge one pair of Yellow-throated Vireo and two of Field Sparrows raised Cowbirds.

“The Scarlet Tanager cannot be “spotted” by censi in the usual way. The records do not fit into groups and the nests must be found on the spot. No territories? There were five to ten singing males on hand. No nests were found.

“Both pairs of Bobolink, both of Grasshopper Sparrow and two of the Henslows moved into the Arboretum late in June after a hayfield across Sperry Road was mowed. They all raised families on the Arboretum. Whether they already had in the hayfield I do not know.

“The redwings lived in a state of sin at Foster Pond and the Buttonbush Bog. There were but two males at each place; there were four females and four nests at the pond, and five females and five groups of young birds at the bog. An additional pair – one female and one male – bred, as usual, in a small cattail area at the head of Fullers Run.

“A single pair each of Baltimore Oriole, Savannah Sparrow, Swamp Sparrow, and Alder Flycatcher gave every indication of remaining to breed. The oriole and Swamp Sparrow were seen nest-building, but the nests were never finished and the birds were not seen again. The Alder Flycatchers were in attendance all summer at wide intervals in the bog, and were regularly seen in early July. The nest was not found and no young birds were ever seen.

“Screech Owl, Woodcock, and Whip-poor-will probably bred on the property but were not recorded during their breeding seasons on our usual bird-censi.

“The breeding bird list is roughly the same as last years, except that the Killdeer, Spotted Sandpiper and Indigo Bunting did not appear, while the Wood Duck, Grebe and Red-shouldered Hawk are newcomers.”

VI. Breeding birds of 1 acre of fallow orchard, South Euclid, Ohio, 1936.

1 Song Sparrow	2 pair	5 Hummingbird	1 pair
2 Woodcock	1	6 Meadowlark	1
3 Bob-white	1	7 Towhee	1
4 Downy Woodpecker	1	8 Field Sparrow	1
		9 Chipping Sparrow	<u>1</u>
	Total pairs per acre		10

VII. Breeding birds of 1 acre of shrubbery and gardens, including a house and small pond [adjacent] to the above mentioned orchard.

1 Robin	3 pair	7 Brown Thrasher	1 pair
2 House Wren	2	8 Yellow Warbler	1
3 Mourning Dove	1	9 English Sparrow	1
4 Downy Woodpecker	1	10 Cardinal	1
5 Blue Jay	1	11 Chipping Sparrow	1
6 Catbird	1	12 Song Sparrow	<u>1</u>
	Total pairs per acre		15

Roadside Censuses

The following table, compiled from data furnished by Mr. Benjamin P. Bole, Jr., is of considerable interest. It is a summary, as Mr. Bole states, of “roadside ornithology – records made by sight and ear as we drove to and from our work. We often stopped our car in order to make certain identification of bird notes, and in the course of such stops, we occasionally added species or individuals that we had not heard from the car...We got so that we would know exactly when, along our routes to any given place, we would see Vesper Sparrows, and how many each large field contained, along the road at least. The same was true for many other species. We even learned where Sparrows hung out on Prospect Avenue, and where Blue Jays lived along Clifton Boulevard, to cite examples.” Longer stops were made and more territory covered away from the car at Richmond Beach and Mentor Marsh than on the other routes. Trips along these routes were in both directions.

The total number of these trips taken was 82, the number of hours consumed was 82, the total mileage covered was 1607. When the total number of individual birds seen per mile was figured separately for each route, the order of abundance was Rocky River through downtown Cleveland to Lyndhurst (28.3 per mile), Cleveland Hts. to Richmond Beach and Mentor Marsh (23.0), Cleveland to Burton Bog (13.7), South Euclid to Little Mountain (10.1), and Kirtland Hills to Arrowhead Camp (7.4). In other words, if you wish to see a large number of birds, go downtown!! However, you will see mostly English Sparrows, Robins, Starlings, Bronzed Grackles, and Purple Martins.

(For key to abbreviations, see the next page.)	S.E. :	C.H. :	K.H. :	R.R. :	C.H. :	S.E. :	C.H. :	K.H. :	R.R. :	C.H. :
	to :	to R.B. :	to :	to :	to :	to :	to R.B. :	to :	to :	to :
	L.M. & M.M. :	A.C. :	A.C. :	L. :	B.B. :	L.M. & M.M. :	A.C. :	A.C. :	L. :	B.B. :
Number of trips	25	12	14	20	4	Number of trips	25	12	14	20
Av. No. hours of trips	1.1	1.3	0.5	1.4	1.2	Av. No. Hrs. of trips	1.1	1.3	0.5	1.4
Av. No. of observers	2.4	2.9	3	3	3	Av. No. of observers	2.4	2.9	3	3
Av. No. miles of trips	23.8	29.5	8	22.8	22.5	Av. No. miles of trips	23.8	29.5	8	22.8
Green Heron	+	+	0	1.6	0	Tufted Titmouse	0.5	0.8	0	0.9
Wood Duck	+	0.9	0	0	0	White-br. Nuthatch	0	0.5	0	+
Sparrow Hawk	0.8	+	+	0.5	0.5	House Wren	6.0	1.5	0.6	1.0
Bob-white	4.8	7.7	+	+	2.7	Catbird	2.5	1.7	1.2	2.3
Killdeer	+	+	0	+	+	Brown Thrasher	+	+	0.5	+
Spotted Sandpiper	1.04	+	0	2.0	+	Robin	23.8	63.1	0.5	135.8
Solitary Sandpiper	+	+	+	0.6	0	Wood Thrush	1.3	0	+	+
Lesser Yellowlegs	0	+	0	0	0	Bluebird	8.0	5.8	1.5	+
Sanderling	0	3.5	0	0.6	0	Cedar Waxwing	2.5	7.0	0.8	1.2
Pectoral Sandpiper	0	0	0	3.6	0	Migrant Shrike	+	0.7	+	0.5
Herring Gull	0	5.8	0	0	0	Starling	7.8	108.0	5.0	63.7
Ring-billed Gull	0	38.0	0	+	0	Red-eyed Vireo	1.2	3.2	0.5	2.3
Bonaparte's Gull	0	2.4	0	0	0	Warbling Vireo	+	0.5	0	0
Common Tern	0	3.5	0	0	0	Yellow Warbler	2.6	1.4	+	0.5
Mourning Dove	4.1	13.9	1.1	2.7	14.0	Ovenbird	0.5	+	0	+
Night Hawk	0	0	+	1.1	0	N. Yellow-throat	4.4	2.5	0	1.6
Chimney Swift	1.2	4.0	0	2.1	0	Redstart	+	8.3	0	+
Belted Kingfisher	+	+	+	2.2	0	English Sparrow	20.2	113.9	5.3	245.8
Flicker	1.1	3.9	+	7.1	+	Bobolink	3.2	2.5	0	0
Red-head Woodpecker	+	1.6	+	0	+	Meadowlark	5.2	3.5	0.7	0.5
Hairy Woodpecker	+	+	+	+	0.5	Redwing Blackbird	5.0	20.4	1.8	0
Downy Woodpecker	+	0.7	+	0.7	0	Baltimore Oriole	+	+	0	0
Kingbird	4.7	10.5	1.1	1.0	4.0	Bronzed Grackle	+	+	0	25.1
Phoebe	1.1	+	0.5	+	0.5	Cowbird	11.6	16.6	1.0	1.6
Wood Pewee	1.2	2.0	+	+	0.7	Cardinal	+	0.9	+	0.9
Bank Swallow	2.4	+	0.7	0	0	Indigo Bunting	+	1.4	1.1	3.4
Rough-wing Swallow	7.5	3.4	1.0	3.5	0	Goldfinch	7.6	28.9	2.4	6.2
Barn Swallow	13.4	32.4	5.7	+	37.7	Red-eyed Towhee	1.1	+	1.0	0.6
Purple Martin	+	71.8	+	20.0	0.5	Grasshopper Sparrow	2.3	0.5	0.9	0
Blue Jay	+	1.2	+	12.7	1.0	Henslow's Sparrow	1.5	2.1	+	0
Semipalmated Plover	0	0.7	0	0	0	Vesper Sparrow	8.9	3.7	2.0	+
Crow	1.2	14.0	+	12.7	3.5	Chipping Sparrow	11.8	12.5	2.2	1.1
Black-cap. Chickadee	+	1.6	0	+	1.2	Field Sparrow	6.9	6.9	1.1	0.7
Domestic Pigeon	2.1	5.9	+	52.5	6.0	Song Sparrow	30.2	24.0	7.2	16.4

Figures indicate the average number of birds seen per trip. Plus mark (+), recorded, but in very small numbers.

Key: S.E., indicates South Euclid; L.M., Little Mountain; C.H., Cleveland Heights; R.B., Richmond Beach; M.M., Mentor Marsh; K.H., Kirtland Hills Village; A.C., Arrowhead Camp (one mile north of Bass Lake, Geauga County); R.R., Rocky River; L., Lyndhurst; B.B., Burton Bog.

Summary of Field Trips

The following tables give the usual statistics on the number of birds observed per hour on field trips into the denser woods, open country, and aquatic habitats.

BIRDS OF THE DENSER WOODS
Number observed per hour in habitat (June, July, and August).

	1936	1935		1936	1935
Red-eyed Vireo	1.39	2.54	Hairy Woodpecker	0.24	0.30
Hooded Warbler	0.89	0.86	Slate-colored Junco	0.24	0.01
Black-th. Green Warbler	0.86	0.35	Towhee	0.23	0.32
Ovenbird	0.59	0.54	Acadian Flycatcher	0.17	0.25
Redstart	0.56	0.74	Cerulean Warbler	0.14	0.11
White-breasted Nuthatch	0.53	0.67	Woodcock	0.13	0.03
Wood Thrush	0.49	0.71	Rose-breasted Grosbeak	0.10	0.12
Black-capped Chickadee	0.42	0.35	Purple Finch	0.06	0
Wood Pewee	0.40	1.08	Louisiana Water Thrush	0.06	0.01
Blue Jay	0.39	0.37	Pileated Woodpecker	0.05	0.03
Scarlet Tanager	0.39	0.82	Yellow-throated Vireo	0.05	0.14
Cardinal	0.32	0.63	Yellow-billed Cuckoo	0.04	0.04
Tufted Titmouse	0.30	0.72	Carolina Wren	0.03	0.04
Downy Woodpecker	0.28	0.34	Barred Owl	0.03	0.08
Crested Flycatcher	0.26	0.28	Black-billed Cuckoo	<u>0.02</u>	<u>0.03</u>
			Total	9.66	12.51

Considering the total number of individual of all species observed per hour in the denser woods, there was a marked decline in 1936 over 1935, this amounting to 23 percent. Counting those species of which at least 0.10 individuals were seen per hour, 11 show a decrease over last year, 4 an increase, while 7 remain approximately the same. Not all those that decreased in abundance were permanent residents, which were subjected to our last cold winter, but some were those that had migrated far to the south, which would indicate, if our figures are trustworthy, that wintering conditions even there may not have been uniformly favorable.

BIRDS OF THE OPEN COUNTRY
(Open woods, shrubby fields, farmland, cities)
Number observed per hour in habitat (June, July, August).

	<u>1936</u>	<u>1935</u>		<u>1936</u>	<u>1935</u>
Robin	5.59	27.63	Flicker	0.76	1.05
Goldfinch	3.79	3.29	Sharp-shinned Hawk	0.66	0.04
Cedar Waxwing	3.32	1.95	Indigo Bunting	0.60	0.63
Song Sparrow	2.97	4.02	Phoebe	0.55	0.48
Barn Swallow	1.98	3.91	Kingbird	0.52	1.56
Bobolink	1.75	1.57	Vesper Sparrow	0.49	1.03
Field Sparrow	1.68	2.39	Meadowlark	0.48	1.26
Mourning Dove	1.56	2.52	Starling	0.41	16.95
Purple Martin	1.36	2.47	Henslow Sparrow	0.33	0.25
Bronzed Grackle	1.34	2.94	English Sparrow	0.29	2.56
Bob-white	1.25	2.28	Chipping Sparrow	0.28	0.59
Crow	1.07	1.77	Grasshopper Sparrow	0.25	0.31
Cowbird	1.02	0.81	Baltimore Oriole	0.23	0.34
Killdeer	0.96	0.45	Ruby-th. Humming Bird	0.17	0.39
House Wren	0.93	1.09	Red-shouldered Hawk	0.14	0.05
Turkey Vulture	0.92	0.28	Nighthawk	0.14	0.95
Catbird	0.89	0.83	Blue-winged Warbler	0.13	0.17
Yellow Warbler	0.88	0.91	Ring-necked Pheasant	0.11	0.43
Bluebird	0.81	1.22	Red-headed Woodpecker	0.10	0.31
Chimney Swift	0.80	2.73	Sparrow Hawk	<u>0.05</u>	<u>0.10</u>
			Total	41.56	93.51

The total number of individuals of all species observed per hour shows a decrease in 1936 over 1935 of 56 percent. Of the 65 species listed, 52 were less abundant in 1936, and the other 13 either showing an increase or remaining the same. Among the species that most notably decreased in abundance is the Robin, which decrease is substantiated by the nesting census at the Baldwin Sanctuary. The lower figure for the Starling in 1936 over 1935 and also the English Sparrow may be accidental, due their being missed by chance on the trip censuses. It is very doubtful if they decreased in abundance to the extent here figured. In spite of these and other discrepancies in the case of individual species, it seems certain that many species of birds in the denser woods and open country were less abundant this last summer than in 1935.

BIRDS OF THE OPEN LAKE, LAKESHORE, STREAMS, AND MARSHES
 Number observed per hour in habitat (June, July, August)

	<u>1936</u>	<u>1935</u>		<u>1936</u>	<u>1935</u>
Ring-billed Gull	11.02	0.54	Belted Kingfisher	0.58	0.65
Red-winged Blackbird	6.81	5.21	Spotted Sandpiper	0.47	0.56
Bank Swallow	1.53	2.93	Florida Gallinule	0.44	0.03
Northern Yellow-throat	1.45	0.74	Wood Duck	0.37	0
Rough-winged Swallow	0.95	0.25	Alder Flycatcher	0.36	0.10
Mallard	0.95	0.03	Herring Gull	0.33	1.92
Green Heron	0.89	0.35	Tree Swallow	0.19	0.12
Great Blue Heron	0.85	1.30	Black Tern	0.13	0.47
Pied-billed Grebe	0.79	0	Virginia Rail	0.06	0.03
Common Tern	0.74	2.76	Sora Rail	<u>0.05</u>	<u>0.00</u>
Bonaparte Gull	0.72	0.03	Total . . .	29.68	18.02

Altogether, these birds of aquatic habitat show a 39 percent increase in numbers this past summer over 1935. Of the 21 species, 14 increased in abundance, 7 decreased. The increase noted in the Ring-billed Gull, most of which were reported by Mr. B.P. Bole, is most astounding, but in general the indices of abundance in birds in this habitat are less trustworthy than in the case of the other habitats.