

The nests were made of sycamore down without lining. One of the eggs is somewhat larger than the other, which is often the case with sets of humming birds' eggs, and is usually explained on the theory that the smaller egg will hatch into a male bird and the larger one into a female.

Sometime ago I had the good fortune to find a nest of the Ruby-throated Hummingbird on an apple tree branch near my home at Willoughby. The nest contained two fresh eggs. While looking around I noticed a second nest a few feet away, and upon examining it found that it was a last year's one. Both nests had probably been made by the same pair of birds, for aside from the discoloration and weathering of the old nest, the two were identical in size, shape and general appearance. This, coupled with the fact that they were located within a few feet of each other, makes it almost certain that they were built by the same pair of birds.

These are interesting examples of the wonderful instinct which guides even the tiniest of birds over thousands of miles of territory to their favorite summer nesting haunts. In the case of the Black-chinned Hummingbird, however, it is quite possible that the builders of the double nest, owing to the mild climate of Southern California, had never strayed very far away from the place it was found.

A SECOND BIRD SURVEY AT WASHINGTON, D. C.

BY HARRY C. OBERHOLSER.

Our first comprehensive bird census¹ near Washington, D. C., was such a success that we decided to repeat it in the spring of 1917. On this second occasion twenty-two ornithologists took part, and the seventeen parties into which they separated covered pretty thoroughly the various kinds of country within twenty miles of the city. The date selected was May 11, 1917, one day earlier in the month than in 1913; and the choice proved to be a fortunate one, since an unex-

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pected and extraordinary combination of circumstances made this time exceptionally favorable for birds.

Weather conditions on this day were almost ideal. The air was clear, with 90 per cent of possible sunshine; a relative humidity of 62 at 8 a. m., and of 31 at 8 p. m.; a barometer ranging from 29.85 at 8 a. m. to 29.69 at 8 p. m.; and with a light south breeze in the morning, changing to a rather strong northwest wind in the evening. The temperature also was favorable, being moderately cool and equable, ranging from a minimum of 42° at 5 a. m. to a maximum of 68° at 4 p. m. Thermometer readings at other hours of the day were as follows: 4 a. m., 44°; 7 a. m., 46°; noon, 64°; 2 p. m., 66°; 6 p. m., 65°; 9 p. m., 57°.

The results of this all-day trip were as remarkable as they were unexpected, for on the previous day the prospects were far from bright. The total number of species observed by all the parties collectively was 166, which is, so far as we are aware, the largest number ever reported in a single day at any locality in the United States, even by the combined efforts of several observers. The total number of individual birds noted was 17074. The reasons for this rather astonishing result are not far to seek. The very cool weather of April and early May induced the winter residents to remain late, and at the same time greatly retarded the northward movement of the later migrants; a condition which, to judge by the reports of heavy spring migration from many other localities, obtained over much of the northern and middle portion of the eastern United States. An examination of the appended table will show that, while a large number of species was present, there were only a few individuals of many of the later migrants on this May 11, on which date the spring migration about Washington is ordinarily at its height. In 1917, however, the high tide of the migration was not reached until May 17 to 23, nearly ten days later than usual. On the other hand, in 1917, some of the early migrants and winter residents were very numerous for so late in the season; as, for instance, the red-breasted nuthatch, blue-headed vireo, and

SPECIES	Wetmore											Totals					
	Aspinwall and Pellew	Shoemaker	Mabbott	Jackson	Palmer	Harper	Miner	Kalmbach and Gabrielson	Oberholser	Bartsch	Howell		Williams and Henderson	Cooke and Baird	Stimson	Holt	Mrs. Gabrielson
<i>Phalacrocorax auritus auritus</i>	3			1	2	1	1	1	1	2				1			4
<i>Nycticorax nycticorax naevius</i>	1			1	1	5	1	3	6								21
<i>Butorides virescens virescens</i>			2	1		1	1	1	1								2
<i>Ardea herodias herodias</i>					1	6	3	3	2								9
<i>Ixobrychus exilis</i>					1	54	3	2	1								60
<i>Mareca affinis</i>						4		1	2				3				1
<i>Mareca marila</i>						4		1	2								10
<i>Anas platyrhynchos</i>						6		6	1								14
<i>Anas rubripes tristis</i>	2								1								1
<i>Querquedula discors</i>									1						1		1
<i>Aix sponsa</i>						3											3
<i>Lophodytes cucullatus</i>	14	42	39	18	17	20	12	46	43	1	23	12	17	24	15	2	378
<i>Cathartes aura septentrionalis</i>									1								1
<i>Tinnunculus columbarius columbarius</i>									2		2						4
<i>Cerchneis sparveria sparveria</i>	1			1	1	1		4	2		1						11
<i>Pandion haliaetus carolinensis</i>				1			1	1	1		1						2
<i>Haliaeetus leucocephalus leucocephalus</i>								1	2	1	1	3				1	11
<i>Buteo lineatus lineatus</i>	1						1	1	2	1	1	3					10
<i>Buteo platypterus platypterus</i>	2		1				1	1	3		1	1	2				4
<i>Accipiter cooperii</i>	1				1			1	1			1	3		1		5
<i>Accipiter velox</i>								1	1			1					1
<i>Circus cyaneus hudsonius</i>			1					1				1					1
<i>Bonasa umbellus umbellus</i>			1					1				1					1
<i>Colinus virginianus virginianus</i>	8	3	6	2	4	24	10	18	12	2	4	7	15	10	8	3	139

purple finch. Furthermore, the occurrence of an exceptional number of rare and of occasional visitors at the time our census was taken aided materially in swelling the total of species observed. This peculiar combination of circumstances, which made possible such a great record, is not likely to recur in many years.

On this day the seven most numerous species, in the order of their abundance, were: chimney swift, white-throated sparrow, English sparrow, song sparrow, American goldfinch, purple grackle, and catbird. It is interesting to note that four of these are sparrows.

The nineteen species least numerous, of which only a single individual was observed, were: greater scaup duck, blue-winged teal, wood duck, pigeon hawk, marsh hawk, ruffed grouse, king rail, upland plover, woodcock, herring gull, yellow-billed cuckoo, yellow-bellied sapsucker, northern yellow-throat, yellow palm warbler, prothonotary warbler, blue grosbeak, fox sparrow, tree sparrow, and Savannah sparrow.

The fourteen species of most general distribution, reported by all the parties in the field, were: turkey vulture, bob-white, flicker, crested flycatcher, kingbird, brown thrasher, southern crow, meadowlark, purple grackle, cardinal, chewink, song sparrow, white-throated sparrow, and American goldfinch.

Thirteen others were observed by every party except one: chimney swift, bluebird, southern robin, house wren, Carolina wren, tufted titmouse, blue jay, American redstart, Maryland yellow-throat, oven-bird, myrtle warbler, field sparrow, and chipping sparrow.

Several birds were much more than ordinarily numerous for this locality, among which we might mention the white-crowned sparrow, bob-white, mockingbird, Carolina wren, blue jay, and American redstart.

Among the rarer birds of the District of Columbia, found on May 11, the following seem worthy of special mention: the double-crested cormorant, of which there are only a few other records; the woodcock, which has become rare of late years; the pigeon hawk, which is not often seen; the ruffed

grouse, which has become almost extinct in the immediate vicinity of Washington; the king rail, which is here of very local distribution; the upland plover, which has been very rare of recent years, but is now apparently on the increase; the red-backed sandpiper, which is very irregular here; the white-rumped sandpiper, which has but two other records; the laughing gull, with only a few previous occurrences, and none of these in the spring; the black tern, previously noted only once in spring; the Caspian tern, otherwise but twice recorded; the common tern, with also but two definite previous records; the mourning warbler, which has been very infrequent of late years; the blue-winged warbler, which is also rare; the prothonotary warbler, of which there are but seven previous records; and the blue grosbeak, which is so uncommon that its presence is always noteworthy.

So unusual a spring season might reasonably be expected to furnish a number of very late records for migrants and winter residents; and in the following list are included those of which the late spring records were broken by our observations on May 11; their latest previous known occurrence at this season in this locality being represented by the date after each:

- Mallard, March 19, 1905.
- Black duck, April 21, 1915.
- Hooded merganser, April 8, 1906.
- Pigeon hawk, April 25, 1912.
- Upland plover, April 24, 1890.
- Red-backed sandpiper, April 24, —.
- White-rumped sandpiper, no previous spring record.
- Herring gull, May 10, 1887.
- Ring-billed gull, April 28, 1887.
- Laughing gull, no previous spring record.
- Caspian tern, no previous spring record.
- Common tern, May 7, 1894.
- Rusty grackle, April 30, 1875.
- Tree sparrow, May 7, 1889.

Comparison of the present census with that of 1913 brings out some interesting points. While the weather on the two

census days was very similar, the temperature on the immediately preceding days was widely different in the two years, being very high in 1913, and very low in 1917; so that in 1913 the winter residents had practically all disappeared, and the number of purely migratory species present was also very much less than in 1917. Thus, 1913 was an exceptionally poor year for birds, in fact, considerably below normal; and 1917 was fully as much above the ordinary. The difference between 129 species observed in 1913, and 166 in 1917 well illustrates this; and the normal condition would probably be about half-way between the two. Six species, however,—the pied-billed grebe, great horned owl, bay-breasted warbler, yellow-throated warbler, northern parula warbler and Bachman sparrow—seen in 1913 were not noted in 1917. Of the six most numerous species, in point of individuals observed, only three—the English sparrow, song sparrow, and chimney swift—were identical in the two years, and their relative abundance was not the same. The abundance of the barn swallow and tree swallow in 1913 was due to a large single flock of swallows seen on the Anacostia River; but no such flock was present on the day of our observations in 1917. Moreover, the list of birds least numerous was very different in 1917, as only five out of nineteen are common to both lists. These are the marsh hawk, king rail, woodcock, yellow palm warbler, and blue grosbeak. The species of most general distribution, however, show a much closer agreement, since eight out of fourteen of the 1917 birds in this category are the same as those in the 1913 list.

The itinerary of each of the seventeen parties engaged in this survey was as follows:

- 1.—Great Falls, Virginia. Traveled by electric car from Woodridge, D. C., to Fairview, Virginia, and return, 43 miles; on foot, 18 miles, from Fairview, Virginia, to above Great Falls on the Virginia side of the Potomac River. Character of country traversed: woodland and thickets, 80 per cent; clearings and farm land, 17 per cent; swamp, 3 per cent. Total distance traveled, 61 miles. Time in field, 5:00 a. m. to

9:25 p. m. Total number of species observed, 85; individuals, 702. Alexander Wetmore.

2.—Washington, D. C., to Great Falls, Maryland. Traveled by automobile to Great Falls and return, 40 miles; on foot, 10 miles, about Great Falls, on the Maryland side. Character of country traversed: woodland and thickets, 80 per cent; fields, 20 per cent. Total distance traveled, 50 miles. Time in field, 6:00 a. m. to 5:30 p. m. Total number of species observed, 84; individuals, 1705. Mrs. Clarence A. Aspinwall and Miss Marion Pellew.

3.—Valley of the Potomac River in Virginia, from Difficult Run to Dead Run, and west to McLean, Virginia. Traveled by electric car from Washington, D. C., to Bellevue, Virginia, and from McLean, Virginia, to Washington, D. C., 18 miles; on foot, 8 miles, from Difficult Run along the Potomac to Dead Run, and thence across country to McLean, Virginia. Character of country traversed: woodland and thickets, mostly along streams, 65 per cent; open fields and country roads, 35 per cent. Total distance traveled, 26 miles. Time in field, 6:30 a. m. to 6:00 p. m. Total number of species observed, 73; individuals, 734. Clarence R. Shoemaker.

4.—Valley of the Potomac River in Maryland, from Chain Bridge, D. C., to one mile above Great Falls, Maryland. Traveled by electric car from Woodridge, D. C., to Chain Bridge, D. C., and from Great Falls, Maryland, to Woodridge, D. C., 30 miles; on foot, 14 miles, along the Chesapeake and Ohio Canal from Chain Bridge to one mile above Great Falls, Maryland, with detours to the Potomac River, to Plummer's Island, and elsewhere. Character of country traversed; canal and towpath, 60 per cent; woodland and thickets, 40 per cent. Total distance traveled, 44 miles. Time in field, 5:10 a. m. to 6:45 p. m. Total number of species observed, 74; individuals, 879. Douglas C. Mabbott.

5.—Potomac Valley on the Virginia side from Georgetown, D. C., to Chain Bridge, Virginia; and on the Maryland side from Chain Bridge, D. C., to Cabin John Bridge, Maryland. Traveled by electric car from Washington, D. C., to George-

town, D. C., and from Cabin John Bridge, Maryland, to Washington, D. C., 14 miles; on foot, 17 miles, from Georgetown, D. C., along the Virginia side of the Potomac to Chain Bridge, Virginia; and on the opposite side of the Potomac from Chain Bridge, D. C., to Cabin John Bridge, Maryland. Character of country traversed: dry woodland, 30 per cent; wet woodland, 20 per cent; forest borders, 36 per cent; fields and roads, 5 per cent; rocky ledges and brushland, 8 per cent; marshland, 1 per cent. Total distance traveled, 31 miles. Time in field, 3:50 a. m. to 3:00 p. m. Total number of species observed, 85; individuals, 1517. H. H. T. Jackson.

6.—Rosslyn, Virginia, to Arlington and Four-mile Run, Virginia. Traveled by automobile from Georgetown, D. C., to Four-mile Run and return, 10 miles; on foot, 8 miles, from Rosslyn, Virginia, to Arlington Cemetery, Hume Station, Relee, and Four-mile Run, Virginia. Character of country traversed: riverside, marshes, and thickets, 40 per cent; woodland, 10 per cent; open fields and roads, 50 per cent. Total distance traveled, 18 miles. Time in field, 7:00 a. m. to 5:30 p. m. Total number of species observed, 83; individuals, 1131. William Palmer.

7.—Woodridge, D. C., Washington, D. C., and New Alexandria to Dyke and Falls Church, Virginia. Traveled by electric car from Woodridge, D. C., to New Alexandria, Virginia, and from Falls Church, Virginia, to Woodridge, D. C., 27 miles; on foot, 25 miles, about Woodridge; in the Mall of the city of Washington; from New Alexandria, Virginia, to Dyke, Virginia, and thence across country to Falls Church, Virginia, by way of Cameron Run and Holmes Run. Character of country traversed: woodland, 50 per cent; fields, 35 per cent; marsh, 10 per cent; river, 5 per cent. Total distance traveled, 52 miles. Time in field, 4:05 a. m. to 9:35 p. m. Total number of species observed, 97; individuals, 1189. Francis Harper.

8.—Wellington, Virginia, to Dyke and Oaks, Virginia. Traveled by electric car from Wellington, Virginia, to Washington, D. C., 13 miles; on foot, 9½ miles, from Wellington,

Virginia, to the Fort Hunt Road; to Arcturus; along the river to Dyke and Oaks; and thence along the uplands back to Wellington, Virginia. Character of country traversed: woodland, 20 per cent; marsh, 10 per cent; farmyards, 1 per cent; orchards, 2 per cent; fields, 67 per cent. Total distance traveled, 22½ miles. Time in field, 5:00 a. m. to 5:00 p. m. Total number of species observed, 89; individuals, 1526. Mr. and Mrs. Leo D. Miner.

9.—Valley of the Potomac and Anacostia Rivers, from opposite Alexandria, Virginia, to Benning, D. C., and College Park, Maryland. Traveled by electric car from Congress Heights, D. C., to Anacostia, D. C., and from Riverdale, Maryland, to Woodridge, D. C., 4 miles; on foot, 18 miles, in the vicinity of the Potomac River from opposite Alexandria to Congress Heights; along the Anacostia River from Anacostia to Woodridge, D. C.; across country to College Park, Maryland; and thence to Riverdale, Maryland. Character of country traversed: woodland, 40 per cent; meadows, 4 per cent; roadways, 22 per cent; wooded swamps, 17 per cent; mud flats, 11 per cent; river shore, 3 per cent; and marshes, 3 per cent. Total distance traveled, 22 miles. Time in field, 4:00 a. m. to 7:00 p. m. Total number of species observed, 98; individuals, 1458. E. R. Kalmbach and I. N. Gabrielson.

10.—Rock Creek Park, D. C., Piney Branch, D. C., and the Anacostia River Valley from Benning, D. C., to Bladensburg, Maryland. Traveled by electric car from Rock Creek Park to Benning, D. C., and return, 12 miles; on foot, 1 miles, in Rock Creek Park, along Piney Branch, and in the Anacostia Valley; by rowboat, 12 miles, from Benning, D. C., to Bladensburg, Maryland, and return. Character of country traversed: woodland and thickets, 42 per cent; fields and roads, 16 per cent; marsh, 21 per cent; and river, 21 per cent. Total distance traveled, 31 miles. Time in field, 4:00 a. m. to 9:00 p. m. Total number of species observed, 105; individuals, 1840. Harry C. Oberholser.

11.—Oxon Run, D. C., and Potomac Park, Washington,

D. C. Traveled by automobile, Washington, D. C., to Oxon Run, D. C., and return; and to Potomac Park and return, 18 miles. Character of country traversed: woodland and thickets, 60 per cent; meadows, fields, and park, 40 per cent. Total distance traveled, 18 miles. Time in field, 6:30 a. m. to 8:30 a. m.; and 5:00 p. m. to 6:00 p. m. Total number of species observed, 30; individuals, 338. Paul Bartsch.

12.—Woodridge, D. C., to Forest Glen, Maryland. Traveled by electric car from Forest Glen, Maryland, to Woodridge, D. C., 13 miles; on foot, 15 miles, from Woodridge, D. C., to Mount Rainier, Maryland; thence up the valley of Northwest Branch to near Burnt Mills, Maryland; and across country to Forest Glen, Maryland. Character of country traversed: rolling cultivated fields, 40 per cent; woodland, 60 per cent. Total distance traversed, 28 miles. Time in field, 5:00 a. m. to 6:15 p. m. Total number of species observed, 79; individuals, 771. Arthur H. Howell.

13.—Sligo Creek, Maryland. Traveled on foot, 12 miles, from Takoma Park, Maryland, to Sligo Creek, and along the creek for a considerable part of its course. Character of country traversed: woodland and thickets, 100 per cent. Total distance traveled, 12 miles. Time in field, 4:40 a. m. to 3:45 p. m. Total number of species observed, 63; individuals, 937. R. W. Williams and W. C. Henderson.

14.—Rock Creek Park, D. C., and Zoölogical Park, D. C. Traveled by electric car from Washington, D. C., north to the District Line, 3 miles; on foot, 10 miles, through Rock Creek Park and the Zoölogical Park, chiefly in the Rock Creek Valley. Character of country traversed: woodland, 90 per cent; open fields, 10 per cent. Total distance traveled, 13 miles. Time in field, 5:30 a. m. to 5:00 p. m. Total number of species observed, 76; individuals, 876. Miss M. T. Cooke and Miss K. B. Baird.

15.—Chevy Chase, Maryland, to Chevy Chase Lake, Maryland, Glen Echo, Maryland, and Chain Bridge, D. C. Traveled on foot, 12 miles, from Chevy Chase, Maryland, to Rock Creek, Maryland; thence to Chevy Chase Lake, Maryland,

and Brookeville Road, Maryland; also from Chevy Chase, Maryland, west to Glen Echo Junction, Maryland, on the Potomac River; thence south along the Conduit Road to Chain Bridge, D. C., and back to Chevy Chase, Maryland. Character of country traversed: woodland, 80 per cent; fields, 20 per cent. Total distance traveled, 12 miles. Time in field, 5:00 a. m. to 9:20 a. m.; and 12:50 p. m. to 5:40 p. m. Total number of species observed, 67; individuals, 401. A. M. Stimson.

16.—Patuxent River, from Laurel, Maryland, to Bowie, Maryland. Traveled by train from Langdon, D. C., to Laurel, Maryland, and from Bowie, Maryland, to Langdon, D. C., 29 miles; on foot, 15 miles, along the Patuxent River from Laurel to Bowie, Maryland. Character of country traversed: timbered river bottomland, 75 per cent; open fields and pastures, 25 per cent. Total distance traveled, 44 miles. Time in field, 5:00 a. m. to 7:00 p. m. Total number of species observed, 74; individuals, 934. E. G. Holt.

17.—East Falls Church, Virginia. Traveled on foot, 2 miles, about East Falls Church. Character of country traversed: woodland, 100 per cent. Total distance traveled, 2 miles. Time in field, 5:15 a. m. to 7:30 a. m. Total number of species observed, 43; individuals, 136. Mrs. I. N. Gabrielson.

The accompanying table gives in more graphic form the number of each species observed by each party; also the total number of each species observed by all the parties during the day, as well as the other totals given above.

SOME FLORIDA HERONS.

JOHN WILLIAMS, ST. MARKS, FLORIDA.

An account of breeding colonies of *Hydranassa tricolor ruficollis* (Louisiana Heron), and of *Florida cærulea* (Little Blue Heron) may contain little information to one familiar with the breeding habits of these two species, but they may be of interest to those who have not had an opportunity to