

number will take this up to insure the complete success of the project.—E. W. NELSON, CHIEF OF BUREAU, *Washington, D. C., April 26, 1920.*

PUBLICATIONS REVIEWED

BIRD BANDING BY MEANS OF SYSTEMATIC TRAPPING. By S. PRENTISS BALDWIN. Abstract of Proceedings, Linnaean Society of New York, no. 31, 1919, pp. 23-56, pls. I-VII. Separate received March 17, 1920.

Both bird-banding and bird-trapping have been used independently for one purpose or another for many years, yet it has remained for Mr. S. Prentiss Baldwin of Cleveland, Ohio, to combine these two procedures into a "new" method which has great potentialities for certain lines of ornithological study. Quite incidentally, in an effort to rid his farm of English Sparrows, Mr. Baldwin saw the possibilities of this method, and the paper cited above gives a summary of his results for the period from 1914 to 1918. Part of the work was done in the summer time at Cleveland, Ohio, and the balance at Thomasville, Georgia, during the late winter and early spring months.

The author's method was to set and bait one or more of the "government" double-funnelled sparrow traps, surrounding each by a 20-foot circle of 3-foot wire netting as a cat guard. Traps were visited at frequent intervals, the captured birds being removed, tagged and recorded and then released. In addition, during the summer, a number of House Wrens were caught in box nests provided with a trap door.

The species caught by the sparrow traps include Song, Chipping, White-throated and White-crowned Sparrows, White-eyed Towhee, Myrtle Warbler, Red-bellied Woodpecker, Brown Thrasher, Eastern Bluejay and Mourning Dove, although traps set for the larger of these birds would not always retain the smaller species. Shrikes gave some trouble in Thomasville and had to be hunted down, but cats were effectively guarded against by the circle of netting. A few birds injured themselves through their struggles in the trap, but subsequent recapture of some of these individuals showed that such wounds healed in a few days.

Permanent residents, summer visitants, winter visitants and transients all figure in the results. Trapping at Thomasville in the spring of 1917, and using five traps for six weeks, some 684 birds were captured. Of these 414 were "repeats" that had been

trapped, branded and released previously. Of 239 new birds, 215 were classed as migrants or winter visitants and only 24 as residents. Four of a lot totalling 63 belonging to the visitant-migrant category banded in 1915 were retrapped in this season and 17 of 169 banded in 1916 were taken again in 1917. Of residents, two of 27 banded in 1915 were recovered and 8 of 44 trapped in 1916.

Mr. Baldwin obtained definite evidence on a number of the heretofore unsolved problems in ornithology. The return of winter visitants was shown strikingly in the case of White-throated Sparrows. Twelve of a flock of twenty were banded in 1915. Two of these were recovered in 1916 and five new birds banded. In 1917 one 1915 bird and four 1916 birds were recovered. The birds in this flock in three successive years, stayed close about a certain thicket at which his trap "A" was placed. They rarely ventured as far as trap "B", 100 yards distant, and none was ever taken in the latter trap.

Chipping Sparrows which do not winter at Thomasville have been taken in the spring of successive years, showing that migrants stop off at the same stations when en route between their winter and summer ranges. Trapping in 1917 resulted in the recapture of three of these sparrows banded in 1915 and eight of those marked in 1916. Song Sparrows trapped at Cleveland indicated that migrants do not move forward at a uniform rate, but, in fall at least, make a move, then linger until a storm urges them on when their places may be taken by new arrivals from the north.

Perhaps the most interesting observations of all are those made on House Wrens at Cleveland. On June 19, 1915, a pair and the members of its brood were banded in a certain "trap" nest. On August 14 the same year one member of this pair was found with a new mate and second brood in the same box while the other member of the original pair also had a new mate (unfortunately not banded) and was also rearing a second brood in another box about 100 feet from the first. In 1916 the second of these "divorced" Wrens was found at the same (second) box but the identity of its spouse as regards the second 1915 mating could not be ascertained.

Contrary to general opinion the handling of birds incidental to their being removed from the traps and being tagged does not discourage their return as is proven by the number of recaptures. Some birds acquire

the "trap habit" and a few individuals made themselves obnoxious by returning to the traps again and again. Considerable individuality in temperament was displayed by the trapped birds. One White-throated Sparrow always fought and bit when handled and another invariably squealed upon being removed from the trap, while a certain Brown Thrasher used to stand quietly until released.

After reading Mr. Baldwin's paper the reviewer is greatly impressed with the possibilities in this new method. Persons who are possessed of even a modicum of spare time can add materially to the fund of ornithological information by operating one or more of these traps through a greater or lesser part of the year. Here is a case where for purposes of identification and record a "bird in the hand", even though temporarily, is worth vastly more than "two in the bush". The establishment of a series of stations along some well travelled route might make possible not only the accurate tracing of *species* migration but even the migratory movements of *individuals*.—
TRACY I. STORER.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

NOVEMBER.—The November meeting of the Northern Division of the Cooper Ornithological Club was held on the 20th, at 8 P. M., at the Museum of Vertebrate Zoology. In the absence of both president and vice-president, Mr. Curtis Wright was asked to preside. Members present were: Mesdames Allen, Griffin, Grinnell, Head, Kibbe, Schlesinger, Thompson, Van Dyke; Messrs. Bade, Bryant, Carriger, Cooper, Grinnell, Hunt, Kibbe, Loomis, Mailliard, McLean, Moffitt, Palmer and White. Visitors were: Mr. Austin, Miss Cooper, Dr. Hanna, Miss Evermann, and Mrs. Thompson.

The minutes of the October meeting were read and approved. Those whose names were proposed at the October meeting were elected to membership, namely, Miss Ames, Mrs. Dodge, Mr. Fletcher, Mr. Harper, Mr. Harrison, Miss Mackey, Mrs. Mead, Mr. Moore, and Mrs. Price. In addition to the proposals before the Southern Division, which included Miss Ruth Ledig, Mr. Richard F. Williams, Mr. Charles F. Hodges and Mrs. Brownlee, the name of Miss Bessie M. Lander, Exeter, Calif., was proposed by

Dr. Grinnell, and that of Mr. Lloyd Austin, Berkeley, by Miss Anna Head.

A letter from Mr. Finley, together with an article of his, clipped from the *Oregonian* for October 26, urged immediate action regarding the drainage of Lower Klamath Lake. On motion of Dr. Bryant, seconded by Mr. Storer, it was declared to be the sense of the meeting that it would be against the interests of the citizens of Oregon and California to have the Klamath Lake Reservation destroyed as a bird refuge, and that letters asking for an investigation should be forwarded to the Secretary of Agriculture and to the Secretary of the Interior.

Dr. Grinnell announced that letters from Mr. Swarth, who attended the meeting of the A. O. U., reported an attendance of twenty-four out of forty-nine fellows, and also the election of two new fellows: Mr. Alexander Wetmore and Mr. J. H. Riley. Dr. G. Dallas Hanna then presented the results of "Bird Studies on the Pribilof Islands", in which he dwelt particularly on the large number of species (129) that have been collected although only twenty-two are listed as breeding there. He emphasized also the enormous numbers of sea birds, such as the Least Auklet and the Pallas Murre, which breed on the Pribilof Islands each year. After some discussion it was voted to adjourn.—AMELIA S. ALLEN, *Secretary*.

DECEMBER.—The regular meeting of the Northern Division of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology, December 18, at eight o'clock in the evening. Dr. Evermann was in the chair and the following members and friends were present: Mesdames Allen, Ames, Ferguson, Griffin, Grinnell, Head, Kelly, Law, Mackey, Mead, Price, Schlesinger, and Thompson; Messrs. Austin, Bell, Carriger, Cohen, Dixon, Evermann, Grinnell, Howell, Kellogg, Kibbe, La Jeunesse, Lamb, Lastreto, Law, Little, Mailliard, Wheeler, White, and Wright. Visitors: Mesdames Evermann, Hardy, Lamb, Thompson, and Wood.

November minutes were read and approved and Southern Division minutes for October and November were also read. Miss Bessie M. Lander and Mr. Lloyd Austin whose names were proposed in November, were elected to membership. Miss Ruth Ledig, Mr. Richard F. Williams, Mr. Charles F. Hodges, and Mrs. W. L. Brownlee, elected by the Southern Division were approved. New names proposed were: Miss Ethel