

RECENT LITERATURE

Der Vogelzug, Vol. 2, No. 2, April, 1931. This number opens with a valuable summary of our knowledge of the wanderings of the birds of northern Asia by Tugarinow. North Asiatic birds are here grouped according to their migration routes, as follows:

1. Species which fly southward over a broad front across Asia. Of these there are several sub-groups. Those which traverse central Asia from the east largely follow the great Chingan, east of Mongolia, and their route is here termed the Chingan route. A great many Asiatic birds travel southward over Turkestan and reach India, Afghanistan, Persia, Arabia, or even Africa, as the case may be in individual species. This route is called the Turkestan route. A small group of central Chinese birds winter in Arabia and western India, and their migration is largely an east-west journey, which is here termed the east-west central Asiatic path.

2. Another assemblage of birds migrate along the Arctic coast of Siberia westward to the Atlantic Ocean. This path is termed the Arctic-Atlantic.

3. Another group of species follow the entire Asiatic coastline from the delta of the Lena River east to the Chuckche Peninsula, and thence south along the coast to the Malay Peninsula, and beyond to Australia. This is the Asiatic-Pacific route.

4. A few birds from northeastern Asia cross Bering Straits and then follow the western shores of North America southward, using what is termed the American-Pacific route.

5. A few species fly in spring from Japan over Amurland to the regions farther north, but in the autumn they migrate eastward to Bering Sea and south along the coast to Japan. This is the east-Siberian cross route.

The Chingan route is the one followed by the majority of the birds breeding in the Yenisei delta and valley; the Arctic-Atlantic path is used by species which also breed in northern Europe. The Turkestan route is used by a smaller number of species, mostly of west-Palaearctic forms. Only a few of them actually get beyond the borders of Siberia, and these few winter in India and near-by parts. The birds which follow the Asiatic-Pacific route include those which breed on the shores of Bering Sea. The American-Pacific route is used by some birds breeding in extreme north-eastern Asia.

Schüz discusses the migration of the Crested Grebe (*Podiceps cristatus*), as indicated by three return records of banded birds.

Kramer writes on bird-migration at great heights and concludes that the direction of flight is affected by coastlines and other topographical features of the landscape only in the case of low-flying birds. The same species may fly high on clear days and low on cloudy ones, and its direction of flight differs on the two occasions. He also notes that inasmuch as only a small percentage of the total bulk of a species flies low (or migrates actively in poor weather when it would tend to fly low), the number of individuals observed is not a reliable index to the abundance of the species.

Drost and Boeck report on the results of the international observation stations' cooperative study of migration in the North Sea in the autumn of 1930. (A preliminary report was published in the January number of this journal.) They find that the line of flight across the North Sea is chiefly in a southwestern direction; a western flight is the usual one between Holland and England; the flight over the North Sea is not in accord with the supposition that some land is always visible to the birds. In many cases the sea, even in good weather, acts as a restraining influence on migration, by shifting the direction of the flight along the coast or to the coast. This restraining influence begins fairly strong and becomes weak

by October and appears to be correlated with the warm winds from the west.

Drost and Bock contribute another paper on German observations in the autumn of 1930, the article being a contribution to the study of the direction of migration in Germany.

Among the shorter notes is one by Schuster showing that the migration impulse is stronger in the male birds than in females in the Hen Harrier (*Circus cyaneus*). He finds that the birds which fail to go south for the winter are chiefly females (75-80 per cent). Schüz comments on Wenzel's and Stresemann's notes on the wintering of Vaux' Swift (*Chaetura vauxi*) in Guatemala.

H. F.

Venatoria, Anno 1, No. 2, March 1931-IX.¹

The Ornithological Station at Castel Fusano is to be operated for the protection and study of birds and for the benefit of the hunters of Migratory Quail in Italy. The station is situated on a belt of dunes extending along that part of the coast lying some twenty-five kilometers southwest of Rome. Trapping and banding methods are employed, the major purpose being at present to study the habits of the Migratory Quail (*Coturnix coturnix*), the investigations to date having covered a part of the spring migration of 1930.

The equipment of the station consists of the trapping station on the highest part of the dunes, an area well situated to receive the flocks of Quail as they arrive from northern Africa. A line of three-fold nets parallels the belt of dunes some sixty meters from the shore. A small building has been erected near-by which is used as a laboratory for scientific work and where all records are kept.

The author states that the prime matters being investigated are the determinations of the migration routes followed by the Quail; the direction of migration; the areas the birds favor for nesting purposes; the distribution of the sexes while in migration; the behavior of the birds as determined by sex and age; speed of migration and sustained migration flights.

Of the one hundred and thirty Quail banded mainly between May 7th and June 10th, ten were recovered at various places in Italy. The three most important recoveries were Numbers 65, 82, and 127, all male birds. Numbers 65 and 82 were killed by gunners on the littoral at Monte Conero, twelve kilometers southeast of Ancona, during May 18th and 19th following their banding on May 17th and 18th. Ancona is situated on the Adriatic Sea approximately one hundred and forty miles northeast of the place of banding. The third bird, Number 127, banded June 2d, was found dead on the beach at Fano, also on the Adriatic, the morning of June 3d, one hundred and fifty miles distant. These recoveries, the author states, show

¹ A copy of this Italian periodical, which is devoted to hunting, as its name signifies, including a translation of an article appearing therein by Prince Francesco Chigi, was kindly sent to the editor by Dr. T. Gilbert Pearson, who had the translation made. This article gives some of the results of the first season's campaign (May to July, 1930) at the banding station of Prince Chigi at Castel Fusano near the mouth of the Tiber. In addition Dr. Pearson sent a copy of a personal letter from Prince Chigi enclosing information regarding the two important Italian Experimental Sanctuaries for the protection and study of birds which have been established since 1928. The Osservatorio Ornitologico del Gardo, situated at the Spino Mountain Pass above Salo is under the technical direction of Dr. Antonio Duse. This sanctuary was promoted by the Ancient Society of Brescian Huntsmen. The second Zoological Experimental Station to be established was that of Prince Chigi above mentioned.

It is gratifying to note that, doubtless as a result of the efforts of the International Committee for Bird Conservation, of which Dr. Pearson is Chairman, a real beginning has been made in the conservation of bird-life in Italy by the establishment of bird sanctuaries where important ornithological investigations will be conducted.

a surprising but distinct northeastward migration, the birds almost certainly coming from Tunisia across the Mediterranean Sea to the Roman littoral and then passing overland across the Italian peninsula to the Adriatic. Previous to these findings it has been supposed that the Quail reaching the coasts of the upper and middle Adriatic came from Egypt or Albania. Moreover, evidence is cited to show that the Quail migration along the Adriatic littoral is earlier than that along the Tyrrhenian littoral. Future banding results are expected to confirm or disprove this theory.

The seven remaining recoveries, with one exception, were made by gunners, and with one exception they were all females. Four birds were recovered in Northern Italy, all of them during the months of August and September, from which it appears that not all the migrants arriving at the Roman littoral in May and June continued northeasterly across the Adriatic, but dispersed to other nesting-grounds in Italy. No theory is offered in explanation of the fact that nearly all the banded birds recovered in August and September were females.—C. L. W.

Bird-Banding by Systematic Trapping.—By S. Prentiss Baldwin. Scientific Publications of the Cleveland Museum of Natural History, Volume I, No. 5. This attractively printed pamphlet consists of reprints of two earlier publications of Mr. Baldwin which are to-day out of print and difficult of access to many bird-students. They are of considerable historical value to all bird-banders, for their publication in their original form aroused much interest and resulted in a radical change in banding methods and in a wider adoption of this method of bird-study. The first of these papers, on "Bird-Banding by means of Systematic Trapping," was given in substance at the New York meeting of the American Ornithologists' Union in 1919 and later formed the basis of the first instruction book for banders issued by the Bureau of Biological Survey. Previously banding had been limited almost entirely to nestling birds, and no definite effort had been made to recapture these birds at a subsequent time. This, and the high mortality during the first year, caused discouragingly few recoveries or returns from banding activities, but Mr. Baldwin demonstrated that when adult birds were trapped, banded, and released, the percentage of returns was much higher. The second article, on "The Marriage Relations of the House Wren," appeared in the *Auk* in April, 1921, and also aroused great interest, for it indicated clearly that bird-banding might reveal many details in the life-histories of our birds which could not be learned by any other method of study. The present pamphlet should be in the library of every bird-bander.—J. B. M.

The Auk. Volume XLVIII, No. 1, January, 1931. Again a bird-bander has added a new species to the list of birds known from Massachusetts. In a brief note in this issue, Dr. Oliver L. Austin, Jr., reports the taking of four Clay-colored Sparrows (*Spizella pallida*) at the Austin Ornithological Research Station, North Eastham, Massachusetts. The first two birds were collected and placed in the Museum of the Boston Society of Natural History; the other two were banded and released. The dates on which these birds appeared, September 20 (two), October 11, and November 3, 1930, suggest that this species may be a regular straggler to New England which has been overlooked in the past through its close resemblance in the field to the immature or winter plumages of the Chipping Sparrow, which it closely resembles in size, form, and habits.—J. B. M.

The Auk. Volume XLVIII, No. 2, April, 1931. This issue contains some additional matter on the Double-crested Cormorant by Dr. Harrison F. Lewis, supplementing his "Natural History of the Double-crested Cormorant," which was reviewed in *Bird-Banding* for April, 1930. It includes several recent recoveries of banded cormorants, birds from colonies in Quebec having been reported from North Carolina and Georgia, and three from Florida. A bird banded at Big Quill Lake, Saskatchewan, was recovered at Lake of the Woods, Ontario, and another was taken about one hundred seventy-five miles northeast of its birthplace a little over two months after it was banded. Dr. Lewis remarks, "No record showing complete crossing of the Florida peninsula by a bird from either east or west has yet come to my attention."—J. B. M.

The Condor. Volume XXXIII, No. 3, May-June, 1931. This issue contains a suggestive article by John B. Price entitled "An Experiment in Staining California Gulls." Eleven gulls were captured at Glendale, California, during May, 1930, in a special pull-string trap six feet square and three feet high. The birds were banded and in addition were stained on the breast and under the wings with a bright red stain formed by dissolving an ordinary artist's oil color (scarlet lake) in carbon-tetrachloride, a dye developed by Dr. Wilbur K. Butts of Cornell and described in the *Auk* for July, 1927. Only one marked gull returned to the place of banding, and another was picked up dead two days after marking, at a point seventeen miles distant. Another was observed six miles from the point of marking, and three reports came from a place about three quarters of a mile from the original station. Probably better results would have occurred had the marking taken place earlier, as all the gulls, marked and unmarked, soon left the neighborhood for their breeding-grounds. Similar experiments should be tried wherever conditions are favorable.

E. L. Sumner reports on six birds recently recaptured by himself near Berkeley, California, where they had been banded by E. D. Clabaugh from five to six and a half years previously. The oldest band was on a Spotted Towhee banded on August 23, 1923, and was the first band ever placed by Mr. Clabaugh. Two other Towhees had been banded on June 21, 1924, and November 11, 1924, respectively. Two Fox Sparrows banded in February and March, 1925, were taken, and a Golden-crowned Sparrow banded in February, 1926. All except one Fox Sparrow were recaptured between January 11 and February 5, 1931.—J. B. M.

Wilson Bulletin. Volume XLIII, No. 1. This issue contains an interesting article by Manley F. Miner entitled "Migration of Canada Geese from the Jack Miner Sanctuary and Banding Operations." The first wild duck banded by Jack Miner, on August 5, 1905, at his sanctuary in Kingsville, Ontario, was killed a little over five months later, on January 14, 1910, near Anderson, South Carolina. The first Canada Geese were banded in the spring of 1915, and the first recovery was from a bird killed by an Indian in unsurveyed territory in the Hudson Bay District, on August 19, 1915. Since 1915 Mr. Miner has tagged about six thousand Canada Geese and has had a great many recoveries reported. From these recoveries the inference is drawn that his spring and autumn visitors belong to two separate groups of birds. Geese banded in the fall of the year at Kingsville apparently winter in the Central States east of the Mississippi River and south to the Gulf of Mexico, but do not reach the Atlantic Coast. Geese banded in the spring at Kingsville apparently breed "in the extreme northerly portion of Hudson Bay and in Baffin Land." In the fall they

migrate along Labrador, Newfoundland, and the New England coast to the region of Currituck Sound, where they winter in numbers, and in spring they head inland and appear at Mr. Miner's Sanctuary in March and April. Large numbers of these tagged geese return to the Sanctuary, and the statement is made that "this fall 100 geese out of 500 which stood on one of our ponds wore tags."

This article again calls our attention to the need of a more uniform nomenclature in this branch of the study of birds. The Miners "tag" their geese, the British ornithologists "ring" their birds, and most of us in the United States "band" ours. And when it comes to reporting the results of our efforts at "tagging," "ringing," or "banding," there is confusion worse confounded, for but few agree as to the meanings of simple words like "repeat," "return," and "recovery." That the pioneers in the bird-banding movement did not realize in advance all the complications, and that the Biological Survey did not in its early records differentiate between different types of what they loosely termed "returns," does not excuse our continuing the confusion indefinitely.—J. B. M.