

## ORNITHOLOGICAL LITERATURE

THE ORIGIN OF BIRDS. By Gerhard Heilman. D. Appleton & Co., New York. 1927. Pp. 1-209. Figs. 1-142 and frontispiece (2 in color). Price, \$7.50.

This profusely illustrated work is the most recent contribution to the subject of avian ancestry. Part I includes a detailed study of *Archaeopteryx* and *Archaeornis*, especially the latter which the author had opportunity to study directly; and of *Ichthyornis* and *Hesperornis*. The conclusion is that on the basis of the skeleton alone *Archaeornis* is strictly reptilian. Part II is a comparison of avian and reptilian embryology. Part III is a theoretical application of the facts to form a phylogenetic explanation of birds. The final sentence runs thus, "In this way the reptile, through millions of years and innumerable generations, has been changed into a bird." The author's "this way" is far from clear and sufficient to the reviewer, but we know of no better presentation of the data.

We make this tardy reference to this work because the remainders have been acquired by the Union Library Association (118-120 East 25th St., New York) and are being sold at \$1.98 postpaid.—T. C. S.

VERTEBRATE NATURAL HISTORY OF A SECTION OF NORTHERN CALIFORNIA THROUGH THE LASSEN PEAK REGION. By Joseph Grinnell, Joseph Dixon, and Jean M. Linsdale. Univ. Calif. Publ. in Zool., Vol. 35, pp. i-v+1-594, figs. 1-181. Price, \$6.00.

This extensive report on vertebrate fauna covers a rectangular area lying about east and west across the eastern half of the northern quarter of the state, and including the Lassen Volcanic National Park. Field notes by ten observers and collectors, besides the authors, are used in the report. Again in this instance Miss Annie M. Alexander appears as the patron of the Museum of Vertebrate Zoology, under whose auspices the work was carried out. The text deals with the terrestrial vertebrate fauna, including 11 species of amphibians, 20 species of reptiles, 257 species of birds, and 99 species of mammals. The analysis of habitats as presented in this paper is particularly interesting and helpful. The numerous illustrations are of excellent quality and pleasing to the eye. It is a noteworthy publication.—T. C. S.

THE WOODPECKERS OF OKLAHOMA. By Edward Drane Crabb. Publ. Univ. Okla., Vol. II, No. 3, pp. 105-158, pls. I-IV. 1930. Price, 75 cents.

Fifteen forms of woodpeckers are described as inhabiting Oklahoma, and one additional extirpated form, namely, the Ivory-billed Woodpecker, is listed. Not all of the fifteen woodpeckers discussed are known to nest in Oklahoma, however. It is reported that Red-headed Woodpeckers had been killed by poisoned grain placed to kill prairie dogs. A typographical error credits 100 genera of woodpeckers to North America, instead of 10. Under the topical heading "Description of Species" the author discusses not only the taxonomic characters, but also breeding and feeding habits, behavior, ecology, etc. This report does for the south-central part of the country about what was done for the northwestern corner by Neff's study of the woodpeckers of Oregon. Crabb's paper is issued by the Biological Survey of the State of Oklahoma.—T. C. S.

CALCULATING WATERFOWL ABUNDANCE ON THE BASIS OF BANDING RETURNS. By Frederick C. Lincoln. Circular No. 118, U. S. Dept. Agric., May, 1930. Pp. 1-4. Price, 5 cents.

An attempt is made in this paper to establish a law by which the total population of North American ducks may be estimated. It is assumed that the ratio of the total number of ducks banded in the preceding year (TDB) to the number of the same lot recovered in the following year (TDR) is equal to the ratio of the total number of ducks on the continent in the preceding year ( $x$ ) to the number of ducks killed in the following year and reported to the game authorities (TDK). In terms of ratio and proportion the proposition may be stated thus:

$$\text{TDB} : \text{TDR} :: x : \text{TDK}$$

The three values being known, the fourth value,  $x$ , or the total number of ducks on the continent for a given year, may be easily calculated. It is a very clever idea.

The ratio of TDB to TDR has been found to be remarkably constant over a period of years, averaging approximately 12 per cent. In the nature of the case, however, it must remain an assumption that the ratio of  $x$  to TDK is the same, since the value of  $x$  is unknown. We may grant that the laws of chance operate to control both ratios (TDB : TDR and  $x$  : TDK), but there are several well-known interference factors which can not be neglected, viz., 1) lack of control of reports of dead ducks, both banded and unbanded; 2) other mortality causes, such as alkali sickness. 3) disturbance of the breeding areas. Even if we grant that the laws of chance may operate to distribute the error equally in the two ratios, we are still confronted with the possibility that tagging may be done on a large scale in one part of the country, while killing may be done on a large scale in another area affecting a different duck population. Nevertheless, while we think there can be little certainty on any figures of absolute duck population as derived by this method, we do believe it is capable of yielding relative values from year to year, thus indicating fluctuations in the total duck population.—T.C.S.

---

CHECK LIST OF THE BIRDS OF TOLEDO, OHIO, AND VICINITY. By Louis W. Campbell. Published by the Toledo Nature Study Society. [1930].

Two hundred and thirty-seven species are listed for the region treated. Mr. Campbell presents the list very modestly, and states that it is published primarily to assist in local study, while, nevertheless, it has been prepared with scrupulous care. Such local lists must be helpful to beginners, and should be encouraged.—T. C. S.

---

OBSERVATIONS OF SOME BIRDS OF WYOMING. By Arthur B. Fuller and B. P. Bole, Jr. Sci. Publ. Cleveland Mus. Nat. Hist., Vol. 1, No. 2, pp. 37-80, pls. VII-XVI. 1930.

Three trips into Wyoming, in 1914, 1923, and 1927, furnished the material upon which the report is based. The list contains 122 species, 65 of which are represented by 172 specimens collected. No extensive bulletin on the birds of Wyoming has been produced since Knight's report of 1902 (leaving out of consideration Cary's ecological paper), and all contributions toward a new list must be welcome.—T. C. S.

OCCASIONAL PAPER NO. 3, UNIVERSITY OF MINNESOTA MUSEUM OF NATURAL HISTORY. 1930.

This pamphlet contains four ornithological papers, viz., "Some changes in the distribution of certain Minnesota birds in the last fifty years", by Thos. S. Roberts; "Breeding of the Connecticut Warbler (*Oporornis agilis*) with special reference to Minnesota", by William Kilgore; "Breeding of Nelson's Sparrow (*Ammodramus nelsoni*) with special reference to Minnesota", by Walter J. Breckenridge; "A hybrid Passerina (*Passerina cyanea*+*Passerina amoena*)", by Walter J. Breckenridge.

Paintings by Mr. Breckenridge of the hybrid and of Nelson's Sparrow are reproduced in color. We cannot avoid thinking that such valuable papers would reach a wider circle of readers, and thus be more generally useful, if published in the regular ornithological periodicals; and yet, conditions in the large institutions seem to encourage independent publication, even though science may not be best served.—T. C. S.

---

BIRD PAPERS FROM THE VIRGIN ISLANDS. By Stuart T. Danforth.

BIRDS OF ST. CROIX. By Harry A. Beatty. Both reprinted from Journ. Dept. Agric., Porto Rico, Vol. XIV, No. 3, pp. 107-150. July, 1930.

Professor Danforth lists fifty-eight birds and makes comments on their distribution on the various islands of the Virgin group. Mr. Beatty lists eighty-eight birds which are found on the island of St. Croix, and gives various notes. A map of the Virgin Islands is included.—T. C. S.

---

ENGLISH SPARROW CONTROL. By E. R. Kalmbach. Leaflet No. 61, Presumably issued by the Biological Survey, U. S. Dept. Agric. 1930. Pp. 1-8. Price, 5 cents.

This leaflet is a revision, with considerable abbreviation, of Farmers Bulletin No. 493 (1912, 1917, 1922). Information is given for combating the English Sparrow by trapping, poisoning, shooting, and destroying nests.—T. C. S.

The *Indiana Audubon Bulletin* for 1930 is again at hand. The leading article is by Dr. W. S. Blatchley, now one of the Nestors of Indiana. He tells of his observations on the bird life of Indiana of forty and fifty years ago. In these early years he had associations with Dr. David Starr Jordan and Dr. Barton Warren Evermann. Eighteen other short articles, including one by Dr. Amos W. Butler, make up an interesting bulletin of sixty-four pages.

Two numbers of the *Florida Naturalist* (July and October) have reached this desk. Mr. Longstreet gives an account of his work in banding Chimney Swifts. The news is given that the ornithological library of Henry Nehrling was acquired by Rollins College, at Winter Park, Fla. This magazine has been carrying a series of articles on the land and water mollusks of Florida; the writer has found the shell collecting game to be a very fascinating one.

The *Western Nature Study* for April, 1930, is devoted entirely to "Birds". This number makes a very useful teachers' handbook of general information about birds—and will be as useful in other parts of the country as on the Pacific Coast.

The *Wren-Tit* for April contains an interesting short note on the time limits of crouch-concealment in birds. A young Killdeer was observed to remain in a "freeze" state, without sound or movement, for 77.75 minutes. The circumstances surrounding this incident were rather violent and abnormal, but a new line of behavior investigation is here suggested.

Among the local mimeographed publications we record the appearance of the *Migrant*, prepared for the members of the Tennessee Ornithological Society (\$1 per year, Geo. B. Woodring, Editor, 1414 Stratton Ave., Nashville). Vol. I, No. 2, for September, 1930, consists of six pages, and contains short articles by R. A. Wilson, Dr. H. S. Vaughn, E. D. McNish, and A. F. Ganier.

Five copies (June, July, August, September, and October) of the *Raven* have come to us. Many migration notes of local interest are presented in the pages. The editor is Dr. J. J. Murray, Lexington, Va. Prof. Ruskin S. Freer is President of the Virginia Society of Ornithology.

We also acknowledge copies of the *Snowy Egret* for June, July, August, September, and October. The mimeograph of printing allows this monthly to have a new cover design for each issue. Local field notes with an occasional longer article fill the pages. It is published by H. A. Olsen and R. E. Olsen, at 1120 East Ann St., Ann Arbor, Mich. \$1 per year.

The May-June number of the *Flicker* (Minnesota Bird Club) is at hand, and contains notes on the nesting of the Barred Owl, by Stanley Stein, and of the Great Horned Owl, by Ralph Woolsey; and also a record of the 1930 spring migration dates, Alden Risser.

Inland Bird Banding Notes (Vol. II, Nos. 1 and 2, for March and June) has reached us twice. These pages carry a great deal of current information of particular interest to active banders, and of general interest also to others.

*Nature Notes from Yellowstone National Park* (VII, 1930, for June, July, August, and September) have been received regularly. The Wood Ibis (*Mycteria americana*) is reported as having been seen near Tower Falls in June. This is a second record for this species in the Park. Another item estimates the number of birds on the Molly Islands, as follows: White Pelicans, about 200 adults, 170 young; California Gulls, 400 adults, 250 young; Caspian Terns, about 20. Apparently these colonies are holding their own.