

not also function in the preservation of the immense bill as suggested in the case of smaller birds by J. Eugene Law (Condor 1929, p. 148)?

Dr. Hose's book is well gotten up and fully illustrated in halftone with a colored frontispiece of the Bald-headed Shrike (*Pityriasis*).—W. S.

Lowe's List of Birds Exhibited in the London Zoo.—Nine editions of the list of vertebrates exhibited in the famous Garden of the Zoological Society of London have been published from 1862 to 1896, and we now have before us the tenth or centenary edition,¹ covering as it does the period of one hundred years since the founding of the Garden, 1828-1927. The second volume of the work is devoted to the birds and lists no less than 2330 species with numerous additional subspecies.

This volume is far more than the list that its title would imply. Under each species is a reference to the place of publication, the present day scientific name, some important synonyms and one or more vernacular names; also a brief statement of its range and references to publish figures. The importance and utility of such a work cannot be overestimated. Every keeper of a Zoo or curator of a museum will appreciate what it means to have before him at a glance the proper names both Latin and English of the great majority of the birds with which he has to deal and the time saved from library research is very great.

Dr. G. Carmichael Low, to whom we are indebted for the preparation of the bird volume, deserves the thanks of all ornithologists and curators for the great amount of painstaking work that he has expended in the compilation.—W. S.

Recent Papers on Birds of Paradise.—When Linnaeus named the first Bird of Paradise, and for many years thereafter, the civilized world knew nothing of these wonderful creatures except for the native-made skins which always lacked feet and caused the father of binomial nomenclature to give to his bird the name *apoda*.

Until quite recently our knowledge, while greatly increased, so far as the discovery of new forms was concerned, was still meagre as to personal experiences with these remarkable birds in their rugged and inhospitable island of New Guinea. No Americans I believe had penetrated to their haunts and a living Bird of Paradise in any American Zoo was indeed a *rara avis*. Last year however, the New York Zoological Society sent Mr. Lee S. Crandall, its Curator of Birds, to New Guinea, accompanied by Mr. J. E. Ward, of Sydney, Australia, with the result that no less than forty-two Birds of Paradise of eleven species were brought safely back to New York, where most of them are exhibited, while some were secured by the Zoological Gardens of Philadelphia and Washington. Mr. Crandall

¹ List of the Vertebrated Animals Exhibited in the Gardens of the Zoological Society of London, 1828-1927. Centenary Edition in three Volumes. Volume II. Birds. By G. Carmichael Low, M.A., M.D., F. R. C. P., F. Z. S. Printed for the Society, and sold at its house in Regents' Park, London, N. W. 1929, pp. i-viii+1-832. Price 25 sh.

has published two accounts of his experiences which fully support the reputation of the country for difficulty of travel and inhospitality. One of these constitutes the November-December issue of the 'Bulletin of the N. Y. Zoological Society' while the other appears in the corresponding number of 'Natural History.' Both are illustrated by an abundance of photographs including portraits of the birds themselves taken in captivity but showing their characteristic attitudes and actions.

Mr. and Mrs. Rollo H. Beck also visited New Guinea in 1928 to secure specimens for the American Museum and an interesting account of their experiences appears in the same number of 'Natural History,' the illustrations including a colored plate of the new Bower Bird (*Xanthomelas bakeri*) discovered by Beck.—W. S.

Shoffner's 'Bird Book.'—This little volume,¹ by the organizer of the 'Farm Journal's' Liberty Bell Bird Club, is designed to furnish in compact form information desired by the school clubs and teachers all over the country, who apply to the 'Journal' for help in organizing and conducting bird clubs.

The topics covered in the forty odd chapters include, Migration, Mating, Nest and Eggs, Growth of Young, Structure, Color, Molts, Food, Sanctuaries, Bird Clubs, etc. Each topic is discussed in a separate chapter following which is another chapter containing questions and answers bearing upon it.

Mr. Shoffner has had much personal experience in stimulating popular bird study and in conducting bird sanctuaries and his little book should meet a general need. There are a number of half-tone illustrations.—W. S.

Boas on the Structure of the Bird's Wing.²—This is a detailed "biological-anatomical" study, with tables and comparisons, of the skeletal and muscular structure of the wing in the principal groups of birds. There are also twenty-four large plates showing different types of cervical vertebrae and the method of attachment of the cervical muscles in the various families. Text figures show the position and convolutions of the neck in several types of birds in performing characteristic actions and the relative position and movement of the vertebrae.

The paper is a most valuable contribution to avian anatomy.—W. S.

Rowan on Manipulation of the Reproductive Cycle.—It has long been realized that when we seek information on the stimulus to migration we must go deeper than the observation of the time of arrival and departure

¹ The Bird Book. A new book for bird-lovers, teachers and students, with more than 500 questions and answers. By Charles P. Shoffner. Richard Manson, Publisher. New York, pp. i-xi+1-335. Price \$2.00.

² Biologisch-Anatomische Studien über den Hals der Vögel, von J. E. V. Boas. Mit 23 Tafeln und 20 figuren im Text. Mem. del'Acad. Royal des Sci. et des Lettres de Danemark, Copenhagen, Sect. des Sci., 9me. serie t. I. No. 3., Kobenhavn, 1929.