

RECENT LITERATURE.

Beebe's 'The Bird.'¹—The scope of this excellent work is indicated by the captions of the seventeen chapters into which it is divided, as follows: 'I. Ancestors' (pp. 1-18), devoted to an account of the early forms of birds, with a discussion of the origin of the bird type and its relation to other vertebrates. 'II. Feathers' (pp. 19-61), treating of their structure, development and arrangement, and of moult and color. 'III. The Framework of the Bird' (pp. 62-102), deals with the skeleton, in comparison with that of other vertebrates. 'IV. The Skull' (pp. 103-115). 'V. Organs of Nutrition' (pp. 116-141). 'VI. The Food of Birds' (pp. 142-164), in reference to its character, mode of procurement, and the special adaptations involved therefor in different groups. 'VII. The Breath of a Bird' (pp. 165-187), or an account of the respiratory organs. 'VIII. Muscles and Nerves' (pp. 188-202). 'IX. The Senses' (pp. 203-222). 'X. Beaks and Bills' (pp. 223-251), their structure and their exceedingly diverse modifications and varied uses. 'XI. Heads and Necks' (pp. 252-284), their peculiarities in different groups and their wonderful adaptations. 'XII. The Body of a Bird' (285-318), in which is treated not merely the variations in its size and form, as correlated with mode of life, but a varied category of other subjects, as the color and texture of the plumage in relation to habits; geographical and other variations in color and their probable causes; adaptive colors, etc. 'XIII. Wings' (pp. 319-352), the various types in relation to modes of flight and manner of life, etc. 'XIV. Feet and Legs' (pp. 353-397), showing variation with function. 'XV. Tails' (398-426), a fruitful subject for illustration with reference to form and use. 'XVI. The Eggs of Birds' (pp. 427-461), and 'XVII. The Bird in the Egg' (pp. 462-482), the latter devoted to the embryology of birds. An 'Appendix' (pp. 483, 484) gives the titles of "a few excellent books relating directly or indirectly to ornithology," and is followed by a full and well-planned topical index.

Other works of much the same scope have appeared in recent years, but none with such a wealth of original illustrations, nor so well adapted to the needs of the general reader and amateur bird student. The treatment is popular, avoiding needless technicalities, well-balanced and eminently original. It is evidently written from the basis of a wide range of first-hand knowledge, and with an inspiration begotten of real interest

¹ American Nature Series | Group II. The Functions of Nature | — | The Bird | Its Form and Function | By | C. William Beebe | Curator of Ornithology of the New York Zoological Park and Life Member of the | New York Zoological Society; Member of the American Ornithologists' | Union and Fellow of the New York Academy of Sciences | Author of "Two Bird-Lovers in Mexico" | With over three hundred and seventy illustrations | chiefly photographed from life | by the Author | [Vignette] New York | Henry Holt and Company | 1906 — Large 8vo, pp. xi + 496.

in the subject. Moot questions are discussed with commendable conservatism, and the book is thus a safe guide to the inexperienced searcher for knowledge.

The author's opportunities for the study of a wide range of bird types in life, through his curatorship of birds at the New York Zoological Park, have given him advantages that few can share, and the pages of 'The Bird' are enriched by many original and hitherto unpublished observations. We note very few slips of any importance, and are therefore surprised to find it stated (p. 297) that the male Bobolink "changes from the buffy female dress to his rich black-and-white spring suit" merely by the wearing off of the brittle feather tips. The context does not lead one to suppose that the male Bobolink acquires his nuptial dress by a full spring moult, which no one better than the author of this book must know occurs, but which for the moment he forgot to imply. There is, as he states, a speedy wearing off of the brown feather-tips *after the spring moult*, beneath which the black is at first more or less veiled.

His accounts of protective coloration and geographical variation, while brief, give a good general statement of the facts, and, as is the case in nearly every instance where broad subjects, open to speculative explanation are touched upon, these topics are treated with commendable reserve. On the whole 'The Bird' fills a peculiar niche of its own, and must prove a mine of welcome information to a wide class of readers.— J. A. A.

Hellmayr on Spix's Types of Brazilian Birds.¹—In the year 1817 the King of Bavaria, Maximilian Joseph I, sent a scientific expedition to explore the rich fauna and flora of Brazil. Dr. J. B. von Spix was the zoölogist and Dr. C. P. von Martius was the botanist of this expedition, one of the most famous and successful of the several scientific expeditions sent out by different European governments during the first half of the nineteenth century for the exploration of the natural history of South America. Spix and Martius reached Rio de Janeiro the 14th of July, 1817, and sailed from Para on their return to Europe on the 14th of June, 1820. During these three years they explored a large part of southern Brazil, and the Amazon from its mouth to eastern Ecuador, including journeys up some of its principal tributaries, as the Rio Negro and the Rio Madeira. The ornithological results, by Spix,² were published in two large quarto volumes, the first in 1824, the second in 1825, under the title 'Avium Species Novæ, quas in itinere per Brasiliam annis 1817-1820,' etc. In this work, according to Hellmayr, about 220 species of birds were described as new or given new names. Of these only about 100 remain in good standing, while a few, through the loss of the types, are not clearly determinable.

¹ Revision der Spix'schen Typen brasilianische Vögel. Von C. E. Hellmayr. Abhandl. der K. B. Akademie der Wissenschaften, II Kl., XXII Bd., III Abt., pp. 563-726, Taf. 1, 2, May 20, 1906.

² Johan Baptist von Spix, born 9 Feb., 1781; died 15 May, 1826.