

past master in the study of animal behavior. There is a history of a Waterhen (our Florida Gallinule) with detailed study of its successive actions through the annual cycle and their cause and meaning; a series of experiments on a Yellow Bunting which was little concerned by the removal of her nest and young a short distance from the original site but when another nest with blown eggs was placed in the old site she immediately began to incubate them and deserted her young, an example of the attraction of "location." Mr. Howard's interpretation of all of these actions are most interesting but even he does not pretend to solve the mysteries of bird life and some of his deductions seem a little far-fetched.

In his preface he says, "I seek the nature of a bird's world, not with any hope of finding it but to know what to find." He sums up the various mysteries in bird life and adds, the bird "seems to mingle the blindness of an insect with the intelligence of an ape; and because nothing is really blind and no one is likely to know what intelligence really is, mysteries will be mysteries still."

The real object of his studies is a search for the relation between birds' reactions to territory, sexual functions, nest-building and care of the young. He treats the bird's world under several headings: Of its Physical Basis; Of its Division into Different Worlds—he suggests the existence of a breeding world and a feeding world more or less independent of one another—and Of its Relation to Learning. Students of animal behavior will find Mr. Howard's book most interesting and suggestive while others may gain some idea of what legitimate interpretation of behavior really is.—W. S.

Herrick's 'Wild Birds at Home.'—Prof. Herrick's earlier book 'The Home Life of Wild Birds' set forth his method of removing a nest of young, including the branch or other support upon which it was built, to a convenient spot where a tent could be erected and the actions of both adults and young studied at close range, while the observer or photographer was concealed from them. The resultant information on bird behavior and close-up photographs added much to our knowledge of even the most familiar species.

That work being long out of print our author has prepared the present one¹ which is in many respects a new edition of the other but so full of new information that it deserves the different title which he has bestowed upon it.

After an introductory chapter on his method with remarks on the reproductive cycle of bird life and upon various phases of animal behavior, there follow intimate biographies of various species and chapters on the communal life in the Gull, on bird nests, with special consideration of nest building in the Robin, Barn Swallow and Oriole, and finally chapters on the development and care of the young and upon life and instinct.

Prof. Herrick has also incorporated in one of his chapters his interesting papers on the "Life and Behavior of the Cuckoo" which have been discussed long ago in these columns.

So full is this volume of instructive and interesting accounts of bird behavior and the author's interpretations of them that it is impossible to even refer to them in detail in the space at our disposal, but by being less technical than many treatises upon animal behavior his accounts are very readable and will attract the attention and interest of many who are repelled by more abstruse works on the subject.

Among the many subjects discussed are the multiple nests of Robins, when a bird builds several nests on successive steps of a stairway or in several openings between girders, where from the similarity of the locations she seems unable to decide per-

¹ Wild Birds at Home. By Francis Hobart Herrick. D. Appleton-Century Co., 35 W. 32nd St., New York. Pp. i-xxii + 1-345. Price \$4.00.

manently upon one of them. We have, however, found three Robin nests side by side on a girder which was not divided by cross beams and in such a case this explanation seems inadequate. In his discussion upon the use of snake skins by the Great Crested Flycatcher our author thinks that it does so because they happen to attract its attention and not because of an instinct transmitted from generation to generation. This is undoubtedly true of birds which only occasionally make use of snake skins but we are inclined to think that the almost universal snake skin habit of this Flycatcher, like the constant use of certain moss stems by the Worm-eating Warbler, and the selection of clusters of *Usnea* by the Parula Warbler, etc., are real cases of inherited instinct.—W. S.

Taverner's 'Birds of Canada.'—Mr. Taverner's two works on the birds of East and West Canada have previously been noticed in these columns (1922, p. 582; 1927, p. 125). He has now combined these into a single book,¹ covering the birds of the entire country from the Atlantic to the Pacific and north to the Arctic regions. For the most part, the text and illustrations of the earlier publications have been used but there are many additions and portions are entirely rewritten, while the sequence and nomenclature of the last edition of the A. O. U. 'Check-List' have been adopted with the exception of the author's well-known practice of altering the English names to suit his ideas of specific and subspecific relationship.

The attractive little color plates from paintings by Hennessey and Brooks, from the previous works are used in illustration, with apparently some additions, but they here appear to better advantage as in the 'Birds of Western Canada' a slightly buff tint to the paper produced wrong color values. In the present work this is avoided but the reds unfortunately are often far too pale, especially in the Sapsucker and Red-winged Blackbird.

Mr. Taverner is to be congratulated upon this excellent work which will do much to advance ornithological interest in Canada while in its present form it will be a much more convenient work of reference than in the east and west volumes of a few years ago.—W. S.

Bergman's 'Birds of Kamtschatka and the Kurile Islands.'—This comprehensive account² of the birds of northeastern Asia is based upon two expeditions by the author under the auspices of several Swedish Scientific Societies and individuals, undertaken in 1920–22 and 1929–30 respectively. There is a review of the literature dealing with the ornithology of the two regions and an account of their physical characteristics with numerous excellent half-tone illustrations of scenery. Then follows a detailed account of each species found in Kamtschatka with a list of specimens obtained and quotations from other authors. A second part of the volume treats in a similar way of the birds of the Kuriles.

Halftone plates of a dozen species, a full bibliography and a map complete this excellent publication, which will be a reference volume for many years to come. It is well printed on heavy paper.—W. S.

Lamond's 'An Aviary on the Plains.'—Australian bird students have published many books of late years devoted to popular ornithology and we now have another³ by Henry G. Lamond. His "aviary" is a section of the table-land of north-central Australia, in Queensland and the North Territory, and his chapters are thoroughly

¹ *Birds of Canada*. By P. A. Taverner. Ottawa. J. O. Patenaude Printer to the King's most excellent majesty 1934. Pp. 1–445. Price \$2.00.

² *Zur Kenntnis Nordostasiatischer Vögel. Ein Beitrag zur Systematik, Biologie und Verbreitung der Vögel Kamtschatkas und der Kurilen. Mit 32 Bildern und 2 Karten von Sten Bergman.* Stockholm, Albert Bonniers Forlag 1935. Pp. 1–268. Price 20 kronor.

³ *An Aviary on the Plains.* By Henry G. Lamond. Australia, Angus & Robertson Limited, 89 Castlereagh Street, Sydney 1934. Pp. i–viii + 1–228. Price 6 shillings.