

it is the so called 'typical' form, as for instance *Planesticus migratorius migratorius*, for the Robin, but in the case of the Hermit Thrush it would seem more consistent to have headed the text with *Hylocichla guttata guttata* than with *H. g. pallasi*. This however simply shows the need that has recently been emphasized of a binomial nomenclature for popular ornithology and a vernacular name for each binomial group. Then we should have had for a heading in the case referred to *Hylocichla guttata* the Hermit Thrush, and if subspecies were to be mentioned at all, their trinomial names could have been given in the end of the text along with their characteristics and ranges. This is a fault of the A. O. U. Check-List, however, and not of 'The Birds of America.'

At the head of each account is given a list of vernacular names; a general description and detailed account of coloration; a description of the nest and eggs; and the range of the bird. This information is taken from Ridgway's 'Birds of North and Middle America' and the A. O. U. 'Check-List,' popularized where necessary by the alteration of technical terms. There are several color keys at the end of the work, a glossary and a bibliography. The last is rather an unfortunate effort, as remarkable for what it omits as for what it includes and with no indication of what the various books treat. There should at least have been a geographical list of works on the bird life of the several states, since the first thing the general reader will desire, after having his interest aroused by a work of this kind, is a special publication on the birds of his own region.

The paper upon which the work is printed is heavily sized in order to carry the large number of half-tone figures, which makes it exceedingly heavy, but the typography is good and the printing of both text and plates well done as is also the binding, making all in all an exceedingly attractive work.—W. S.

**'Tropical Wild Life in British Guiana.'**—This volume published by the New York Zoological Society, presents the results of the first season's work at the tropical research station, established in British Guiana under the direction of William Beebe and conducted by him from March to August, 1916. The enterprise marks an innovation in tropical zoological research, making possible the study of living or freshly killed tropical animals in their native haunts, whereas heretofore field work has of necessity been mainly limited to securing and preserving specimens to be studied by specialists in museums, far distant from the home of the animals them-

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<sup>1</sup> Tropical Wild Life in British Guiana. Zoological Contributions from The Tropical Research Station of The New York Zoological Society. By William Beebe, Directing Curator, G. Inness Hartley, Research Associate and Paul G. Howes, Research Assistant, with an Introduction by Colonel Theodore Roosevelt. Volume I. Photographs and Other Illustrations by the Authors. Published by the New York Zoological Society, 111 Broadway, New York City. January, 1917 [distributed in November]. 8vo. pp. i-xx + 1-504, 4 colored plates and numerous half-tone illustrations.

selves. It is in fact an extension of the idea of the marine zoölogical laboratory, made familiar by the Wood's Hole and other stations.

The practicability of the plan may be realized when we read of the commodious and thoroughly equipped laboratory and dwelling which Mr. Beebe and his companions established, and in which they carried on their researches, on the very edge of the jungle and yet with no more inconveniences than would be met with in similar establishments in the United States — working hard “day after day, month after month, unpoisoned, unbitten and in good health.”

The work is divided into four parts: I. General and Ecological, by William Beebe; II. Ornithological, by G. Inness Hartley; III. Entomological, by Paul G. Howes; and IV. Supplementary Chapters — on the Hinterland of Guiana, by Rev. Walter G. White and on Indian charms by James Rodney. Mr. Beebe's narrative chapters are extremely interesting and give one an intimate picture of life in the jungle, while they teem with important ornithological information. At one point the birds are arranged according to their vertical habitat in the forest, at another brilliancy of plumage is considered in its relation to intensity of light. Protective coloration naturally comes in for considerable attention and in this connection Mr. Beebe adopts the apparently original criterion of regarding a bird as not protectively colored — “at least in its own intensive estimation” — if it takes immediate flight on the approach of a supposed enemy; while the bird is so protected which attempts concealment by squatting or “freezing”. Emphasis is placed upon the need of an intimate knowledge of the natural environment and habits of a species before any judgment is possible as to the protective value of its coloration.

The habits of the Hoatzin are described with great detail with photographs of the nest and eggs and the downy nestlings climbing about “on all fours” as it were.

Our knowledge of the nest, eggs and young of the Toucans has been as Mr. Beebe well puts it, “almost a blank”; and yet he was able in two months time to obtain data on the nidification, of five species and to study carefully the development of the young. They have curious thickened heel pads armed with conical tubercles by means of which they are able to drag the body along, the toes remaining functionless for quite a long time. Similar heel pads have been noted in other birds which nest in holes, and which probably have a similar method of locomotion during their nestling stage. The nesting habits of the Tinamous of the genus *Crypturus*, as described, are most interesting. The male, it seems, makes the nest and attends to all the duties of incubation, the female's entire interest in the matter being to deposit the egg, after which she departs possibly to perform the same favor for some other male who has a nest ready. The male having hatched the single egg prepares another nest and awaits “another temporary mate of advanced feminist views.” The process seems to be continuous.

Mr. Hartley's contributions to the volume consist of laboratory studies

covering the development of the Jacana and Ani and elaborate studies of the development of the several parts of the bird's wing, from embryo to adult, in a number of species. There is also a study of a Grey-breasted Martin colony which occupied a box near the laboratory.

One must read the book to appreciate the amount of interesting and suggestive data that it contains. With such results in the first season we may confidently look for greater success in the future, and with the experience gained in 1916 Mr. Beebe should be able to plan definitely for the solution of certain problems when he makes his next visit to "Kalakoon House." The science of zoölogy and ornithology in particular is deeply indebted to the six members of the New York Zoölogical Society whose liberality made the establishment of this station possible, while hearty congratulations are due Mr. Beebe and his staff upon the manner in which they have availed themselves of the opportunities that were offered them.— W. S.

**Catalogue of the Childs Library.**<sup>1</sup>—In this handsomely printed volume Mr. John Lewis Childs presents a catalogue of his well known library. Nearly one third is devoted to ornithological works, following which are the parts relating to various other branches of natural history. Mr. Childs' series of large illustrated folios is very complete, including the Shattuck copy of Audubon's 'Birds of America,' Elliot's monographs, Gould's 'Hummingbirds', etc. We notice one unique volume of especial interest, a series of original water colors of the commoner birds of Floral Park, by Alan Brooks and one additional plate depicting their eggs. A large number of separata are listed in the bound volumes of 'Ornithology'. The catalogue will be of especial interest to bibliographers and to those who wish to ascertain the extent of their own desiderata.— W. S.

**Preliminary List of the Birds of Tennessee.**<sup>2</sup>—This little pamphlet consists of a list of 270 species with a very brief mention of the character of their occurrence in west, middle and east Tennessee, in three parallel columns. According to the 'fore word' it is compiled to serve as a working basis for the collecting of data from which the Tennessee Ornithological Society expects, in due time, to prepare an authoritative list of the birds of the state. Only English names are used but these follow the nomenclature and order of the A. O. U. 'Check-List'. The list seems well calculated to serve its purpose and presumably the compiler has consulted most of the meagre literature dealing with the birds of Tennessee, but as he states that "the published material consists of a few local lists covering

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<sup>1</sup> Catalogue of the North American Natural History Library of John Lewis Childs, Floral Park, New York. Published by John Lewis Childs, Floral Park, New York. 1917. Small 4to, pp. 1-150.

<sup>2</sup> Preliminary List of the Birds of Tennessee. Compiled by the Tennessee Ornithological Society. 1917. Issued by the Department of Fish and Game, W. D. Howser, State Warden. Nashville, Tenn. 8vo, pp. 1-28.