The first paper ostensibly by Bendire may be that on the nest and eggs of Clark's Crow, in *Bull. Nutt. Club*, I, 1876, pp. 44, 45, though this is actually written by Dr. Allen from Bendire's MS. The first formally and actually by him may be that on the Birds of Oregon, in *Pr. Bost. Soc. Nat. Hist.* XIX, 1877, pp. 109–149. For a note on his introduction to ornithological print see *The Osprey*, Apr., 1897, p. 113.—Elliott Coues, *Washington*, D. C.

## RECENT LITERATURE.

Ridgway's Birds of the Galapagos Archipelago. - The Galapagos Archipelago has come to be classic ground in ornithology. present paper of over two hundred pages Mr. Ridgway treats the subject exhaustively, so far as available material and previous work permits. Yet it is evident that the field is as yet far from thoroughly worked. From some of the sixteen islands that compose the group only scant material has been obtained. Says Mr. Ridgway: "Not a single island of the group can be said to have been exhaustively explored, and few of the species are known in all their various phases; in fact, many are known only from a few specimens in female or immature dress. No observations have been made 'upon the attitude the different species of Geospiza maintain toward one another tending to show how far the differences observable, or thought to be observable, in dried specimens indicate the actual grouping in species of living individuals.' The anomaly of individuals adult as to plumage but with bills suggesting immaturity, and of others which show exactly the reverse, remains to be explained; and there are other questions which only protracted field-studies by a competent investigator can decide. Until all these present mysteries are solved, theories and generalizations are necessarily futile."

Regarding the origin of the Galapagoan fauna, Mr. Ridgway considers that the time has not yet arrived when theorizing may be indulged in with any great degree of confidence. He notices briefly the two leading theories respecting the origin of the Galapagos group of islands—namely, the old and formerly generally received conception that they are

<sup>&</sup>lt;sup>1</sup>Birds of the Galapagos Archipelago. By Robert Ridgway, Proc. U. S. National Museum, Vol. XIX, No. 1116, pp. 459-670, pll. lvi, lvii, with 7 cuts and numerous distribution charts in the text. Dated 1896; issued March, 1897.

volcanic, and Dr. G. Baur's theory that they are the remnants of a former large oceanic land area—and presents the evidence afforded by the birds. He considers in this connection the relationships of the five peculiar Galapagoan bird genera, and finds that only two "are of evident American relationship. The remaining three have so obvious a leaning toward certain Hawaiian Dicæidine forms that the possibility of a former land connection, either continuous or by means of intermediate islands as 'stepping stones,' becomes a factor in the problem. It may be," he adds, that the resemblance of these three genera to "Hawaiian forms is merely a superficial one, and not indicative of real relationship. I do not by any means claim, on the strength of such evidence, a common origin for them, but merely present the facts as 'food for reflection.'"

In this connection Mr. Ridgway gives a summary of the ranges of the genera of Galapagoan birds, without, however, deriving from this study any decisive evidence as to "whether the non-peculiar portion of the Galapagoan avifauna is most nearly related to that of the adjacent mainland of South America or that of lower Central America or the West Indies."

Mr. Ridgway comments on the perplexing difficulties that beset the discrimination of the many closely related forms, and says that "whenever there seemed to be a well-defined average difference between specimens from different islands, I have not hesitated to separate them as local forms. No other course, indeed, was practicable; for were 'lumping' once begun there could be no end to it, unless purely arbitrary limits were given to the species recognized, and if followed to a logical conclusion might easily end in the recognition of a single variable species, equivalent in its limits to the genus."

The distribution of the 105 species thus far recorded from the Galapagos Archipelago is shown in a series of tables, as to the group of islands collectively, and for each island individually. Then follows the detailed treatment of the species, with charts showing their distribution in the Galapagos Islands. It is interesting to observe that five-sixths (53 species) of the Passerine birds belong to four genera—Nesomimus, Certhidea, Geospiza, and Camarhynchus—peculiar to the Galapagos, and that half the remainder belong to the genus Pyrocephalus; and that all but two of the 61 species of Passerine birds are peculiar to the Islands, the other two being of casual occurrence. Most of the remainder are wide-ranging water birds, with a few species peculiar to the Galapagoan fauna.

The species are treated exclusively from the systematic standpoint, giving their synonymy and bibliography, with full descriptions, tables of measurements, and their ranges, together with discussions of their relationships. The paper concludes with a bibliography of all the works and papers relating to Galapagoan ornithology. Mr. Ridgway has thus given us a detailed and masterly monograph of the birds of the most interesting and instructive group of islands known to science.— J. A. A.