

RECENT LITERATURE.

Swarth's 'Avifauna of the Galapagos Islands.'—In the years 1905–1906 the California Academy of Sciences conducted an expedition to the Galapagos under the leadership of R. H. Beck which secured the largest and most representative collection of the birds of the archipelago that has ever been brought together, Beck with the assistance of his associates, E. W. Gifford, J. S. Hunter, and E. S. King obtaining in all 8691 specimens.

Mr. Gifford in 1913 began a report upon this material covering the orders Columbiformes to Pelecaniformes and later (1919) published the field notes dealing with the land birds, while the late Leverett M. Loomis prepared a revision of the Tubinares based mainly upon this collection. Nothing further was done, however, until Harry S. Swarth's appointment as Curator of Birds and Mammals at the Academy when he began the comprehensive report which is now before us.¹

Mr. Swarth as his work progressed wisely decided not to limit his report to the collection of the expedition but to embody in it everything of importance relative to the ornithology of the islands so that the completed volume constitutes a virtual monograph of the Galapagos avifauna. At the outset he secured the loan, from Stanford University, of the material obtained on the Hopkins-Stanford Expedition which formed the basis of the publication of Snodgrass and Heller (1904), and in 1930 he visited the British Museum, the Rothschild Muesum and the United States National Museum, where most of the types of Galapagos birds are preserved, besides securing, through correspondence, information regarding material in other institutions.

Mr. Swarth is to be congratulated upon the result of his labors as his report is admirable in all respects. A full synonymy is given under each species, with exact data for the type specimen, followed by distributional notes and critical discussion of the material. Preceding the systematic report is an interesting historical summary of the ornithology of the islands and a nominal list of the 108 species and subspecies recognized, along with the three peculiar to Cocos Island which is considered as ornithologically part of the group. A good bibliography completes the volume. There is no account of habits, this being wholly a systematic report.

Forty-six "water birds" are reported from the islands, most remarkable of which is the peculiar Cormorant, *Nannopterum harrisi*, with a resident species of Duck, Heron, Man-o-war bird, Penguin, etc. and many migrant shore birds. Of "land birds" there are a peculiar Hawk, a Cuckoo, a

¹The Avifauna of the Galapagos Islands. By Harry S. Swarth. Occasional Papers of the California Academy of Sciences, XVIII. Printed from the John W. Hendrie Publication Endowment. San Francisco, June 29, 1931. Pp. 1–299 with map and 57 text figures.

Barn Owl, a Short-eared Owl, a Crested Flycatcher and a Martin, together with three races of Vermillion Flycatcher, ten of the peculiar Mockingbird, *Nesomimus*, and thirty-seven forms of the Galapagos "finches" which Mr. Swarth has previously established as a separate family, Geospizidae, showing that the slender-billed genus, *Certhidea*, formerly referred to the Mniotiltidae is really most closely allied to the Grosbeak-like *Geospiza*. This last group has always been the outstanding feature of the Galapagos avifauna and the complicated inter-relationship of the species and subspecies and their peculiar occurrence on the different islands have long been a subject for discussion. According to Mr. Swarth "the only consistent handling of the situation would lie in giving a separate designation to the representative of each separate form on every island, whether obviously different or not." Not caring to go to that length he has tried to describe the variation that exists among the birds of each island, "adopting a conservative use of names to distinguish what appear to be the better defined forms." "Intergradation," he adds, "between different extremes occurs to a bewildering degree, so as to render any system of nomenclature more or less of an artificial procedure." Of the sixty-seven species and subspecies that have been described in this family Mr. Swarth recognizes but thirty-seven. In the species *Geospiza fortis* he combines nine described forms; 812 skins were available and after long and careful study of this material he found it utterly impossible to correlate the variations in bill proportions to any feature of distribution or environment. Apart from its interest to ornithologists this monograph will prove of great value to biologists who are interested in problems of variation and the excellent outline drawings of bills, maps of distribution and tables of measurements will furnish important data for specialists in this line of research.

The author finds it necessary to name but three new forms from the vast material before him namely, *Nesomimus parvulus wenmani* (p. 129) Wenman Island; *Geospiza septentrionalis nigrescens* (p. 185) Culpepper Island; and *Cactospiza pallida striatipecta* (p. 245) Chatham Island.

Mr. Swarth's volume constitutes, in our opinion, the outstanding contribution to the systematics of the Galapagos avifauna.—W. S.

Slevin's 'Log of the Schooner Academy.'—In connection with Mr. Swarth's account of the avifauna of the Galapagos it is opportune to have the narrative¹ of the voyage upon which his material was secured. This has been compiled by J. R. Slevin, herpetologist of the expedition, and is based upon the log of the vessel and the diaries of Mr. Slevin and of F. X. Williams entomologist of the party.

¹ Log of the Schooner "Academy" On a Voyage of Scientific Research to the Galapagos Islands 1905-1906. By Joseph R. Slevin. Occasional Papers of the California Academy of Sciences, XVII. Printed from the John W. Hendrie Publication Endowment. San Francisco, February 14, 1931. Pp. 1-162, pl. 1-16, and a map.