

none has shown such exhaustive research along so many lines as the present. The Gannet, a conspicuous element in the pelagic avifauna of the North Atlantic, is herein dealt with by the eminent British ornithologist, J. H. Gurney. Many years of painstaking observation and bibliographic research are evidenced, and the result is rendered of the utmost interest as well as scientific value by an ingratiating literary style.

The student of North American birds finds the present book to approach much nearer his own field of interest than most volumes published abroad. For the Gannet ranges in summer, though rather restrictedly, along the northeastern shores of North America. The life history data in the present volume, however, although including practically everything known in regard to the bird in America, is chiefly based on its occurrence and history around the British Islands.

The reader will get an idea of the range of treatment from the following subjects suggested in chapter headings: names of the gannet; distribution; estimated number of gannets; nidification and incubation; the nestling; food and fishing; flight; mortality; gannets as food; plumage; osteology; parasites; historic and pre-historic. There is thus a great deal of matter pertaining to subjects of general interest outside of the bird under special consideration.

Mr. Gurney estimates the total number of Gannets (*Sula bassana*) now existing, at 101,000. Incidentally, the most abundant sea-bird of the North Atlantic is considered by him to be the Puffin (*Fratercula arctica*) which is to be numbered by the million—for instance, three million on St. Kilda alone; also 235,000 Puffins were annually gathered on the Faeroes up to the time when these birds became less esteemed for food. Yet only one egg is laid.

As furnishing further basis for estimating bird populations, some data is quoted as to numbers of birds marketed in various European cities. For example, 404,000 Skylarks were brought into Leipzig in one month. In Paris, alone, 1,419,891 Skylarks were sold in 1898; in 1909 the number had dropped to 355,000. The marvel in all these cases is as to the wonderful productivity of birds where conditions of food and climate are favorable, so that the enormous drafts upon their numbers by man are, for long periods, nearly or quite offset.

The Gannet, a bird of slowest breeding rate, was levied upon for hundreds of years by people living adjacent to their colonies.

As many as 28,300 annually, nine-tenths of them young, were formerly so appropriated around Great Britain. Small colonies of the birds have disappeared, but the more favorably situated nesting places held their own to a remarkable degree. With decreasing value of the young birds for food and feathers, and with governmental protection afforded against wanton destruction, the Gannet is now on the increase. The problems confronting the game conservationist here in California would doubtless be greatly aided in solution by a study of the history of the Gannet.

To Mr. Gurney we owe much for adding to our literature this most valuable and fascinatingly readable bird book.—J. GRINNELL.

FOUR NEW BIRDS FROM NEWFOUNDLAND. BY HARRY C. OBERHOLSER. (Proceedings of the Biological Society of Washington, vol. xxvii, March 20, 1914, pp. 43-54.)

The forms here named and characterized are *Dryobates pubescens microleucus*, *Bubo virginianus neochorus*, *Perisoreus canadensis sanfordi*, and *Pinicola enucleator eschatosus*, the first confined to the island of Newfoundland, the others occurring also on nearby parts of the North American mainland. From Mr. Oberholser's study of the collection containing these birds, as well as from other work recently done in the same region, it would seem that Newfoundland is possessed of a fairly distinctive endemic fauna, and one containing certain points of decided interest. The Hairy and Downy woodpeckers of the island are both shown to have developed characters markedly at variance from those possessed by the related forms of the adjacent mainland, giving them a superficial resemblance to certain races from remote parts of western North America. The Newfoundland Pine Grosbeak is described as having assumed characters similar to those distinguishing the recently described Newfoundland Crossbill, *Loxia curvirostra percna* Bent, an interesting instance of parallel development. Altogether, from the preliminary and rather disconnected studies so far made, it would seem that Newfoundland offers a most promising field for careful, systematic research, such as has not yet been accorded it.

Mr. Oberholser's treatment of the forms described in the present paper is gratifying alike in the explicitness and attention to detail shown by the characterizations, and in the pertinence and suggestiveness of his general remarks; statements, however, that can as truthfully be made of nearly all his systematic work.—H. S. SWARTH.