

diverted entirely in the presence of freshly killed food. This habit, therefore, while it may be potential storage, has not developed into true storage as in the case of rodents storing nuts, largely, perhaps, to the impossibility of keeping animal food fresh.

Another outstanding portion of the work deals with territory and contains much valuable and interesting data largely confirmatory of Mr. Howard's theories on the subject. Especially important is the extension of territorial behaviour to wintering shrikes which have as definite a winter feeding area as they do a breeding area. The account of singing by females is also a contribution to a neglected field.

Mr. Miller is to be congratulated upon a splendid piece of work bearing, as we have indicated, upon several distinct lines of research.—W. S.

'A Bird Painter's Sketch Book.'—For those who delight in handsome bird books Philip Rickman's 'Bird Painter's Sketch Book'¹ will have a strong appeal. It consists of thirty-four plates of British birds, eleven in color and twenty-three black and white reproductions of pencil sketches. Each plate is accompanied by a short account of the bird from the author's experience or compiled from recognized authorities, and in case of the color plates an account of the locality represented in the painting.

It is the black and white plates that have the most charm, the birds being drawn with great softness and delicacy, and the reproduction remarkably accurate. Some are finished pictures, others single figures of birds and still others whole pages from the sketch book with many figures in various positions with details of plumage, bills, etc., added here and there. The birds in this series include among others the Raven, Magpie, Bullfinch, Barn Owl, Greenland Falcon, Woodcock, Snipe, and several ducks and plover.

The color plates are not so satisfying, the landscape being the chief motif and the bird figures usually very small and apparently secondary to the view. The reproduction on very highly sized paper, too, is not so satisfactory although the pictures are often very attractive.

In the text will be found much information on the colors of the soft parts of the bill and feet and quotations from different works on this point, which is evidently a matter of much interest to the author. Mr. Rickman has made a notable contribution to the artistic side of ornithology.—W. S.

Nicholson's 'The Art of Bird Watching.'—Until we read Mr. Nicholson's book² we had not realized what a science bird-watching had become,

¹ A Bird Painter's Sketch Book Written and Illustrated by Philip Rickman, Illustrator of "Game Birds," "The Gun Room Guide," etc. Published in London by Eyre & Spottiswoode and in New York by Charles Scribner's Sons. MCMXXXI. Pp. 150 and 11 plates. Price \$10.00.

² The Art of Bird-Watching, A Practical Guide to Field Observation. By E. M. Nicholson, Author of "Birds in England," "How Birds Live," "The Study of Birds." Illustrated by Photographs, Maps and Diagrams. The Sports and Pastimes Library. H. F. and G. Witherby, 326 High Holborn, London, W. C. 1931. pp. 1-218. Price 10 shillings 6 pence, net.

distinct in its way from ornithology or even bird-banding,—in fact in America we have not even developed a distinctive name for the study though vastly more people are engaged in it than in ornithology *sensu strictu*. Possibly we prefer "ornithology" as more high sounding and are loath to relinquish it, like the young amateur who has his letter heads printed "ornithologist and oologist" and imagines that thereby his reputation has been established.

At any rate we know of no recent book that deserves the careful attention of our field students than this volume of Mr. Nicholson's, and none that is more suggestive or informing as to what to do in the study of live birds and how to go about it.

We have long been impressed with the innumerable opportunities that are lost by those observers whose main object seems to be to get as large a daily list as possible and it may be open to question whether the prominence given to competition in this line may not be as harmful as beneficial in furthering ornithological knowledge. It is not the length of the list that counts but the detailed notes made on the spot on the behaviour of even a few species. To this end the printed pocket form with room only for a check mark does not compare with an ordinary note book with unlimited space for full observation.

Mr. Nicholson defines bird watching as "either the most scientific of sports or the most sporting of sciences." "Bird watchers have usually nothing in common," he says, "except the fact that they *are* bird watchers, and this curious community of interest" he adds, "seems to have no explanation other than that it is an Act of God!"

He emphasizes the error in the belief that bird watching demands no special training and that it is only necessary to go out and see what you can find in order to draw your own conclusions and he stresses the need of knowledge acquired by others as to local and seasonal occurrences and the problems of plumage and molt, migration, song, nesting habits and behaviour, in order to make worth while contributions to the subject. For this purpose he lists many books although this list must change somewhat with the location of the observer—he is writing primarily for English readers.

Of identification books he says very truly that they "are still colored by the tradition that what is demanded of them is a feather description for a corpse in the hand" "for," he adds, "identification is not just a matter of plumage and size, and a good bird watcher can give a correct determination without necessarily knowing either."

In the matter of equipment our author says, "the only article for bird watching that can rank with field glasses, if not before them, is the note book," and he emphasizes the importance of entering one's observations on the spot. "It is commonly reckoned that failure of memory only spoils observations left unrecorded for a day or a week but the same process is at work on those unrecorded for half an hour." He also insists on a permanent record apart from the field note book, either a loose leaf book or a card system, "not a record in diary form which soon becomes unmanageable."

We could go on quoting words of wisdom from this work but those who study birds in the field should read the book in its entirety. There are chapters on recording bird censuses, of making ecological studies, investigations of song, nesting, etc., etc.

The fact that it is an English book and mentions English species, where definite mention of species is required, in no way detracts from its usefulness to American bird watchers as the methods to be pursued and the objects to be gained are the same everywhere. It is largely to bird watching that ornithology looks for its advancement today, accumulation of skins and their study, so far as many parts of the world are concerned, is, like nomenclature "a means not an end of ornithological science" and is, except in the case of museums, almost a thing of the past. It is therefore high time that we develop well trained bird watchers, field students, or whatever we may call them, who shall know what to look for and how to record their observations, so that a valuable method of scientific research shall not develop into a mere amusement. Mr. Nicholson's book is almost the first to adequately point the way and lay down the rules of the game.—W. S.

Kearton's 'The Island of Penguins.'—We have had a number of books and papers dealing with penguins notably Dr. Levick's 'Antarctic Penguins' and Dr. Murphy's paper on the 'Penguins of South Georgia Island,' both dealing with more typically Antarctic species, and now we have before us Mr. Kearton's contribution¹ to the life history of the Black-footed or Jackass Penguin (*Spheniscus demersus*), which breeds on an island off Cape of Good Hope. The author and his wife spent five months on the 'Island of Penguins,' inhabited only by the birds and the lighthouse keepers. They estimated that at least five million penguins as well as hosts of gulls, cormorants, terns, etc., bred there so that it was by no means "uninhabited." Mr. Kearton is well known as a photographer of birds and the seventy odd pictures in the present volume fully maintain his reputation, while his graphic account of his experiences testify to his ability as a writer as well.

Except in the first chapter, in which he describes the trip from Capetown and arrival at the island, he devotes himself entirely to the birds, explaining the absence of personal experiences by the statements that the knowledge he obtained of the birds is more important than how he acquired it; that after writing the life history of some five million penguins there would be no room for anything more; and finally that the penguins are far more amusing than he can ever hope to be!

His account of the birds is written in a personal vein referring to the pair which he especially studied as Mr. and Mrs. Penguin and likening individuals to various types of human beings which they could not help but

¹ The Island of Penguins. By Cherry Kearton, Author of In the Land of the Lion; Photographing Wild Life across the World, etc. With seventy illustrations and a map. Robert M. McBride & Company, 7 W. 16th St., New York, MCMXXXI. Pp. 1-xviii + 1-248. Price, \$3.00.