

The following day the three male blackbirds were by the beech. Later No. 1 chased No. 2, No. 1 with the usual leaves. Then came a change in tactics. No. 2 picked up a leaf (he did not know the art—it dangled out of his mouth at one end, like a pipe) and hopped after No. 1. Several times he changed his leaf, eventually holding a crisp one like No. 1, who did not swap leaves, except for dropping one at a time and adding. No. 1 and also No. 2, flew up into a tree with their leaves. It was merely a stately game. Next week, the female was seen hopping round after one of the male birds.

The four-month "war" stopped—No. 2 had played the game. Probably nesting had begun, as a week before I had seen a male blackbird flying with a worm. I do not know which of the three males the female won, but all appeared satisfied.

REVIEWS.

Secondary Song: A Tentative Classification. M. D. Lister, 1953, *Brit. Birds* 46.4 : 139-143.

All those of us who speak glibly of "whisper song" and "sub-song" should read this. The author prefers to describe a bird's normal loud specific song, which is most in evidence in spring but is given by some species at other seasons as well, as "primary song." "Secondary song" can include "whispering song" ("the very quiet, inward rendering of the primary song," audible not more than about 20 yards); "sub-song" ("the very quiet inward rendering of song which is intrinsically different from the primary song . . . It is not always easy to distinguish between the whispering songs and sub-songs of those birds such as blackbirds. . ."); "rehearsed song" (imperfect versions of the primary song); and "female song."

In New Zealand the "rehearsed song" is usually known as "part song," and the tui has a true "whisper song." It is not generally realised that such birds as the chaffinch and greenfinch have extremely quiet and sweet warbling songs which certainly are "sub-songs," and the song of the silver-eye, described by Miss N. Macdonald (*Notornis* 4.4 : 127) also falls into this category.—J.M.C.

On the Hour of Laying and Hatching of Birds Eggs. A. F. Skutch, *Ibis* 94 (1) : 49-61.

This interesting paper analyses many records of the time of laying and hatching of eggs of Costa Rican birds. Many birds lay soon after dawn and each species has its own time of laying. These show less variation in the hour of laying than those laying later in the day. Some birds lay successive eggs at 24-hourly intervals and others at 25 or 26-hourly intervals. Hatching in some species takes place a fixed time after incubation commences but in many others there is a far higher percentage that hatch in the morning whatever the time of laying (and if hatching is delayed, the eggs may fail to hatch until the following morning, a day late). It is suggested that there is a diurnal rhythm in the birdlings' efforts to break through and escape from the shell, probably due to constant warming during the night when a parent is on the nest without a break for many hours.—J.M.C.

The Antarctic Today. Edited by Frank A. Simpson, M.A., *Dip. Jour.* Publishers: A. H. & A. W. Reed, in conjunction with N.Z. Antarctic Society. Price, 47/6

New Zealand's interest in the Antarctic is important, especially in the Ross Dependency. Explorers, since the time of Sir James Clark Ross, over 100 years ago, have proved that the Ross Sea, almost ice-free in the summer months, and leading well into the heart of the land mass, is the best one for outside approach. Because the hinterland is a New Zealand dependency and the Dominion the closest base to serve it, the view has been expressed frequently that the Ross Sea-New Zealand summer air and sea routes are

the logical outlet for the vast mineral wealth so confidently predicted by geologists to await exploration.

For the British Commonwealth, Antarctica may have a strategic importance, quite apart from the whale fisheries and mineral resources, in what may become, in the event of a future world conflict, the new life-line between Africa and Australia across its icy wastes. In view of the potentialities of Antarctica, New Zealand is likely to play a part in the subduing of its rigorous attendant on exploration. Although New Zealand has long provided a base for explorers from other countries, there has been little published literature reflecting New Zealand's relationship to its own Ross Dependency, or to Antarctica as a whole. Practically all literature on the subject is of Northern Hemisphere origin, the product, direct or indirect, of expeditions organised by larger and older nations; relatively little has come from the younger countries which are geographically nearest the Antarctic—New Zealand, Australia, South Africa and South America.

The publication of "The Antarctic Today" represents an important break with this tradition and depicts the Antarctic as observers in the Southern Hemisphere see it. Written in seven parts, each part taking an aspect of Antarctic conditions or problems, the contributors of each have been well chosen as men to the fore in their scientific or academic researches. From the first part, "The Mysterious South," the introduction by John S. Cumpston; through "Continent and Ocean"; "Natural Life"; "From Ocean to Continent"; "Meteorology, Aurora, Ionosphere"; "The Nations in the Antarctic"; to "New Zealand and the Far South," the reader will find question posed or answer given to many aspects of this vast area of about 6,000,000 square miles.

To members of the Ornithological Society the section on "Natural Life" will hold the greatest appeal; nor must they be disappointed with its brevity, for any phase—seal, penguin, whale, etc.—could provide material for a volume on its own. The contributors to this section, R. K. Dell, W. H. Dawbin, R. A. Falla and E. G. Turbott, need no introduction; they are acknowledged experts in their own fields. The marvel is that they have condensed so much information in such a short essay.

The volume is well illustrated and if one could find fault at all, it is that the excellent studies do not appear next to the text relating to them. As the New Zealand Antarctic Society says, "it is proud to make this first major New Zealand contribution to the reference literature on the Antarctic regions."

The price is 47/6 and this handsome volume of authoritative material should find a place of honour in the library, reference or general, of all interested in the Dominion of New Zealand and its relation to the "Deep South."—J.H.S.

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Date of Publication—October 1st, 1953.

The Masterton Printing Co., Ltd., Lincoln Road, Masterton.