

## REVIEWS

EDITED BY JOHN WILLIAM HARDY

**A comparative life-history study of four species of woodpeckers.**—Louise De Kiriline Lawrence. 1967. Ornithological Monographs, no. 5, American Ornithologists' Union. Pp. 1-156, 33 figs., 15 tables. Paper. \$3.75 (\$3.00 to A.O.U. members).—Woodpeckers are of special interest to many ornithologists. Their unique structural modifications and the peculiarities of their reproductive biology set them apart from other common groups of small birds. This monograph deals with four species of eastern North America: the Yellow-bellied Sapsucker (*Sphyrapicus varius*), Flicker (*Colaptes auratus*), Hairy Woodpecker (*Dendrocopos villosus*), and Downy Woodpecker (*D. pubescens*), which the author studied intensively over a period of 7 years. Her observations on the sapsucker were most numerous (about 50 per cent of the total of 800 hours), with the remaining time distributed between the other three species. Most of the birds studied, except the Flickers, were color-banded.

Mrs. Lawrence has compiled an impressive amount of information. Her detailed accounts of the year-to-year activities of marked birds (changes of territories, mates, etc.) strikingly illustrate the variation in behavior that may occur among individuals of a population and point out the value of long-term studies.

Perhaps the greatest contributions of this work are those dealing with breeding behavior. The descriptions and illustrations of the "aggressive-social" displays of each species are highly useful and clearly indicate the relationship of aggressive and courtship behavior. As descriptions of actual pair formation are not often reported, Mrs. Lawrence's observations are important contributions. She makes a strong case that close cooperation between the pair is essential for successful reproduction and presents evidence that not all woodpecker pairs maintain harmony. Kilham (Wilson Bull., 77: 134-145, 1965) likewise suggests that natural selection will favor those pairs most capable of cooperation throughout the long reproductive cycle characteristic of this group.

The discussion of the mechanical means of communications, clarifying and expanding on the descriptions of other authors, is enlightening. Functions of drumming, displacement-drumming, displacement-tapping, and ritual tapping are discussed. Vocalizations are described and categorized for each species, and calls described in the text are referred to specific cuts in the collection of sound recordings at Cornell University, a very useful idea.

The book contains a wealth of information on breeding biology. Mrs. Lawrence convincingly proposes that light, and perhaps the warmth associated with it, is an important factor influencing location of the cavity entrance. Her conclusion that sex is unimportant in nest site selection appears questionable, judging from her data. The role of each sex in excavation, incubation, and brooding is shown by the use of histograms, and rates of feeding the young are illustrated graphically, as well as in tabular form.

The author's style of presentation, making frequent use of anthropomorphic phrases, will be appreciated by some readers, whereas others will find it distracting. There are some minor contradictions and inconsistencies, but considering the scope of the work and the quantity of material presented, they are few. In general the illustrations are of mediocre quality and vary greatly in their significance.

In summary, this work is an important contribution to the knowledge and understanding of woodpecker biology. Most topics are well covered and a great deal of significant material is presented.—J. DAVID LIGON.

**The birds of southeastern Victoria Island and adjacent small islands.**—David F. Parmelee, H. A. Stephens, and Richard H. Schmidt. 1967. Ottawa, Ontario, National Museum of Canada, Bull. 222, Biol. Ser. No. 78, pp. x + 229, 10 pls., 4 figs. includ. 2 maps of study area, wrappers, \$2 (Can.).—Detailed accounts of the ecology and breeding biology of birds of the Canadian arctic have slowly been accumulating in the last few decades. Most notable in recent years have been the studies by W. H. Drury (Bird-Banding, 31: 63–78, 1960; Auk, 78: 176–219, 1961) on Bylot Island; by T. H. Manning, E. O. Höhn, and A. H. MacPherson (Natl. Mus. Canada, Bull. 143: 1–144, 1956) and by T. H. Manning and E. O. MacPherson (Trans. Roy. Canadian Inst., 33: 116–239, 1961) on Banks Island; by D. F. Parmelee and S. D. MacDonald (Natl. Mus. Canada, Bull. 169: 1–103, 1961) on Ellesmere Island; and by G. M. Sutton and D. F. Parmelee (Arctic, 7: 81–92, 1954; Bird-Banding, 26: 1–18, 1955a; Wilson Bull., 67: 110–127, 1955b; Auk, 73: 78–84, 1956a; Condor, 58: 273–282, 1956b), A. Watson (Canadian Field-Nat., 71: 87–100, 1957a), and V. C. Wynne-Edwards (Auk, 69: 353–391, 1952) on Baffin Island.

These studies have dealt with species in environments that are essentially High Arctic (July mean temperature less than 5°C; see H. Johansen, Acta Arctica, pp. 1–98, 1956), either as a function of latitude or their proximity to Greenland. The present report treats stations that, although fundamentally Low Arctic (July mean temperature between 5° and 10°C; Johansen, op. cit.), have some floral and faunal characteristics of the High Arctic. In 1960 between 31 May and 31 August, Parmelee and Schmidt principally visited Cambridge Bay (69° 03' N, 105° 05' W) and Anderson Bay (68° 55' N, 104° 20' W) on Victoria Island and the Finlayson Islands (69° 06' N, 105° 59' W) in the Dease Strait. In 1962 between 10 May and 12 September the authors investigated the environs of Cambridge Bay, the Finlayson Islands, and Jenny Lind Island (68° 55' N, 101° 56' W) in Queen Maud Gulf.

The main part of this paper deals with 68 species known to have occurred in the study area and gives extensive data pertaining to the breeding season for 44 of them. These species are distributed among "marine, marsh tundra, wet tundra, low-level dry tundra, high-level dry tundra, deep lakes and artificial environment" habitats. Given in most accounts are previous records, arrival and departure dates, information on nesting, courtship and post-nesting behavior, comments on general behavior, mortality, banding, and a résumé of the annual breeding cycle. The data on banding are especially useful. Among noteworthy records were 3 sibling Snowy Owls banded 18 July 1960, near Cambridge Bay and subsequently recovered near Clyde Forks, Lanark County, Ontario (45° 08' N, 76° 41' W) on 19 October 1961, near Hudson Bay at Atawapiskat, Ontario (52° 36' N, 82° 84' W) on 8 May 1962, and west of the Kurile Islands on Sakhalin Island (ca. 50° N, 145° E) USSR, on 18 February 1962. As all data are carefully related to information in reports of other arctic areas, interesting comparisons emerge relative to the timing of the various stages of the breeding season. Notable with respect to new and useful information are the accounts of *Somateria spectabilis*, *Buteo lagopus*, *Pluvialis dominica*, *Squatarola squatarola*, *Arenaria interpres*, *Micropalma himantopus*, *Larus thayeri*, *Nyctea scandiaca*, and *Calcarius lapponicus*. It is especially gratifying to find that Dr. Parmelee graciously made available to Earl Godfrey critical data on incubation periods, distribution and other topics for inclusion in "The birds of Canada" (Natl. Mus. Canada, Bull. 203: 1–428, 1966).

The avian accounts are followed by three pages devoted to brief commentary on the ecology of 10 kinds of mammals recorded in the area. Mentioned are *Lepus arcticus*, *Dicrostonyx groenlandicus*, *Lemmus trimucronatus*, *Canis lupus*, *Alopex*

*lagopus*, *Thalarctos maritimus*, *Mustela erminea*, *Phoca hispida*, *Rangifer arcticus*, and *Ovibos moschatatus*.

In 1966 Parmelee and several colleagues (not the junior authors) again visited the region between 28 May and 15 August, spending all but a few days of that time on Jenny Lind Island. The observations made on that trip are appended to the main report as a 15-page supplement. Each of 45 species of birds found on Jenny Lind Island is discussed briefly.

This paper is in keeping with the excellent editorial standards of other National Museum of Canada bulletins and no text errors were apparent in careful reading. It would have been helpful if all of the various collecting stations had been marked on the maps and their geographic coordinates had been given in the text. Overall I heartily recommend this report to anyone interested in the ecology and the breeding schedules of far northern birds.—JON C. BARLOW.

#### ALSO RECEIVED

**The lovely and the wild.**—Louise de Kiriline Lawrence. 1968. New York, McGraw-Hill Book Co. Pp. 228, drawings,  $6 \times 9\frac{1}{4}$  inches, \$6.95.—Known to *Auk* readers as a thorough scientist (A.O.U. monograph No. 5, reviewed above), the author has here produced a delightful and informal account of her everyday confrontation with nature and especially the lives of birds. The 22 sketches by Glen Loates are exceptional.—J. W. H.

**Birds of Pennsylvania.**—Merrill Wood. 1967? (no publ. date). University Park. Agr. Exp. Sta., Pennsylvania State Univ. Pp. (16) + 111 + (9), 156 line drawings,  $4\frac{1}{2} \times 8\frac{1}{2}$  inches, \$1.00. Available from Box 6000, University Park, Pa. 16802.—This paperback pocket reference work briefly describes and outlines the status of 423 bird species known from the state. Not a field guide, it will serve nicely as a companion to a field guide in the state. Illustrations by Dorothy L. Bordner are good. Nicely printed on heavy paper, it should stand up well in field use.—J. W. H.

**Another view of the city.**—Russell Peterson. 1967. New York, McGraw-Hill Book Co. Pp. xvi + 221, drawings in text and plates,  $6\frac{1}{2} \times 9\frac{1}{2}$  inches, \$6.50.—The author is a staff mammalogist with the American Museum of Natural History, New York. The book is a chronicle of a year's cycle in a peculiarly rural area of New Jersey, already surrounded by urban development, not far from New York City. Peterson writes like a combination of Thoreau and John Updike. To wit: "Somehow our feeding of the birds (and the birds feeding back of companionship to us) makes winter less of a sterile and bitter thing. There is so much happiness in a handful of seeds."—J. W. H.

**Flashing wings.**—John K. Terres. 1968. Garden City, New York, Doubleday & Co., Inc. Pp. xiv + 177, drawings,  $6\frac{1}{2} \times 9\frac{1}{2}$  inches, \$4.95.—A popular, nontechnical, and authoritative account of bird flight from the standpoint of the observer-naturalist.—J. W. H.