

Islands (14 maps, 2 photographs, and 2 pictures); Ocean Islands (14 maps). South Ocean: Antarctic sector (5 maps); Weddell Sea (11 maps); Indian Ocean sector (23 maps); Davis Sea (17 maps and 2 pictures); Pacific Ocean sector; Ross Sea, Bellingshausen Sea (44 maps).

Maps, diagrams, profiles, and others are reproduced in colour, which makes the atlas clear and attractive in appearance. Only 3,000 copies have been published.

A major shortcoming of this otherwise excellent work is the absence of explanations in any language but Russian.*

Marian M. Kuc

*Since this review was written, complete translation of all the legends and explanatory text of Atlas Antarktiki has been published by the American Geographical Society as the May-June 1967 issue of their *SOVIET GEOGRAPHY: REVIEW AND TRANSLATION* (V. 8, No. 5-6; pp. 261-507). Copies can be purchased directly from the A.G.S. for \$3.00 (U.S.) each.

THE MAMMALS OF EASTERN CANADA. BY RANDOLPH L. PETERSON. Toronto: Oxford University Press, 1966. 10 x 7½ inches, xxxii + 465 pages, 233 line illustrations, 8 colour plates, 107 distribution maps. \$15.95.

Eastern Canada, here considered to include Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, the Atlantic offshore waters, Eastern Hudson Bay, and the islands in James Bay, has a land area of about 1,215,600 square miles. In this vast area of varied topography and climate lying between the Torngats and Point Pelee, mammal habitats are numerous, and Dr. Peterson estimates that 122 species inhabit them. Of these species, 102 are native, 10 are domestic, 9 have been introduced, and 1 (the sea mink) has become extinct. One of the largest mammals, the wapiti or "elk," has been extirpated and reintroduced locally by man.

Dr. Peterson, Curator of the Department of Mammalogy at the Royal Ontario Museum in Toronto, spent ten years in preparing the book—a badly needed reference for mammalogists and those generally interested in Canadian natural history. He opens with several brief introductory essays describing the basic nature of mammals, their origin classification, and man-

mammal relationships. The last essay on the region of Eastern Canada is only a page long—certainly insufficient for a book of this type. Five pages with numbered diagrams provide the rudiments of mammalian skeletal anatomy.

Classically simple and clear introductions to the major categories—orders, suborders, and families—precede discussions of the species which belong to them. Peterson's comments on the bats (Order Chiroptera) and the deer (Family Cervidae) are particularly effective.

The core of the book consists of a series of pithy and interesting sections on each species of Eastern Canadian mammal from the small, southern opossum to the bulky bowhead whale, which ranges well north of the region considered. Species are described according to physical characteristics and appearance, size and weight ranges, distribution and variation, habitat, and habits (including reproductive, feeding, and social behaviour, and activity period). Subjects such as status, economic value, conservation, and research are dealt with under "Remarks." Fur production tables for the 1950-60 period are usually given for economically valuable species. Still, it seems rather arbitrary to tabulate the production of bobcat pelts in Eastern Canada while omitting similar data on seals—particularly the valuable harp seal. A few selected references follow each section.

With the excellent skull drawings of each species and the taxonomic keys, those using the text should have little trouble identifying good specimens. Distribution maps, with insert maps of the species' North American range, show where the various animals can be expected to occur in Eastern Canada. The book closes with a glossary of terms frequently encountered in mammalian literature, 38 pages of references (few more recent than 1960), and a useful index.

Considering the scope of Peterson's study, it would be surprising if it had no weaknesses. To begin with, his goal of making the book "useful to a wide audience without sacrificing accuracy and readability on the one hand and scientific detail and substantiating evidence on the other" is virtually impossible to achieve, for really two divergent goals are involved. Necessarily, some sacrifices have been made.

Although the book was originally intended for high school and university use, few students will be able to afford it (at \$15.95), and its lavish production and size will prevent its practical use in the field. It is a book for the reference shelf. A handier paperback edition at an eighth of the price would be most welcome (see Cowan and Guiguet, *The Mammals of British Columbia*, 1965).

The distribution maps are one of the author's major contributions. The maps are remarkably detailed; each solid dot represents one or more specimens currently preserved in a permanent museum collection, while open squares represent other records not substantiated by specimens. Yet there is little doubt that the maps would have been more valuable scientifically if much unused page space, and that given over to unnecessarily large print, had been used to document the most important (e.g., marginal) distribution records, or those not listed by Hall and Kelson (*The Mammals of North America*, 1959). Where present and former ranges of species (e.g., caribou, Map 85) are given, graphic legends would have been convenient for quick interpretation.

Line drawings vary greatly in quality—perhaps partly because of the number (five) of contributing artists. Contrasts between the Düreresque flying squirrels and shrews, and the cartoon-like cottontails are staggering, and this lack of uniformity detracts from the appearance of the book.

Peterson has made no attempt to revise or validate the subspecies listed, but it is apparent that a thorough study will reduce the number of racial names that are currently recognized. In a few cases, where he has gained special insight through his work, he makes suggestions about subspecific relationships. Probably the wapiti formerly present in northwestern Ontario was the Manitoba wapiti rather than the eastern race, as some have suggested. He also considers the interesting point that the yellow-nosed vole (*Microtus chrotorrhinus*), with its peculiar eastern distribution, may belong to the same species as the yellow-cheeked vole (*M. xanthognathus*) of northwestern Canada and Alaska. Many other problems ripe for research are mentioned.

The reliability and breadth of the study

reflect Dr. Peterson's wide-ranging interests in the field of mammalogy—from studies on Pleistocene grizzly bears, and the habits of meadow voles, to his well-known monograph, *North American Moose* (1955). The book is a valuable and lasting contribution to Canadian zoology.

Although there are concise discussions of a number of arctic mammals, including arctic foxes, ringed seals, and polar bears, they will perhaps be of peripheral interest to arctic mammalogists. This conclusion emphasizes the need for a *Mammals of Arctic Canada*.

C. R. Harrington

NATUR I LAPPLAND. KAI CURRY-LINDAHL, EDITOR. *Stockholm: Svensk Natur*. 1963. 8 x 11 inches, Part I, 498 pages; Part II, 548 pages. Sw. crowns 184.

Nature in Lappland is the bold and final effort in the series on Swedish nature, published over an eighteen-year period under the editorship of the well-known scientist, Kai Curry-Lindahl. The Lappland volumes comprise the twenty-third in the series which covers all the traditional counties and landscapes of Sweden. This publication completes the set which, though not perhaps a "best seller," represents a very comprehensive coverage of Swedish nature, from the southernmost Scania, approximately on the latitude of Copenhagen and with characteristic continental European influences on physical, biological, and human environment, to the barren mountain lands on latitude 69°N. Few countries have similar encyclopedic works in which so many prominent scholars and specialists have tried to merge their knowledge in one common mould.

In order really to appreciate the Lappland volumes, one should also have had access to the volumes on other parts of the country.

As it is, the reviewer can only judge the Lappland volumes *per se*; even that is a Herculean task, as they consist of some thousand pages of text, pictures, and maps.

Technically, one should expect a high quality of reproduction of photos in black and white, as well as in colour, particularly in a work of this prominence. I find this