

REVIEWS

THE CLIMATE OF CENTRAL CANADA.

By W. G. KENDREW and B. W. CURRIE. Ottawa: Queen's Printer, 1955. $9\frac{3}{4} \times 6\frac{1}{2}$ inches; ix + 194 pages; 5 plates, numerous charts, diagrams and tables. \$1.00.

Some time ago a series of research monographs on the climate of certain Canadian regions was prepared in various Canadian universities. These studies were originally commissioned by the Defence Research Board, under funds administered by the Department of Transport. The reports—five in all—were considered too detailed for publication, and the Department of Transport set about the preparation of condensed and revised versions.

The present volume, based in part on one of these studies (by B. W. Currie), is the first revision to be published. It is the work of W. G. Kendrew, the well-known British climatologist, who has not only revised Currie's original study that originally covered only the Mackenzie Basin and Keewatin, but has extended it to include also the Prairie Provinces. There is a general introduction, and this is followed by a detailed description of the screen-level climate of a series of arbitrarily defined climatic regions. Extensive tabulations of climatological averages, including station tables, make the book very useful for reference purposes.

The choice of climatic parameters is traditional and unventuresome. The reduction of temperature to mean sea-level on the monthly maps is hard to defend, since in the north the temperature lapse rate of the lower atmosphere is normally inverted in the cooler months; reduction to a standard pressure surface, such as 1,000 or 900 mb., might have obviated this difficulty. There is some disagreement between the other maps and those recently published in the *Climatological*

Atlas of Canada, issued by the same Department. Nevertheless the book fills a real need, and will be welcome to all who travel in the northwest. One hopes for early publication of the remaining volumes.

There are some editorial slips, of which photograph 2, p. 96, is the best example. The view shown is of a locality on the upper Thelon River, above Beverly Lake, not Wager Bay, as the legend indicates. F. KENNETH HARE

MAMMALS OF NORTHERN ALASKA ON THE ARCTIC SLOPE.

By JAMES W. BEE and E. RAYMOND HALL. Lawrence, Kansas: Allen Press, 1956. (*Museum of Natural History, University of Kansas, Misc. Publ. No. 8*). 9×6 inches; 309 pages; col. frontispiece; 4 plates, 127 numbered figures, 5 tables. Cloth \$4.00, paper bound \$1.00.

This book represents the first attempt to provide a definite account of the mammals occurring on the Arctic Slope of Alaska. It is based on specimens collected and observations made by the authors and their assistants during two summers (July 3-September 6, 1951; June 14-September 12, 1952), and on material in the collections of nine museums in the United States and Canada.

A coloured frontispiece by R. P. Grossenheider depicts the five species of microtine rodents and the three species of shrews considered in the book. Although well executed by the artist, the subtle shades of colour seen in the living animal are not accurately portrayed. The book consists of a short introduction, a check list of the species considered, a discussion of these mammals, a hypothetical list of species for which records are lacking, a key to the mammals of the Arctic

Slope, a short discussion (22 pages) of the geography, climate, and biotic communities of the Arctic Slope, an itinerary, and a bibliography of 177 titles.

The introduction contains a discussion of the cyclic fluctuations of certain species of arctic mammals, a phenomenon attributed to the effects of starvation, predation, and disease. There is also a brief comparison of the faunas of arctic, temperate, and tropical regions.

The bulk of the book, 247 pages, is taken up by the discussion of the 42 species of mammals recorded. In addition to the scientific names, the common and Eskimo names are given. A list of pertinent references precedes each species account. A detailed description of each species is given, supplemented by appropriate illustrations, including a line drawing of the skull. Under "remarks" are given field observations and data on trapping results, reproduction, molt, and general ecology. Previously published records of occurrence are summarized at the close of each account, and stations of occurrence are shown on an outline map.

Emphasis is placed on the shrews and microtine rodents, with over half the total section on species being devoted to them. For these mammals detailed observations on reproduction, composition of populations, and molt are given. Many data are presented by means of graphs, the use of which in some cases might be considered excessive. The discussions of mammals do not adequately take into consideration the fluctuations in population density so characteristic of shrews and mouse-like rodents of the region. Consequently, observations on habitat preferences and interspecific relationships are often misleading. Everywhere in the discussions one finds animal behaviour interpreted in a purposeful way, such as (page 81): "The lemmings retreat to these ice chambers . . . to keep cool during the hottest part of the summer." Throughout the book other observations are often given interpreta-

tions not supported by available data. The authors use their own data almost exclusively and make no attempt to synthesize the work of others in interpreting their observations. Had this been done, a much more valuable contribution would have resulted.

Not many specimens of the larger mammals were collected, nor were specimens in other collections studied, especially of the larger carnivores (wolf, bear, wolverine, etc.), but this is also true in the case of the common seals, specimens of which are obtainable in the coastal Eskimo villages. It is unfortunate that the authors did not discuss the taxonomic status of the terrestrial carnivores, even where it appears to be important. In some accounts skulls that were not collected in Alaska have been used for illustrative purposes, among others black bear and otter from California, moose from Minnesota, and caribou from Greenland. Although this is of little technical importance, it nevertheless distracts from the value of the work. In all such cases the same subspecies that occur on the Arctic Slope are found also in the forested regions to the south, and suitable material is available. Of the 29 terrestrial species considered at least 24 are widely distributed in the forested regions of Alaska and northern Canada.

In the section on caribou the authors forcefully criticize the "control" of wolves on the Arctic Slope as being biologically unsound and probably detrimental to the welfare of the herds.

The localities where the authors made their collections were largely places where collections had been made by others. However, although mammals have been studied from relatively few localities, the region is so uniform that few differences can be expected.

The authors have made the fullest use of the material at their disposal. The book will serve as an important and valuable guide to those continuing this work in arctic Alaska.

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