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No. 5 of this series, MARINE INFAUNAL
 BENTHOS IN ARCTIC NORTH AMERICA. By
 Derek V. Ellis, 53 pages, 2 plates, 17
 figures, and 9 tables, has appeared.
 Copies can be obtained from the Mont-
 real Office at the price of \$1.00 to mem-
 bers, \$2.00 to non-members.

REVIEWS

A PHOTO-RECONNAISSANCE SUR- VEY OF LABRADOR-UNGAVA

By F. KENNETH HARE. *Geographical
 Branch, Department of Mines and
 Technical Surveys. Memoir 6, 83
 pages, 5 tables, 2 maps in text, 2
 folding maps, 2 maps with overlays
 in pocket. 9¾ x 6½ inches. Ottawa:
 The Queen's Printer. 1959. \$2.00.*

The appearance of this memoir is of
 considerable importance to the botanist
 working in Canada, and this review
 will be concerned primarily with the
 botanical content of the work. Not only
 does the paper make available the first
 balanced and accurate map of the veg-
 etation of a large portion of northern
 Canada, but it demonstrates the value
 of applying certain survey methods in
 the study of Canadian plant commu-
 nities. Among professional botanists in
 Canada there is remarkably little ap-
 parent interest in compiling accurate

vegetation maps, although it is widely
 recognised, especially in the Old World,
 that such a step is the soundest begin-
 ning to the study of vegetation. That
 this first accurate map of vegetation
 should be the work of a group of ge-
 ographers rather than botanists further
 emphasizes the neglected condition of
 geobotany in Canadian institutions.

The most useful lesson in this work
 for the botanist is that reconnaissance
 surveys on extensive scales must be
 made if we are to establish properly,
 and with any degree of objectivity, the
 general background for more detailed,
 intensive studies. Professor Hare makes
 clear in his Introduction the regret-
 table, even embarrassing truth that
 much of our knowledge of Canadian
 vegetation beyond, and often within
 the regions of merchantable timber is
 superficial and fragmentary. For ex-
 ample, it is evident that much of the

confusion and error that characterizes many North American contributions to Quaternary and Recent vegetation history can be traced to an incomplete knowledge and understanding of the contemporary vegetation and flora of northern regions. Professor Hare has filled a large gap in our knowledge, and has provided the incentive and direction for detailed botanical studies of many kinds. He groups the vegetation of Labrador-Ungava into a small number of simple types, but it will be many years before the whole area is mapped in greater detail and with the consistency of treatment that is one of the advantages of the photo-survey method.

My chief regret about this publication is that it was found necessary, or desirable to reduce the scale of the vegetation map from 1: 1,000,000 to 1: 4,000,000—the latter is described as “a scale suitable for inspection and publication”. The original mapping was at 1: 500,000, the information having been transferred from vertical air photographs at scales between 1: 40,000 and 1: 60,000, and it is suggested that the publication of the 1: 1,000,000 maps would have justified any increased cost by making available greater detail than is shown on the map. It is rather paradoxical that at the other side of the continent we have a recently published vegetation map of Alaska and Yukon, which is little more than a very simple zonal map, printed at the unnecessarily large scale of 1: 2,500,000 and with a wealth of topographical detail. Professor Hare and his colleagues have accumulated enough information with adequate accuracy to merit printed maps at 1: 1,000,000.

It will be salutary to botanists to find an investigation of vegetation that is confined to the reporting of factual data, without imposing any set of subjective notions about community dynamics, ecology, or classification. The little that is now known about the basic nature of northern vegetation and flora permits only the making of primary surveys conducted in as much detail and as uniformly as possible. However,

perhaps Professor Hare has been unfaithful to his “requirements of objectivity” on one point. The whole scheme of vegetation mapping from air-photographs depended on the recognition and grouping of physiognomic types, regardless of their successional or ecological relationships. In Table II, these physiognomic categories are described briefly and annotations about their physiographic positions are appended. To group them further into Moisture Series adds nothing to the information and compounds two different approaches to the grouping of vegetation. One must ask—how was a decision about the Moisture Series of a particular stand reached? The apparent answer is by “a scouting of its characteristic site”, which implies the sort of personal judgement and postulating that the author is anxious to avoid. Hustich’s grouping (Moisture Series) was firstly into forest sites, in the Finnish tradition; that is, it made a primary ecological postulate. That there is a good correspondence between the two “classifications” is not surprising, but it scarcely permits one to join the two approaches. Of course, it follows from this criticism that little would be lost by removing the Moisture Series considerations altogether.

The memoir is really the final chapter of a series of reports by the author and his associates, and a familiarity with these other publications is helpful, if not essential, for complete appreciation of the procedures and understanding of the data. They are referred to fully throughout the text, and the author takes pains to stress the collaborative nature of the whole endeavour. Deliberately, the author has avoided any considerations of the possible interpretation of his results, which further strengthens the work as a factual contribution lacking the clutter of personal judgements so common in ecological publications. Nevertheless, we look forward keenly to the promised interpretive treatment, for this investigation has raised many questions of interest.

One can find only praise for the clarity of exposition of the text—there are

few questions left unanswered regarding the precise objectives, methods, and results; even the usual reviewer's task of evaluating the contribution is made largely superfluous by the author's own critical assessments and suggestions for future research.

The illustrations deal chiefly with landform types, but together with those appearing in previous publications from the same project, they provide an excellent pictorial record of the information. The work is pleasingly printed and bound, and only one small printing error could be detected.

J. C. RITCHIE

WONDERS OF THE ARCTIC

By JACQUELYN BERRILL. *New York: Dodd, Mead. 1959. 9¼ x 7 inches, 94 pages, illustrated. \$2.25*

Mrs. Berrill's book "Wonders of the Arctic" is written for a youthful audience (8-12 years). It opens with a general description of the arctic region and its seasonal changes. Then a chapter is devoted each to caribou and wolves, arctic foxes, lemmings, tundra hares, arctic birds, musk-oxen, polar bears, walrus, seals, and whales, giving a succinct account of their daily and family lives. A chapter on exploration, from Pytheas to the *Nautilus*, complete the book. Eskimos, Lapps, and other native peoples are only referred to in passing.

Mrs. Berrill's style is clear and simple. Unfortunately, on occasion she gets carried away (e.g. p. 63, "This is a bear [the polar bear] that never sees a plant in all its life . . ."); some inconsistencies have been allowed to creep in (e.g. p. 77, "Ice islands move through the ice pack in a counterclockwise direction"; p. 92, they are "traveling clockwise about the pole"); and not a few errors (e.g. p. 28, the Barren Grounds and the Tundra are considered the same; p. 36, ". . . and when the little fellows [lemmings] do venture out in the open, there is always a falcon, buzzard, owl, or skua gull ready to snatch them"; p. 42, ". . . the Eskimos, the people of the far North, kill hares

for food and use their snow-white, furry skins to cover the sails of their boats so they can get closer to seals resting on the ice . . ."; p. 48, ". . . when the snow melts . . . there is simply no place for the water to go—so it becomes a bog"). Furthermore, although the Arctic Ocean has been referred to as a "mediterranean sea", it is open to debate whether it can be called "land-locked". On page 89 the impression is given that Alexander MacKenzie and Sir John Franklin were in the employ of the Hudson's Bay Company.

"Wonders of the Arctic" is handsomely illustrated with black and white pen-and-ink drawings. These have not been drawn from life, but are nonetheless pleasing. An adequate index is included. The volume is bound in a special reinforced library binding to withstand moisture and dirt, the pages have been strongly stitched to prevent them from coming out, and the cover has been reinforced so that it cannot be readily broken when bent, and will not come loose from the book—all admirable qualities for a children's book.

NORA CORLEY

THE WORLD OF THE ARCTIC

By FRANCES C. SMITH. *Philadelphia and New York: J. B. Lippincott Co.; Toronto: Longmans, Green and Co. 1960. 8¼ x 6 inches, 126 pages, 2 sketch maps, 16 illustrations. \$3.50 in Canada.*

This slim volume is one of the latest in the "Portraits of the Nations" series, which attempt "to give young people compressed, authoritative and interesting profiles of the land, history, geography, and life" of various countries. "The World of the Arctic" is a slight departure from the others in that it discusses a geographical region rather than a political entity.

The reader is introduced to the region in a general outline, thence taken through three chapters concerning the history of discovery and exploration, followed by five chapters on Alaska, Canada's Western Arctic, the Arctic Archipelago, Greenland, and the Soviet