

and provide some quantitative data. This volume will be of most value to those interested in the biology of loons, grebes, albatrosses, shearwaters and petrels. I look forward to seeing Volume 3, on birds of prey, but Volume 4, dealing with grouse and cranes, is planned first and expected to appear in 1987.

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FLUCTUATIONS OF GLACIERS 1975-80 (Vol. IV). Compiled for the Permanent Service on the Fluctuations of Glaciers of the IUGG-FAGS/ICSU by WILFRIED HAEBERLI, Laboratory of Hydraulics, Hydrology and Glaciology, Swiss Federal Institute of Technology (ETH), Zurich. Paris: International Association of Hydrological Sciences and UNESCO, 1985. 265 p. Maps, index of glaciers cited. Softbound. US\$38.00.

There is presently much discussion and research being conducted on global climatic change. A growing concern is that inadvertent human interference in the atmosphere at all levels may cause the most dramatic change in climate in 100 000 years. One of the major obstacles to understanding climatic change is a paucity of usable data. A study of ocean, lake and ice cap cores has given us a wealth of information on how climate changed in the past. These changes give us better insight into the present climate and what may happen in the future. However, while the planet is now bristling with environmental instrumentation, it is generally located in areas of high population density. We have to turn to natural indicators to measure present-day climatic trends; glaciers can serve as one of these indicators. This volume, the fourth in a series beginning in 1959, serves this purpose. It brings together data from 691 glaciers located in 15 different countries and Antarctica. The data will be of use mainly to the glaciological community, but should also be useful to anyone working in the field of climatic change.

The first 117 pages of the book serve several purposes. The sources of the data are fully documented, the meaning of the data is explained and the method of glacier classification and the formats used to gather the data are described. Twenty pages of glacier data that do not fit the official format are presented, including some interesting Australian material from Antarctica. Then there is a 25-page chapter describing each of 11 glacier maps from seven countries. The maps, which show glaciers from both remote and accessible areas in Europe and Asia, are carried in a back pocket of the cover, which also carries the data volume itself.

Before describing the various tables, it should be noted that mass balance is a measure of the amount of snow and ice that accumulates on the glacier each year, mainly during winter (i.e., winter balance), the amount that melts and leaves the glacier each year, mainly in summer (summer balance) and the difference between these two amounts (net balance). More accumulation than loss gives a positive balance and the converse gives a negative balance.

There are nine sets of tables. The first covers variations of the glacier front position on 626 glaciers, with a set of 105 glacier updates from previous years. The next gives mass balance summaries of 75 glaciers (winter, summer, net balance, equilibrium line elevation, accumulation area ratio and total glacier area), with 22 glacier updates from previous years. Then there is a set of tables of mass balances given for each of 20 glaciers by 100 m altitude intervals. This is followed by a 36 glacier set of areas, volumes and thickness changes, again by 100 m altitude intervals, and then a table listing 30 glaciers and the availability of hydrometeorological data (stream gauge, meteorological station, their coordinates, altitude and area of the drainage region studied). Finally, there is an alphabetical glacier index, which lists the data available with page numbers.

All the tables are well organized, with each having its own distinc-

tive page colour for easy location from the closed book. The first page of each table section explains the acronyms at the top of each table. It is not necessary to be a glaciologist to use and understand the data.

A brief look at some of the data indicates that in the five-year period covered by the volume, 77% of the reported glaciers had positive balances and 23% negative ones. In terms of terminus changes, 46% have advanced and 44% retreated, with 10% unchanged. So, between 1975 and 1980 glaciers were more than holding their own.

Among the various contributing countries, Canada and the U.S. are well represented, although the compiler notes that many Canadian measurements have been discontinued due to a lack of funding. If so, the next five-year edition, ending with 1985, will show a much smaller Canadian contribution. Data lost can never be regained.

Antarctica and Greenland are very poorly represented, and while they have provided the deepest and longest ice cores to date, and will continue to do so, the mass balance of both ice sheets remains unknown. Some mass balance work is now being done in Greenland. However, it would be nice to see the data from past and present stake farms in Antarctica. These would at least give time series of snow accumulation rates there.

The compiler, Haerberli, is to be congratulated on taking over and succeeding in the particularly arduous job of wrestling data from scientists. We can look forward to an even better Volume V (1980-85), which is already in the collection stage.

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ARCHEOLOGIE DE L'UNGAVA: LE SITE DE LA POINTE AUX BELOUGAS (QILALUGARSIUVIK) ET LES MAISONS LONGUES DORSETIENNES. By PATRICK PLUMET. Montréal: Laboratoire d'Archéologie de l'université du Québec à Montréal, Collection Paléo-Québec, No. 18, 1985. 472 p. Figs., photos, drawings, plans, bib. In French. Softbound. Cdn\$18.00.

This book is a product of the multidisciplinary Tuvaaluk Programme funded by the Canada Council during the second part of the 1970s. The volume deals essentially with only one aspect of the program, namely the longhouses from Ungava. Another presents the history of human occupation in Ungava from an ethnohistorical perspective, and a third is a Master's thesis on one of the sites excavated during the Tuvaaluk Programme.

The hypothesis in vogue during the time of Plumet's initial field work in the Eastern Arctic held that longhouses in arctic Quebec resulted from Norse who had left Greenland in the 12th century and adopted a Dorset subsistence culture. Plumet's hypothesis is that longhouses discovered throughout the Arctic were effectively built by the Dorset people themselves, about A.D. 1000. The earlier hypothesis had been proposed by the late Thomas Lee, who could not conceive that such advanced architecture could have been developed by aboriginal people.

The book is organized in a way peculiar to the author and French prehistorians. Plumet's methodology is inspired by the work of Leroi-Gourhan. The strong point about Plumet's work is that he uses a *vocabulaire d'attente*, which makes his methodology explicit and his reasoning, although dense, easy to follow. Moreover, the field techniques used throughout the program are very detailed and the data collected during the field research are well integrated by using computer techniques.

The book is divided into ten parts, which in turn are subdivided into chapters. It starts with a general description of the aims of the Tuvaaluk Programme and the topic of the longhouses. The next section includes a description of the environment of the west coast of Ungava Bay, with a

focus on the Qilalugarsivik site and its surrounding natural resources. It is followed by a description of the field work at the site, including the architectural features of the longhouses and their associated artifacts. Since Plumet uses his own descriptive methods for the artifacts, his sections on artifacts are complemented by reference to traditional Paleoeskimo artifact typology. He also reports on the excavation of two other "normal" houses excavated at the site and how they related to the longhouses. The author then goes on to compare his data with those for other longhouses found in Ungava and elsewhere in the Arctic. His conclusions are that longhouses are part of the Dorset culture complex and not a trait borrowed from allochthonous groups. They were seemingly used from the end of the summer to mid-autumn by regional bands made up of nuclear families.

The book includes an appendix by M.-F. Archambault on soapstone found at the site, as well as a short report by M. Julien on osteological remains.

Two minor problems were encountered. Typographical errors are frequent (but are counterbalanced by the excellent quality of the illustrations). The second problem, more serious, is that some of the material dealing with the methodology for artifact analysis is already available in an earlier publication in the same series, and material on artifact analysis methodology included in an appendix could have been totally omitted to make for a less voluminous publication. Nevertheless, the price is still very low.

In summary, *Archéologie de l'Ungava: Le Site de la Pointe Aux Bélougas (Qilalugarsivik) et les Maisons Longues Dorsétiennes* marks a milestone in arctic archaeology as much for its topic as for its organization. It is a commendable and well thought out piece of research, which should be consulted by students and professionals interested in the origin of longhouses and the relation between field research and laboratory work.

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BOOKS RECEIVED

ALASKA TREES AND SHRUBS. By LESLIE A. VIREECK and ELBERT L. LITTLE, JR. Fairbanks, AK: University of Alaska Press, 1986. Third reprint of Agriculture Handbook No. 410 by Forest Service, United States Department of Agriculture, Washington D.C. 1972. (Now available from University of Alaska Press, Signers' Hall, University of Alaska, Fairbanks, AK 99775-1580.) ISBN 0-912006-19-6. 265 p., illus., maps. Softbound. US\$12.95.

DAS GRÄBERFELD DER HUNNO-SARMATISCHEN ZEIT VON KOKEL, TUVA, SÜD-SIBIRIEN Materialien zur Allgemeinen und Vergleichenden

Archäologie, Band 25. By ROMAN KENK. München: Verlag C.H. Beck, 1984. Kommission für Allgemeine und Vergleichende Archäologie des Deutschen Archäologischen Instituts Bonn. (Köllen Druck & Verlag GmbH, 5305 Bonn-Oedekoven, Federal Republic of Germany.) ISSN 0176-7496. ISBN 3 406 30826 0. 202 p., figs., tables. Softbound. DM 58.

EXPLORATORY HUMAN CRANIOMETRY OF RECENT ESKALEUTIAN REGIONAL GROUPS FROM THE WESTERN ARCTIC AND SUBARCTIC OF NORTH AMERICA: A NEW APPROACH TO POPULATION HISTORICAL RECONSTRUCTION. By GARY M. HEATHCOTE. Oxford: B.A.R., 1986. BAR International Series 301. (B.A.R., 5 Centremead, Osney Mead, Oxford OX2 0DQ, England.) ISBN 0 86054 386 2. xvi + 347 p., tables, figs., maps, refs., appendices. Softbound. £12.50.

MAMMALS IN NORTH AMERICA: FROM ARCTIC OCEAN TO TROPICAL RAIN FOREST. By ROBERT E. WRIGLEY; paintings by DWAYNE HARTY. Winnipeg, Manitoba: Hyperion Press, 1986. (Hyperion Press Limited, 300 Wales Avenue, Winnipeg, Manitoba, Canada R2M 2S9.) ISBN 0-920534-33-3. 360 p., colour illus., maps, North American mammals checklist, bib. Hardcover. Cdn\$49.95.

POLITIQUES ARCTIQUES (ARCTIC POLICY). Études Inuit Studies, Vol. 9, No. 2, 1985. (Études/Inuit/Studies, Département d'anthropologie, Université Laval, Québec, P.Q., Canada G1K 7P4.) Articles in French and English. ISSN 0701-1008. 225 p., illus., maps, tables. Softbound. Cdn\$9.00.

THE ROCKY MOUNTAINS: CREST OF A CONTINENT. Photographs by J.A. KRAULIS; text by JOHN GAULT. Toronto: Key Porter Books, 1986. ISBN 0-919493-95-5. 200 p., coloured photos, maps, appendix. Hardcover. Cdn\$29.95.

WILD WATERS: CANOEING CANADA'S WILDERNESS RIVERS. Edited by JAMES RAFFAN; foreword by BILL MASON. Toronto: Key Porter Books, 1986. ISBN 0-919493-99-8. xv + 151 p., coloured photos, map. Hardcover. Cdn\$29.95.

PAPERS TO APPEAR IN ARCTIC

- PORTER, L. Late Pleistocene Fauna of Lost Chicken Creek, Alaska.
GREEN, D.H., and GREEN, M.B. The Food Retailing Structure of the Northwest Territories.
RICHARDSON, W.J., DAVIS, R.A., EVANS, C.R., LJUNGBLAD, D.K., and NORTON, P. Summer Distribution of Bowhead Whales, *Balaena mysticetus*, Relative to Oil Industry Activities in the Canadian Beaufort Sea, 1980-84.
FERGUSON, M.A.D. Status of Peary Caribou and Muskox Populations on Bathurst Island, Northwest Territories, August 1981.
NEFF, J.M., HILLMAN, R.E., CARR, R.S., BUHL, R.L., and LAHEY, J.I. Histopathologic and Biochemical Responses in Arctic Marine Bivalve Molluscs Exposed to Experimentally Spilled Oil.
OWENS, E.H., ROBSON, W., and FOGET, C.R. A Field Evaluation of Selected Beach Cleaning Techniques.
OWENS, E.H., and ROBSON, W. Experimental Design and the Retention of Oil on Arctic Test Beaches.
MEERES, L.S. Meteorological Operations at Cape Hatt in Support of the Baffin Island Oilspill Project.