

somewhat limited. Other limitations, noted by the editor himself, include lack of hydro-meteorological data and lack of short-term energy balance data. Beginnings in these directions may be made in future volumes. In the meantime, the volume and its predecessors are the best (by virtue of being the only) compilations available, and they do contain a great deal of information. A peripheral value of the book is its bibliography and lists of contributing authors and agencies, from which original (and additional ?) data can be obtained.

As a bonus the third volume contains a collection of 12 assorted glacier maps and orthophotographs, including 4 Canadian products. The collection is apparently designed to show the state of the art of glacier mapping. Of particular interest is a series of maps depicting thickness changes of selected glaciers in the Bavarian Alps.

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CLIMATIC ATLAS OF THE CONTINENTAL SHELF WATERS AND COASTAL REGIONS OF ALASKA: VOLUME I — GULF OF ALASKA BY WILLIAM A. BROWER JR., HAROLD W. SEARBY, JAMES L. WISE, HENRY F. DOAZ AND ANTON S. PRECHTEL: U.S. Department of Interior's Bureau of Land Management and Alaska Outer Continental Shelf Environmental Assessment Program, 1977. 11 in x 11 in, 439 pp., \$5.00.

Climatic Atlas of the Gulf of Alaska is the first of a three-part series on the climate of the coastal region of Alaska. The other volumes, still in preparation, are the Bering Sea (Volume II) and Chukchi and Beaufort Sea (Volume III). There is some overlap in the content of the volumes, a device which hopefully should ensure continuity.

The Atlas, which was jointly produced by Arctic Environmental Information and Data Centre of the University of Alaska and the National Climatic Centre, presents a vast amount of information on atmosphere and surface marine parameters that will be useful in the assessment of risks involved in resource exploitation in the coastal waters of Alaska. Elements covered in the Atlas include temperature, wind, precipitation, pressure, fog, cloud cover, etc. Also included are icing, hypothermia, and storm surges. Statistical descriptors used in the Atlas include maxima, minima, means, standard deviations, extremes, persistence, probabilities, and return periods. The analyses are based on over a half million surface marine observations and two million

three-hourly observations from 49 selected coastal stations. The results are presented in 3-color maps; graphs, in black and white; and tables depending on the type of information to be conveyed. Together, the variables, their descriptors and presentation offer as complete a climatological profile for the coastal and marine areas of the Gulf of Alaska as possible within the limitation of the data base.

Because of its early publication in relation to resource exploration and exploitation in the Alaskan region, it is reasonable to believe that the stated objective of the Atlas to provide the type of information "required for the assessment of potential impact by oil and gas exploration and development and monitoring programs that will permit resource development and ensure environmental protection", will be realised. The Atlas is very well produced, the tables are crisp, and the legends are very clear. Where the authors believe that an introduction to concepts or tables is necessary, they have passed it on in the form of brief notes and in a style that should make them understandable even to the uninformed.

The authors must be complemented on their very thorough work. It is hoped that the other volumes will achieve the same high standard set by Volume I. I highly recommend it to anyone involved in any type of work in Alaska and to every climatologist or meteorologist with an interest in the Arctic. At \$5.00 a copy, it is truly a bargain. For the U.S. Department of the Interior, which funded the project, the result must be very satisfying. Their money was well spent.

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ESKIMOS OF NORTHWEST ALASKA IN THE EARLY NINETEENTH CENTURY, BASED ON THE BEECHEY AND BELCHER COLLECTIONS AND RECORDS COMPILED DURING THE VOYAGE OF H.M.S. BLOSSOM TO NORTHWEST ALASKA IN 1826 AND 1827. BY JOHN R. BOCKSTOCE.

EDITED BY T. K. PENNIMAN. *Pitt Rivers Museum, 1977 (Monograph Series, University of Oxford, Pitt Rivers Museum, No. 1). 139 pages, illus., maps. No price indicated.*

When Commander Frederick William Beechey sailed H.M.S. Blossom to Alaska via Cape Horn in 1825-6 he carried orders to meet there with the exploratory parties of Captain William Edward Parry and John Franklin. Neither Parry nor Franklin, both in search of a northwest passage, travelled far enough west to make their proposed rendezvous with

Beechey in Kotzebue Sound. However Beechey's expedition was not a failure, for he spent two fruitful summers in Alaskan waters carrying out survey work, gathering natural history specimens, and amassing a substantial collection of ethnographic material from the Alaskan Eskimos. Much of Beechey's ethnographic collection, together with that of his assistant surveyor, Lieutenant Edward Belcher, is now housed in the Pitt Rivers Museum at the University of Oxford, and it is a pleasure to see a catalogue of this early body of Eskimo material culture finally published by that venerable institution.

This catalogue of 119 extant items from the Beechey and Belcher collections, carefully prepared by John R. Bockstoce, gives us a glimpse of Alaskan Eskimo material culture at a very early period in their contact history. The voyage of the Blossom was completed prior to the intensive contact conditions that followed the expansion of Russian-American trading posts in the 1830's and the invasion of Arctic whaling ships after 1848. The artefacts in the catalogue were therefore manufactured during a much earlier stage of acculturation than those represented in previously published collections from northwestern Alaska (Murdoch, 1892; Nelson, 1899; VanStone, 1976), which date from the final decades of the nineteenth century.

It is always disturbing to see how old collections with such tremendous potential for ethnographic research can have their scientific value so sadly diminished by poor documentation. Although the author of the catalogue appears to have made a thorough search for records covering the acquisition of specimens by Beechey and Belcher, he appears to have met with little success. This is particularly serious in the case of the Belcher material, which was not sold by the collector until some time near his death in 1877 and which contains many pieces that are shown by Bockstoce to be wrongly labelled. Even the Beechey material, which tends to be more accurate in this respect, is often merely labelled "Esquimaux" and cannot be pinpointed to specific locations within the vast territory between St. Lawrence Island and Point Barrow. Such poor records of provenance make it difficult if not impossible to analyse the material from the standpoint of either cultural homogeneity or regional differentiation, and perhaps this is one of the main reasons that the author has avoided any general conclusions based on the collection as a whole.

In describing the artefacts, which fall mainly in the general categories of "Hunting and Fishing Equipment" and "Tools and Manufacturing Implements", Bockstoce has done

an exemplary job in producing what could well be used as a model for catalogues of this type. His clear descriptions are supplemented by excellent photographs, with close-up shots of important features, and a few pen-and-ink drawings showing details of construction. The catalogue is enhanced with introductory chapters placing the collections in historical perspective and with ethnographic observations from a variety of sources, including field sketches and excerpts from the journals kept by Beechey, Belcher and other crew members during the voyage of H.M.S. Blossom.

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THE BIOGEOCHEMISTRY OF BLUE, SNOW, AND ROSS' GEESE. BY HAROLD C. HANSON AND ROBERT L. JONES. *Carbondale, Illinois: Southern Illinois University Press (Special publication - Illinois Natural History Survey; no. 1.)*, 1976. 10 x 7 inches, 281 pages, illustrated. \$15.00.

In 1965 Hanson and Jones set out to show that chemical patterns in primary wing feathers could be used to determine the geographic origins of geese which nest in the Arctic. During the summer geese are temporarily grounded when they moult their primary feathers. As their new feathers grow, adults and their flightless young feed within an area restricted to the breeding grounds. On the premise that characteristic mineral patterns in the soils should be transmitted through the nutrient chain to appear in the newly grown feathers, Hanson and Jones studied the composition of feather samples collected from the major species of North American geese. In this book they present their results for lesser snow geese (*Anser caerulescens caerulescens* - including both white and blue colour phases), greater snow geese (*Anser caerulescens atlantica*), and Ross' geese (*Anser rossii*). They discuss and explain the many facets of the