

The post-war years, in McCandless's view, intensified "a process of separation, both social and economic, between the Indian and non-Indian cultures." In addition, these years saw a substantial decline in fur prices. "The net effect was total disruption for the Yukon Indian communities." The Family Allowance Act of 1944 was paid to the mothers and required enrolling children in schools, which tended to draw families to nearby settlements. It was the men, the trappers, who lost the most; trapping was no longer a family project. As one trapper said, "The government became my wife's old man. She don't need me any more."

It followed that from the late 1940s "the Yukon's decades-old wildlife policies transformed themselves."

The wildlife became detached from the landscape, from any site-specific understanding of varieties and abundance, only to become a free-floating, Territory-wide system providing trophies and other cult objects for export out of the Yukon. Its use as sustenance and a livelihood became less important.

McCandless offers two remedies for the present situation: abolition of non-resident hunting by simple amendment of the Game Ordinance, and reinstatement of market hunting under license "to make big game of direct and indirect benefit to Yukon residents." Needless to say, he holds out little hope that his unconventional advice will be accepted.

Yukon Wildlife focuses our attention on the small number of politicians and administrators who during the first half of the 20th century made wildlife policies for the Yukon Territory that were increasingly detrimental to the Indian people, who lacked the political power to defend their interests. The account implies that, in the long run, such policies are destructive: exasperated, impoverished or demoralized natives not only become a drain on social welfare funds but also, instead of being recruited into effective and relevant conservation practices in harmony with their culture, are now tempted to indulge in extremes to express their "rights." The recent slaughter of geese in the Yukon-Kuskokwim Delta, Alaska, is an example that Yukoners should heed. It will be interesting to watch the development of wildlife policies as the native land claims in the Yukon near settlement.

McCandless deserves our gratitude for his forthright presentation of what is bound to be an unpopular position. He is also to be commended for attempting to place events in the Yukon in the perspective of an "historically relentless process global in scale." His first chapter, "Old Laws — New Attitudes," shows that recent game laws in the Yukon, one of the last real wildernesses in the world, are an end point of a "certain pattern" of aggrandizement of hunting privileges by licensed elites, to the exclusion of ordinary inhabitants enjoying the usufruct of the land. This pattern dates at least to 1217, when King John's barons forced him to sign the Forest Charter, relieving abuses of the Norman kings as monopolizers of the forests and wild animals. Its progress paralleled the centralization of legal systems during the rise of nation states, accelerating as England was deforested and the land enclosed for sheep pasture and making speedy headway in North America after extermination of the bison.

"Only the longest view," McCandless explains, "will help us understand why Europeans, and English colonial administrators in particular, had some very definite and rigid ideas about game management at the time of the Gold Rush." The historical background is necessary also "to understand the core problem seen in the history of the Yukon Territory's game laws, game as trophies or game as meat."

Although the animals can provide staples, their value in relation to the land they occupy soon becomes less than that land's ultimate value as a location for agriculture, or forestry, or mineral and fuel production. As the lands still available for wild animals diminish, so must the material well-being of persons who obtained their living from wildlife.

Since the book is, for the most part, written in plain, non-technical language, it should appeal not only to wildlife management people everywhere but also to all Yukoners, whatever their situation. Teachers, students, hunters, trappers, lawyers, sociologists, land claims negotiators and business people involved in tourism will benefit from the insights McCandless's study presents. We especially recommend it to Canadian and American government functionaries, however distant

from the Yukon, who have a hand in shaping and executing policies affecting residents of the northwest.

We have one or two criticisms of the book. The photo credits listed on the last two pages should instead accompany the photographs. The excellent pictures used at the beginning of each chapter should be full page size. The photo on the back cover is much clearer than is its reproduction in the text.

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HANDBUCH DER VÖGEL DER SOWJETUNION — BAND 1.

Edited by V.D. IL'ICEV and V.E. FLINT, U.S.S.R. Academy of Sciences. Translated from Russian into German by BURKHARD STEPHAN. Wittenberg Lutherstadt: A. Ziemsen Verlag, 1985. 350 p. Colour plates, illus., maps, tables, refs. Hardbound. M78.00.

This handsome first volume of ten, entitled *Handbook of the Birds of the Soviet Union*, is an updated German translation of the Russian version that appeared in 1982. Production of these volumes began in response to a request by an advisory committee of the U.S.S.R. Academy of Sciences responsible for the study, protection and management of birds. Special emphasis was to be placed on hitherto little-studied, remote regions, rare and endangered species and species of particular economic and scientific value. The last time a similar extensive work had appeared in the Soviet Union was nearly 30 years ago, when G.P. Dement'ev and N.A. Gladkov compiled *The Birds of the Soviet Union*.

The handbook contains a summary of avian studies in the Soviet Union beginning with the first scientific expeditions in 1768-74 led by P.S. Pallas and others. The second part of the book treats the biology of three orders of birds: Gaviiformes (loons), Podicipediformes (grebes) and Procellariiformes (albatrosses, fulmars, shearwaters and petrels).

In an attempt to focus attention on little-studied, remote regions, Chapter 1 (158 p.) deals with summaries of the avian studies in each of 74 biogeographic regions. The names of investigators, the area visited, the time period involved and the species encountered receive prominent mention. Conclusions are treated superficially in comparison. In Chapter 2 (15 p.) the authors evaluate the completeness of avian studies in each biogeographic region. Under consideration are species inventories, area coverage, data on abundance and ecology and availability of the results in published form. A map summarizing this evaluation illustrates that vast sections of the northern and eastern parts of the Soviet Union are in need of further study. Chapter 3 (16 p.) represents a compilation of the most important ornithological publications. This list is in addition to 460 references cited in the Literature Cited section.

In Chapters 4 (32 p.), 5 (48 p.) and 6 (50 p.) the orders of birds are introduced, beginning with a summary of anatomical, ecological, taxonomic and paleontological information for the particular group. This introduction is followed by a detailed description of each species providing information on plumages, body measurements, distribution, habitat, abundance, breeding, food habits and economic importance. Maps portray distribution worldwide and in greater detail within the Soviet Union. Throughout these chapters, identifying characteristics and behaviour are liberally illustrated using black and white sketches. In addition, colour plates illustrate males and females of each species and also eggs and young.

This valuable volume provides considerable insight into the rich avifauna of a vast region of Eurasia. The arrangement is pleasing, using illustrations and colour. The historical portion of the book may be of little utility to most readers, but the species descriptions are detailed

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