

RUSSIAN EXPLORATION IN SOUTHWEST ALASKA: THE TRAVEL JOURNALS OF PETR KORSAKOVSKIY (1818) AND IVAN YA. VASILEV (1829). Edited and introduced by JAMES W. VANSTONE; translated by DAVID H. KRAUS. The Rasmuson Library Historical Translation Series Vol. IV. Fairbanks: University of Alaska Press, 1988. vii + 120 p., 13 maps, bib., index. Softbound. US\$15.00 plus \$4.50 postage and handling.

This volume has two basic components: the travel journals including also "Chistyakov's Instructions to Vasilev," and the extensive input of the editor consisting of a preface, introduction, notes, references, glossary, index and maps.

The accounts report the first of two expeditions by Korsakovskiy (there being no known journal for his second trip undertaken in 1819) and the first of two subsequent expeditions by Vasilev (the journal for his second, 1830, expedition being lost). In his introduction VanStone discusses each set of expeditions, utilizing details gleaned from Russian sources. Their sequent relationship focused on a single region and the likelihood that persons utilizing one account would consult the other one justify joint presentation in this volume, achieving a certain economy of publication, focus and concentration of subject matter.

In VanStone's words, the "purpose of this account is not only to reproduce . . . [the journals] in English, but to place their achievements in historical perspective . . . and to emphasize the importance and significance of two generally neglected events in the history of Russian America." The actual narratives are not for a general readership but are working documents for historians, anthropologists and others with specialized interests. For this pursuit even the specialist might have difficulties if it were not for the editor's numerous notes, totalling 214 items, some of which are detailed and treat many subtopics. The notes hardly are of lesser magnitude than the texts. One might wonder if it would not have made a fascinating writing project, in the place of extensive notation, to retrace Korsakovskiy's and Vasilev's travels in parallel documents.

But the editor's objectives are not simply to present source material. To read life and significance into these accounts of a century and three-quarters ago we return to the ten-page introduction. Following the consolidation of Russian operations in Alaska into a single company, and with decreased fur yields from coastal stations in the Aleutian Islands and around the Gulf of Alaska, the attention of the fur traders turned northward to the hinterlands beyond the Alaska Peninsula. Information on the native peoples and resources of this region was sparse, though there had been one largely undocumented Russian exploration in the 1790s. To explore that area, Korsakovskiy was dispatched from Kodiak and was joined by Kolmakov at Katmai. His is the first overland expedition to the Nushagak-Kuskokwim region for which a first-person account exists, and accordingly, as VanStone points out, "everything he says about the country represents new information." But his account is vague and difficult to follow, he made no map, and his contribution to geographic knowledge is rated as poor. Nevertheless, during his next expedition, aided by a ship-born party, Korsakovskiy established the trading post, Aleksandrovskiy, at the mouth of the Nushagak River. This initial opening up of the country and subsequent coastal exploration notwithstanding, southwest Alaska remained to be fully explored. The next documented exploration of the interior is Vasilev's. It receives high marks for the accurate map that Vasilev prepared. VanStone states that Chistyakov, general manager of the Russian American Company, who ordered the exploration, was pleased with the results, but it is not clear to this reviewer whether the journal supplied Chistyakov was the brief (11 p.), sometimes second-person, narrative published in the present volume or a more detailed journal. The editor suggests that the missing journal of Vasilev's second expedition was more

detailed and a source of information later published by Wrangell. VanStone concludes that Vasilev's explorations assisted the company in assessing the fur-bearing potential of the region and that they were instrumental in the decision to establish the St. Michael post on the coast north of the Yukon River. Like pieces of a puzzle, these accounts contribute to piecing together the big picture of contact and development of the interior and western regions of Alaska.

I found Chistyakov's detailed instructions to Vasilev more interesting than the latter's account. I was disappointed, though, to find only scattered references to these instructions in the Introduction. Are explorers normally requested to "take note of . . . bees, flies, midges . . . etc.?" I am fascinated that Vasilev was instructed to "measure the thickness of the skin and determine the color and length of the hair" of any mammoth remains he might see. A reference to blue pigment scraped off such remains by natives undoubtedly refers to the iron phosphate mineral "vivianite" (first noted in 1823, according to the *Shorter Oxford English Dictionary*) found on Pleistocene remains uncovered later by placer mining. Evidently for such reasons, Fedorova (cited by VanStone) considers Vasilev's to be a scientific expedition. But judging from the brevity of his journal, perhaps not the primary account of this exploration, coping with the aftermath of the severest winter then ever known and hunting and fishing to provide for the party's subsistence prevented Vasilev from fully recording the array of ethnographic and other scientific observations requested.

At the back of this small book is a brief glossary of Russian and Siberian terms used in the fur trade and exploration of Alaska. Many such glossaries have accompanied translations during recent decades. Since the same researchers use these publications, has the time not arrived for a definitive separate, collaborative publication of terms that explicates their significance and explains usage changing through time? VanStone's explanation of the two- and three-hatch *baydarka* (kayak) is exemplary, for instance, but his definition of *artel* clings too closely to the classic definition as a work crew and misses the functional aspect of a settlement from which the crew operated.

This publication is one of a growing series of translations of primary documents that regional historians will want to add to their base of reference resources.

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FLUCTUATIONS OF GLACIERS 1980-1985. Vol. V. Compiled by WILFRIED HAEBERLI and PETER MÜLLER for the World Glacier Monitoring Service. Wallingford: IAHS Press; Nairobi: UNEP; Paris: UNESCO, 1988. 288 p., 9 maps. US\$38.00.

It has been said that a mere handful of mathematical physicists have contributed far more to glacier science than have a hundred measurers of glacier stakes, or recorders of advances and retreats of glacier termini. On the one hand, this statement may have had some truth to it, but on the other hand, with time, the slow but steady labour of the field crews is resulting in the accumulation of some very valuable time series, which start, in this series of publications, in 1967. The World Glacier Monitoring Service (WGMS) assumes the very crucial role of the "middle man" in the process of providing raw data to the research consumer, who

may be interested, for example, in 1) the specific climatic parameters influencing the fluctuations of a particular glacier, or in 2) regional to hemispheric responses of glaciers to climatic changes and the implications to regional hydrology or sea level.

Furthermore, it is believed that glaciers, particularly valley glaciers, may be used as indicators of the Greenhouse Effect, bearing in mind that some glaciers are more sensitive to precipitation changes than to air temperature changes. One Alaskan glacier study has shown that as mean annual air temperatures increased, the mass balance increased, because of the concurrently increased precipitation. With further temperature increase, however, the mass balance trend began to reverse. Interesting observations such as these often form the basis for subsequent theoretical modelling studies, in which case it may be claimed that mere observations can and do inspire others to greater levels of understanding.

As a final example, one can refer to a classic study by two theoretical physicists who applied kinematic wave theory to study how a glacier might respond to changes in mass balance, and thus to see if a mine portal was in danger of being overwhelmed during the projected lifetime of the mining operation (Untersteiner and Nye, 1968). Because no mass balance (and ice thickness) data were available at that time, the results were imprecise, and it was left to others to repeat and refine the study at a later date, using some accumulated mass balance data (Fisher and Jones, 1971). One can thus see that there are some interesting aspects to the apparently routine procedure of recording glacier behaviour.

The WGMS and the schedule for its series of publications place a responsibility on each "measurer of stakes" and their national correspondents, who every half decade report their countries' results to the compilers in Zurich. In this way, the "consumers" need not waste valuable time trying to collect data from the "hundred measurers of stakes" scattered around the world.

The book comes in a handy cardboard case (165 x 250 x 60 mm), which also holds the sheaf of nine new glacier maps. It is divided into useful chapters that address topics related to the data presented in the appended tables, which are the real *raison d'être* for this publication.

One aspect of these data sets that should be addressed in future publications is the errors involved in the measurements of snow and ice areas, point mass balance measurements and specific net mass balance values. In many cases, this could be a formidable task, but along with updating glacier areas, it should become a routine exercise.

This review appears at a time when the "accounting" for the next compilation period (1985-90) is fast drawing to a close. Some time series will then span 23 years, but for many statistical processing purposes this is not nearly long enough.

There are many reasons why this publication should be continued; one key reason is that the complete series gains value with every volume. Thus the compilers are to be congratulated for continuing this task on behalf of the international glaciological community. This book is certainly an item for acquisition by all science libraries.

REFERENCES

- UNTERSTEINER, N., and NYE, J.F. 1968. Computations of the possible future behaviour of the Berendon Glacier, Canada. *Journal of Glaciology* 7:205-213.
- FISHER, D.A., and JONES, S.J. 1971. The Possible Future Behaviour of Berendon Glacier, Canada — A Further Study. *Journal of Glaciology* 10:85-92.

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NATURE OF THE SOVIET UNION. LANDSCAPES, FLORA AND FAUNA. TARYBU, SAJUNGOS GAMTA. KRAŠTOVAIZDŽIAI, AUGALAI IR GYVŪNAI. PRIRODA SOVETSKOGO SOIUZA. LANDSHAFTY, FLORA I FAUNA. By VAIDOTAS JANUŠKIS, ALGIRDAS KNYSTAUTAS, and EUGENIJUS KARPAVIČIUS. Vilnius: Mokslas Publishers (23 Zvaigzdiu Street, Vilnius, USSR 232050), 1987. 588 colour photos. US\$45.00.

Nature of the Soviet Union is a book of outstanding appeal to naturalists, especially to those who desire a better understanding, through visual appreciation as well, of the great natural diversity of the USSR, an area of 22 million km². Those concerned with the protection of floras and faunas will find the details about natural reserves and national parks to be highly informative.

The volume is well bound in cloth, in a format of 34.5 by 26.5 cm. The text, prepared by A. Knystautas, is trilingual, in Lithuanian, Russian, and English. The writing in the two major languages is of high quality. A two-page preface describes the natural features of the Soviet Union, including climatic conditions, mountain ranges, rivers, and lakes, and provides information about the biota: 90 000 to 100 000 species of plants occur there; the fauna includes mammals of 300 species and birds of more than 800 species. In 1985, when the authors were preparing this book, the USSR had 143 separate reserves and national parks, making up altogether 11 193 667 hectares, or 0.5% of the total area of the country. These include 17 that were established under the UNESCO program "Man and the Biosphere." In 1969, the book edited by A.G. Bannikov, *Reserves of the Soviet Union (Zapovedniki Sovetskogo Soiuza, Kolas, Moskva)* listed only 83 natural reserves (all described in detail). That the number of protected areas has been significantly increased in approximately 15 years is of importance, perhaps even adding some balance (minuscule but probably positive) against those regions of the world that are being severely altered in their natural qualities or destroyed by man.

A collection of splendid photographs makes up the greater part of the book. The prints are in colour, 588 in all, taken from nature and arranged appropriately by region. Some pages hold several; two-page panoramas or portraits (34.5 x 53 cm) are numerous; and two consist of three-page foldouts. Symbols indicate threatened, endangered, or rare plants and animals that are listed respectively in the *Red Book of the USSR* (94 species) or in the *International Red Data Book* (published by the International Union for Conservation of Nature and Natural Resources, to define the status of species worldwide) (12 species). The subject of each photograph is identified in the three languages, and scientific names of plants and animals are given, in captions printed beneath each picture or, for two-page illustrations, on the preceding page. Those for the front- and end-plates are given on the last page. The photographs are arranged under the five sections of the book: Tundras, Forests, Steppes and Deserts, Mountains, and the Far East. Each section begins with a two-page description of the natural features, flora and fauna and includes information about the existing reserves, which are indicated and identified by number on regional outline maps, superimposed on maps of the country.

In Section I (Tundras), following a two-page photograph of a Ross Gull on Wrangel Island and a three-page foldout of the landscape there, views of low-vegetation tundra are shown from Iakutia, Taimyr, Chukotka, Franz Josef Land, and the Lapland Reserve and of forest-tundra as well. The following photographs portray typical plants, birds, and mammals. These include a peregrine falcon covering its nest on the ground and a three-page foldout of a polar bear emerging onto the sea ice while carrying remains of prey.

Forests (Section II) make up the largest of the natural regions, with 38 reserves. The major types of forest landscapes are shown, followed by impressive photographs of fungi, higher plants, insects, amphibia, reptiles, birds, and mammals (a two-page