

atics of Canadian freshwater fish, although some of the environmental physiologists may feel they have been overlooked.

The book is long and detailed and the authors must have been faced with many difficult decisions as to content when writing it. In reading the book I wondered if some sections could not have been shortened. The 'Distribution' section, giving the North American distribution followed by the Canadian, seemed in part redundant and slightly repetitive, and I wondered if the maps alone might not have been sufficient for the North American range with details in the text on Canadian localities only. I would not have too much confidence about some of the egg numbers reported, but this is a fault of the literature. Reliable estimates of how many eggs a species produces at spawning are not always available. Reporting on the diet of fish is a similar problem, as stomach contents are influenced by so many factors — including locality, season, method of capture, rate of digestion — that providing a generalized account of the food is almost impossible. I am sure the authors are more than aware of these problems. The parasite section is another difficult one, and perhaps the solution adopted in most descriptions is the only one, namely to list the numbers of various groups of parasites reported by Hoffman¹. These are minor, almost insignificant, comments compared to the academic achievement of the authors in producing this work.

Throughout the text the authors have shown a keen historical perspective. They were wise in their choice to include descriptions of a number of species that might now be extinct, or nearly so, in Canada. I was pleased that they reported so well on the numerous depressing trends in commercial catch statistics, and that they were willing to point the finger at environmental deterioration as being responsible for the rarity and shrinking ranges of some species. The other thing that they highlighted very successfully was the limited state of our knowledge of many of the smaller species of fish. As a source of inspiration for research topics I think the book should more than fulfill the hopes expressed by the authors in their introduction.

This book should find its way onto the shelves of everybody who has more than a mere passing interest in fish.

G. Power

REFERENCE

- ¹Hoffman, G. L. 1967. *Parasites of North American Freshwater Fishes*. Berkeley: University of California Press.

EASTWARD TO EMPIRE: EXPLORATION AND CONQUEST ON THE RUSSIAN OPEN FRONTIER, TO 1750. BY GEORGE V. LANTZEFF AND RICHARD A. PIERCE. *Montreal: McGill-Queen's University Press, 1973. 6½ x 9¼ inches, 276 pages, 15 maps. \$15.50.*

Though the Slavic principalities which from the 9th century on grew up along the trade route from the Baltic to the Black Sea were vexed by internal strife and raids from the nomads of the steppes, the Russian urge for eastward expansion was even then evident. The traders of Novgorod pushed northeast into the Dvina basin and Kiev thrust southeast into the gap between the Ural mountains and the Caspian Sea. For more than two centuries (1237-1480) territories in eastern Russia were subjected to the rule of the Tatar Horde and paid tribute to their Asiatic masters. As the Tatar power waned and receded the Princes of Moscow emerged as the most powerful of the native potentates and consolidated their position by adding Novgorod to their dominions and appropriating the title Tsar (Caesar) from the defunct empire of Constantinople. Intermittent warfare to the south and southeast bred a set of footloose and lawless adventurers, the Cossacks. In 1581 a band of these, backed by the great trading firm of the Stroganovs and led by the outlaw Ermak, crossed the Urals, overthrew the Tatar Khanate to the east and penetrated as far as the Irtysh, a tributary of the Ob. Like his contemporary, Sir Francis Drake, Ermak was pardoned and rewarded by his Prince for successful brigandage. Though he later fell in battle, he had demonstrated Tatar impotence. Private adventurers, with the countenance and support of the Tsars, drove on. Barely half a century after Ermak's death the Russians reached the Pacific on the Gulf of Okhotsk, and a few years later were fighting and levying plunder, thinly disguised as tribute, in the valley of the Amur.

This conquest, extraordinary in its extent and the speed with which it was accomplished, was made possible by the river pattern of Siberia. The expanded and almost interlocking headwaters of the great northward-flowing rivers, Ob, Enisei and Lena, furnish a water route, broken only by infrequent portages, virtually all the way from the Ural mountains to the Pacific shore. Availing themselves of this, the Cossacks established successively the posts of Tobolsk, Eniseisk and Yakutsk, and went down the Lena by boat, levying tribute of furs from the natives and hunting for ivory along the frozen shores of the Arctic. In the

north the settlements were too small and scattered for effective resistance to be mounted. But in the thrust around Lake Baikal and down the Amur river the greed and cruelty of the invaders provoked local opposition that was quickly reinforced by the armies of China. The rapacious intruders were thrown back, and for a hundred and seventy years held off from the region of the lower Amur.

In Kamchatka the resistance of Koriaks and Kamchadals was finally quelled, not by arms but by the ravages of smallpox. The Chukchi of the extreme northeast were strong enough to obtain tolerable terms upon their submission to the Tsar.

The Russian conquistadors, like those of Pizarro, were lawless and disreputable examples of matchless courage, energy and endurance. But one feature of their eastern drive was wholly heroic and honourable. In 1733-42 naval detachments on foot or by boat mapped the Siberian Arctic shore eastwards past the mouth of the Kolyma, while Bering and Chirikov further extended discovery by crossing the Pacific. Chirikov left his mark on North American history by making his landfall and establishing a discoverer's claim near 54°40' of north latitude.

The history of these events now under review is the work of two scholars, the late George V. Lantzeff, Professor of Russian History at the University of California, Berkeley, and Richard A. Pierce, who holds the same chair at Queen's University, Kingston. Professor Lantzeff wrote approximately the first half of the book, and gathered materials for the rest. Professor Pierce has revised the first seven chapters, and added the last six which are based on the joint researches of the two authors.

The actual text of this history is compressed into 212 pages. To expect the authors to furnish vivid narrative or critical portraiture in a work so condensed is to ask too much. All that they can promise they have performed by producing an informative summary of events that is complete, coherent, and — with some qualification relating to the obscurity and complexity of Russian history prior to the Tatar conquest — a masterpiece of lucidity. For the last-named quality Professor Pierce is indebted not only to his late colleague's labours and his own gifts but to the generosity of his publisher and the pains taken by his cartographers, Professor Henry W. Castner and Mr. Ross Hough. This book is furnished with no fewer than fifteen full-page maps, which cover every phase of a varied and complex narrative, spare the diligent student much labour and enhance

his enjoyment of this most rewarding history. A knowledge of Russian history that is unwarped by prejudice is of the utmost importance today, and the surviving author and his publisher can view with satisfaction a book which presents an important phase of that history in a form that is brief, clear and entertaining.

(Professor Pierce is to be commended for scorning pedantry and giving us familiar Russian names in familiar form. When he means Peter he says Peter, and not the affected "Pyotr".)

L. H. Neatby

V. S. KHROMCHENKO'S COASTAL EXPLORATIONS IN SOUTHWESTERN ALASKA, 1822. EDITED BY JAMES W. VANSTONE. TRANSLATED BY DAVID H. KRAUS. *Chicago: Field Museum of Natural History, 1973. 6½ x 9¼ inches, 95 pages, illustrated. (Fieldiana: Anthropology, Volume 64). No price indicated.*

For a number of years James VanStone has been involved with nineteenth century anthropological and historical research in southwestern Alaska. His numerous publications, derived from his own archaeological and ethnographic research among the Eskimos and Russian historic sources, have provided one of the most thorough studies of Eskimo and Russian relationships during the fur-trade years in this huge region. The volume reviewed here is a continuation of his historic contributions.

V. S. Khromchenko, with A. K. Etolin, undertook the exploration of the southwestern Alaskan Bering Sea region in 1821 and 1822. The journal of the 1822 voyage translated here is the only one available from either voyage. It was originally published in a Soviet periodical, *Severnyi arkhiv*.

In addition to making the journal readily available to others, VanStone has edited the able translation of the journal by David H. Kraus in order to place Khromchenko's "achievements and the related achievements of others (particularly A. K. Etolin) in the framework of the development of the fur trade and the expansion of Russian influence in Alaska" (page 2). In so doing, he hopes to bring to the attention of researchers "important and generally neglected events in the history of Russian America" (*ibid.*)

VanStone has provided a detailed introduction which contains an historical summary of earlier explorations in southwestern Alaska and a review of the two major expeditions, one headed by Vasilev and one by Khromchenko, to the southern and central