a more encompassing ecological approach to the sea-ice zone and suggests that BIOMASS was the precursor of studies being developed to consider the Antarctic sea-ice zone system.

The final chapter, by Fogg, gives a critical appraisal of the program and discusses BIOMASS' shortcomings as well as its advances. He considers the advantages and disadvantages of cooperative, integrative, interdisciplinary research and comments on the major contributions for future studies that exist within the BIOMASS Data Center. I found particularly compelling his suggestion that the data in the BIOMASS Data Center will be useful in the future for exploring not only hypotheses about the dynamics of krill populations but also about the functioning of the Antarctic marine ecosystem. Further, he suggests that the BIOMASS data could be used in structuring some type of a global model on the production of krill. Clearly, the data are not of that extent, but I do agree with his conclusions that beginning to think about the structure of such a model perhaps would let us gain a better notion about how the Antarctic ecosystem compares to other world systems in temperate and tropical regions.

Finally, I cannot complete this review without acknowledging the great contribution of the editor of this volume, both in completing the BIOMASS project through this final book, but also as he toiled to keep the BIOMASS program afloat as criticism abounded on many sides, and controversy within the BIOMASS community was everpresent. The leadership, diligence, and creativity shown by El-Sayed throughout the entire BIOMASS program, with the final conclusion resulting in this outstanding volume, was indeed remarkable. In my view, the greatest contribution of the BIOMASS program has been its documentation of the need for interdisciplinary research if we are to have any hope of understanding the functioning of marine ecosystems. This volume is indeed a major contribution and should be within reach of all scientists studying marine systems. (Donald B. Siniff, Department of Ecology, Evolution and Behavior, University of Minnesota, 1987 Upper Buford Circle, St Paul, MN 55108, USA.)

REMARKS AND OBSERVATIONS ON A VOYAGE ROUND THE WORLD FROM 1803 TO 1807. Georg Heinrich von Langsdorff. Translated by Victoria Joan Moessner. Edited by Richard A. Pierce. 1993. Fairbanks and Kingston, Ontario: Limestone Press. Two volumes in one: xxxviii + 239 p; xvi + 281 p, illustrated, hard cover. ISBN 1-895901-00-6. US\$30.00.

Georg Heinrich von Langsdorff, physician, scientist, naturalist, was one of those well-educated German travellers who feature prominently in the 100 years of Asian and Pacific exploration that followed the Bering-Chirikov expedition of 1741. Steller, Pallas, and the Forsters are among his predecessors. Langsdorff served as doctor and naturalist on the first Russian voyage around the world. This was a disputatious affair, in which an expedition supposedly commanded by Captain Krusenstern and bound for the northwest coast of America turned into one led by Nicolai Petrovich Rezanov, an official of the Russian-American Company, with instructions to open trade and diplomatic relations with Japan. Langsdorff's narrative of the voyage was published in Frankfurt in 1812, with an English translation in 1814, one year after the more readable translation of Krusenstern's published account. The translation of Langsdorff's *Bemerkungen* has long been recognized as defective — 'translated anonymously and indifferently' one authority has recently written of it and it is good to have a new, unbowdlerized one that, despite the odd jarring note ('gotten,' 'happenstance,' and so on), for the most part reads well.

On the various quarrels of the voyage, Langsdorff's account is almost silent. As Victoria Moessner points out in a perceptive note, the conventions of the time 'required the narrator not to be self-centred, but rather to suppress most personal feelings and reactions and to report objectively.' The two volumes cover different stages of the voyage, different voyages in effect. The first describes the long voyage of Nadezhda and Neva from Kronstadt into the South Atlantic, round Cape Horn, and into the Pacific. There the expedition stayed for 10 days at Nukahiva in the Marquesas, long enough for Langsdorff to meet two beachcombers, one English, one French, and to make some observations, many of them second-hand, on the islanders. The ships then headed northwest to Kamchatka, and then to Nagasaki, where they arrived in October 1804. There the expedition spent six months in vain attempts to establish trading links, but predictably were unable to persuade Japanese officialdom of the desirability of these. Langsdorff's increasingly irritated description of events, and non-events, from these months forms the centrepiece of the first volume, and affords a rare glimpse into the closed world of Japan in the early nineteenth century.

On its return to Kamchatka, by way of the little-known western route around Japan and into the Sea of Okhotsk, the expedition split up. While Krusenstern sailed back to Europe by way of Canton and the Cape of Good Hope, Langsdorff accompanied Rezanov to the settlements of the Russian-American Company in the Aleutians and along the northwest coast of America. Rezanov wanted the German along as a personal physician; for Langsdorff the lure was the chance to collect and observe: 'A blind zeal for natural history and repeated promises, both written and oral, of all possible support, for scientific research.' But it was not to be, and scientific investigation made little headway against the pressing day-to-day demands of Rezanov's mission. In Russian America, Langsdorff abandoned the reticence of his earlier pages as he recoiled in horror from the exploitation and depopulation of the Aleuts, Tlingits, and others by agents of the Company ----'the scum of Siberian criminals and adventurers of all kinds...in this miserable, God-forsaken part of the world.' The exploiters were also the exploited; and Langsdorff has vivid descriptions of the desolation at the starving, scurvystricken Russian settlements at New Archangel and elsewhere. From Alaska, Langsdorff accompanied Rezanov to San Francisco in an attempt to open up a flow of foodstuffs from Spanish California, but although Spanish officials let Rezanov take away a cargo of grain, they refused his requests for a regular trade. Disappointed in the practical and scientific results of his efforts, Langsdorff returned to Europe by way of Alaska, Kamchatka, and Siberia, reaching St Petersburg in March 1808.

It is good to have this accessible edition of Langsdorff's book included in the Alaska History series of the Limestone Press, but the editorial policy is open to question at several levels. Both the amount and standard of annotation are inadequate. To read that Chirikov 'was second in command under Vitus Bering on the First Kamchatka Expedition. He also assisted Bering in organizing the Great Northern Expedition from 1733-43' (volume II, page 43, note 2) would seem to reverse the order of things. To be told that Roggeween, who died in 1729, visited Easter Island in 1772 (volume I, page 61, note 4, and volume II, page 280) is carelessness. To discover that Bligh, born in 1754, 'was Captain Cook's sailing master on his second expedition between 1772 and 1774' (volume I, page 60, note 1) is absurd, and suggests that nothing on Bligh more recent than the erroneous entry in the Dictionary of national biography (1903) has been consulted. More vexing than such errors at the margins is that little effort has been made to include citations to much recent work in English, which one might reasonably expect in such an edition. The sections on the attempts to provision Russian America from California carry no mention of the work of James Gibson on this subject; the introductory material on Russian activities in the Pacific lacks any reference to the books of Glynn Barratt; even the general editor's volume on Rezanov's mission to California fails to find a place. Finally, the six-page index is the poorest I have seen in a work of this scale. Readers will look in vain for place-names or events relating to the expedition's visit to Japan; they will have to be content with a single. all-purpose entry: 'Japan (Oct 1804-Apr 1805), 161-218.' (Glyndwr Williams, Queen Mary and Westfield College, Mile End Road, London E1 4NS.)

THE LANGUAGE OF EMPIRE: MYTHS AND METAPHORS OF POPULAR IMPERIALISM, 1880–1918. Robert H. MacDonald. 1994. Manchester: Manchester University Press. xii + 268 p, illustrated, hard cover. ISBN 0-7190-3749-2. £40.00.

The language of empire is the latest book in the Manchester University Press 'Studies in Imperialism' series, a steadily growing and continually impressive collection of works that is making a key contribution to the study of imperialism by demonstrating that in the nineteenth and early twentieth centuries this phenomenon was based on much more than political, economic, or military decisions. Imperialism was equally a complex interplay between government and the populace, an interplay that had a wide variety of mediators and interpreters, and that, although it at times led to dramatic displays or jingoistic outbursts, was generally part of a much deeper, more ingrained, and more widespread cultural and intellectual expression in an era of unrivalled European supremacy and expansion.

As has been shown throughout this series, by the end of Queen Victoria's reign, all levels of British society reflected, were influenced by, and were instrumental in an imperial nationalism that emphasised monarchism, militarism, and cultural superiority vis- \hat{a} -vis the rest of the world. But how were these concepts communicated? How did empire itself gain any popular meaning?

In this book, Robert H. MacDonald has attempted to uncover how the very concept of empire was constructed, imparted, and changed. To do this, he has focused on the role of language — that is, of imperial discourse as a specific style of language with a very powerful and privileged way of communicating — in creating and conveying knowledge, images, and myths. Specifically, he has examined the metaphorical constructions of empire in what he has defined as popular texts — fiction, poetry, popular biographies, juvenile literature, and, to a considerably lesser extent, the press. The author's sophisticated analysis and subsequent interpretation of these documents make the book an unquestioned success as far as it goes. The only question is whether its net should have been cast a little wider.

The subject of the book is one that has direct significance for the exploration of the Arctic and the Antarctic during the 'Heroic Age' of polar exploration. Indeed, the British advances into the far north and south were presented to the public in much the same way, and for many of the same reasons, as the empire's expansion into Africa and Asia. A close reading of the same general sources that MacDonald has used shows how many concepts of empire normally applied to new or developing lands in the tropics are equally related to the polar regions. Unfortunately, from a polar perspective, the author has based all his examples on Africa and Asia, with little regard for the overall picture of imperialist-nationalist exploration and expansion, which, of course, included the Antipodes, large areas of North and South America, the Arctic, and the Antarctic. In doing this, he not only excludes at least one relevant audience, he also misses the chance to break out that linking it directly to only Africa or India. Had the author even tangentially brought in some of the key polar figures of empire --- Franklin, Scott, or Markham --- his arguments would have been considerably strengthened and broadened. (Beau Riffenburgh, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

IN A CRYSTAL LAND: CANADIAN EXPLORERS IN ANTARCTICA. Dean Beeby. 1994. Toronto, Buffalo, and London: University of Toronto Press. xii + 262 p, illustrated, hard cover. ISBN 0-8020-0362-1. £19.00; US\$29.00.

Some years ago I corresponded with the author of this book in connection with a short paper in which I had brought together, probably for the first time, the names of a dozen Canadian Antarctic explorers. In this paper, I concluded