

are thought to have escaped the main Caledonian (Silurian) orogeny (page 270). The next generation of bedrock specialists are here presented with fundamental problems to tackle!

A 500-page book with so many illustrations and much overlap between the sections inevitably contains a wide range of small errors. They seldom lead to misunderstanding and are sometimes entertaining (even welcome, if one disagrees with the interpretations)! I read most of the text during the 1999 Arctic field season, having previously briefly browsed, examining closely only those chapters directly concerned with my own research. As we waited on Severnaya Zemlya for long-delayed helicopter transport, a colleague from Novosibirsk, glancing over my shoulder at figure 3:1, commented 'Good heavens! Maybe the choppers are using Harland's map. Look, we are on the (New) Siberian Islands!' Other mistakes are more geological and provide insight. Thus, on page 135, Harland's controversial interpretation of the basal beds of the Old Red Sandstones (Siktefjellet Group) refers to the Rabotpasset unit as both a member and a formation; at best, the former, some would say. It is convenient that the author shows he was in two minds. Errors in the illustrations are only occasionally misleading. It is unfortunate that figure 3:2 shows a complete lack of Mesoproterozoic rocks on Svalbard. Indeed, much of the Precambrian representation on this figure is mistaken — only part of western Ny Friesland is Palaeoproterozoic, none of Nordaustlandet is of this age, and certainly there is scant support for the high grade metasediments and migmatite terranes of northwestern Spitsbergen being late Neoproterozoic. Large areas of Vendian in southwestern Svalbard are also a controversial interpretation. Interestingly, figure 12:1 presents a quite different picture.

The language is not always easy, especially for the non-English speaking public. And this is compounded by a (publisher's?) decision to reduce punctuation to a minimum. Those writing geoscience for a wide international audience need to strive for simple language; commas and other punctuation marks certainly help.

An important part of this book is the last, with an index of place names, a glossary of stratigraphic names, a general index, and a comprehensive reference list. The last of these is particularly welcome. As the next generation of geologists takes over and reinterprets the old data, they will need to weigh the evidence and understand the previous, often obscure, arguments that provide the foundation for today's interpretations. The book is inevitably a very Cambridge-centric view of Svalbard. Nevertheless, Harland goes to some pains to present alternative hypotheses and cite the sources. Those working on Svalbard need to go deeper than the citations. One does not have to agree with the interpretations to appreciate the importance of all these references. This book leads the reader back into the heart of the controversies and that is what is important. The 37 pages of small-type references are a gold mine for future work.

Books as comprehensive as this one take a long time to

write. One has to have the tenacity of a marathon runner to take them on. Most of us follow an easier path, gather a flock of 'experts,' and obtain an acceptable product in about twice the time we had originally estimated would be necessary. Harland chose the way less travelled by, much the longer and harder, but it made all the difference. Of course, this book should have been published a decade ago; it would have avoided much of the tortuous updating of the mid-1990s. So much has happened since the 1980s, not least the flood of isotope age and provenance data that has added a new dimension to many of the old controversies. But ambitions seldom come to fruition on time; they are still worth celebrating!

At the end of the book there are some nice pictures catching the spirit of Svalbard; these are nostalgic for some of us. The caption on a picture to the north of Liefdefjorden comments that 'the dots in the sky are geese training their young to fly in formation for the migration back to the UK at the end of the summer.' This flight of fantasy is perhaps related to Harland's own geese, who did not always fly in formation or return to the UK, but nevertheless salute him for a masterly book; it will remain the Svalbard bible for many years to come. One should remember to read it in the spirit of the author: with an inquiring mind, never satisfied with conventional wisdom and present-day interpretations. The Geological Society is to be congratulated for another fine memoir. (David Gee, Department of Earth Sciences, Uppsala University, Villavägen 16, 752 36 Uppsala, Sweden.)

ABORIGINAL PEOPLE AND THE COLONIZERS OF WESTERN CANADA TO 1900. Sarah Carter. 1999. Toronto: University of Toronto Press. xi + 195 p, soft cover. ISBN 0-8020-7995-4. £9.75; \$Can12.95.

This the latest instalment in the University of Toronto Press' 'Themes in Canadian Social History Series,' edited by Craig Heron and Franca Iacovetta. Geared towards the non-specialist reader and with the paperback edition very inexpensively priced, this slender volume offers much to the generalist reader and undergraduates alike. Throughout the book, Carter engages a sweeping literature, exploring historiography as much as historical content. Indeed, one of its chief strengths lies in Carter's ability to introduce the uninitiated to a veritable tangle of the scholarly interpretations surrounding the nature of post-contact relations in the Canadian west (excluding British Columbia). She outlines the basic challenges faced by those attempting to write Aboriginal history, ranging from the nature of sources to the very question whether an Aboriginal understanding of the past is even possible for non-Aboriginals. Yet the struggle to produce solid history in this field is well worth the effort: 'it is necessary to have knowledge of the past and to appreciate that there are often conflicting interpretations of the past, sometimes clearly as a result of present-day concerns. Lively and intense debates about the past are very often linked to the issues that are before the courts and Indian claims commissions

today, and that are discussed in Parliament and in the press, as well as at academic conferences' (page 9). Mindful of the dangers of 'advocacy history' (page 111), here is history of national relevance.

Carter overtly attempts to create an Aboriginal-centric history of the region(s). She consistently emphasizes the ancientness of Aboriginal populations and cultures, and that encounters with newcomers did not represent an immediate break with that past, despite dramatic effects on Aboriginal demographics, economies, and cosmologies. By describing Aboriginal people as explorers and discoverers and conceptualizing 'contact' as the story of how two Old Worlds collided and intertwined, she demonstrates how the 'broader issue of encounters of cultures have shifted' (page 31). Her tone is also perceptible in subtler ways, oftentimes a matter of refocusing attention away from Europeans. For instance, while relations between Aboriginal women and European men were a central aspect of the fur trades and directly responsible for the creation of a new Aboriginal people — the Métis — Carter points out that most Aboriginal women in western Canada were not involved in this way. Nor did their and their male kinfolk's lives revolve around European trade or technologies: 'The posts did not act as magnets for the surrounding population, as historians have often assumed' (page 61).

Throughout, Carter adopts historian Richard White's term 'middle ground' to describe the post-contact world. '[I]n the history of Western Canada, there were many opportunities to create mutual accommodation out of mutual interest, and times when it appeared that coexistence or a progressive partnership might be possible, but these developments were always impermanent' (page 34). If the volume has any thesis, it revolves around this theme, and how middle grounds emerged, thrived, and collapsed. She selected 1900 as the date to end her study because 'it was then that any hope of partnerships for the twentieth century was finally laid to rest' (page 13). Explorations of native roles in this relationship characterize the book's core chapters on fur trade interactions, the variety of settlements (indigenous, Métis, and non-Aboriginal) at the forks of the Red and Assiniboine rivers, the nature of Métis society, change and continuity in Blackfoot/Siksika society, and finally to the Canadian colonizing of the west (for example, treaties, agricultural resettlement, and the Indian Act).

My only criticism is Carter's claim to focus on 'western Canada,' while giving no rationale for the exclusion of Canada's most westerly province, British Columbia. I found this particularly puzzling, as she calls for revisionist thinking on how we view not only the history of human occupation in the Canadian west, but the land itself. For example, Carter challenges the oft-applied term 'Prairie Provinces,' labelling it a misnomer for a region that properly encompassed three geographic zones — grasslands, aspen parkland, and boreal forest (taiga) — or makes the point that the forty-ninth parallel marking the boundary between British/Canadian and American claimed territory was no border in any real sense for the peoples

who lived there until the final decades of the nineteenth century. Why must the Rockies remain such a conceptual barrier to historians of the Canadian west? Surely, to borrow a phrase from BC historian Jean Barman, 'the west beyond the west' deserves full integration into any examination of Aboriginal people and colonizers in western Canada.

Despite the lack of a truly western Canadian focus, ultimately, this book delivers on what it sets out to do. This text has great potential as an introductory piece to issues and themes that can then be explored in further detail through other sources. Carter's selected bibliography (divided chapter by chapter, in lieu of footnotes), directs readers to the scholarly interpretations she has highlighted or where to find more information on particular topics. While I am sure this work will be widely used in survey courses in Canadian history, it could also effectively serve comparative courses on colonialism/post-colonialism and indigenous studies. (Susan Neylan, Department of History, University of British Columbia, Vancouver, British Columbia V6T 1Z1, Canada.)

ANTARCTIC MARINE GEOLOGY. John B. Anderson. 1999. Cambridge: Cambridge University Press. vii + 289 p, illustrated, hard cover. ISBN 0-521-59317-4.

The understanding of the marine geology of the Antarctic continental shelf and surrounding oceans has improved dramatically during the last 30 years. The name of John Anderson has figured prominently throughout this period, and through a combination of marine geophysical studies and shallow coring of sea-floor sediment, he has probably done more than anyone else to enhance understanding of this region. It is therefore fitting that he should write what can be regarded as the definitive account concerning Antarctic marine geology.

This book aims to introduce graduate students and researchers to the geological history of Antarctica and the unique processes that operate there. Although there are several useful accounts of these topics, this is the first time that the subject has received comprehensive treatment. The book, in fact, is more wide-ranging than the title implies, and will thus be of value to all earth scientists and others working in Antarctica.

The first of six chapters provides a concise account of the Antarctic environment and its influence in a global context. Useful summaries of the different types of ice masses, icebergs, sea-ice distribution, and physical oceanography are presented. Chapter 2 deals with the geological history of the continent, describing first the general structure and crustal components, and outlining sequentially all orogenic events from start to finish. Particularly interesting topics are the composite crustal configuration of West Antarctica, the uplift of the Transantarctic Mountains, and the break-up of Gondwana. The discussion is followed by a short summary of Antarctic stratigraphy, using a series of palaeomaps to illustrate the distribution of strata through geological time. The emphasis