

diagrams, and photographs. This material has been carefully edited and occasionally compressed. Appendix 4 is a conflation of two concluding reports, while Appendix 6 appears in an abridged form.

In achieving this level of clarity, Gold has followed the wishes of Dr C.J. Mackenzie, President of the National Research Council of Canada, who 'expected the story of the Canadian involvement in the Habbakuk project would be written up as soon as the work was declassified' (page 7). The synthesis of the 'single-drawer locked filing cabinet' (page 7) described by the author containing the Habbakuk records is far from a modest achievement, rendering this book of interest to technical and non-technical audiences alike. (Ian N. Higginson, Unit for the History of Science, University of Kent, Canterbury, Kent CT2 7NR.)

ARCHEOLOGY OF THE FROBISHER VOYAGES. William W. Fitzhugh and Jacqueline S. Olin (Editors). 1993. Washington: Smithsonian Institution Press. xvi + 271 p, illustrated, hard cover. ISBN 1-56098-171-7. £34.95; US\$45.00.

This volume presents the preliminary results of a multi-disciplinary project investigating the physical remains of Martin Frobisher's three expeditions to Baffin Island in 1576–1578. Frobisher's first expedition was concerned with the discovery of a Northwest Passage, while the second and third were conducted expressly for the purpose of establishing mines to extract 'gold' ore (assays of which in 1578 revealed it to be worthless, thus ending the enterprise). The project was initiated in 1981 by William Fitzhugh of the Smithsonian Institution, and followed an earlier, preliminary investigation of several Frobisher sites by Walter Kenyon of the Royal Ontario Museum in 1974.

The various chapters in the volume explore four central themes that have guided the research: specific historical issues relating directly to the Frobisher voyages; a detailed inventory and assessment of associated archaeological remains; the environmental context of the voyages; and the effects of Elizabethan (and later) contact on the indigenous Inuit of southern Baffin Island. Each of the 14 papers addresses one or more of these themes.

The first four chapters briefly outline the archival history (Fitzhugh, Laeyendecker, and Hogarth) and Inuit oral accounts (Rowley) of the three voyages, as well as the history of research on previously collected Frobisher artifacts (Washburn; Olin), including the 'Smithsonian bloom,' a 10-kg mass of smelted iron collected by the explorer Charles Francis Hall in 1861–1862 from the Frobisher site on Kodlunarn Island.

Chapters 5–8 present results of archaeological (Fitzhugh; Auger) and geological (Hogarth) field studies conducted in 1981, 1990, and 1991. Included are detailed site and feature descriptions of various prehistoric and historic Inuit, as well as Frobisher, localities.

Chapters 9–13 concentrate upon the analyses of the iron blooms and other iron artifacts (Harbottle, Cresswell, and Stoenner; Unglik; Wayman and Ehrenreich;

Ehrenreich), and of associated wood and charcoal (Laeyendecker), recovered from the Frobisher sites. Certainly the most interesting results of the analyses are the anomalously early dates of the five blooms recovered to date. These dates, ranging from AD 640–760 to AD 1250–1440, result in several conflicting interpretations for the origin of the blooms: Norse (Harbottle, Cresswell, and Stoenner; Unglik); Frobisher, and used as carpenter's 'dollies' (Ehrenreich); or unknown, but used and left by Frobisher (Laeyendecker).

In the concluding chapter, Fitzhugh discusses a number of questions remaining for future research, including the problem of five men and a ship's boat that disappeared in 1576, and that of the origin of the iron blooms. Included in the discussion of the latter problem is the suggestion by Ivor Noel Hume that the blooms originated in Russia.

Although reporting primarily on preliminary results only, the book represents an excellent contribution to northern archaeology and the history of northern exploration, and is highly recommended. (James M. Savelle, Department of Anthropology, McGill University, 855 Sherbrooke Street West, Montreal, Quebec H3A 2T7, Canada.)

EAST OF THE SUN: THE CONQUEST AND SETTLEMENT OF SIBERIA. Benson Bobrick. 1992. London: William Heinemann. 542 p, illustrated, hard cover. ISBN 0-434-92889-5. £20.00

This book is history with a broad sweep, and, in view of the current situation in Russia, its publication is very timely. Bobrick attempts to present an account of Siberia from the first crossings of the Urals by the Russians to the present. Its scope is, in fact, somewhat wider than indicated by the subtitle and includes the history of Russian Alaska, the diplomatic relations between Russia and its neighbours, and Russian exploration and other activities in the Pacific, notably in Hawaii.

The subject is handled chronologically and in a straightforward and attractive manner well suited to hold the attention of the general reader, to whom the book is primarily addressed. The breadth of the material presented is impressive and the sources used are comprehensive. Good accounts are given of all of the obvious topics and some of the less obvious ones. For this reviewer, the most impressive sections are those that deal with the relations between Russia and China concerning the Amur valley, with the Great Northern Expedition, and with the exile system, both under the tsars and under the Soviets. The latter is quite impossible to read without shuddering.

This said, the book has its deficiencies. There are several trivial errors and indications of inadequate or hasty proof reading. One example of this is on page 223. The reader is informed that the Russian authorities at Petropavlovsk agreed 'to safely convey copies of Cook's Journal overland to St Petropavlovsk' and in the very next paragraph that Macao (*sic*) is a Portuguese colony on the Chinese coast, when it is referred to two pages previously without this qualification.