This book has a number of notable features for readers interested in Arctic affairs. Chapter 3 is devoted entirely to the Arctic, while numerous Arctic examples throughout the book illustrate cooperation towards environmental protection. Without directly addressing the question, Chapter 3 raises important issues that are currently confronting Arctic policymakers as they seek to implement the Arctic Environmental Protection Strategy and consider the creation of an Arctic Council. Young concludes that the Arctic demonstrates that:

it is appropriate under current conditions to focus on complex ecosystems that are subregional in scope. It makes sense, in other words, to think of the Barents Sea or the Bering Sea or the Alaska-Yukon borderlands as suitable units for the purposes of management rather that endeavoring to create resource regimes for the Arctic region as a whole. (p. 76)

Given this conclusion, it is regrettable that Young did not take the opportunity to directly address current Arctic developments. The Arctic Environmental Protection Strategy represents a regional initiative by the eight Arctic states which has the potential to develop into a very complex overarching environmental protection regime that will subsume existing subregional arrangements. Given Young's attention to the Arctic, regime formation, and potential regime effectiveness, current Arctic developments would have made a useful case study. This, however, is a minor criticism, and the reader who is interested in a more specific Arctic focus can readily consult some of Young's earlier works which address related Arctic issues.

Young also expressly considers the relationship between legal and social science analyses of international environmental cooperation. While acknowledging that the two disciplines adopt very different approaches, he argues that much could be gained by greater collaboration between them, especially a greater appreciation of how environmental regimes deal with enforcement and compliance. Young laments the lack of cooperation and interaction between the two streams of analysis, but argues that his critique is generic and could also easily apply to the study of international governance systems from a security, economic, human rights or international environmental perspective.

International Governance is to be welcomed as yet another significant contribution by Oran Young to an understanding of why states cooperate and how they may be able to more effectively protect the environment. Understanding these issues will help researchers from many disciplines to better appreciate the impact of these processes on a wide range of international institutions, from the simple bilateral scientific exchange program to large, mulitlateral environmental conventions that seek to remedy global problems such as climate change. While the book is full of terminology familiar to the international relations specialist, a consistent effort is made to define the specialist terms which are used. Any reader who is interested in gaining an understanding of international cooperation, and especially why states have joined together so frequently during the past few decades to address environmental problems, will find this a worthwhile book.

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THE ARCTIC: A HISTORY. By RICHARD VAUGHAN. Stroud, Gloucestershire: Alan Sutton, 1994. xi + 340 p., 38 maps, 6 tables, 28 illus., index, bib. Hardbound. US\$40.00.

Richard Vaughan is having a very productive retirement, with a book a year since 1991. The title of this, his latest book, is bald and assertive, with no exclusions, no qualifications. The author deals with the entire circumpolar Arctic, with appropriately extensive consideration of the Russian Arctic, and discussion of native peoples besides the Eskimos or Inuit. He has drawn on a good deal of the Russian literature, and the international range of sources used is one of the great strengths of his book. It begins in prehistory, around twelve thousand years ago in Yakutia, and ends with questions about sovereignty and nationhood in the 1990s. It is an analytical review, very tightly packed with information, and accessibly organized. This is in many ways the most comprehensive onevolume history of the Arctic ever written. At times, the narrative becomes almost an inventory, but generally Vaughan's themes are clearly pursued, so that, in spite of its density, this is a good read. Those themes include the antiquity and effectiveness of native occupation; the exploitative approaches taken by Europeans and Russians, notably in whaling and the fur trade; the devastating effects of European incursions on native cultures; the unsuitability of the Royal Navy's tactics in tackling the Arctic; the shift from geographical to scientific exploration; the strategic significance of the Arctic; and the emergence of a politicized and educated corps as part of a revival of native cultures. Some of these themes are generally accepted; others are more debatable. Any reader interested in arctic history will benefit from reading this book, although specialists will wish for more in their own areas, and may occasionally take issue with Vaughan's views, which are not hidden.

Vaughan draws on archaeological evidence to explore the hunting styles and social organization of early arctic cultures, including the Old Bering Sea people, and gives a brief vignette of the "Arctic Stonehenge" of Whale Alley off the coast of Chukotka. He stresses the similarities and notes differences among arctic societies, Palaeoeskimos and Neoeskimos (the transition occurring around 1,000 years ago), the Sami, Samoyeds and other groups. And he notes the first encounters with whites, generally disastrous over time, if not immediately, and sometimes very recent, as in the case of the Netsilingmiut.

Vaughan looks at Norse and Viking explorations and settlements, and the medieval introduction of arctic products to Europe. The Russian and North American fur trades receive even-handed treatment. He is unusually harsh in his judgement of Bering, whom he describes as "a third-rate explorer, cautious and irresolute and so lacking in courage as to be almost incapable of carrying out his instructions" (p. 103). Vaughan ignores the virtual impossibility of anyone's fully carrying out those grandiose instructions. Vaughan is likewise, although more reasonably, critical of the Royal Navy, discussing the search for a Northwest Passage in a chapter entitled "The Arctic Defeats the Royal Navy." He is even-handed in his criticisms and his assignment of blame for the Franklin disaster. Errors that he identifies include overmanning; excessively large ships, crews and sledge teams; the use of lime rather than lemon juice; and Franklin's failure to leave messages along the route, for example in cairns on Beechey Island (although Gore did leave a message on King William Island). He is judiciously agnostic about the issue of lead poisoning.

Whaling is an important part of the story, and here too the coverage is appropriately international. Vaughan notes the cooperation of the Eskimos in the western Arctic in helping whalers to eliminate the species on which they depended for food. Whaling, as well as the Franklin search, took the Americans into the Arctic.

There is a good summary of Russia's economic and political reasons for selling its American colony to the United States. There is less coverage of the first International Polar Year (IPY) than it deserves, partly because Vaughan considers that it was not until the twentieth century that geography gave way to science; but German IPY expeditions, for example, involved first-rate scientific work in the 1880s, fifty years before the second IPY pursued meteorological and geophysical programs. Vaughan's account of twentieth-century science includes the next IPY, the International Geophysical Year, and such projects as the Greenland Ice Core Project, revealing 200 000 years of climatic and environmental history, which reached solid rock in 1992. Twentieth-century science is also associated with the search for minerals, including natural gas in Alaska, Canada, and Siberia-a topic that Vaughan considers judgmentally but fairly. I'd have welcomed more discussion in the later chapters of environmental issues. They are there, with tourism as well as nuclear waste flagged as dangers; but sport receives almost twice as much space as the environment.

The chapter on the Northern Sea Route is a particularly valuable one, identifying Tsarist precedents for Soviet and later activity. Vaughan gives us a wonderful sketch of Georgiy Ushakov's expedition, "the last, and perhaps the greatest of historic Arctic exploring expeditions by dog sledge" (p. 203). He paints a large canvas, describing the Soviet Union's creation of "a veritable Arctic empire or state within a state" (p. 202), and reminding us that "The Arctic Ocean is Russia's Mediterranean" (p. 202). The latter circumstance had military implications that featured in "the war of the weather stations" during World War II. He also describes the extension

of arctic shipping, with the use of nuclear-powered icebreakers, and very recent signs that parts of the route are opening to foreign shipping.

He ends with a chapter on the ownership of the Arctic, beginning with accounts of Europeans kidnapping Eskimos in the 16th and 17th centuries, "in token of possession," looking at tribute extracted, and at the vigorous and briefly successful resistance of the Chukchi to Russia in the 18th century. He also looks at the repeated use of resettlement to bolster sovereignty, by Russia, Denmark, and-recently and deplorably-by Canada. The role of missionaries in destroying native cultures is looked at critically; so, among other issues, is the imposition of Soviet collectivization and of the business economy in Alaska. Altogether, arctic peoples have suffered by contact with Europeans, North Americans, and Russians in health, education, and many other aspects of their culture. But Vaughan ends optimistically, noting the development of education carried on through northern languages, politicization, land claims, moves towards self-government, and population increases after long decline through illness (especially smallpox, and tuberculosis, about which he says little). Northern peoples are developing their own ideas about a national state, and southern peoples are having to listen.

The 35-page bibliography is very useful: circumpolar, international, polyglot, and up-to-date. It is necessarily selective.

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ARCTIC EXPLORATION AND DEVELOPMENT, C. 500 B.C. TO 1915: AN ENCYCLOPEDIA. By CLIVE HOL-LAND. New York and London: Garland Publishing, Inc., 1994. 704 p., intro., bib., append., index, maps. Hardbound. US\$125.00.

I suspect that all of us, intent on our own immediate research problems, eagerly consult reference books and then indifferently push them aside as soon as our questions have been answered. Yet even a cursory reading of Holland's brief introduction to this new encyclopedia should cause us to think quite differently about how we value reliable research tools. In fact, when we appreciate the incredible complexities that Holland has successfully juggled in Arctic Exploration and Development, the entire notion of compiling a comprehensive reference book about Arctic exploration seems overwhelming. To create a cumulative index to a journal or to compile a catalogue of manuscripts in an archival collectionsuch tasks, where the editor works within a finite system, are imaginable. What amazes me about Holland's encyclopedia, however, is that it is a wonderfully concrete and useful book, but one that is shaped out of a huge and amorphous subject.