

The editors have attempted to organise the chapters in three groups, the first dealing with background information on soil and plant community processes, the second with species interactions with climate, and the third with man's influence on the Arctic environment. This division seems somewhat artificial in places.

A considerable amount of literature has been produced during the last decade on the topics covered by this book. For example, the interactions of terrestrial ecosystems with climate (which is the central issue of at least six of the chapters) is the subject of two major volumes in Springer-Verlag's Ecological Studies series, which appeared during the past year (Reynolds and Tenhunen 1996; Oechel and others 1997), thus adding to the already substantial number of recent books in this field (such as Chapin and others 1992, and Callaghan 1995).

The obvious question that comes to mind when confronted with the broad title of this book is, therefore: is there a niche for yet another book on current issues within the ecology of Arctic environments? To cut a long story short, I believe the answer is yes.

The first reason is because of the broad range of research fields covered by this book. It is, to my knowledge, unique to see fields like traditional cryopedology, soil carbon and nitrogen cycles, invertebrate and mammal ecology, acid deposition, and trophic interactions treated in the same book. Obviously, the cost of including such diverse topics is the lack of detail that can be included about each, yet, it is an appropriate strategy, as this book concentrates on overviews.

Secondly, due to the wide range of topics, the book avoids concentrating on any of the very topical issues of, for example, global warming or acid deposition, as most other recent books have done. Rather, it appears more like a textbook on aspects of Arctic ecology with 'appetisers' in the form of case studies associated with current environmental issues. Some of the chapters are very well written and will support both current research purposes and modern ecological graduate teaching purposes; others less so.

One highlight of the book is the chapter by Robinson and Wookey on microbial carbon and nitrogen cycling. It forms a good background paper for recent research in this field and includes some significant original data. Chapin and others, in a paper dealing with man's impact on the environment, in the form of interaction between global change and Arctic vegetation, make a brief, but nevertheless brave and important, attempt at integrating small-scale experimental ecosystem research with global vegetation models and other large-scale and long-term modelling approaches.

In a book of this nature, it is refreshing to see Bale and others dealing with the ecology of arthropods. Arctic invertebrate ecology has recently been somewhat neglected in the functional contexts of Arctic ecology. At a November 1996 Copenhagen meeting on Arctic soil biology, organised as a review of progress in the 25 years following the 1970s International Biological Programme, the lack of studies in recent years on invertebrates, and in

particular the functionally important enchytraeids, was repeatedly pointed out. Therefore, while waiting for a renewed international effort within Arctic earthworm ecology, it is refreshing to see other parts of the invertebrate zoology represented in a current ecosystem-oriented book like this one.

The book has a small number of typographical errors and in general appears well organised with — in most cases — well-illustrated chapters (a chapter like Longton's on bryophytes and lichens does seem a bit dry). The book is recommended to anyone interested in current issues within Arctic ecology and in particular those teaching graduate courses in general aspects of Arctic ecology. (Torben R. Christensen, Global Systems Group, Department of Ecology, Lund University, Sweden.)

#### References

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**THIN ICE: INTERNATIONAL ENVIRONMENTAL COOPERATION IN THE ARCTIC.** Paul Samson. 1997. Wellington, New Zealand: Pacific Press. 176 p, soft cover. ISBN 0-9583418-1-8. £18.00.

Paul Samson divides this book into three major sections, including an introduction and conclusion, with several annexes. Its overall theme, as the title suggests, is that international policy mechanisms for protecting the environmental quality of the Arctic are in a nascent stage. Samson argues that a new dynamic of regional politics is developing as concern grows over issues of global environmental change. He focuses on how the Arctic is unique, yet linked to the entire planet, and on the interactions between science and politics. The book offers little in the way of new ideas or innovative approaches to help the reader think more critically about Arctic environmental policy. However, it provides a useful survey of the existing literature on a complex and important subject.

The first section introduces the Arctic setting in its physical, biological, and human dimensions. Samson briefly discusses the ecogeography of the region, providing some basic information about its physical and biological traits and describing the actors who are stakeholders with interests to defend or promote in the Arctic. He argues that the post-Cold War era has broken apart the old hierarchy of issues, where national sovereignty and military security were paramount. In a new age of the Arctic, economic development, environmental protection, and the rights of aboriginal peoples are now linked with these

issues in complex interactions. He also notes that humans entertain competing views of the Arctic environment, tending to see it in pure mental images as either pristine or polluted, robust or fragile. The author suggests that Arctic realities lie somewhere between these simplified, half-truth pictures of nature.

The second major section of the book describes the evolving state of international policy for protecting the Arctic environment. Samson discusses the Rovaniemi Initiative and the 1991 Arctic Environmental Protection Strategy (AEPS). He also summarizes four major programs developed to implement its policy goals, which include the Arctic Monitoring and Assessment Program. Samson describes other international cooperative efforts related to the northern environment, including the Convention on the Law of the Sea, the International Arctic Social Sciences Association, and the Barents Euro-Arctic Council. He criticizes the AEPS as an ineffective vehicle for protecting the Arctic environment, yet his points are poorly developed. For example, on page 70 he asserts that the AEPS does not deal squarely with global-change issues, but instead limits itself to a regional perspective. In fact, the AEPS states the need to work with existing international bodies to control pollutants in the region that come from outside sources. This is not a duplication of existing mechanisms, as Samson claims, but a necessary approach for building a workable set of policy arrangements integrated at the local, regional, and global levels.

The third major part of *Thin ice* surveys strategies for managing environmental change in the region. Samson offers the interesting idea that conceptual blindness is a major obstacle to solving global-change problems in the Arctic, as it hinders designing the right forms of political institutions. He argues that humans are confronted with new planetary realities that cannot be grasped by current ways of thinking about nature. The author notes on page 126 that new policy forms should be characterized by 'adaptability, plurality, and interdisciplinarity.' Samson also argues that problems associated with military security remain distinct from those of environmental security, although their differences are also blurred. He brings up the idea of sustainable development, attempting to relate it to differing perceptions of the place of humans in nature, but his cursory treatment does not help bring clarity to a confusing debate. This section of the book concludes with the observation that Scott's expedition to the South Pole ended in tragedy because he failed to learn from indigenous knowledge gained by Arctic explorers who observed Inuit techniques. The author suggests that more use should be made of traditional ecological knowledge in coping with global-change issues in the region.

The book is thin on analysis; it introduces several promising ideas, but fails to exploit them in any sustained manner. For example, Samson refers to four cultural views of humans toward nature — individualist, egalitarian, hierarchist, and fatalist — but makes scarce use of them to illuminate his subject. In other places there is an obvious need for a more demanding attention to details. On page

86, Samson refers the reader to chapter 4.3 of *Thin ice* for a description of the role of science in politics, yet no such chapter exists in the book. In numerous places, the author cites references in the text, then neglects to include them in the bibliography. One of many examples is found on page 111, where Samson cites a work published by Caldwell in 1984 but fails to provide the facts of publication in the bibliography. This oversight is frustrating for readers who wish to look up sources used by the author in writing his book. Also, on pages 119–120 Samson states that Scott died in 1905 while on his South Pole expedition, when in fact his life ended in 1912. These and other problems, such as an occasional jumbling of sentence structure, should have been corrected before the manuscript went to press. (James N. Gladden, Department of Political Science/Justice, University of Alaska Fairbanks, Fairbanks, AK 99775-6420, USA.)

**ANTARCTIC HOUSEWIFE.** Nan Brown. 1996. Richmond, Victoria: Hutchison of Australia. 190 p, illustrated, hard cover. ISBN 0-09-108510-1.

This is a memorial reprint (first published in 1971) of Nan Brown's experiences as a member of the Falkland Islands government settlement at King Edward Point on the sub-Antarctic island of South Georgia during the mid-1950s. Nan, an Australian, had just married George Brown, a Scot who had been appointed to run the radio station at King Edward Point for two and a half years. While most autobiographical books written by people working in or briefly visiting Antarctic regions tend to be highly emotive, inaccurate, exaggerated, and boringly similar, Brown's personal account is refreshingly accurate and well written. She relates a series of delightfully vivid descriptive cameos of incidents experienced and of personalities befriended at the government settlement and at Grytviken whaling station and the three other stations on the island. This was only a decade before the end of the whaling industry at South Georgia, yet there was no indication then that the end of an historical era was not far off.

Nan Brown presents an intriguing insight into the joy and hardships of life on this remote South Atlantic island, as one of only five women in a population of more than 2000 men. Her brief, yet highly descriptive, verbal snapshots of the wildlife and scenery reveal her addiction to the island's wild environment. She succeeds in capturing the excitement of a whale hunt in one of the tiny catchers and provides a vivid picture of the hectic life at the whaling station. In addition to the routine duties of being a housewife, she describes the active social life of their isolated community and meeting many notable visitors to the settlement. These included members of George Sutton's South Georgia Survey Expedition and of Vivien Fuchs' and Edmund Hillary's Trans-Antarctic Expedition; HRH Prince Philip, Duke of Edinburgh, on his return on RY *Britannia* from the Melbourne Olympics; and the governor of the Falkland Islands.

Brown also established, on behalf of the whalers and sealers at the four stations, a lucrative 'business' as the