

leading light of albatross research, Peter Prince of the British Antarctic Survey, died. The volume is dedicated to him. He would have no reason to be disappointed. (M. de L. Brooke, Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ.)

References

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GOVERNING THE FROZEN COMMONS: THE ANTARCTIC REGIME AND ENVIRONMENTAL PROTECTION. Christopher C. Joyner. 1998. Columbia: University of South Carolina Press. xviii + 463 p, hard cover. ISBN 1-57003-239-4. \$US49.95.

In many respects, Christopher Joyner possesses a considerable advantage when writing about Antarctica, a region best studied in an inter-disciplinary manner. Joyner, who moved across Washington, DC, from George Washington University to Georgetown University, a few years ago, is not only well versed in international politics and law but also is an ‘old hand’ in the sense that he has been working on Antarctic law and politics for a long time. As a result, his publications, rooted in the Antarctic past and present, always make a thoughtful and informed contribution to our understanding of current and future possibilities, even on aspects, like environmental management, already well covered in the literature.

Antarctic experts will probably skip the opening chapter — this provides the obligatory introduction to the broader Antarctic scene — but chapter 2 warrants a close read. Here Joyner investigates the conceptual complexities posed by treating Antarctica as a global common. He begins by arguing that the usual focus on territorial sovereignty means that the case for defining Antarctica as part of the global commons has been both ignored and underestimated. Although conceding the effectiveness of occupation in very limited locations (for example, permanent scientific stations), Joyner concludes that most Antarctic claims fail to satisfy the effectiveness criterion, which is, of course, the key requirement for territorial sovereignty.

In the legal view of the international community, that condition in Antarctica remains unfulfilled...For the ice-clad continent as a territory, the existence or exercise of national sovereignty appears to remain more legal fiction than actual fact. (page 53)

Joyner, moving on to identify Antarctica as ‘part of the global commons,’ asserts that, for management purposes, the region should therefore be subject to ‘the new international law’ in order to protect the fragile polar environment. Reasons of space force the reviewer to gloss over this controversy, but undoubtedly both claimant governments and legal experts will wish to focus in more detail on the assumptions inclining Joyner to argue that, like the

deep seabed and Moon, ‘Antarctica should be considered part of the global commons’ (page 51). Some readers might well decide to put down the book here, but they are advised to read on, or at least to look at chapter 8, where Joyner’s conclusions might appease most critics.

Certainly, the reviewer read on, even if chapter 3 can also be skipped by those familiar with the history of the Antarctic Treaty regime. Chapter 4, however, demands more attention, given the innovative attempt to consider regime theory and Antarctic practice by reference to the principles of global commons. There is also an attempt to illuminate the factors adjudged responsible for the success of the Antarctic Treaty regime’s in terms of compliance, efficacy, and international legitimacy. For Joyner, a key factor has been the political will of participating governments in favour of cooperation and compliance. In turn, the resulting efficacy and legitimacy of the Treaty regime encourages governments to remain members thereof.

Subsequent chapters evaluate the varying degrees of success of the Antarctic Treaty Parties (ATPs) in managing specific activities, like fishing, science, and tourism, with particular reference to accommodating the emerging priority of environmental protection. The factual detail is little different from that found in several other publications. What distinguishes this book is Joyner’s judgmental approach, that is, his conscious attempt to evaluate the achievements and shortcomings of the Antarctic Treaty’s regime by reference to global commons principles. For example, the Environmental Protocol is judged in terms of not only its success in moving Antarctica both *de facto* and *de jure* towards world park status but also its role in reflecting and bringing about ‘a profound redirection’ (page 179) in the policy of ATPs: ‘That policy shift was indeed profound, as it contributed mightily to the international movement towards global environmental governance for the Antarctic commons’ (page 180). In turn, the chapter on science and tourism is of particular interest, among other reasons, for its advocacy of the need for ‘the integrated management’ (pages 215–217) of these activities in Antarctica.

Perhaps chapter 8, the penultimate chapter, might have come earlier in the volume, even if, on reflection, it does provide a useful concluding framework for Joyner’s discussion. Thus, a detailed explanation of the common heritage principle leads into a critical appraisal of its relevance to Antarctica. Joyner, having attacked the legitimacy of Antarctic territorial claims in an earlier chapter, now acknowledges Antarctic realities, that is, the relatively successful operation of the Antarctic Treaty regime, and particularly its pronounced shift towards environmental protection. The declining force of the UN-based challenge in the 1990s — UN debates on ‘the Question of Antarctica’ during the 1980s and early 1990s were often employed to articulate the common heritage case — also influenced Joyner’s view. For the foreseeable future, Joyner concedes that the Antarctic Treaty regime

will continue, and hence, as now, any implementation of global commons principles within the Antarctic region will have to come through ATPs.

So long as the Antarctic Treaty regime well serves the common interests of humankind, neither its lawfulness nor its purposes seem likely to be effectively challenged. Nor is the Antarctic Treaty System likely to be replaced by any other regime resembling the common heritage of mankind. Hence, for the foreseeable future, the Consultative Parties will continue to manage Antarctica in trust for the international community. (page 258)

As a result, the key challenge for ATPs is not only to continue to do this but also to keep convincing the wider international community on this point. (Peter J. Beck, Kingston University, Kingston upon Thames KT1 2EE.)

THE ARCTIC SKY: INUIT ASTRONOMY, STAR LORE, AND LEGEND. John MacDonald. 1998. Toronto: Royal Ontario Museum and Nunavut Research Institute. x+314 p, illustrated, soft cover. ISBN 0-88854-4278.

A millennium ago, the ancestors of contemporary Inuit began migrating eastward from Alaska, and, within a few centuries, they established the Thule culture along the entire Arctic coastline reaching to Greenland and the Labrador peninsula. *The Arctic sky* reveals the astute navigational skills and knowledge of northern cosmography that allowed prehistoric aboriginal hunting parties to explore this vast territory. Their descendants preserved the Thule environmental legacy as they adapted to regional geographic conditions over time, and, despite the emergence of linguistic and social distinctions between population groups, a common identity as Inuit endures to this day.

Inuit used stars to determine direction, diurnal and seasonal periods of time, and recurring natural ecological cycles. As well, there were other dimensions to Inuit astronomy that integrated the celestial and earthly realms. Stars had a mythic role in Inuit spirituality and were endowed with names to personify human and animal figures mirroring terrestrial life. Their names were recalled through legends that reflected social ethics and universal concerns about creation, social and cosmic order, nourishment, retribution, and renewal. Thus the Arctic sky was a complex metaphor for the spatial knowledge and cognitive orientation of Inuit, subjects that were intrinsic to aboriginal people and eluded non-Native academics conducting research during the course of more than a century. Accordingly, this book is not simply about Inuit astronomy, but rather it is an exploration of the Inuit intellectual culture that is guided, as are all successful northern expeditions, by aboriginal expertise.

Inuit elders at Igloodik were the main source of information for the text. The community has a permanent research centre (managed by John MacDonald) and a continuous 4000-year history of occupation by Arctic cultures that make it an ideal site for indigenous research.

Observations by elders on astronomical features were recorded in a series of interviews for an oral history project that was conducted during the winters from 1988 to 1997. The elders considered their traditional knowledge to be personal rather than absolute and universal, as is often implied in statements made by western scientists. Experience and memory were more relevant to Inuit because they lacked a writing system, and so they learned star names, and other environmental details, casually in conjunction with an activity or the telling of a legend.

Place, time, and activity were the cardinal elements of an ecological and social orientation that Inuit measured by star constellations, cycles of the Sun and Moon, wildlife migrations, and 'landmark' events in the life of an individual, family, or community. The Inuit language contributed to the subtleties of people's conceptual framework with unique word categories (called localizers) that gave precise references to the location of things and places, and with specific place-names that described a physical or biological aspect of the landscape. In this manner, Inuit traditional knowledge was profoundly holistic and not readily reduced to western rational analysis.

John MacDonald expands the perspective of Igloodik elders by including extracts from circumpolar literature published by western observers that reveal a fundamental similarity in star lore across the Arctic. Inuit names and corresponding European terms are given in descriptions of stars and constellations, phases of the Sun and Moon, and various other atmospheric phenomena. Ample illustrations are provided to assist readers in identifying the position of celestial features. Remarkably, Inuit applied the same principles in their astronomical naming system as did ancient Arab peoples, in contrast to western society, by representing single stars as living creatures and groups of stars as inanimate objects. Constellations that are most commonly recognized by Inuit throughout the Arctic are Aagjuuk (Aquila) and Tukturjuit (Ursa Major or 'Big Dipper'), and surprisingly the celebrated Polaris or North Star (Nuutuittuq) is actually useless for navigation in the far northern hemisphere. Its height above the horizon increases with latitude and is too great in higher Arctic regions to be employed for an accurate directional bearing.

Chapters on navigation and on time provide fascinating information on attributes of the Sun and Moon, and other environmental elements in addition to stars that were traditionally used by Inuit to orient themselves in northern landscapes. Wayfinding skills included reference to place-names, familiar landmarks, set of winds and snowdrifts, vegetation, sea currents and tides, unusual meteorological conditions such as mirages, the aurora borealis and 'water-sky,' animal behaviour and movements, and even dream experiences. Thirteen named moon months and eight seasons composing the conventional Inuit calendar are outlined in a summary table showing associated celestial markers, biological and environmental signals, and prominent social activities.

The Arctic sky presents an outstanding wealth of information on Inuit astronomy and offers the best exposition of