

from portraying him as the villain of the piece. Scott himself denied any suggestion of a race, but his morale must have been seriously undermined. The events of 17/18 January 1912 gave the coup-de-grâce; Bowers' group photograph tells all.

In her concluding chapter, 'The reason why,' the author carries out the customary post-mortem investigation and analyses the source of her original inspiration, Scott's 'Message to the public.' 'Qui s'excuse s'accuse' the critics might say. Mrs Preston properly thinks otherwise. These are the words of a dying man under unimaginable stress anxious to secure financial support for his own family and for the dependents of Evans, Wilson, Oates, and Bowers. She does have one criticism to make of Scott, and that is that he too slavishly copied Shackleton without the benefit of personal communication. She also takes up the question of Scott's abilities as a leader and the question of expedition morale. Maybe there were times when the expedition was run as if under ship's orders, but those who were close to Scott, especially those who knew him from *Discovery* days, were not merely loyal, but harboured great affection for him. There were, expectably, the grumblers — even Oates was critical at times. Mrs Preston sums up the situation with a quote from Sir Ranulph Fiennes: 'human beings are not ideally designed for getting on with each other, especially in close quarters.' The real point to remember, the author concludes, is not that the expedition failed, but that it very nearly succeeded.

This account of Scott of the Antarctic, although adding little that is new regarding the failure of the Polar Party, nevertheless presents a balanced and sympathetic account of its hero's life and times. Space doubtless would not permit, but one would have liked to hear more about the scientific work of both expeditions — really their main object. Mrs Preston's obvious enthusiasm for her task and the freshness of her style make the book a pleasurable read. It is to be hoped that this will not prove the author's sole venture into polar history. (H.G.R. King, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

**HUNTING THE LARGEST ANIMALS: NATIVE WHALING IN THE WESTERN ARCTIC AND SUBARCTIC.** Allen P. McCartney (Editor). 1995. Edmonton: Canadian Circumpolar Institute, University of Alberta (Occasional Publication 36). xii + 345 p, illustrated, soft cover. ISBN 0-919058-95-7.

*Hunting the largest animals* is the product of a symposium on native whaling held at the 1993 meeting of the Alaska Anthropological Association. Although primarily archaeological in outlook, the 16 papers collected here include ethnographic and biological contributions, and, refreshingly, the comments of Yupik and Inupiat whalers who participated in the session. Surprisingly little has been published previously on prehistoric Alaskan whaling, but the topic is clearly vast and of central importance for understanding Eskimo prehistory. This, along with the overall high quality of the papers, will make the collection

essential reading for anyone interested in aboriginal whaling or northern archaeology.

Wide-ranging chapters by Mason and Gerlach, Harritt, and Sheehan consider the larger place of bowhead whaling in the Alaskan record. Mason and Gerlach subject the enigmatic Choris and Old Whaling cultures to a characteristically scathing reanalysis, rejecting on taphonomic grounds the claim that the latter in fact whaled, and dismissing its status as an archaeological oddity by subsuming it within a proposed Chukchi Archaic tradition. Similarly, the Choris whale bone association at Cape Krusenstern is best seen as an artifact of climatically controlled increase in carcass accumulation, in concert with a reduced rate of beach ridge accretion. Harritt traces shifts in subsistence orientation from ASTt times, arriving at the problem of accounting for the emergence of the Thule whaling pattern. While acknowledging a host of unanswered questions surrounding interaction between the Birnirk and Punuk antecedents of Thule, he identifies culture-historical issues related to the spread of complex Siberian modes of social organization as a more promising line of inquiry than conventional ecological approaches. Bandi similarly argues for the appearance of a Siberian warfare complex in the St Lawrence Island Punuk culture, which may have provided an organizational prototype for the whaling crew. Certainly, a lively social dynamic seems to have persisted at least into the twelfth century, judging from the occurrence of distinct migratory pulses of both Birnirk (Pioneering Thule) and Punuk (Ruin Island phase Thule) whalers in the eastern Arctic. Sheehan's ambitious model for the span of northern Alaska prehistory following the Thule exodus posits an elaborate string of causal relationships between climatic cooling, sea-ice expansion, the creation of permanent whaling villages, surplus production from successful whaling, population growth, expanded interior settlement, increasing reliance on inter-regional trade, and warfare resulting from trade disruption. The notion that coastal groups attained the high levels of population and social complexity documented historically due to the emergence of an inter-regional economy of scale is a powerful one, and of potential value for explaining the flourishing and abandonment of Thule population centres in the eastern Arctic. However, the model sometimes strays from the archaeological evidence. The assertion that 'trade was not based on rare or elite-oriented goods, but on utilitarian bulk commodities' (page 202) is belied by the virtual absence, archaeologically, of anything but the former. While it is reasonable to see the precarious situation of interior groups as dependent on trade with the coast, coastal groups seem to have relied on the interior not for bare survival, but as a market for converting marine mammal products into the precious commodities, especially hides, on which the wealth and prestige of whaling captains and their factions were based. Settlement of the interior represented the further delegation of hide production to those insufficiently wealthy and connected to whale.

Dumond and Yarborough both deal with the record

from southern Alaska. Dumond constructs a circumstantial case for the use of lagoons along the Alaska Peninsula as whale traps that seems worth testing archaeologically. Yarborough provides a systematic overview of ethnographic and zooarchaeological data on Alutiiq whaling. She concludes that whaling likely arose during the past five millennia, as a result of environmental change and population growth causing subsistence stress, but, given the close historic connections between Eskimo and Indian in this area, it may be worthwhile to consider the much earlier evidence for delphinid use from the northern Northwest Coast of North America. Small whales are present in some of the oldest faunal assemblages there, dating to 6000–7000 BP (calibrated) at Namu and Coho Creek, when population pressure is unlikely to have been a factor.

The archaeological discrimination of scavenging from varieties of whale hunting is a critical interpretive problem, as Mason and Gerlach illustrate. A successful approach to resolving this issue has been developed elsewhere by McCartney and Savelle for the excellent Eastern Thule record, through the comparison of archaeological and natural mortality profiles. McCartney here extends this long-term research project to the Alaskan coast, reviewing the ethnographic and zooarchaeological evidence that bears on preferential harvesting of juvenile animals. As expected, this type of size selection was generally practised, but, because such direct evidence of whale hunting has been neglected by earlier Alaskan archaeologists, the database is frustratingly thin. Friesen and Arnold demonstrate a further application of mortality profiles, in building a convincing case for the practice of beluga drives, as opposed to other hunting methods, at a late prehistoric site in the Mackenzie Delta. Perhaps not surprisingly, given McCartney's grumblings, this is the only contribution in which the researchers work directly with a fully adequate zooarchaeological database, with correspondingly fruitful results. Savelle presents the results of ethnoarchaeological research on modern beluga and narwhal hunting in the central Canadian Arctic, with an eye to constructing an analytical framework for whaling-based settlement systems, and identifying key taphonomic processes affecting the distribution and survival of whale bone. Since the hunting of marine mammals everywhere operates under a distinctive set of logistical constraints, these results are useful for modelling site formation in the prehistoric Alaskan context. Additional research of this sort is called for, to specify the range of variability (technological, seasonal, topographic, etc) in whaling logistics. Yesner considers whaling from the furthest remove, as simply an instance of humans electing to exploit megafauna in one way or another. The discussion of conditions under which different modes of hunting and scavenging might arise is interesting, but the point of comparing utilization of whales and elephants is at times hard to discern.

Larson usefully summarizes archival and recent oral historical data on the function of the *qargi*, or ceremonial

house, in north Alaska. As a widely distributed feature type with potentially high archaeological visibility, *qariyit* would seem to represent a privileged avenue for investigating the social dimension of whaling, Larson's cautions notwithstanding, and another topic woefully neglected by past archaeologists. Jolles highlights the profound assistance rendered to a generation of early twentieth-century ethnographers and archaeologists by a single Yupik informant, really an anthropologist in his own right, named Paul Silook. Silook warned that the knowledge he contributed did not capture the full range of whaling practices, but his singular perspective remains the largely unexamined, and unacknowledged, germ of the current understanding of traditional Yupik whaling. Braund and Moorehead provide an overview of modern bowhead whaling in the settlements that have been designated as whaling villages since the harvest became subject to direct International Whaling Commission intervention in 1977, and Braham presents a painstaking analysis of the sex and size composition of twentieth-century bowhead catches.

The volume concludes with the voices of the whalers themselves, in the form of a transcript of the presentations by Yupik and Inupiat representatives of the Alaska Eskimo Whaling Commission, and the personal reflections of Anungazuk, an Inupiat whaler. It was an unusually thoughtful move on the organizers' part to invite native participants to the session, given the often strained relationship between anthropologists and indigenous communities. Although the lived experience of whaling is clearly distinct from the representations that anthropologists make of it, the concerns of both groups converge on such issues as the everyday mechanics of making a living by hunting such impressive creatures, the centrality of whaling to Yupik and Inupiat lifeways, and the long-term survival of a rich cultural heritage. This volume exposes how much remains to be learned about such essential aspects of the Eskimo whaling tradition. The diverse papers collected here illustrate the fragmented state, but also the promise, of whaling research, and will hopefully move the field toward the theoretical and methodological accord that will be necessary to advance these researches seriously. It is fortunate that McCartney (and the other symposium organizers, Harritt and Jolles) have created this opportunity. (Peter Whitridge, Anthropology Program, University of Northern British Columbia, 3333 University Way, Prince George, BC V2N 4Z9, Canada.)

**CHEMICAL EXCHANGE BETWEEN THE ATMOSPHERE AND POLAR SNOW.** Eric W. Wolff and Roger C. Bales (Editors). 1996. Berlin, Heidelberg, New York: Springer Verlag (NATO ASI Series I, Volume 43). xi + 675 p, illustrated, hard cover. ISBN 3-540-61280-7. DM398.

Recently completed deep ice-core drilling projects in central Greenland have highlighted their unique capacity to detail the complex history of the climate and atmospheric environment on our planet. This evidence is recorded in the changing chemical composition of the ice