

the book is to some degree a commemorative volume, dedicated to the author's memory.

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WIND AS A GEOMORPHIC AGENT IN COLD CLIMATES. By MATTISEPPÄLÄ. Cambridge and New York: Cambridge University Press, 2004. (Studies in Polar Research.) ISBN 0-521-56406-9. x + 358 p., maps, colour and b&w illus., bib., index. Hardbound. US\$130.00.

Wind is an important geomorphic agent in many high-latitude areas because of sparse plant cover, churning of soils by frost processes, generally low precipitation, and high frequency of strong winds. Although a vast literature is available on wind action in low-latitude settings such as deserts and seacoasts, the distinctive geomorphic effects of wind in cold climates have received less attention. No recent comprehensive review of this subject has been available, and in contrast to the voluminous literature on wind-moved sand and silt particles, the few works describing how wind affects redistribution of snow cover inadequately represent this topic in the geomorphic literature. In this well-organized and nicely illustrated volume, Matti Seppälä, Professor of Physical Geography at the University of Helsinki, attempts to remedy these deficiencies.

Most of the volume's chapters can be grouped into three principal sections. The first (Chapters 2 and 3) provides a broad introduction to the climates, vegetation assemblages, snow and ice features, and wind patterns of cold regions. The region-by-region geographic coverage of these topics becomes somewhat tedious in places, and the volume might have been better served by an integrated synthesis of the general principles that are most important for understanding the high-latitude processes and features presented in the following chapters. The author's citations of early explorers' accounts add spice to these and subse-

quent chapters, but in some cases the reader would benefit from more recent references that reflect current ideas and modern data.

The second and longest section (Chapters 4–10) deals with interactions of wind with mineral grains, primarily sand and silt. The topics covered progress smoothly from wind-drift processes to abrasion by wind-driven grains, then to deflation processes and resultant features, and finally to accumulation of sand dunes and loess. Oriented lakes (Chap. 7) and sand wedges (Chap. 10), distinctive Arctic features that require wind activity for their formation, are also covered in this section. A very useful but brief chapter on field evidence for wind directions (Chap. 9) discusses erosional and depositional features that can be used to reconstruct the often highly complex wind patterns controlled by local topography. However, it fails to mention grain mineralogy as an important indicator of source area.

The final major section (Chapters 11–15) deals with wind effects on snow cover. After a review of snow and its properties, successive chapters cover drift of snow, snow accumulation and its geomorphic effects, deflation of snow cover, and the effects of wind-packed or deflated snow on ground freezing and on resulting hummocks, palsas, and other frozen-ground features. Although snow avalanches are mentioned in passing, the role of wind in loading avalanche-prone slopes, forming wind-slab detachment surfaces, and building cornices that may collapse to trigger avalanches is largely ignored. A vast literature deals with these destructive events, which generally cause 50 or more deaths annually in the United States and Canada alone. Topics that could well have been covered in this volume include (1) geomorphic and botanic indicators of avalanche tracks and runout zones, (2) meteorologic conditions conducive to avalanches, (3) prediction of avalanche runout distances, and (4) determination of avalanche recurrence intervals. Slush flows (p. 276–278) receive more systematic coverage, but further information and illustrations could have been provided on recognition criteria for these hazardous high-latitude and alpine events.

The volume concludes with a very brief chapter on ancient eolian landforms and their use in reconstructing Quaternary paleowind directions. More information could have been presented here on other paleoenvironmental determinations provided by the fossil soils and plant and animal remains that commonly are well preserved in Quaternary eolian deposits such as sand sheets and loess accumulations. Correlations of dune- and loess-forming intervals with past climatic fluctuations also provide important insights into environmental controls over the accumulation of these eolian sediments, a topic discussed earlier in the volume but without this historical perspective. A review of optical luminescence and other methods for dating Quaternary eolian deposits would have been a valuable addition to this chapter.

One of the greatest strengths of this volume is its strong emphasis on European literature, much of which may be

unfamiliar to North American scholars. However, the author's relative unfamiliarity with North American geography and literature and the fact that English is his second language give rise to some interesting glitches, for example, "Aleutes" (for Aleutian Islands?) on page 44, "he" referring to Sylvia Edlund on pages 45 and 47, and "North West Territories" (p. 40 and 42). Some awkward and occasionally obscure sentences have resulted from translation into English, and the volume could have received more careful attention from its editors.

Despite these minor caveats, Dr. Seppälä has compiled a unique and important review that displays an impressive breadth of scholarship. For those who can afford its high cost, this volume should be an excellent resource for classroom use and a valued addition to their personal libraries.

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UPSIDE DOWN: SEASONS AMONG THE NUNAMIUT.

By MARGARET B. BLACKMAN. Lincoln: University of Nebraska Press, 2004. 206 p., map, b&w illus., endnotes. Hardbound. US\$27.95.

This book is an important work for those interested in ethnographic research and indigenous peoples living in the Arctic. Blackman successfully follows the "journeys of some villagers down the likes of the Information Superhighway" while following "others back to a time when technology was a rifle, a distant plane in the sky and a battery-powered radio that tuned in news of World War II in a foreign language—English" (p. 3). Blackman informs the reader of consistency and change in the community of Anaktuvuk Pass, a small Nunamuit settlement in the Brooks Range of Alaska 35 miles beyond the tree line. She writes about the Nunamuit while reflecting on her own experiences as an anthropologist and her relationships with her husband and daughter.

The tone of the book is set in the introduction, where Blackman tells how she, with her husband Ed Hall, first came to Anaktuvuk Pass. She tells of her special relationship with the community that keeps her returning in spite of her discomfort, verging on fear, of small plane air travel—a necessity, given that there are no roads between Fairbanks and Anaktuvuk Pass. She openly speaks of her difficult marriage, made more difficult by her husband's progressing disease. Blackman notes—and exemplifies—how her way of living, both in the south and in the north, affects her research, her relationships, and her interpretation of all that she experiences.

Each of the 27 essays in the book tells an engaging story of how the Nunamuit, who until 50 years ago were

nomadic caribou hunters, deal with settled life in their community. Her stories usually start by telling of an event or a situation and often end with a question. Blackman is able to weave an anthropological picture whether discussing the history of being settled and experiencing the new water and sewage system in Anaktuvuk Pass, as she does in the essay entitled "Fifty Years in one Place," or in the essay "Town," where she tells of seeing and visiting with her friends from Anaktuvuk Pass in a completely different setting during her sabbatical in Fairbanks.

Blackman's use of photographs is meaningful: they are well placed at the beginning of each essay and enhance the text. Both essays and photos encourage the reader's interest in the members of the community and in Blackman herself. At times the combination of text and photo is gentle, and at other times the combination hits hard and fast, not allowing the reader to avoid reality. Such is the combination of Willie Hugo photographed on his father's lap in 1963 and the essay entitled "The 'New' Eskimo." The essay talks of Willie Hugo as the "new Eskimo" who seems to bridge the life of successful hunter and successful wage earner as manager of the Anaktuvuk Pass power plant. Blackman continues the story of this well-respected individual, who one day bought a number of items for his wife and family and then shot himself.

Both photos and text reflect change; both tell the story of past and present, as well as portraying individuals of all ages in a variety of situations. Take for example, the photos 'Returning from caribou hunting, 1959,' in which a hunter and dogs are carrying packs, and the contemporary scene of 'Coming home from camping,' in which individuals and dogs are standing around three six-wheel Argos.

I particularly enjoyed how Blackman took me from the importance of the CB radio to the community members' use of e-mail; from the introduction of a Christmas mask to an economic industry of making caribou-skin masks that are sought after by museums and collectors; from her own field notes and journals to her excitement of having access to the journals of two hunters—Homer Mekiana and Simon Paneak— whose writings span more than 20 years; from her joy in doing field work with her daughter at her side, to the breakup of her marriage and her teenage daughter's wanting to stay home rather than return to a small community, to a time when her grown daughter wished to return to Anaktuvuk Pass; her experience in the community with Ethel and Justus Mekiana and Rachel Riley and their experience with her in Brunswick, Maine. All of these experiences are associated with having real relationships with real people who became friends while she worked as an anthropologist. She does not pretend to disengage from the individuals she knows and who know her—she treats people as people and writes about people, including herself, as people. Her interactions span the familiarity of home and the strangeness of being away from home and the merging of the two.

Upside Down: Seasons among the Nunamuit is an extremely important book. Not since Jean Briggs' *Never in*