

Book Reviews

IDENTITY AND ECOLOGY IN ARCTIC SIBERIA: THE NUMBER ONE REINDEER BRIGADE. David G. Anderson. 2000. Oxford: Oxford University Press. xiii +253 p, illustrated, hard cover. ISBN 0-19-823385-X.

Based on 16 months of fieldwork, including nine months mainly spent with Evenki reindeer herders, *Identity and ecology in Arctic Siberia* is the superlative English-language ethnography of an aboriginal group in Russia, in a recently expanded cohort of such books authored by western ethnographers. David Anderson has scribed a book immensely rich in arguments about identity politics, which should interest a readership far beyond the anthropological community. This book should not be ignored by geographers and political scientists, nor by scholars who study areas beyond the Russian Federation or circumpolar north. Anderson states at the outset his proposition that 'a small social setting, intimately described, can speak to large issues of politics and identity' (page vi). The book indeed provides a complex and fertile analysis of the junctures of identity and territory that, if idiographic at first glance, addresses the general roots of the 'eruption of claims to self-determination and territorial autonomy' (page 201) in a way instructive to students of identity politics across a range of disciplines and regions.

Chapter one introduces the study area, the southern belt of the Taymyr Peninsula (and Dolgan-Nenets Autonomous District), at the northern extreme of central Siberia. It briefly describes the ethnic identities of the two predominant indigenous peoples of the area, the Evenkis and Dolgans, underscoring how 'assigning an identity to an individual immediately implicates that person's attitude towards tradition, profession, or his or her relationship to a colonizing nation' (page 11). This theme is developed throughout the book; one of the author's aims in this book is to explore the construction and reformulation of ethnic identities, a continual process imbricated with both bureaucratic intervention and self-manipulations for material and non-material goals.

Anderson also introduces the idea of people's negotiation between the 'tundra' — the spaces not yet fully disciplined by the Russian state — and the settlements — the 'civilized' spaces where certain material benefits can be harvested, but at the (variable) cost of articulating with state institutions.

Living in the tundra requires *knowing* that place, *knowing* the reindeer that facilitate life there. Anderson stresses in chapter two (and again in chapter six) the constitution of knowledge as incorporating both technical skills and a comprehension of 'right-living,' that is, of appropriate relationships between people, animals, and place (pages 28, 116). This 'sentient ecology' involves a flexible approach toward resource use, the importance of

which has been heightened by state interventions and, more recently, economic reforms. One can truly know only through experience; other paths of 'knowing,' such as the mediated knowledge that characterizes academia, the Evenkis find suspect, even 'lies' (page 35ff). Anderson notes the stark implications of indigenous pedagogies rooted in experience for the current debates on how to negotiate an integration of 'indigenous' and 'western' knowledge.

Chapters three and seven explicate the consequences of Soviet territorial policies that bounded the tundra into discrete administrative units, and constrained the peoples' movements within these units. People who had formerly maintained spatially extensive ties with far-flung kinsfolk and others, were encouraged to take up much more focussed and circumscribed territorial identities. The author depicts the tensions this project caused, markedly elevated by forced relocation of certain groups from one administrative unit to another, and the concomitant crystallization of ethnic identities and conflicts delineated along ethnic fault-lines. He also describes resistance to limitations to mobility. Chapter seven explores the territorial consequences of post-Soviet reforms of increasingly exclusive tenures, and local reactions to these.

Chapter four gives the details of state constructions of identities, based on ethnographers' precepts. By a reflective re-reading of basic Soviet ethnographic classics (especially Dolgikh), Anderson re-presents the creation of a distinct Dolgan ethnicity, and, more broadly, depicts the state's role in encouraging discrete ethnic identities, at odds with the relational identities employed by the *tundroviki*. He then describes the 'inflation' of ethnic identities, as people exploit their ethnicity to claim rights and resources, within the territories inscribed upon them. Chapter eight returns to the theme of ethnic identity, discovering common denials of inter-ethnic affiliations in an atmosphere where ethnic 'purity' can be capitalized upon. Anderson also explores the rise of identity as a member of a *kollektiv* under the Soviet system of economic organization, and the partial conflation of *kollektiv* and ethnic categories.

Identity and ecology in Arctic Siberia concludes with an exploration of the idea of 'belonging.' During the Soviet period, people were assigned to territories, professions, and ethnic groups; the potential set of new relationships that these bounded identities have inscribed upon their lives, to other people, and to the land, are now used in creative ways to try to survive the chaos and trauma of 'reforms.'

Woven into the warp of the text are short passages from interviews the author carried out, poignant recollections of stories told, and sometimes amusing, sometimes moving encounters of situations experienced first-hand while

negotiating his own training as a reindeer herder and inchoate *tundrovik*. These anecdotes enliven the book, as do the numerous photographs. Anderson also employs potent and charming analogies, for instance likening politics of identity to geological structures (page 74) and Russian administrators to archers (page 167).

I find few faults with this book. Anderson's meticulous attention to terminological precision sometimes slows the reader's pace, but such decelerations are justified. A few of the maps are missing scales. Gender analysis is limited: the ways of knowing the environment are much more thoroughly and explicitly examined for males, a situation not surprising, given the author's gender. More attentive is Anderson to the gendered dimensions of identity construction, although further explication would be welcome here.

I disfavor Anderson's choice of the term 'sparse peoples' as an awkward attempt at shorthand for 'numerically small peoples'; I find the term 'aboriginal' preferable, but given his arguments, this may have been a counterproductive choice for the book. But ultimately, these criticisms are rather trivial. I can promise the potential reader a highly rewarding read, and apologize for being able to address but a fraction of the arguments that Anderson so skillfully packs into his tome in this short review. (Gail Fondahl, Geography Programme, University of Northern British Columbia, Prince George, British Columbia V2N 4Z9, Canada.)

SNOW ECOLOGY: AN INTERDISCIPLINARY EXAMINATION OF SNOW-COVERED ECOSYSTEMS. H.G. Jones, J.W. Pomeroy, D.A. Walker, and R.W. Hoham (editors). 2001. Cambridge: Cambridge University Press. xx + 378 p, illustrated, hard cover. ISBN 0-521-58483-3. £50.00; US\$80.00.

Snow, like its alter ego water, is too frequently taken for granted. The public interest is too often coloured by its link to recreational activities for its more fundamental importance in high-altitude and high-latitude regions to be considered, and many of the publications on it are specialised and narrowly focused. It is therefore with considerable enthusiasm that I welcome this interdisciplinary volume that tries to bridge the gaps between physics, chemistry, and biology and to show how the holistic approach provides new opportunities for understanding at a system level.

The book starts with a chapter on snow cover and climate by P.Y. Groisman and T.D. Davies. Their contention is that seasonal snow cover is so important to the global climate system that all ecosystems are directly or indirectly affected. Given the increasingly strong evidence for climate change in the latest IPCC report, this would seem a reasonable hypothesis, and the data linking ENSO and global temperature with annual changes in large-scale snow cover are a good example of feedback processes that need to be properly understood for global climate modelling.

Chapter 2, by J.W. Pomeroy and E. Brun, describes the physical properties of snow. They identify five key interactions with ecosystems where the biologist or ecologist needs to understand how these physical properties are manifested. Snow provides an energy bank, a radiation shield, an insulator dampening down temperature fluctuations, a reservoir of water and nutrients, and a transport medium both as snow particles and as meltwater. The authors provide a wealth of useful material for ecologists. In discussing the penetration of snowpack by solar irradiance, they unfortunately make no mention of UV penetration, a feature of some topicality at present. Nor do they recognise that during early melt, in at least some areas, recrystallisation in meltwater channels appears to form 'light pipes' through the snowpack, allowing much greater radiation penetration to the underlying vegetation.

Snow cover is also a source of nutrients for both those organisms that live within it and those that receive meltwater. Much of the research has concentrated on the scavenging of chemical ions as ice particles form in the atmosphere, reflected in the composition of the local snowpack. In chapter 3, M. Tranter and H.G. Jones examine the chemistry of snow not only in terms of its ionic constituents but also the processes that affect availability of nutrients such as volatilisation, photochemical reactions, and leaching. Perhaps surprisingly they show that mediation by the snowpack of gas exchange between the ground/vegetation and the atmosphere is of considerable importance not only for CO₂ but also for a number of trace gases such as NO_x and will need to be included in global climate modelling.

Having described the physics and chemistry of this ephemeral habitat, the four remaining chapters all deal with biology. R.W. Hoham and B. Duval first provide an excellent overview of the microbial ecology of snow and fresh-water ice. Hoham's extensive contributions on snow algae have been a major contribution to this field and illustrate, by contrast, just how little is known about bacteria and fungi in snow. Not only do these authors try to relate the physiology of the organisms to the physical and chemical features of the habitat, but they also have a short section that considers human aspects, such as the effects of eating snow algae and their potential for biotechnological development.

In chapter 5, C.W. Aitchison looks at the effects of snow cover on small animals, in which the emphasis is mainly on invertebrates. I was surprised to see virtually no reference to any of the extensive physiological work undertaken in the Antarctic on Collembola and no mention at all of anaerobiosis in nematodes.

Everyone who works in snow-covered regions knows just how closely vegetation is related to length and depth of snow lie. Despite studies in many alpine and Arctic sites, the authors (D.A. Walker, W.D. Billings, and J.G. de Molenaar) contend that we still know far too little about the general characteristics of snow-bed vegetation, whilst there are considerable problems in scaling interactions