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Indigenous Knowledge, Themes in Environmental History 3

Cambridge: The White Horse Press, 2012.

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Indigenous knowledge is now a matter of active interest to environmental historians, not least because of the opportunities it presents to study the relations – expressed through power, knowledge and identity – between people linked to specific places and larger forces of imperialism, globalisation and science. Indigenous knowledge is also a hot topic politically, given its roles in efforts to assert the interests and rights of indigenous people. This book provides a valuable survey of ideas and research practices that are relevant to both dimensions of indigenous knowledge. It includes articles originally published in *Environment and History* and *Environmental Values*. The mainly European authors range widely: from Amazonia to Australia, India to Indonesia, Iran to Mozambique, Russia to South Africa.

Several themes emerge from these chapters. Most obviously, the authors challenge the view of indigenous knowledge as the timeless and unchanging product of traditional societies living in pre-colonial harmony with nature. Instead, several chapters explore how indigenous knowledge evolves, as people adapt to changing environments – both natural and social. For example, Fabio de Castro, in his analysis of decades of change in the Amazonian floodplain, describes indigenous knowledge and local management systems as complex and dynamic historical phenomena, evolving in response to their environments and social contexts. Overall, de Castro and other authors present indigenous knowledge not as an archive, but as a process – one formed through interaction between self-representations and the perspectives and influence of others.

A related theme is the value of interpreting indigenous knowledge in relation to local cultural institutions, practices and power structures. The comparison by M.D. Subash Chandran and J. Donald Hughes of sacred forests in the Mediterranean and South India (where these groves were part of cultural practices that helped maintain an ecologically steady state), Vinita Damodaran's discussion of the relations between landscapes and ethnic identities in India, and the analysis by Mohammad Reza Balali, Jozef Keulartz and Michiel Korthals of water management in Iran provide interesting illustrations of these interpretations.

The political implications of indigenous knowledge receive considerable attention. Several authors explore its role in traditional conservation practices. For example, Pekka Virtanen examines sacred forests in Mozambique, and B.B. Mukamuri examines local conservation strategies in Zimbabwe. Departing from the volume's emphasis on post-colonial or tropical environments, Timo Pauli Karjalainen and Joachim Otto Habeck examine the role

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of local knowledge in environmental politics in northern Russia. And, as Annika C. Dahlberg and Piers M. Blaikie demonstrate, indigenous knowledge can provide a basis for sustainability – in the case they examine, ensuring the resilience of a livestock-based economy in Botswana. On the other hand, as Heather Goodall explains in her study of conflicts over water and land ownership on the upper Darling River in New South Wales, Australia, it cannot be assumed that indigenous knowledge will remain intact and relevant even as environmental conditions are transformed. This circumstance speaks to the uncertain place of indigenous knowledge in the contemporary world, and the need for flexible, thoughtful, and collaborative approaches to understanding it.

The history of indigenous knowledge encompasses its complex relations – sometimes collaborative, sometimes conflicting – with other knowledge systems. Several chapters examine how representations of indigenous knowledge have been influenced by attitudes regarding humans and the environment. Anja Nygren surveys *National Geographic* magazine's representations of indigenous people in tropical rainforests in relation to perceptions of the biological and climatological significance of these environments. Christopher Low provides another example, examining how Europeans appropriated and transformed buchu (used by the Khoisan people of southern Africa), while often failing to understand indigenous perspectives on this medicinal plant. The study by Balali and his colleagues of Iran's Qanat irrigation system, and of the interaction between the environmental implications of Islamic beliefs and the modern imperative of control over nature, demonstrates the formation of a post-colonial perspective on water that combines modern and traditional components. And in her analysis of the consequences of a biological control programme in colonial Madagascar, Karen Middleton argues that local people and conservationists may not always (as is often assumed) be in opposition: in this case, local people adapted conservationist ideas, while conservation initiatives were influenced by local memories. Together, these accounts complicate the simplistic notion of a global hegemony of western science displacing indigenous knowledge.

Several chapters explore how indigenous knowledge relates to critiques of dominant environmental perspectives, including those based on assumptions about the role of humans in environmental change. For example, Christian Kull dissects myths of the environmental destruction of Madagascar. These myths have been based in part on the mistaken assumption that the island was originally covered by forests; but he also explains how the myths continue to survive because they are based on compelling and politically useful assumptions about fire, shifting cultivation, and the status of the Malagasy people as ignorant of biodiversity, or alternatively, as wise resource managers. For his part, David Henley critiques views of swidden farming as ecologically sound. Focusing on Indonesia, he uses historical data to show that, in fact, agriculture is not compatible with tropical forest conservation. The assumption that it is

stems from inappropriate extrapolation from a few well-studied places (such as Borneo), incomplete historical evidence, and the tacit assumption that indigenous people are eco-friendly.

Finally, several chapters explore the relevance of indigenous knowledge to historical research practice. Most evident is the value of collaborating with indigenous communities, to record and sustain their knowledge. Dahlberg and Blaikie provide a case study of reconstructing the environmental history of a village in Botswana, using local memories obtained through interviews, as well as evidence from the field such as aerial photos, rainfall measurements, and records of human and livestock populations. They identify numerous implications for historical practice: reconciling oral history and historical data, applying knowledge of risk and adaptation strategies, and using scientific evidence, particularly from ecologists. Middleton illustrates another approach, relating to recovering local memories of historical events regarding biological control in colonial Madagascar. Her study illustrates the value of oral memory – so long as its use is accompanied by a critical perspective on its reliability. In practice, memory is a complicated thing: it is not just an individual, but a collective product, and is readily influenced by events and by exposure to other ideas – as, in Middleton's case, when it is exposed to conservationist discourse.

Overall, this collection provides a diverse and valuable overview of indigenous knowledge. Most of the chapters can provide useful instruction to environmental historians (and their students) who seek a better understanding of knowledge and power in imperial and postcolonial worlds.

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Brian Black and Michael Chiarappa, eds.

Nature's Entrepôt: Philadelphia's Urban Sphere and its Environmental Thresholds

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ISBN: 9-780-8229-4417-1 (HB) \$38.00. 304 pp.

Urban environmental history is not virgin territory, but the field is still quite young and many of the best American studies focus on western cities. As one of the nation's largest cities, Philadelphia offers a number of key moments: thresholds, as the editors suggest, from which to gain perspective on the interaction of human culture and the urban landscape. The editors also have an explicit policy goal, hoping that a better understanding of the region's environmental past will encourage respect for the environment in the twenty-first century. Thus, the collection includes four articles that tell of activist efforts and highlights important themes of urban environmental history.