## Mountain Research and Development (MRD)

An international, peer-reviewed open access journal published by the International Mountain Society (IMS) www.mrd-journal.org

The Lens of Time: A Repeat Photography of Landscape Change in the Canadian Rockies

By Cliff White and E.J. (Ted) Hart. Calgary, Canada: University of Calgary Press, 2007. 312 pp. US\$ 69.95. ISBN 978-1-55238-237-0.

Repeat photography has proven to be a valuable, reliable, and accessible methodology for evaluating and illustrating changes in landscapes over time. Ecologists often use the technique as a complementary tool for quantitative research, providing a historical context for current findings, while historical images are a key source of information for historians. Written by an ecologist and a historian, both of whom have lived in the town of Banff for decades, The Lens of Time brings together these two perspectives. The photographs in the book span a period from the 1870s to the present decade; the majority are presented in pairs of (more or less) the same view, to permit comparison.

This is a unique book with two main sets of elements. The first is a compilation of a series of historical commentaries on groups of photographs, which are ordered, in subsequent chapters, from Calgary and the plains east of the Rockies, into the Rockies, through Banff and west to the Columbia River Valley, and then north along the Icefields parkway to Jasper and back to the northern prairies and Edmonton. The second comprises a number of short essays exploring a range of ecological and historical themes and concluding with a 31-page synthesis illustrated with photographs as well as excellent figures. These two sets of elements are woven together and also provide a foundation for the third element of the book: a 43-page reference section with four appendices (relating to photographers, photographs, and species), a full bibliography, notes on each chapter, and a remarkably comprehensive index.

The area considered by the book includes four national parks, which are jointly designated by the United Nations Educational, Scientific and Cultural Organization as a Natural World Heritage Site, as well as a number of provincial parks and settlements of various sizes. When Banff National Park was established in 1887 (with its first set of boundaries, which have been moved a number of times), changes in the landscape reflected the interactions of biophysical processes and anthropogenic processes, primarily fire caused intentionally by indigenous people, mostly in relation to hunting practices. While some changes in the landscape were catastrophic, most were gradual. In 1881, the Canadian Pacific Railway entered the area, and the line through the Rockies was completed four years later. Since then, as the authors say, "landscape change has been revolutionary" (p 1), and "Apart from the railways, the most fundamental and constant elements of change ... have been the Government of Canada and private enterprise," particularly including tourism and mining (p 127). A further cause of change is climate change, linked to the extent of both glaciers and forests. Not only the landscape has changed; the few settlements have also emerged, expanded, moved, and/or disappeared.

The book's only failing is the lack of a good map of the entire region. Appendix C comprises 5 grayscale maps, apparently based on a digital terrain model, with the location of each photograph. The overall geographic context, however, is not provided.

This is not an easy book to summarize: it has many facets of interest to different audiences whether they are interested in the human history of a very diverse mountain area; changes in ecological processes, wildlife populations, and human interactions with these; or just in looking at the photographs to draw their own conclusions or reignite memories. It is recommended to anyone with these interests and especially to anyone who has lived in or visited the Canadian Rockies.

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