

Herschel Island—Qikiqtaryuk: A Natural and Cultural History.

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To conclude, 26 species of migratory shorebird were targeted in Tier one of the Arctic monitoring program, and improved population estimates were derived for 17 of those species. The incredible effort brought together a wealth of information on avian abundance and distribution on birds from areas in the Arctic not previously surveyed. So far the program has provided improved population estimates and range distributions for many of these birds. The program has also detailed the strengths and weaknesses of a double sampling method, and left little doubt that this program should provide improved population estimates and trends for up to 24 shorebird species breeding in North America's Arctic, albeit over relatively long time scales.

Unless this effort is repeated we will gain no information on apparent changes in population densities of these species in the Arctic in the next decade or two. Most agree that climate change will continue to change the Arctic environment, but without this program continuing it seems unlikely that a meaningful assessment of the impact of those changes on these species populations would be delivered at levels of certainty increasingly demanded. This book makes a good case for not only the continuation of this program but also for the expansion of the program to help test predicted densities in yet-to-be-surveyed areas, while also looking to discover if increased sampling, finer-scale habitat modeling, and improved timing of surveys may improve the precision of density estimates at regional scales.

ARCTIC SHOREBIRDS IN NORTH AMERICA: A DECADE OF MONITORING provides a solid overview of a huge contribution to our understanding of Arctic shorebird and other Arctic bird distributions. It will provide a useful resource with many good citations, figures, and maps for those conducting environmental assessments in the North American Arctic, for those at all interested in shorebird conservation, for those interested in monitoring especially for cryptic and widespread species, for those interested in Arctic ecosystems generally, and for those seeking an understanding of the history and best available methods for monitoring shorebird populations in the Arctic.

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HERSCHEL ISLAND—QIKIQTARYUK: A NATURAL AND CULTURAL HISTORY. Edited by Christopher R. Burn. Calgary: University of Calgary Press, 2013. 138 pp. \$51.95 (hard-cover). ISBN 0988000903.

This book is a collection of essays and photos that document the natural and anthropological history of the westernmost island in the Canadian Arctic. Herschel Island, or *Qikiqtaryuk* as it is called in the Inuvialuit language, lies to the west of the Mackenzie Delta in the southeastern Beaufort Sea. Nominated as a UNESCO World Heritage site in 2004, the island has a complex history of

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aboriginal, European, American, and Canadian occupation that has been shaped by a unique natural setting. Prior to the book's publication in 2012, the only account of the island's integrated natural and cultural heritage was a published oral history. Just as Herschel Island is a place where natural and human history is inextricably linked, so are the chapters of the book.

As a self-described "northern story by northerners" (over half of the contributing 43 authors live north of 60°), the book is a multidisciplinary research collective that summarizes Herschel Island's geology, geography, climate, oceanography, flora, fauna, archeology, culture, governance, and historical conservation efforts. Structured like a short encyclopedia, each section of the book is written by experts specializing in a specific aspect of the island's physical, biological, or cultural history. Following the introduction, five chapters are divided into smaller subsections that focus on a particular topic. Chapter subsections are grouped together by color, lending to the overall organization and visual character of the book.

Following an introduction to the "Yukon's Arctic Island," place names, and the family for which the island was named, the next two chapters of the book describe the physical setting, flora, and fauna of Herschel Island. Herschel Island was formed during the last glaciation when the ice sheets of northern Canada advanced over the Yukon coast into the Beaufort Sea. The northern tip of the ice sheets pushed up a mass of frozen sediment from the continental shelf, creating the positive topography of the island and scouring a deep basin adjacent to the landmass. Upwelling of nutrient-rich water in a submarine canyon close to the island supports the primary productivity that in turn maintains large populations of seals and whales. On the island's surface, the abundance of summertime tussock cottongrass meadows has enabled large herds of caribou to flourish. Freshwater outflows from the Mackenzie River mix with Arctic seawater around the island, sustaining several species of anadromous and marine fish. The thriving coastal ecosystem and bountiful fish and game have attracted humans to Qikiqtaryuk for at least 800 years, the longest recorded Inuvialuit occupation yet found in the Canadian Arctic.

The abundance of whaling, fishing, and hunting stock attracted more than just aboriginal communities to Herschel Island. The position of the island between the Alaska North Slope and the Mackenzie Delta also made it a preferred moorage for Canadian, European, and American ships traveling the Arctic coast. The following two chapters of the book pick up the story of the island's history where humans began migrating to the island, and focus on the development of Qikiqtaryuk as a whaling and trade center. The physical setting of the island provided one of the only accessible safe harbors for ocean-going vessels in the Beaufort Sea, particularly during harsh winters. This also made it a convenient and accessible base for whaling operations beginning in the late 19th century. Word spread quickly to southern whaling operators that Herschel Island offered an ideal combination of safe over-wintering and Arctic waters teeming with whale stock. Once discovered, the island quickly became a boomtown of trade between the Inuvialuit and Euro-Americans. The buzz around Herschel Island led to immediate social and cultural change, resulting in the development of infrastructure, and the arrival of missionaries, police, and ultimately disease.

The last section of the book describes conservation efforts and modern governance of the island. Today, Qikiqtaryuk is recognized

as a territorial park, designated as such to protect its "cultural, historic, geographical, and ecological significance." Wildlife management, and ecological monitoring and research are ongoing. Herschel the island, once used as a base for whaling and trade, is now the center of environmental monitoring of climate change effects along the Yukon Coastal Plain and Beaufort Sea.

The book succeeds at bringing together a "variety of perspectives on a single place," while continuing to preserve the oral history and the Inuvialuktun language. All names of places, flora, and fauna are given in the Siglitun dialect of Inuvialuktun as well as in English. One observation on place names is that the titles given to landforms by the Inuvialuit are descriptive, whereas British explorers named features after other Europeans. The island's two names provide an example of this. Qikiqtaryuk means "big island" in Inuvialuktun; Herschel was the name given by the first known British explorer of the island, Capt. John Franklin of the British Royal Navy, in honor of what he regarded to be the "most distinguished scientific family" of his time. This naming convention highlights the importance of the island to both indigenous and nonnative communities, and also illustrates the earth-centric simplicity of the aboriginal people compared to the anthropocentrism of the Euro-American explorers.

The expertise and passion of the book's collective authors for Herschel Island are evident in the level of detail presented in each subsection and in the way the editor frames the book. The chapter subsections are written as stand-alone segments, although there is occasional redundancy across sections. For example, there is repeated reference to the relationship between the island's physical and oceanographic conditions and human livelihood. Likewise, the arrival of the whaling ships as a trigger for social and cultural change is mentioned throughout the book. While this approach could be distracting to the reader unfamiliar with interdisciplinary writing, it is a technique that is often unavoidable and necessary to fully describe the intertwined natural and human history of a place. As such, the reader concerned only with the discrete components of Herschel Island's history will find the stand-alone chapters accessible and informative. When read in its entirety, however, the book as a whole leaves the reader with an impressive, well-rounded understanding of how human and natural systems have influenced each other on Herschel Island.

The book is written at a level appropriate for both scientists and the educated layperson, as the authors seem to have made an effort to use concise and simple language throughout. The book is a great primer for readers unfamiliar with Herschel Island or Arctic Yukon environments in general, and would be a useful text for an interdisciplinary course on coupled human—natural history in Arctic environments. To that end, the final chapter includes short bios of each of the book's authors and their research interests, and a useful reference section of suggested continued reading. Likewise, the accessibility of the writing and the excellent photos create a compelling narrative for eco-travelers with an interest in conservation and preservation of places threatened by environmental change.

The largest modern threats to Herschel Island are sea-level rise, marine industrial activity, and offshore hydrocarbon drilling in the Arctic Ocean. Coastal erosion has already washed away archaeologically important sites, and rapid offshore development is increasing the risk of potentially catastrophic oil spills in the waters surrounding Herschel Island. These represent the most pressing challenges facing the preservation and management of Qikiqtaryuk as a historical site, as well as other low-lying coastal communities with rich human and natural histories. While Herschel Island—Qikiqtaryuk: A Natural and Cultural History of Yukon's Arctic Island carefully presents the history of a single small place, the book serves as a well-organized template for interdisciplinary research efforts focused on other historically significant and environmentally sensitive coastal regions.

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CIVILIZING THE WILDERNESS: CULTURE AND NATURE IN PRE-CONFEDERATION CANADA AND RUPERT'S LAND. By A. A. den Otter. Edmonton: The University of Alberta Press, 2012. 438 pp., Index. \$49.95 (softcover). ISBN 9780888645463.

The theme of CIVILIZING THE WILDERNESS is perhaps best expressed in the quote from Horace with which den Otter introduces his first essay: "They change their clime, not their frame of mind, who rush across the sea."

The nine essays in this work address concepts of wilderness and civilization held by people living in or concerned with British North America and Rupert's Land, the vast territory controlled by the Hudson's Bay Company, especially the settlement of Red River and the Red River valley. The timeline cuts back and forth across the 19th century, a time of political, scientific, and philosophical upheaval at the height of the British Empire.

Den Otter wades into the nature-culture divide, showing the Western conceptions of wilderness and civilization as human constructs. These constructs, implicitly or explicitly stated, shape his subjects' philosophical stances and drive their actions.

Above all, den Otter is concerned with what he terms the "civilizing-the-wilderness theme." He is at pains to explore "the drive to civilize not only the Natives but also the wilderness in which they lived" (p. xxi). He delves into extensive primary sources to work out how actors perceived wilderness and civilization, and how these perceptions transformed and shaped their actions as missionaries, company functionaries, settlers, traders, writers, and administrators, and as white, Native American, and Métis.

Den Otter contends, "At mid-nineteenth century, most writers perceived the concepts of civilization and wilderness as opposing poles. And, in conflict, they defined each other" (p. xii). The concepts defined not only the landscape, but the people inhabiting it. Wilderness could be perceived as untouched, barren, unredeemed, wasteful, or dark, and its people as heathen and ignorant. Civilization was ordered, settled, productive, and its people Christian, literate, and educated. How each actor defined or resisted these con-

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