

new Russian laws on the protection of natural areas (Pavel Shul'gin, Chapter 6).

In summary, this work is providing an invaluable service to both scholars and policy makers as it seeks to break down the barriers dividing policy and research from community interests by presenting what has been done and is being done across the North. All can learn from the experience of others trying to develop policy on the management (or better yet, the co-management with local communities) of ethnographic and cultural landscapes. The book highlights the importance of not only protecting the space itself, but also safeguarding the human knowledge associated with a place. An ethnographic landscape is a priori a place where the cultural and the ecological come together. It is necessary to record the human tradition that is associated with the landscape, to teach and present this tradition faithfully, and to ensure that the landscape remains a culturally meaningful space. As the editors of the volume note in the introduction (p. 9): "in practical managerial terms it is, therefore, as important to preserve and support the knowledge about the land (through documentation, education, and other heritage efforts) as it is to establish a vigorous protective regime for the land itself." This approach also requires a change in the colonial mindset and the recognition that there was no true "wilderness" in the North: with the exception of glaciers and mountain tops, all the territory was inhabited, modified, and integrated into the traditional knowledge of its indigenous inhabitants. As the editors state (p. 9): "the extinction of cultural knowledge associated with a certain landscape returns it to the status of wilderness or makes it an empty land with barely seen remnants of former occupation."

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BIRDLIFE OF THE CHURCHILL REGION: STATUS, HISTORY, BIOLOGY. By JOSEPH R. JEHL, Jr. Victoria, British Columbia: Trafford Publishing, 2004. ISBN 1-4120-3107-9. 155 p., b&w and colour illus., bib. Softbound. US\$30.50, Cdn\$35.00, EUR25.00, £17.50.

Although many books describing the birds of a local region have been written, this book is in a class of its own. It is written with scientific rigour, yet for a popular audience. It is much more than a description of the birds that have been found in the region of Churchill, Manitoba, on the Hudson Bay coast. A biologist and research scientist who has spent many months in the Canadian Arctic over a considerable span of years, Joe Jehl has succeeded in writing for a broad audience, covering both the ecology

and the history of the region, as well as giving a lively account of each of the 285 bird species that have been recorded in the area. As Stuart Houston pointed out, the Churchill region boasts the longest record of birdlife and meteorological records of any Subarctic area of the world. From the occasional notes in the diary of the stranded Jens Munk in 1619, via the records of several Hudson's Bay Company factors (Light, Isham, Graham, Norton, and Hearne) of the 18th century, to the notes of the many birders who visit the area today, Jehl has brought together a scholarly account of a Subarctic avifauna and its changes over time. The book will be valuable not only to amateur and professional ornithologists, but also to historians, climatologists, geographers, and conservationists.

Churchill has long been associated with scientific studies, and this book integrates the records of both amateur bird watchers and scientific ornithologists whose work has taken them to the Churchill area. One of the most interesting innovations of the book is a series of vignettes, included as insert boxes and written mainly by the scientists themselves, describing aspects of the ornithological research carried out in the region. These vignettes provide a valuable link between amateur and professional, which is often missing from both present-day scientific ornithology and present-day bird books. Another feature (also included as insert boxes) is a series of the author's suggestions for valuable ornithological research topics that could be investigated at Churchill in the future, a challenge to scientists looking for an interesting project and place to work.

The author has been very effective in bringing to readers' attention some of the more important general research findings from work carried out in the Churchill area, ideas that have had wide impact on the professional ornithological community. Examples are David Hussell's work on clutch size regulation and Jim Briskie's studies of mating strategies. One gets the feeling from the book that the author is part of the Churchill community, and his experience over a span of 40 years has given him a unique vision of the region. He describes the importance of the Churchill Northern Studies Centre, established by the Community of Churchill in the late 1970s, to attract scientists and other scholars to the Canadian Arctic and Subarctic regions. Most importantly, his longtime experience has enabled him to detect many changes in the distribution and frequency of local bird species. It is here that one realizes the dynamic nature of bird populations, perhaps more vividly illustrated in the Churchill area than elsewhere. So many species have changed in frequency and distribution, with some worrying declines in species. Jehl has documented these with care, and the data provide some evidence of the effects of both climate change and the impact of humans on sensitive Subarctic environments.

I found the book remarkably error-free; certainly the events that coincided with my own multi-year visits to the Churchill area between 1968 and 1992 conformed to my own recollections. I have one minor complaint. The establishment of the Churchill Northern Studies Centre was

much more of a community venture than the author suggests, and people like Hugh Jones, the late Bishop Robidoux, and the Erikssons deserved a mention.

The quality of the photographs is occasionally less good than one might hope, particularly in portraying the magnificent scenery of the area, but this does not detract from the quality of the book, which I can most wholeheartedly recommend. It is a good read, not only for amateur and professional ornithologists, but for all those whose studies and inclinations take them north to the shores of the vast Hudson Bay.

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THE WORLD OF THE POLAR BEAR. By NORBERT ROSING. Richmond Hill, Ontario: Firefly Books, 2006. ISBN-13: 978-1-55407-155-5. 204 p., map, large format colour plates, bib., index. Hardbound. Cdn\$45.00.

One of the most serene (and now famous) images ever taken of a polar bear graces the cover of the new book by photographer-author Norbert Rosing, *The World of the Polar Bear*. Rosing has emerged as a superb polar bear photographer, and with this new volume, he is likely to delight those that seek a glimpse into the life of one of the world's most charismatic species. One could imagine that the world of the polar bear consists of sea ice, seals, and little else. Taking a broader view, Rosing uses the polar bear as the central theme of his photographic journey.

Although this photographic essay includes a variety of Arctic and Subarctic species, the selection is limited. We are offered numerous impressive images of male polar bears play-fighting, mothers cuddling young cubs, and bears lounging about. Polar bears are clearly the focus of the book, but we are led off into vignettes of other species. The logic behind the selection of species is unclear and seems opportunistic rather than planned. Of the three main Arctic whales, belugas are shown in numerous images, but bowheads are restricted to a single image and narwhal are entirely lacking. Caribou and muskoxen, arguably uncommon neighbours of most polar bears, are given vastly different treatment: caribou are seen only from the air, while muskoxen are prominently featured. Painfully absent are any images of the main prey of polar bears: ringed seals and bearded seals. This leaves a rather large gap in the bear's "world."

Much of the book centres around Churchill, Manitoba, and nearby Wapusk National Park, thus the images of polar bears are somewhat restricted to the summer-autumn period when bears are on land and to females emerging from dens with young cubs in early spring. The area provides a fantastic venue for photography, but the limited

geographic coverage leaves a two-dimensional element to *The World of the Polar Bear*. Images from Foxe Basin showing walrus and polar bears only hint at the broader texture of a polar bear's life, and greater geographic and ecological coverage would have been welcome.

There is little doubt that one would seek this new volume largely for its images: they are beautiful and well presented. The text contains interesting insights into individual photos, anecdotes from photo expeditions, and short natural history sketches. The natural history notes are broadly factual, but they lack the depth and nuances that a dedicated naturalist might wish for. We are told that "Twins and, less frequently, triplets make up the typical polar bear family; only one litter of four has ever been documented" (p. 23). However, the text fails to mention that single-cub litters are very common and represent over 30% of litters at den emergence. Other slight inaccuracies are misleading. The text states that polar bear courtship takes place on the sea ice during April and May and that the partners remain together for an entire week. Field studies are clear that the mating season extends from March to June; that mated pairs can remain together for over two weeks; and that in some populations, mating often occurs on land. Again, from a layperson's perspective, one might find the statement "Conveniently, the polar bear's favourite prey gives birth on the ice in the early spring" (p. 35) reasonable. However, most scientists would cast doubt on the "convenience" issue and invoke a process of natural selection and evolution. Few scientists would be so bold as to imply that ringed seals are the "favourite" prey of polar bears. There is no doubt that the bears eat them in great numbers, but determining favourites is an impossible task. Further, stating that a polar bear "can detect prey more than 20 miles (32 kilometers) away" (p. 198) reflects information gleaned from other sources and perpetuates a myth. Despite these niggling details, readers would not be led too far astray by the text. Those well versed in polar bear ecology will note omissions in detail or generalities that detract from what is known about the species. The inaccuracies, however, are largely inconsequential to the intent of the book because the text is just the matrix for the photos.

Rosing published a book by the same title in 1996, which was a translation of the work from German. Most of the photographs in the latest version (considered a first printing) are new, but some images have been carried over from his earlier work. The images in the latest version are vastly superior to the earlier ones and most are crystal clear. Some images are taken from aircraft and supply a perspective that could not be obtained by other means. The photographs are most powerful when Rosing sits across from a bear and invokes his obviously substantial patience to capture an enduring image. The notes he provides on the cameras and lenses used may be useful for aspiring photographers. The text is mostly new, but favourite themes are carried over from the earlier book.

Norbert Rosing is a superb photographer and one who can capture the essence of a polar bear in a diversity of