

ICE BEAR: THE CULTURAL HISTORY OF AN ARCTIC ICON. By MICHAEL ENGELHARD. Seattle and London: University of Washington Press, 2017. ISBN 978-0-295-99922-7. xiv + 288 p., map, b&w and colour illus., notes, selected bib., index. Softbound. US\$29.95.

Even though relatively few people around the world will ever see wild polar bears in their remote natural habitat of Arctic sea ice, they have long been one of the world's favorite animals, along with several other spectacular large mammals such as lions, tigers, wolves, elephants, gorillas, and "whales." Probably, much of the initial intrigue simply reflects an appreciation of their overall visual attractiveness along with respect for their size, strength, potential danger to humans, dramatic white coat, and apparent ability to live so comfortably in such a rigorous environment. Thus, it is not surprising that in recent years there has been an abundance of coffee table photo books with multi-photos of polar bears, as well as several scientific volumes on their biology. If you google "polar bears," on their own or with various modifiers, you will get literally thousands of hits. Even children's books (most of which only use polar bears as a vehicle) get several hundred titles. These simple activities confirm the extent to which polar bears are on our collective radar.

At a deeper level, however, certain anatomical and behavioral characteristics of polar bears (and some other bear species) appear to have given rise to fascination, fears, and cultural perspectives that reach back into the human psyche for centuries. Aspects of particular significance likely include features that are strongly reminiscent of humans, such as the bears' ability to stand vertically on their hind feet and look forward with both eyes, eating of foods similar to those eaten by humans living in the same habitats, and possibly most significantly, the fact that the bear carcass, when the skin is removed, is uncannily similar to that of a human. In particular, the latter feature may explain the shape-shifting in so many Inuit legends in which polar bears inside an igloo are humans, but when they go outside, they put on their hides and become bears again. There are similar parallels to legends involving bears of other species and humans in different parts of the Northern Hemisphere.

It is against this complex background that Michael Engelhard, a cultural anthropologist trained at the University of Alaska Fairbanks and an Arctic ecotourism guide, delves into aspects of the relationships between polar bears and humans. He has obviously developed a deep, long-term, and multidisciplinary interest in the species. He also specifically notes in the introduction that he does not include scientific aspects of polar bear biology because there are several other books by specialists that do.

By establishing an investigative approach separate from science-based books, the author gives himself considerable freedom to use his training, intellectual curiosity, personal observations of polar bears, speculations, and direct discussions with indigenous people (primarily Alaskans) to

direct the investigations in his book into many fascinating historical and anthropological corners. While there have been other books and scientific papers that touch briefly on aspects of interactions between polar bears and humans, none I am aware of even begins to present information on such a broad range of topics as this one. That said, no book of this nature will ever be "complete" because of the infinite abundance of cultural corners in which polar bears crop up, either significantly or anecdotally. To me, some of the deepest and most relevant aspects described were anthropological studies and related anecdotes, the most interesting of which deal with spiritual relationships between polar bears and various indigenous populations from Russia to Alaska, Canada, and Greenland. It is particularly intriguing to contemplate and compare among different groups of indigenous peoples the diversity of traditions and practices relative to polar bears that were widespread prior to the invasion of European culture.

To a large degree, what sets this book aside from others on polar bears is the extent to which it tries to include an almost overwhelming number of less understood, but clearly real, aspects of human behavior in response to polar bears. For example, there is a whole chapter devoted to the polar bear cub known as "Knut," who was born in the Berlin Zoo and, for reasons not well understood, became an incredible international media phenomenon. The outpouring of public grief in response to his premature death at the age of four was unprecedented. Similarly, in a chapter entitled "Lover, Super-Male, Mate," the reader is titillated with suggestive images of polar bears and women in paintings, novels, polar bear rugs, and other contexts. As bizarre and largely unrelated to how most people might think about polar bears these images and descriptions appear to be, they also seem to represent some kind of attraction I have not seen discussed elsewhere.

Besides the impressively broad range of topics the author discusses in the text, one of the most riveting aspects of the book is its large and diverse collection of illustrations. Besides providing background relevant to each chapter, the images will arouse the curiosity of many readers about a wide range of subjects, often not immediately related to the subject at hand. Thus, the illustrations alone are sufficiently thought-provoking and fascinating to make it worth reading the book. My own favorite, on p. 113, shows the petite German circus animal trainer, Tilly Bébé, sometime in the early 1900s, with no fewer than 20 polar bears all obediently posing in various positions, many touching each other, and one standing beside her and looking down on her head, while she calmly looks toward the photographer. Although I have studied and observed the behavior of polar bears for more than 45 years, this picture fascinates me simply because of all the unknown things it may say about the evolution of these mysterious and brilliant animals.

Not surprisingly, there are expectable and relatively straightforward descriptions of modern-day activities such as ecotourism to view wild bears, as well as the aspect of bears entering human settlements or camps in a variety

of locations, including Churchill, Manitoba, where they represent a potential threat to human life and property. However, given the book's central theme of trying to understand why humans respond so deeply to polar bears, the consideration of why the bears are so relevant to the whole discussion of climate change seemed incomplete. To a degree that seems broadly similar to the massive public response to Knut, the cub born at the Berlin Zoo, humans all over the world have exhibited an overwhelming concern about the possible fate of polar bears in a rapidly warming Arctic. However, beyond describing the existence of such phenomena, these two topics seem not to receive a deeper analysis of the "why?" aspect. With respect to climate warming, at least, part of the explanation may be relatively straightforward: Even elementary school students instantly understand that polar bears depend on the presence of sea ice as a platform from which to hunt their primary prey: ice-breeding seals. However, as the climate continues to warm because of human activities, sea ice is melting earlier, more extensively, and for longer periods. This means polar bears have less time to hunt at the best times of year (spring and early summer); thus, the amounts of fat that they are able to accumulate, and on which they depend for both reproduction and survival, are ever decreasing. Significant negative effects of climate warming on polar bears have already been confirmed in some populations. Thus, humans have little difficulty understanding that if warming continues unabated, eventually all polar bear populations in which they have such a deep instinctive interest, will be significantly, and negatively, affected—as will the Arctic itself—and ultimately, much of the rest of the world. Therefore, the deep and widespread attraction to polar bears, felt even by people who will never see one in the wild, translates directly into human understanding that the long-term effects of climate warming on the planet as a whole are likely to be devastating. The simple clarity of

this understanding is anathema to climate-change deniers, but may be the most significant contribution that polar bears can make to the overall well-being of humans and the planet as a whole.

The author is clear in the introductory sections that he does not intend this to be a science book, though not surprisingly he needs to use a certain amount of scientific information to reinforce or explain his descriptions. In a few cases, it appears he could have been more careful about detail. For example, on p. 209, he claims that adult male polar bears kill cubs to gain reproductive advantage. However, they do not: they kill cubs, and sometimes independent subadults, for food. Similarly, on p. 228, he says that the earlier breakup, and later freeze-up, of the sea ice on the west coast of Hudson Bay was first noticed about 2005, when in fact it was reported to be occurring by the early to mid-1990s.

However, in a book as diverse as this one, it would be impossible to be completely free of errors, and the fairly small number I noticed did not detract significantly from my continued interest in the overall thrust of the author's investigation of the deep, diverse, and ongoing relationships between polar bears and humans. Overall, I found the book both interesting and thought-provoking. I have no hesitation in recommending it to anyone interested in polar bears and in things they may tell us about ourselves.

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