Walter Wellman), the Baldwin-Ziegler Polar Expedition (commanded by Evelyn Briggs Baldwin, a veteran of Wellman's expedition, and funded by baking powder baron William Ziegler), and the Ziegler Polar Expedition (Ziegler's second sponsored expedition, led by Anthony Fiala, formerly of the *Brooklyn Eagle*).

As Capelotti notes in the volume's introductory materials, the history of American exploration of Franz Josef Land could be told only in fragments until recently, when expeditionary diaries, journals, and materials became newly available to scholars. (Capelotti is also one of the few Americans to have visited the islands in the past century.) This history, he argues, was driven by a late-19th-century American media hunger for stories of extremity. Gilded Age industrialists and newspaper magnates underwrote expeditions in exchange for publicity. Capelotti notes that patronage-driven geographical naming practices were another goal of these expeditions: backers could expect an honorific cape, island, or strait as thanks for financial support of the American expeditions. As he writes succinctly in the book's preface, "the American exploration of Franz Josef Land was both a direct product of the spectacular levels of untaxed private wealth of the Gilded Age and a monument to that age's inevitable collapse" (p. xviii). The lack of sustainable, community-minded leadership of turn-of-the-century titans of industry finds its analogue in the ambitious yet bumbling American explorations of Franz Josef Land.

The story of the three American expeditions unfolds in short, punchy chapters, and Capelotti is adroit in narrativizing a broad range of evidence. The details are thick and dizzying, and none is spared, but the overall account will captivate students, scholars, and enthusiasts of American and Arctic history, science, and culture. The expeditions were fractious, which likely was the case for most polar explorations in history; rarely, though, has a scholar had access to such a substantial body of diaries and letters in order to expose the tensions that are often glossed over or elided in official expeditionary narratives. Capelotti brings these moments to light with relish. Of a newspaper description of the explorer's striking eyes written before the departure of Baldwin's expedition Capelotti observes: "Given his erratic behavior—a tincture of paranoia laced with delusions of grandeur—the 'piercing steel grey eyes' can now be seen for what they were, a physical manifest of [his] increasingly unbalanced mind" (p. 247). At the end of the expedition, Baldwin seized most of the private diaries and correspondence of the crew in order to protect his reputation; his calamitous failure to lead the men with any purpose, confidence, or skill would be comic if it weren't so chilling. Anthony Fiala, whom Capelotti describes as the "most irrepressibly guileless" of Baldwin's men, would go on to lead the third American venture to Franz Josef Land, with even less competence. The expedition was plagued by the loss of the ship, *America*, crushed by tremendous ice pressure; interpersonal conflicts did not ease the crisis. One of the most acidly interesting details in *The Greatest Show in the Arctic* is the "venomous little collection" of "Fialaisms" kept by the expedition's doctor, George Shorkley, who was annoyed by what Capelotti calls Fiala's "uncontrolled need to spout profundities that were either absurdly pretentious or hopelessly inappropriate" (p. 390). Among the "Fialaisms" are the following claims, as recorded by Shorkley: "[After fainting]: 'Why, this is strange! Just before coming away, I wore out four strong men, one after the other, at fencing'" and "I am the only male member of the 'Ladies Aid Society'" (p. 391).

Capelotti might have provided a broader overview of newspapers' stunt-publishing in the period, giving readers a sense of where Arctic exploration fit into their commercial strategic plans. How common, in other words, was it for newspapers or for industrialists to promote adventurous voyages? Is Arctic exploration meaningfully different from other travels at the turn of the century, or were these the previous century's versions of Elon Musk's SpaceX or Richard Branson's Virgin Galactic, designed to send private citizens to space? *The Greatest Show in the Arctic* could do more, too, to distinguish capitalist geographical naming practices from imperial or national ones: what is the difference between naming an inlet for a captain of industry, say, and naming an inlet for a captain of a naval vessel? How do such differences register on a global scale, and might this be evidence for a shift from an age of nationalism to an age of capital? *The Greatest Show in the Arctic* is evocative enough to propel such questions, and readers are indebted to this volume for the means to pose them. Capelotti's deft and much-needed account of messy, determined, bungling, aspirational American expeditions to Franz Josef Land will fire the imagination of any reader.

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THE ARCTIC GUIDE: WILDLIFE OF THE FAR NORTH. By SHARON CHESTER. Princeton, New Jersey: Princeton University Press, 2016. ISBN 978-0-691-13975-3 (pbk.). 544 p. Includes introductions to higher taxonomic units (orders, families, genera), colour illus., species distribution maps, selected bib., web sites, indexes to scientific names of families, genera, and common English names for taxa. Softbound. US$27.95; £22.00.

This is an ambitiously inclusive guide to characteristic species of circum-Arctic fauna and flora in a single volume. Its illustrations are excellent, the species accounts in the text are concise and informative, species' identities nearly error-free, and their formal scientific names almost all

current. The front matter includes a glossary and illustrated introduction to life zones of the Arctic that should help observers and trip planners. Previous portable natural history guides in one volume have not attempted such broad coverage—from green algae to birds and mammals—for any comparably extensive portion of Earth's biosphere. All species descriptions contain scientific names; common names in English, German, French, Russian, Norwegian, Inuktut, and Iñupiaq equivalents, as appropriate; and range maps. Colour illustrations are included within sections for Mammals (101 p.); Birds (245 p.); Fishes (25 p.); Lizards and Frogs (2 p.); Flies, Bees, and Butterflies (24 p.); Flora: Cyanobacteria through Orchidaceae (111 p.).

Opening *The Arctic Guide* the first time led me to the section on biota that I know best: tundra-breeding sandpipers. Stylized profile illustrations of non-breeding birds at lower latitudes in most field guides are supplemented here with depictions of breeding plumages, body conditions, and diagnostic postures of several species of calidridine sandpipers. The unique development of an inflatable sac that amplifies the low-pitched hooting vocalizations of male Pectoral Sandpipers (*Calidris melanotos*) during flights over their Arctic breeding territories is illustrated (p. 219), as are the communal dance display of Buff-breasted Sandpipers (*Tryngites subruficollis*) and individual plumage elaborations by the male Ruff (*Philomachus pugnax*) (p. 227).

At that first encounter with Chester's book in April 2018, I was surprised at having been unaware of it until 18 months after its release, but several active professional authorities on the biogeography of one or another group of Arctic biota also admitted to unawareness of this guide. These surprises may reflect limited communication across research disciplines, between professional researchers and dedicated amateur observers, or both. Perhaps, too, the publisher and booksellers were unprepared to promote this title effectively to interdisciplinary, holistic, and high-latitude enthusiasts, who comprise the membership of the Arctic Institute of North America.

The breadth of coverage that distinguishes the intellectual and publishing attainments by this book is admirable. Few mammal or bird species that occur regularly in the Arctic are omitted, although representation of other groups of vertebrates, arthropods, and plants is less complete. Arctophiles must concede, however, that compilation of an equally inclusive guide to biota inhabiting any globe-circling span of 20˚–35˚ of latitude closer to the Equator would require vastly more than the 544 pages in this guide. Balancing this inclusiveness against keeping the volume portable required judicious choices favouring visible (e.g., macroscopic, diurnally active, terrestrial, boat-, shipboard-, and coastal zone-accessible) taxa and species either endemic to the Arctic or especially characteristic of northern high latitudes. To illustrate this point with one group for which the author has been severely selective, this guide describes 13 species of Arctic marine macroalgae ("kelp:" p. 426–430). Wilce and Dunton (2014) identify a total of 78 species known to occur in one region of the Alaskan Beaufort Sea and around Svalbard, only two of which are considered endemic to the Arctic. The remaining 76 species are also found at lower latitudes in the Atlantic, the Pacific, or both. Of Chester's selection of 13 species of marine macroalgae, five have been harvested locally or commercially for medical applications, fertilizer, or food or food supplements, and one merits inclusion for being poisonous. One of the two Arctic species considered endemic by Wilce and Dunton (*Ralfsia ovata*, 2014:48) is omitted from the *The Arctic Guide*, perhaps because only specialists actually diving in Arctic waters are likely to encounter it.

Minor inconveniences confront users of the book, mostly resulting from the challenge of conserving printing space and costs while preserving its coverage of so many groups of biota. The illustrations do not always follow the same sequence as the species accounts, so readers may be momentarily frustrated at trying to connect one to the other. To overcome that frustration, future editions of the *The Arctic Guide* might add page references linking the species accounts in the text to the illustration(s) of each species.

Some environmental and ecological factors are changing faster in the Arctic than at lower latitudes, so that reliable general Arctic natural history observations and publications seem likely to remain at a premium. Meanwhile, specialists pursue detailed process studies of changes affecting the distribution of biota. Ideally, these parallel efforts will come together for periodic mutual updates. Such syntheses are challenging, but feasible, especially in the Arctic. As an illustration of the interaction of such efforts, Chester identifies the balsam poplar (*Populus balsamifera*) as the northernmost North American hardwood tree, and the range map accompanying her species account depicts general limits of where it is common (p. 453–454). Researchers document outlier stands of this especially vagile tree species. Hopkins (1996: p. xviii) cites a *P. balsamifera* clonal population reported from Eurasia by Russian observers in the vicinity of Provideniya, Chukotka. Saarela et al. (2012) explore details of this species' extralimital distributions north of the conventional tree line in Canada's Northwest Territories (NWT). Some of their poplar stands are clones or "ramets" from vegetatively propagated individual males or females of the dioecious tree (Zasada and Phipps, 1990), whereas other NWT outlier groves have grown from seed, so that female trees develop catkins that may experience long enough growing seasons to enable seed maturation and further reproductive propagation.

Extirpations of Arctic biota could prove more difficult to document and explain than stable or expanding distributions. In addition to changes in presence in or absence from a geographic area, plant species may exhibit changes in stature, abundance, and percent coverage within their distributions. Tape (2010), for example, examines changes in "shrubbiness" of Alaska's landscapes that are higher in altitude than, and north of, the tree line. Schwörer

et al. (2014) show that invasive species are at the threshold of afflicting Arctic Alaska. Future editions of *The Arctic Guide* might address examples of extirpations, invasive species, and instances of spreading pathogens and parasites.

It is difficult to imagine any observant residents, or hosts to visitors to any part of the circumpolar North, being without a copy of this book. High-latitude visitor destinations, guiding and tour operators, and cruise ships headed to the Far North should be glad of its availability now, and in favour of updated future editions.

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