earlier, within two to four years. The objective of his book is to present his case for why he believes this to be so, to explain why he believes the generally accepted estimates are flawed, and to highlight a potential new threat that it will trigger—the release of a "pulse" of methane currently held frozen in sub-sea permafrost off the Siberian coast, which he believes will lead to an additional 0.6˚C of global warming well before the middle of the century.

This may sound alarmist and indeed Wadhams, one of the world's leading authorities on sea ice, has been criticized several times in the past for crying wolf. In 2007 he predicted that the Arctic summer sea ice would be gone completely by 2013, and then in 2012 he forecast that it would be gone by 2016—yet 4.14 million km^2 of sea ice remained in the Arctic at the annual minimum in September 2016. So the reader needs to bear in mind that there is some inherent uncertainty in such forecasts, yet this book is an informative and useful discussion of the issues and summarizes a lot of the latest research findings, as it must when describing such a rapidly changing topic. These data largely speak for themselves; the charts Wadhams presents of Arctic ice volume and extent up to mid 2016, for example, clearly show a marked acceleration in reduction of sea ice extent in the last 10 years.

For those who are inclined to think that the melting of the Arctic summer sea ice is a mere curiosity in a remote part of the world (unlike the Antarctic or Greenland, it won't have any impact on global sea level since the ice is floating anyway), Wadhams explains the implications for global weather systems. The big difference between having 8 million km^2 of reflective ice at the top of the world replaced by much less reflective water (sea ice has an albedo of 0.6 and ocean water is 0.1) is that the Arctic will absorb twice as much radiant heat and therefore warm up faster once its reflective blanket of ice has gone. Wadhams details meteorologists' suggestions of ways in which such change may destabilize and weaken the polar jet stream, which in turn will cause more extreme weather events in the Northern Hemisphere.

A second and potentially more catastrophic effect of a warmer Arctic is the release of large quantities of methane currently held in permafrost beneath the ocean. Much of the Arctic Ocean on the Russian side is shallow and easily warmed, and Wadhams describes recent U.S.-Russian observations of vast plumes of methane bubbles already being released from beneath the East Siberian Shelf in water of 70 m depth. Once the summer sea ice completely disappears, the consequent warming of the Arctic may result in a pulse of about 50 gigatonnes of methane being released within a period of a few years, according to studies that Wadhams quotes. The reason this result is so significant is that methane is a much more powerful greenhouse gas than carbon dioxide, between 23 and 100 times more effective in its warming potential, depending how you calculate it. To put this in context, the book reports recent modeling work Wadhams has published with others suggesting that this methane release will result in an additional global warming of 0.6˚C by 2040. Such a methane pulse could therefore bring forward the date by which the global mean temperature exceeds 2˚C above pre-industrial levels by 15 to 35 years.

The book ends with a discussion of ongoing efforts to combat global warming, including a useful summary of the key provisions of the Paris Agreement. Since Wadhams argues that existing CO_2 levels are already high enough to cause unacceptable future warming, he maintains that the only way to avoid such warming is to not merely reduce future CO_2 emissions to zero, but actively remove what is already in the atmosphere using yet-to-be-developed technologies. How realistic this is obviously remains debatable.

Overall, this is a valuable book for anyone who wants up-to-date information on what is happening in the Arctic and how it may impact our climate in the coming decade or two. It has its shortcomings (notably reminiscences about fieldwork in the Arctic and lengthy criticisms of the IPCC and various funding bodies are a digression from the central message), but overall it is a well-written summary of the physics of sea ice, the greenhouse effect, and its importance to our climate. However, it is more suited to the scientifically literate than to the general public, since it assumes some familiarity with the physics of climate change, oceanography, and glaciology.

As well as being well illustrated throughout with clear charts and diagrams and 16 pages of colour photos, the book is exceptionally well documented, with every claim meticulously referenced. It will be useful ammunition for those arguing for more urgent action on climate change.

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"THE CARIBOU TASTE DIFFERENT NOW": INUIT ELDERS OBSERVE CLIMATE CHANGE. Edited by JOSÉ GÉRIN-LAJOIE, ALAIN CUERRIER, and LAURA SIEGWART COLLIER. Iqaluit: Nunavut Arctic College, 2016. ISBN 978-1-897568-39-2. 314 p., map, colour illus., appendix. Softbound. Cdn$39.95.

"The Caribou Taste Different Now" is a compelling reflection of the essence of this book. The objective of this work is to understand, through the words and experiences of Inuit Elders, how environmental changes across the Canadian Arctic are affecting tundra vegetation, with particular emphasis on the impacts of change on the ecology of tundra berry plants. As highlighted in the introduction, berries are important to wildlife, human health, and traditional ways of life in the North. Through a combination of field research and community-based monitoring, interviews, and mapping consultations, Elders

and local knowledge holders shared their observations of change and the impacts of these changes on their environment, community, and well-being. The editors represent a collaborative research team from the University of British Columbia, l'Université du Québec à Trois-Rivières, le Jardin botanique de Montréal, and Memorial University of Newfoundland. Over three years (2007–10), they inspired impressive involvement from 145 participants across eight communities in Nunavut (Kugluktuk, Baker Lake, Pond Inlet, Pangnirtung), Nunavik (Umiujaq, Kangiqsualujjuaq, Kangiqsujuaq), and Nunatsiavut (Nain), as well as 20 interpreters across all communities.

The book begins with a cross-community summary to highlight commonly observed environmental changes. Assessment of change was indicated where there was consensus from more than half the participants in each community. This overview is followed by community-specific summaries describing local perceptions and experiences of environmental change through a poignant collection of quotes from Elders in each community. There is a clear effort to ensure that Inuit knowledge and voices are presented with minimal manipulation beyond some minor clarifications. The observations are grouped according to six broad categories: berries, other plants, animals, seasons, climate and weather, and impacts on traditional ways of life. The Appendix also provides a helpful summary of findings in tabular format.

In her Foreword, Mary Simon (p. 2) praises this book as: "…a very useful guide—and I hope it is the beginning of recognizing the contribution Inuit have made and continue to make to the science of climate change." I couldn't agree more. It is a beginning and an important contribution to broader collective efforts on this front (e.g., Krupnik and Jolly, 2002; Nickels et al., 2005; Riewe and Oakes, 2006; Krupnik et al., 2010). The editors and research team have done a tremendous amount of careful work to ensure that diverse observations from across three Inuit regions (Nunavut, Nunavik, and Nunatsiavut) are represented. Sharing these community-specific observations through a collection of quotes is a valuable contribution to climate change research and one of the biggest strengths of this book. Another strength is that the book is fully bilingual, presenting the entire text in both English and Inuktitut in order to support a broad range of research, education, and decision-making initiatives. The Inuktitut dialect used broadly represents the Baffin Island region; however a goal for future editions is to include translations into other regional dialects.

If there are to be future editions, I encourage the editors to consider more explicitly addressing their goal that the "…local knowledge shared within this book will… contribute to local and regional adaptation strategies to address current and future environmental changes" (p. 9). It would have been helpful to have more dedicated discussion of such potential applications at the end of the community-specific sections, outlining some key recommendations to guide scientists and decision makers attempting to develop research, policy, or strategies in response to the observations shared. Further discussion of mapping, defining consensus, identifying "-miut groups," using Inuktitut terms, and clarifying the meaning of terms describing change would be particularly valuable to support such recommendations. First, I would like to have seen more incorporation of the mapping work referred to as part of the research methods, but not presented in the book. This work would help to enhance readers' understanding of local and regional trends related to geography and climate or weather conditions, as well as to highlight diverse uses of land, water, and ice based on cultural practices in particular areas. Second, this study defines "consensus" as sharing of a similar observation by more than 50% of respondents in a community. It would be valuable to have more discussion about how this threshold was determined, or what differences in observations (i.e., less than 50%, or no consensus) may tell us about use of different areas around communities based on local topography, hydrology, climate, or cultural practices.

This topic may also directly relate to my third suggestion of acknowledging "-miut groups," *-miut* being a suffix used in Inuktitut to indicate where someone or something is from (Bennett and Rowley, 2004). Accounting for the diversity of -miut groups living in a given community could help to identify the traditional homelands Elders may be using as reference points for observations of change. What may seem like a lack of consensus when looking at the community as a whole may in fact be strong consensus if speaking with families who identify with the same -miut groups (i.e., with traditional homelands they shared prior to moving into the permanent settlement). Fourth, some Inuktitut terms for plants, animals, ice conditions, and winds are provided in the quotes. For a future edition, however, it would be a valuable contribution to research and education to compile a glossary of such terms that includes regional dialectal variants.

Lastly, it would be helpful to have more discussion about the meaning of relative changes expressed in quotes as "later," "earlier," "increased," and "decreased," for example. What do these terms mean in each community? What comparison points and time frames were individuals using? For example, what does "a long time ago" or "recently" or "nowadays" or "these years" mean in the context of a given observation? This discussion would certainly be challenging, as time frameworks vary according to an individual's own life experiences. But having a general sense of this, based on collective experiences shared (as in the overview tables in the Appendix), would be helpful as an important point of intersection with other change assessments relevant to the community or region in question.

The book is laid out effectively for the bilingual format, with beautiful photos to provide context. The overview tables in the Appendix are a very helpful summary, as mentioned above. Some clarification may be warranted in the Appendix where are there are indications of change

but not the type of change (i.e., more or less, earlier or later), which makes the changes difficult to interpret. In addition, the seasonal changes refer to only four seasons, while many Inuit communities would characterize the year according to six seasons (Bennett and Rowley, 2004). Linking observations of change to appropriate months is challenging without knowing how local seasonal cycles are defined.

I highly recommend this book as an introduction to Inuit observations of climate change for students, educators, researchers, and decision makers. I also encourage more in-depth reading, personal engagement, and research in order to understand the context within which these observations are being shared. Inuit local ecological knowledge is indeed "…a unique reference in this era of rapid changes in the Arctic regions" (p. 302). This book alone cannot convey the depth and nuance of Elders' knowledge and wisdom, but the quotes shared are a powerful glimpse into a lifetime of experience with land-based lifestyles that can inspire many different ways of learning and responding to environmental change. The editors intend this book to be a useful legacy for communities, schools, and other institutions that wish to document the effects of climate change from an Inuit perspective:

> If we reflect on the important information we have gathered, we hope that political figures and leaders will listen carefully to what Inuit have shared with us, and embrace a true partnership with them in order to learn and understand more about these changes and how they have and will continue to transport the North. (p. 304)

I fully support these final thoughts from the editors and echo their encouragement, in the hope that by sitting together to have tea around kitchen tables, meeting tables, or Coleman stoves, we can build on this important foundation to encourage better northern research and leadership in Canada.

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FINDING FRANKLIN: THE UNTOLD STORY OF A 165-YEAR SEARCH. By RUSSELL A. POTTER. Montreal and Kingston: McGill-Queen's University Press, 2016. xvi + 262 pages, maps, b&w illus., notes, bib., index. Hardbound. US$34.95; Cdn$39.95. Also available as an eBook.

The fate of Sir John Franklin's 1845 Northwest Passage expedition has fascinated researchers and the public for more than 17 decades. The degree of interest has waxed and waned but never died away entirely and, as this book seeks to show, from the 1850s through the 1870s, and again from the 1920s through to the present, the area where the expedition disappeared has drawn searchers interested in learning more about its fate. Author Russell Potter, a professor of English at Rhode Island College, documents these searches, but his focus is at least as much on the searchers themselves as on the searches, and especially the effect on the searchers of the Franklin expedition story. Its effect on Potter himself is also documented; when he received a satellite phone call in April 1998 from the location where the Franklin survivors had come ashore exactly 150 years earlier, he said, "[I] almost thought I could hear the howling of the winds" (p. 166). Other sections are less autobiographical but equally revealing about the author. Potter is clearly fascinated with the portrayal of the Franklin story in the media, lovingly describing and editorializing on TV documentaries made about the story. He spends almost five pages describing scenes presented in the 2008 film *Passage* and when discussing a 1994 documentary, he characterizes Margaret Atwood's contribution as "prescient" and describes amateur historian Barry Ranford as the "craggy anchor" of the film (p. 160).

But the primary thrust of the book is to describe the searches in the vicinity of King William Island. The book's early chapters are named after and revolve around themes that have pervaded the Franklin search story over the years (e.g., Bones; Papers; Provisions; Maps). Several of the book's central chapters each deal with a single searcher, and these names (Rae, Hall, Schwatka, Ranford, and Woodman) will be familiar to anyone who has read the voluminous Franklin literature. The book closes with more