Arctic may be a recent development. However, there is little reference to the human security literature that exists in the field, which is an unfortunate limitation of the book's argument.

Despite the fact that the Arctic is not immune from the wider trends in geopolitics and international security, Heininin et al. provide unique insight into the benefits of broadening our understanding of security in a general sense and of applying a humancentric approach to security in the Arctic.

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BAFFIN ISLAND: FIELD RESEARCH AND HIGH ARCTIC ADVENTURE, 1961–1967. By JACK D. IVES. Calgary, Alberta: University of Calgary Press, 2016. ISBN 9781552388297. Copublished with the Arctic Institute of North America, Northern Lights Series No. 18. xii + 234 p., maps, b&w and colour illus., notes, index. Softbound. Cdn\$34.95. Also available as an ePub and for mobile.

The author of Baffin Island, Jack D. Ives, arrived in Canada from Britain in 1954 and enrolled as a graduate student in the Geography Department at McGill University. For someone with a burning interest in Arctic and sub-Arctic research, the timing was auspicious, and McGill University was the place to be. In 1956 Jack Ives received his PhD, followed by his appointment in 1957 as the first director of the McGill Subarctic Research Laboratory in Schefferville, Quebec. The 1950s and 1960s, and I would add the 1970s, were indeed the "golden age" of Canadian federal research as well as federally supported research. As stated in the book's introduction by Peter Adams, one important objective of government and university institutions in this golden age was "to produce graduates trained for polar research" (p. x). In the early 1950s, the Canadian Defense Research Board and the Geological Survey of Canada had launched a major multidisciplinary research project in the High Arctic, and in 1958 the federal government founded the Polar Continental Shelf Project, to this day a crucially important logistic support organization for researchers working in the Canadian Arctic. In 1960, Jack Ives accepted a senior position in the Geographical Branch, Department of Energy, Mines and Resources, Canada. That year Peter Adams was a member of a party heading north to establish the McGill Arctic Research Station on Axel Heiberg Island, while members of the Arctic Institute of North America (AINA), then headquartered at McGill University, established a research station on Devon Island.

As Ives points out in Chapter 1, Baffin Island had been the focus of pioneering investigations going back to the

occasional visitations of Western explorers, whalers, and eventually scientists. At the time of Jack Ives' arrival at McGill, he was undoubtedly exposed to the research projects carried out on Baffin Island, including the multidisciplinary expedition to Pangnirtung Pass in 1953 under the leadership of AINA director Patrick D. Baird. On two earlier expeditions to Baffin Island, Baird had named the Barnes Ice Cap, thought to be a remnant of the Laurentide Ice Sheet. In the mid-1950s, the Canadian government completed air photo coverage of Canada, a remarkably useful way to analyze regions as part of pre-field work planning. In 1956 and 1957, as a member of a small AINA team, Jack Ives was contracted to study the air photos and produce a manuscript for a new edition of Pilot of Arctic Canada. As part of the air photo interpretation, he was asked to study the Baffin Island coastline, among other areas. A sneak peek farther inland brought him over the unknown landscape of the Barnes Ice Cap. Three photos in particular caught his attention, providing the focus for future research plans on Baffin Island.

The completion of the air photo project in 1957 coincided with the establishment of the Distant Early Warning Line (DEW Line), a series of radar and weather stations stretching from Alaska to Iceland, which offered a great opportunity for logistic and communication support for field projects located in their vicinity. The location of the Fox-2 DEW Line station on Baffin Island was to greatly enhance the eventual Barnes Ice Cap work of Jack Ives. A broad research objective of the federal Geographical Branch was the investigation of the "landscape" of Baffin Island. As assistant director of the Geographical Branch, Jack Ives could return to the three air photo images he had noticed earlier and focus his efforts on the glaciological history of the Barnes Ice Cap, a long-term study that would gradually expand in size and scientific coverage.

In chapter 2, Ives provides an excellent account of the all-important 1961 reconnaissance season, which involved the investigation of the three chosen areas of the Barnes Ice Cap. As with most initial field seasons in remote regions, there was much to learn, particularly about the capriciousness of weather and air transport. The first field camp choice, which Ives named Rimrock Lake, was reached with a chartered single-engine de Havilland Otter on skis, using the DEW Line site (Fox-2) as the nearest contact location and supply centre, courtesy of the station chief, Lou Riccaboni. The first experience with the Single Otter was occasionally tense but successful. The second air support, a Cessna on floats, was less successful. There were close calls and downright drama involving a rescue by a chartered Lamb Airways Norseman.

Following the successful reconnaissance season, the field plans were expanded and new people joined the team. Chapters 3 and 4 cover the 1962 field season, during which one of many challenging objectives was to extract ice cores and transport the frozen cores to Montreal and Stockholm. The reader will enjoy this tale of adversity and success—and the eating of a lot of ice cream as part

of the transportation process. In the 1963 season (chapter 5), the field work expanded both geographically and in numbers of senior researchers and students, with a total of 17 participants. Having research parties located in small separate camps, often significantly far apart, easily results in complications of various magnitudes. Transportation between the camps was at first maintained by a Single Otter on skis and two Beaver float planes in the open water season. Again there were several close calls and plenty of drama. However, the season was successful—particularly the work of John Andrews and Pat Weber and students in their use of lichenometric techniques to date the glacial retreat of the Barnes Ice Cap.

In the fall of 1963, Jack Ives accepted an invitation to serve as acting director of the Geographical Branch. From then on the combination of administrative duties and field research would be a complicated business. It was also a time of difficult administrative maneuvers and federal departmental power plays. The details of this tug-of-war are not described in this publication. Jack Ives knew that his future participation in the field would be restricted. Fortunately he also knew the scientist who would be the "outstanding choice for expedition leader" (p. 77): Dr. Olav H. Løken, whose credentials were most impressive.

In chapters 6 through 9, Ives continues his remarkable narrative, blending accounts of scientific accomplishments with breathtaking tales of obstacles, hardships, and adventures experienced by researchers working in remote and mostly unknown regions. The project objectives kept expanding and now included comparative glaciological fieldwork in the Rocky Mountains and the Coast Ranges. On the east coast of Baffin Island, a field station was established at the head of Inugsuin Fiord. Olav Løken began the study of a series of sedimentary successions and the dating of marine fossils along the coast. During the three final field seasons, the use of a helicopter with an exceptional pilot greatly improved access to difficultto-reach areas, enabling Ives to examine mountaintops for evidence of former glaciations and nunataks. The helicopter also served as an excellent platform for aerial photography by the author, resulting in the magnificent photographs that illustrate the text.

For Jack Ives, the winter of 1966–67 involved many, often tense, discussions about the future of the Geographical Branch. In the middle of these administrative considerations, the graduate dean of the University of Colorado invited Jack Ives to Boulder to consider becoming director of the university's Institute of Arctic and Alpine Research (INSTAAR). After the announcement a few months later that the federal Geographical Branch was to be disbanded and its various units assigned to separate areas of the federal government, Jack Ives quickly decided to head to Boulder.

Perhaps fittingly, the 1967 Geographical Branch field season was also the most ambitious, involving numerous field parties, a DC-3 on ski-wheels, helicopters, a Cessna floatplane, and submarine contour mapping along the east coast of Baffin Island using the CCGS *d'Iberville*. With the author's move to INSTAAR, Baffin Island research became a major objective of that institute for many years under the leadership of John Andrews.

Chapter 10 provides a brief overview of the careers and portraits of many of the field assistants and staff who participated in the Geographical Branch Baffin Island Research program. Chapter 11 is an excellent summation and assessment of the seven-year program as seen from a broad geographical perspective, followed by a series of photographs of glaciers and glacial landforms with informative subtexts. The nine pages of chapter notes are not to be missed.

For anyone interested in glacial geomorphology and glaciology, this volume definitively belongs on the bookshelf. For anyone interested in Arctic research in general, including the challenges confronting field researchers working in remote regions, the book is a fascinating and informative read, beautifully illustrated and highly recommended.

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