is the setting to keep in mind when reading the account of the field research discussed in this book.

Svalbard is governed by Norway as a result of the Svalbard Treaty of 1920, which came into force in 1925, and is an 'open treaty' to other countries, numbering about 41 in 2001. Poland is one of those countries, and within the last decades, only Norway, Poland, and Russia have had permanent research stations in Spitsbergen, with other countries present in various locations conducting research. The Polish settlement on the north side of Hornsund has been there since the International Geophysical Year of 1957–1958, and provided the logistics necessary for the three investigators from Jagiellonian University who did the fieldwork on which this book is based. Although the time period for fieldwork was relatively short (7–23 August 2005), and considering the usual weather conditions in this area (mostly wet), these men gathered a great deal of information relating to the changes in glacier extent, landform development, wildlife, and vegetation that accompanied climatic changes over the past century or so.

The area of study is relatively small. The programme started on the eastern side of Sørkappland, where the ship from the Polish station transported the three scientists, who then moved on foot northward to the head of a fjord and then west across an approximately 10 km-expanse of glaciers to reach the head of Hornsund, where the ship evacuated them. The chapters in the book include details on the geographical setting, weather conditions, landscape elements (1900–2005), glacial recession and shoreline changes, animal colonisation (primarily birds and mammals), flora, soil development, mapping methods, and changes in the landscape since 1900. The text spans pages 7 through 62, in double-column format with the left side of each page in Polish and the right side in English. References follow on two pages. The 22 plates that follow the references include a general location map of the field area at a scale of 1 inch to 5 km, numerous color photographs of the area, examples of birds and vegetation types, and geomorphic examples of the shorelines, cliffs, and related features illustrated in maps and listed in a descriptive table. Of the 14 species of birds observed, only six breed locally, in a narrow expanse of the coastline. Five or six taxons of mosses, 15 species of vascular plants, and 30 species of lichens were found, some of which are illustrated in color photos.

The regional map and sketch maps show the recession of glaciers in Hambergbukta fjord (east side of Sørkappland) and Hornsund fjord in the years 1900, 1936, 1990, and 2005, with major glacier retreats in each year. Early studies were factors in measurements from those years, and satellite imagery and GPS measurements more recently will provide a more detailed and continuing record of what these glaciers do through time. The pass separating Sørkappland on the south and Torrell Land to the north is a good example of those changes. It is glacier-covered (Hambergbreen and Hornbreen), and in 1900 was more than 30 km in length (east to west), and had a highest elevation of more than 300 meters above sea level. By 2005, it was 7.5 km long, with a high point 180 m asl, a dramatic change in 105 years. It is uncertain whether the glacier-covered pass is on bedrock above or below sea level, but it can be assumed that if recession of the major glaciers that comprise the pass continues, an open-water channel might occur from Hornsund on the west, transforming Sørkappland into an island, or become separated from the rest of Spitsbergen by a low, narrow isthmus (up to 3 km wide and a few dozen metres high) (page 61). Although not mentioned in the text, crustal rebound as the weight of ice is removed might make the difference in this scenario as it develops. The ocean currents on either side, consisting of the warmer waters of the Greenland Sea on the west, and the colder waters of the Barents Sea on the east, could then interact to change the dynamics of much of what is discussed and recorded in this book. The authors have thus provided a snapshot of conditions as of August 2005 that can be compared with changes predicted for the next 40 years or more to show the vulnerability that applies to the environment, landscape, surrounding waters, and flora and fauna. The area of only 12.72 km$^2$ that was mapped in 2005 will become a baseline for changes in this part of the archipelago and the North Atlantic. This is a major attraction of this useful documentary account of what might be attributed to a warming planet. The book is recommended for physical and biological scientists who maintain interest in the subject, as well as the general public and research libraries. (John Splettstoesser, PO Box 515, Waconia, Minnesota 55387, USA.)

**EIGHT MEN IN A CRATE: THE ORDEAL OF THE ADVANCE PARTY OF THE TRANS-ANTARCTIC EXPEDITION 1955–1957**. Anthea Arnold. 2007. Norwich: Erskine Press, Bluntisham: Bluntisham Books. 133 p, illustrated, soft cover. ISBN 978-1-85297-095-6. £12.75.
doi:10.1017/S0032247408007596

The Commonwealth Trans-Antarctic expedition of 1955–58 was unusual among such ventures in that it employed an advance party. The main duty of this was, over the winter of 1956, to prepare a base camp for the main expedition, the camp to be named after Sir Ernest Shackleton, close to Vahsel Bay in the Weddell Sea. The party had the additional tasks of conducting scientific observations and of seeking possible routes southwards for the main party when it arrived a year later. This included the laying down of depots of stores. The question of why this departure from usual practice was deemed necessary is addressed in the preface of this work. The author states that it enabled Vivian Fuchs, the leader of the expedition, who accompanied the advance party on its voyage south in *Theron*, and who, after depositing the men and a large volume of stores at the site, returned northwards in that vessel, to complete some useful preliminary tasks. These included looking 'at the

ice shelf,' finding 'a camp site,' and scouting 'in an aircraft to look for an inland route'. . .'all before the main commitment was made.' The author raises the question of whether this was 'over-cautious leadership' and notes that it involved 'unnecessary cost and duplication.' And had 'the expedition been mounted in one strong bite — rather than a strong one preceded by a weak and tentative one — the eight unfortunate Advance Party members would not have had to endure the grim lean winter of 1956.'

This book is the first account of the group's 'struggle to survive at Shackleton Base, between February 1956 and January 1957' and goes some way towards filling an important gap in the historiography of the Commonwealth Trans-Antarctic Expedition. The primary source upon which it is based is the diary of Rainer Goldsmith, 'medical officer, veterinary surgeon and dentist' of the party. At the time of his appointment to the expedition, Goldsmith had no experience of exploration. The author suggests that this detachment enabled him to be more objective in his 'questioning of the effectiveness of the Expedition and Advance Party leadership' than would have been the case if he were 'steeped in the ethos of the British gentleman-explorer, where [sic] "roughing it" was seen as noble and "comfort" as suspect.' There is much criticism of Fuchs and in particular of his choice of route through the Weddell Sea, which seriously delayed *Theron*, causing her to arrive at the selected site very late in the season and resulting in 'over hasty and chaotic unloading.' This left the advance party with 'no proper protection and almost nothing done, so condemning them to a winter of purgatory.'

The outline of the story is simply told. The advance party comprised eight men, of whom no fewer than three were meteorologists. The leader was K.V. Blaiklock, who had had the experience of four winters in the Antarctic. *Theron* departed from London on 14 November 1955 and, travelling via the Cape Verde Islands and Montevideo, arrived at Grytviken on 16 December. Leaving South Georgia on 20 December and after a difficult passage through the Weddell Sea, *Theron* arrived at a suitable site — 'a fringe of bay ice, to which the ship could be made fast backed by a gently rising slope' — for the base camp on 29 January 1956. Unloading proceeded apace and this operation did not escape Goldsmith's critical eye. 'They blundered on without any real direction.' 'The lack of organisation caused chaos.' 'No one seemed to be fully in charge.' And so forth. The stores were deposited on the bay ice and, due to water flowing over them, much was engulfed. By 5 February, sea ice was approaching and there was danger of the ship being trapped, so the members of the advance party left the ship just as the last of the cargo was being unloaded and 'all semblance of order broke down.' In the event, the ice receded and so the ship was able to stay a little longer, enabling reconnaissance flights to be conducted by the aircraft carried on board. *Theron* finally left on 7 February, leaving the advance party alone.

The 'crate' in the title was the container for a sno-cat, in which the party lived until the expedition's prefabricated hut was sufficiently constructed as to be habitable. This however, was not until 20 September, and so for several months the party was confined, for daily living, to a space 19 feet (5.79 m) long, 9 feet (2.74 m) wide, and 8 feet (2.44 m) high. The men slept in tents pitched around the crate. Over the winter, when conditions were suitable, which they rarely were, the party laboured on constructing the hut, and it soon appeared that its design was 'over-elaborate.' For example, each truss comprised 'twenty pieces of wood, marked with letters and held together by twenty bolts and four enormous plates,' and, moreover, although the wood had been pre-drilled, much of it had warped in the passage through the tropics and the holes did not line up. In addition, the bolts were of varying lengths and there were no spares. That the hut was habitable after such a relatively short period of time, and in such conditions, speaks volumes for the dedication of the party.

Daily living, however, presented inevitable difficulties, and Goldsmith recorded several personality clashes, although none of them had a deleterious effect on the progress of the work. In addition to hut construction this included keeping the dogs in trim, maintaining the vehicles — a time consuming task as, for example, the tracks of the sno-cat had no fewer than 236 grease nipples — and moving of stores from the sea ice up to the hut site. Many of these stores, including supplies of fuel and a boat, were lost when the ice on which they were resting broke off. Eventually the hut was rendered habitable, although it was not complete, and they moved in.

This enabled the party to proceed with the task of undertaking reconnaissance journeys, and the opportunity of getting away from the base was, understandably, greeted with enthusiasm. The first journeys were to Vahsel Bay and were intended to get the dogs fit and to secure seals for their food. Then a depot was established at a distance of 50 miles (80 km) from Shackleton. The most substantial journey completed was to what became known as the Theron Mountains, with 360 miles (580 km) covered in 20 days.

The party had radio communication with the outside world for much of their stay at the base. On 30 December there was a visit by a party from USS *Staten Island*, from which an IGY base some 50 miles from Shackleton was being established, and the vessel carrying the main party of the Commonwealth expedition, *Magga Dan*, arrived on 14 January 1957. Relations with Fuchs, who was 'his usual brusque self' continued poor. Apparently 'he said some very uncomplimentary things,' about the work of the advance party 'when he had time to say anything at all.'

Goldsmith, who was one of the very few members of the advance party not to participate in the main expedition or to be assigned to work in other Antarctic bases, returned home in *Magga Dan*, and undertook an academic career.

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Sufficient has been written in this review to indicate the interest and usefulness of this book. It comprises large sections of prose from the author based upon Goldsmith's diary together with shorter direct quotations from that document. The problem with this approach is that in the former part of the text it is not at all clear how much of the writing, and most importantly, what proportion of the opinions expressed, are those of the author and how much derives directly from the diary. This is unsatisfactory and in this reviewer's opinion it would have been much better if the diary had been printed *in toto* with the author inserting such editorial apparatus as she considered necessary. In particular, this comment is of importance in considering the question of the privations suffered by the party. The author stresses this several times and quotes Fuchs that 'apart from Scott's marooned northern party theirs was the most severe ordeal in the history of Antarctic exploration.' This reviewer is second to none in his admiration of the work of the advance party, as revealed in this book, but surely that is overstating the case more than somewhat.

The presentation of the book is attractive. There are some excellent photographs and interesting plans, of, for example, the interior of the crate itself. Everyone with interests in the twentieth century history of the Antarctic should read this book. (Ian R. Stone, Scott Polar Research Institute, University of Cambridge, Lensfield Rd., Cambridge CB2 1ER.)

**DRIFT STATION: ARCTIC OUTPOSTS OF SUPER-POWER SCIENCE**. William F. Althoff. 2007. Dulles, VA: Potomac Books. xiv + 355 p, illustrated, hard cover. ISBN 1-57488-771-8. $US39.95.
doi:10.1017/S0032247408007602

In the summer of 2006, on the helicopter deck of the Russian icebreaker *Yamal*, I took a picture of two Russians. The nuclear vessel had just ploughed its way to the North Pole, and the expressions on the faces of the Russians revealed the emotional intensity of their pride in the power and skill of Russian engineering, navigation, and ice-piloting. This is our realm, their expressions said, because we can gain the top of the world at will.

Russia has been reaching the North Pole more or less at will since 1937 — almost as long now as the whole history of the Soviet period — so a feeling of competence in high Arctic operations is well-justified. In recent months, as during the Stalin era, Russian claims to the north are again rattling the west. So this history of scientific drift stations — with its central focus on Russian polar operations and published at a moment in world history that feels more and more like cold war II — would seem destined to command a wide audience in academic, military, and political circles. Unfortunately, what could have been a valuable introduction to an important chapter in the history of Arctic exploration and a primer on Russian–U.S. scientific competition in the Arctic, is undone by a writing style so obtuse as to create a work of near-insensibility.

The history follows the tracks of drift stations across the polar basin from the Soviet *Severnyy Polyus 1* (SP-1, or North Pole 1) station in 1937 to recent millennial Russian attempts to regenerate their Arctic research programme after the long bad decade of the 1990s. The obligatory introduction to polar exploration history is written as classic heroic materialism, understandable since the bibliography does not reveal any secondary sources on the subject published in the last 40 years. Expeditions are 'brilliantly executed,' engineers like Andrei N. Tupolev are invariably 'geniuses,' and the *SP-1* hut at St Petersburg's Russian State Museum of the Arctic and Antarctic is a 'holy relic.' The author categorises the press releases issued from Moscow during the *SP-1* mission as 'Stalinist-style prose, a mélange of bombast, information, and rhetorical excess' (page 47). It is as good a description as any of the book itself.

The historical background largely begins and ends with Nansen and the *Fram* expedition, and even this abbreviated chronology stumbles. One would believe that no oceanographic research had been done in the north prior to the arrival of Nansen. *Fram* is 'the first vessel designed for scientific sailing' (page 8), although any number of legitimate claimants preceded *Fram*, including USS *Albatross* (1882) and Leigh Smith's *Eira* (1880). *Eira* was also 25 years ahead of *Fram* in sounding the Arctic Ocean and discovering temperature inversion layers in the deep ocean there.

The author delineates the Russian Arctic sector as a triangle formed by the extreme northeastern and northwestern points of the country with the North Pole at the top, then asserts that the 'seasonal Norwegian settlements on Franz Josef Land [Zemlya Frantsa-Iosifa] lay beyond this claim' (page 16). Franz Josef Land, of course, lies nearly smack in the middle of the Russian Arctic sector and, in any case, Norway was not able to plant a settlement there before the Soviet Union raised their flag on Hooker Island in the summer of 1929 (not 1928, as written here).

The text is sprinkled with general observations followed by simplistic aphorisms. For example: 'Storms are frequent in the Franz Josef group; man has to abide his chances' (page 40). Well, yes, of course he does, and not just because there are a lot of storms in Franz Josef Land. Synonyms are given a hard workout throughout, while the antique vocabulary ('moil,' 'proffered,' 'drear'), passive writing, and purple sentences ('Theirs proved a trail to break the heart,' or 'Thus was parted the curtain of mystery for that far sea') is more appropriate to 1907 than 2007.

Ice, ships, and aircraft are personified (vessels become 'reckless' and 'purchase sure destruction'), while people and places are introduced with little regard for their identity (Valeriy Chkalov appears first only as 'Chkalov' (page 26)), or biography (Nansen appears to have won his