The Exploration of the Antarctic Peninsula

Simon Fraser

Photographs 32— 39

The mountains of Antarctica are about as remote and as beautiful as any in the world and reach their highest elevation at 5140m in the Sentinel Range of the Ellsworth Mountains. The Antarctic Peninsula, the second longest mountain chain in Antarctica, points like a crooked finger towards Cape Horn across the stormy seas of Drake Passage. Known as Graham Land in the north and Palmer Land in the south, the Peninsula and its rugged offshore islands contain a host of magnificent peaks that stretch southwards for hundreds of kilometers to the bleak southern plateaus where the Peninsula merges with the vast desert interior of continental Antarctica. These elusive, glittering prizes are isolated by ocean, tempest and sheer remoteness from the attentions of the mountaineering world. It was in the 1977/8 southern summer that H. W. Tilman and his companions disappeared without trace in the South Atlantic *en route* for Smith Island in the South Shetlands, with its impressive, mysterious virgin peak of 2143m. Apart from the rare visits of yachtsmen-mountaineers (albeit growing in number), the few who are fortunate enough to work and travel in the area are generally employees of official scientific organisations such as the British Antarctic Survey (BAS), who spend up to 2½ years at Faraday or Rothera, the two British bases presently operational in the Peninsula area. There are 12 abandoned bases that have been used at different periods over the last 40 years and one southern station at Fossil Bluff that is opened during the summer months as an advance base for aircraft operations further south, as well as three bases away from the Peninsula at Halley, Signy Island and Bird Island. The USA, USSR, Poland, Chile and Argentina also maintain bases in the area, though today Rothera is the only base which supports extensive field travel in the Peninsula, with aircraft supported sledging parties carrying out fieldwork for the BAS earth sciences programme.

The unpredictable weather can be of Patagonian severity and for much of the time the Peninsula hides beneath a mantle of cloud, swept by implacable winds and snowstorms, an inhospitable and unyielding wilderness. Fine days reveal the mountainous coastal islands, silent fjords and the huge escarpment of the plateau edge, which drops sheer in many places from the 2000m high spine of the Peninsula. On these serene, windless days it seems a peaceful, gentle world of unparalleled beauty, with an ambience of the most vivid yet delicate hues and colours. And yet for all its exquisite loveliness on these rare days of calm, it remains an austere, cruel and forbidding land, where man is merely a puny visitor, dwarfed by the scale and dependent for his comfort and very survival on an expensive logistical package. Those who belong there are the specially evolved marine-based mammals, the seals, penguins and sea-birds that live in the nutrition-rich Southern Ocean. The frigid continent is almost devoid of plant and

32 Pinero Island and Mercanton Heights across Laubeuf Fjord from Rothera

Photo: Simon Fraser

33 Dog team resting on sea-ice south of Pourquoi Pas Island

Photo: Nigel Young

animal life, possessing only a few lichens and mosses, two primitive grass species, and some tiny flightless insects which somehow contrive to exist. No human being set eyes on the continent until 1820.

Before 1819 nothing was known of the region south of Cape Horn except that the ocean was exceptionally stormy and cold, the home of vast icebergs drifting from the unexplored southern wastes. Captain Cook's second voyage (1772-5) circumnavigated the continent, twice crossing the Antarctic circle and reaching 71°10′S, but he was repeatedly prevented from getting further south and discovering land by the extensive, impenetrable pack-ice which he believed 'extended quite to the Pole'. Thus began the 'Maritime Era' in Antarctic history with competitive, tough sealers and whalemen attracted to the Southern Ocean. However in 1819 the Russians despatched Captain Bellingshausen and two vessels to supplement Cook's voyage by sailing around the continent in high southern latitudes. Following the edge of the pack, Bellingshausen reached his furthest south in January 1821 and discovered Peter I Island, the first land ever seen south of the Antarctic circle, in 68°57′S, 90°46′W. A week later he sighted the lofty mountains of Alexander Island on a perfect clear day, 65 km to the south. Meanwhile a trader between Buenos Aires and Valparaiso, Captain William Smith, had discovered land in latitude 60° which he called South Shetland. Edward Bransfield later took Smith as pilot and in 1820 surveyed what were found to be the islands of South Shetland. The name Bransfield Strait was given to the channel he discovered separating the islands from the Peninsula mainland. Soon these islands were populated by American sealers who based themselves at the crater harbour of Deception Island, and Palmer Land is the name derived from one of these American sealers, Nathaniel Palmer, who with the British sealer George Powell discovered the South Orkney Islands whilst pursuing the search for new sealing grounds. Then in 1823, James Weddell made a great southern voyage to 74°15′S, 34°W in what is now the Weddell Sea which has never since been known to be so free of ice as in that remarkably ice-free year.

The captains employed by the London shipowners, the Enderby brothers, were encouraged to combine geographical discovery with trade and sealing. One such, John Biscoe, circumnavigated the continent in 1830-2 and in February 1832 he discovered Adelaide Island and the Biscoe Islands. He named the mainland Graham Land after the First Lord of the Admiralty. There being no fur seals on these coasts, Biscoe sailed northwards again.

Between 1837 and 1843, America, France and Britain all sent expeditions for purposes of research and discovery. The French under Captain Dumont d'Urville and the British under Captain James Clark Ross explored the islands off the NE coast of the Peninsula, such as Joinville and James Ross Islands, whilst the Americans worked to the west of the Bellingshausen Sea but failed to discover any land due to heavy ice conditions. Sealing expeditions continued up to the end of the century and after the Arctic whaling industry failed in 1892 various voyages were made in search of whales and led to the discovery of the extensive Larsen ice-shelf on the E coast of the Peninsula in 1893, named after the Norwegian captain.

The International Geographical Congress in London in 1895 declared that the exploration of the Antarctic was the most important geographical v

34 Aerial view over Pourquoi Pas Island north to Arrowsmith Peninsula on the W coast of Graham Land. *Photo: Simon Fraser*

35 *View from Rothera Point across ice floes in Laubeuf Fjord to the 1500m peaks of Pourquoi Pas Island*

Photo: Simon Fraser

done. As a result a Belgian expedition commanded by Captain Adrien de Gerlache, with Roald Amundsen as mate, sailed in the 'Belgica' in 1898 and made extensive discoveries along the W coast of the Antarctic Peninsula and commenced the first exploration of the continent itself. But the ship was beset by ice for 13 months before being released and thus they became the first wintering party in Antarctica.

The early years of this century became the 'Heroic Era' and today the names of Scott, Shackleton, Amundsen and Mawson are synonymous with the continent where their epic journeys took place. Simultaneously, serious scientific research was being launched and geographical discovery was no longer the sole motivation for polar exploration. The first purely scientific undertaking sailed from Sweden in 1901, led by Dr Otto Nordenskjöld. The party wintered on Snow Hill Island in 1902 but the expedition turned into one of the great epics of polar exploration for the relief ship could not reach them in 1903 and was crushed in the pack-ice and abandoned. The crew managed to reach Paulet Island where they survived the winter. Another party had been landed at Hope Bay in order to sledge to Snow Hill to bring Nordenskjöld's party out overland, whilst the relief ship was continuing the attempts to get through the pack. In the end all three groups spent the winter isolated and unaware of each others' fate and were finally rescued by an Argentine ship. The expedition had however explored the E side of Graham Land as far as the Antarctic circle and unravelled the complex geography of the islands and channels at the NE end of the Peninsula.

The next major contribution to the charts of the W coast of the Peninsula was made by two French expeditions in 1903-5 and 1908-10 led by Dr Jean Charcot. Extensive parts of the W coast were surveyed and scientific programmes carried out, and in the second expedition in the ship 'Pourquoi Pas?' he discovered Marguerite Bay and sailed close to Alexander Island, with a miraculous escape when a severe storm drove the ship out of control through the unknown rocks and islands known today as the Fauré Islands. Meanwhile, expeditions such as the 1902-4 Scottish National Antarctic Expedition under Dr W S Bruce were exploring the coasts of the Weddell Sea.

One of the most famous expeditions of the Heroic Era was Sir Ernest Shackleton's Trans-Antarctic Expedition 1914-6. The crossing was never accomplished because his ship the 'Endurance' was beset by ice and drifted for 281 days before she was crushed and sank into the Weddell Sea. For a further 5½ months the ship's company survived on the ice floes before reaching open water and sailing to Elephant Island. The story of Shackleton's epic voyage across the Southern Ocean to South Georgia in an open boat and then his crossing of that rugged and mountainous island needs no embellishment. The expedition failed in its objective but remains one of the greatest feats of survival in the history of exploration.

Between the World Wars, biological studies were initiated in the Southern Ocean and the Discovery Investigations continued as a major research project until the Second World War. There were also numerous short-term expeditions in the Falkland Islands Dependencies and aircraft were used in the Peninsula for the first time in 1928. In 1935 Lincoln Ellsworth discovered the highest mountains in the Antarctic when he achieved his trans-Antarctic flight from

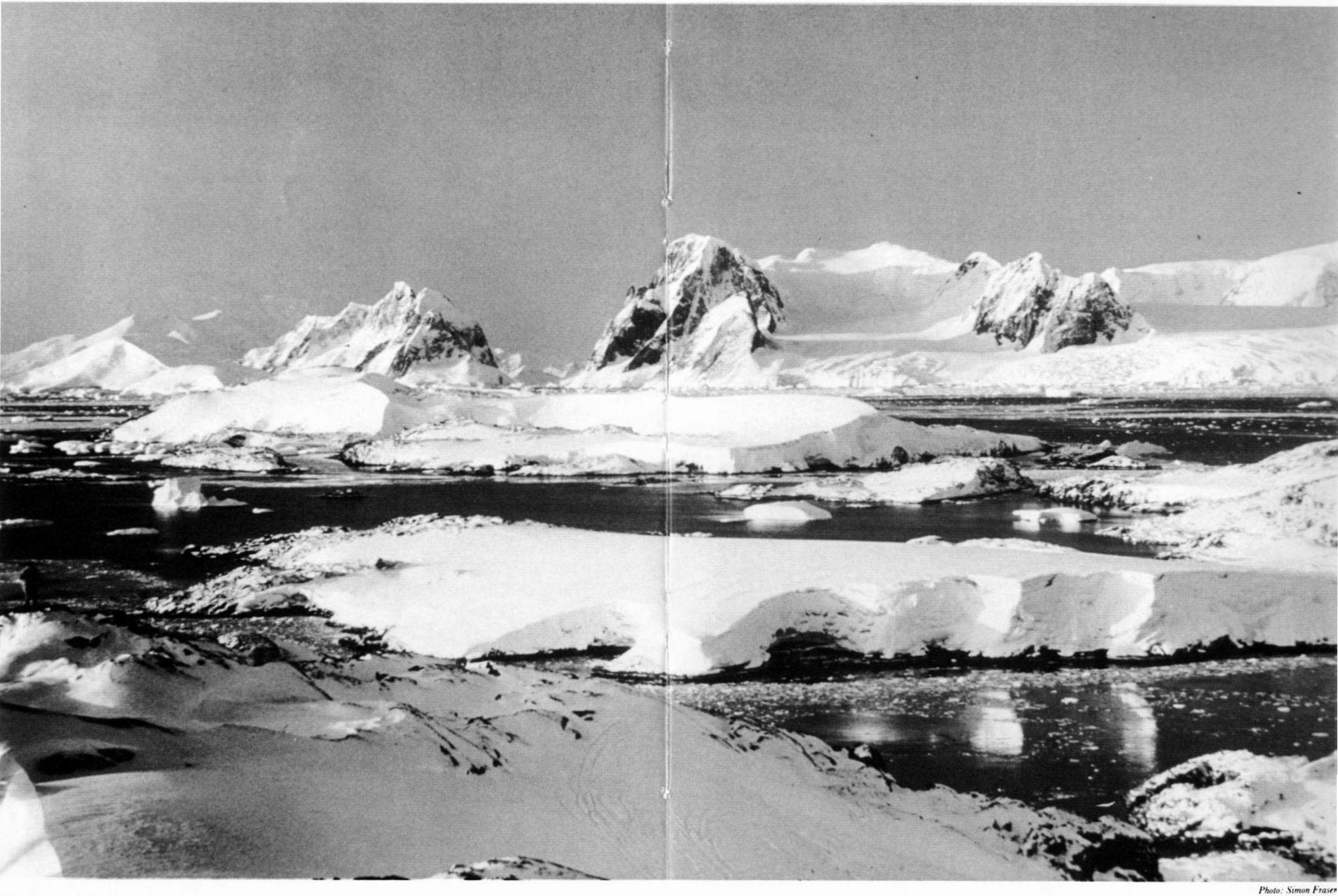
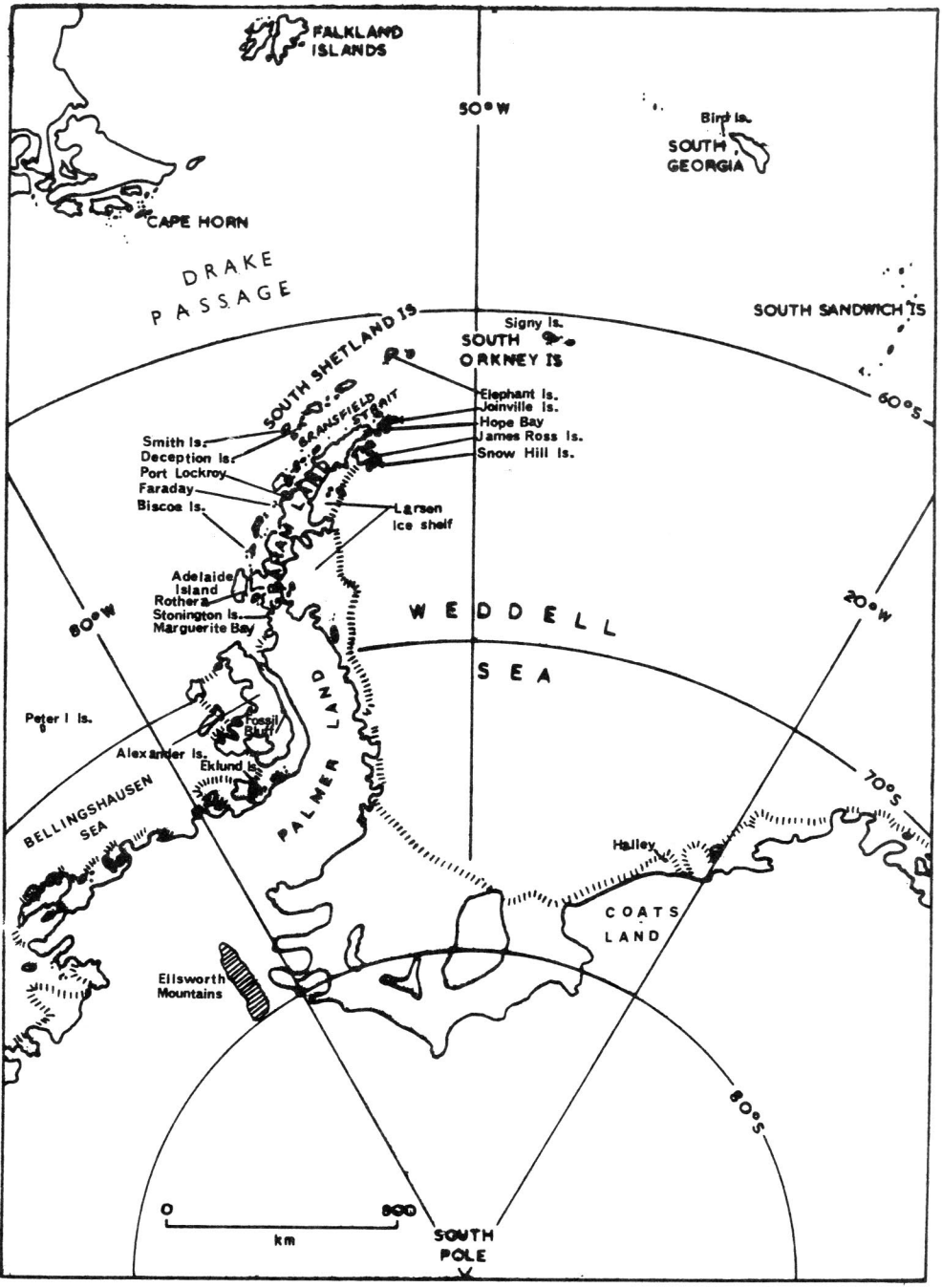


Photo: Simon Fraser

36 View north from Argentine Islands to Lemaire Channel and Mount Scott on the W coast of Graham Land


FALKLAND ISLANDS
50°W
Bird Is.
SOUTH GEORGIA
CAPE HORN
DRAKE PASSAGE
SOUTH SANDWICH IS
Signy Is.
SOUTH ORKNEY IS
SOUTH SHETLAND IS
BRANSFIELD STRAIT
Elephant Is.
Joinville Is.
Hope Bay
James Ross Is.
Snow Hill Is.
Smith Is.
Deception Is.
Port Lockroy
Faraday
Biscoe Is.
Larsen Ice shelf
60°S
Adelaide Island
Rothera
Stonington Is.
Marguerite Bay
80°W
20°W
WEDDELL SEA
Peter I Is.
Fossil Bluff
Alexander Is.
Eklund Is.
PALMER LAND
BELLINGSHAUSEN SEA
70°S
Halley
COATS LAND
Ellsworth Mountains
80°S
0
800
km
SOUTH POLE

37 Mount Liotard (c. 2500m) and S Adelaide Island across Ryder Bay from Rothera Point *Photo: Simon Fraser*

Graham Land to the Ross Sea. The British Graham Land Expedition 1934-7 (BGLE) made the first significant contribution to geographical knowledge on land in the Peninsula since Nordenskjöld's expedition. They spent the first winter at the Argentine Islands (now the site of Faraday) and the second winter at the Debenham Islands in Marguerite Bay (now the site of the Argentine base San Martin), and used aircraft flights and dog-sledge journeys to open up new areas. Some of the work was extended by the United States Antarctic Service Expedition 1939-41 which wintered at Stonington Island, later to become the site of one of the main British sledging bases.

Until 1925 no other nation challenged the British claim to the Antarctic sector between 20°W and 80°W, a claim originally based on early exploration and promulgated by Letters Patent in 1908 and 1917. Argentina in 1925 and Chile in 1940 suddenly formulated various claims to the area of the Falkland Islands Dependencies and in 1943 plans for a British naval operation were initiated, to control the southern side of Drake Passage, as the activities of German commerce raiders now brought home the strategic importance of the area. It was known as Operation Tabarin and in 1944 bases were established at Deception Island and Port Lockroy, followed by Hope Bay in 1945. In July 1945, Operation Tabarin became the Falkland Islands Dependencies Survey, later to become the British Antarctic Survey in 1962 when the sector south of latitude 60° was designated British Antarctic Territory.

For almost 40 years, field parties have sledged the length and breadth of the Peninsula, as well as other areas from Halley base in Coats Land on the other side of the Weddell Sea. The main travelling bases on the Peninsula were Hope Bay (1945-9 and 1952-64), Stonington Island (1946-50, 1958-9, 1960-75) and to some extent Adelaide Island (1961-77) which was the support centre for all field parties operating in the area on account of its good airstrip. The flying and sledging operations are now based at Rothera, about 40km from the old base at Adelaide, and skidoo motor toboggans have taken over from sledge dogs. The heyday of British dog-sledging came in the later Stonington era with totals of over 30,000km being clocked up in successive years by the dozen dog-teams. Field parties generally comprise two men, a scientist and a general assistant (mountaineer) and carry out the various programmes in geology, geophysics and glaciology. The early journeys were exploratory in nature and ventured into new country. In 1947 Hope Bay sledgers travelled down the east coast as far as Three Slice Nunatak where they rendezvoused with a Stonington party who led the way back over the plateau to Marguerite Bay to complete an outstanding journey. In 1949 a party sledged to the Eklund Islands, far to the south of Stonington, first reached by an American party in 1940, a round trip of over 1500km. But these are by way of example for there have been many other long, hard journeys in subsequent years and the countless adventures in ferocious storms and katabatic winds or 'fumigators', crevasse incidents, treacherous sea-ice, recalcitrant dog-teams (and latterly skidoos), and climbs on numerous peaks to establish survey stations, are all recorded succinctly in the hundreds of sledging reports built up over the years.

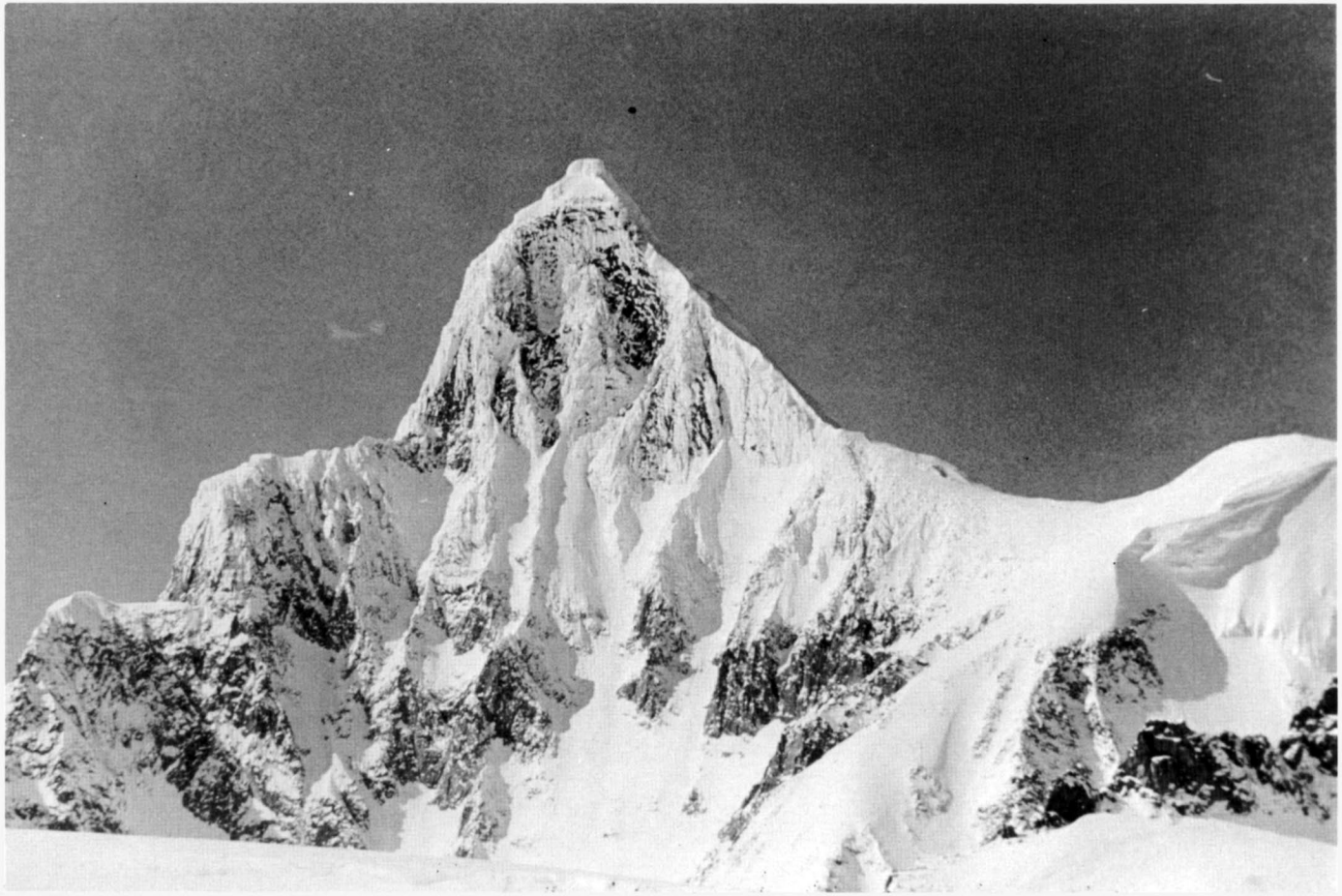
As time has passed, methods have become more efficient and mechanised, the scientific work is more complex and sophisticated, and aircraft have had an

38 Rock towers at Cape Renord on the W Coast of Graham Land *Photo: Simon Fraser*

increasingly important and nowadays essential role to play during the southern summer, deploying and supporting sledge parties far from base as well as carrying out extensive aerial surveys in various scientific disciplines. To some extent the adventure and challenge of travel has diminished as the focus of work becomes more detailed and less exploratory in nature. But the Antarctic itself changes only imperceptibly and for those who winter there the continent will make a profound impression that will remain with them for the rest of their lives. The tedious days of lying up in bad weather, the cold, the wind, the frustration and anxiety are all forgotten. There remain only treasured memories of silent freezing days on sea-ice in narrow fjords amidst icebergs of breathtaking size and shape; of crossing wide mountain passes in low winter sunshine, negotiating vast glaciers and crossing featureless ice piedmont and plateau; of climbing snow aretes on mountainous islands with Weddell seal mothers and pups uttering strange sounds on the sea-ice far below, and Snow Petrels flying round the summit; of the concentration and exhilaration of driving a dog-team, and of the strange and dramatic light effects during the Antarctic winter. The polar plateau is unchanging in the human span of time and the words of John Rymill, leader of BGLE, still evoke the emptiness and desolation:

'Soon after we started again the wind slackened and we could see down on to the shelf and sea ice of Marguerite Bay. We were still 130 miles from home, but this first sight of well-known landmarks and the sea — always a thing of life even when frozen — gave us a pleasant sensation of familiarity which was a relief after the austere country through which we had been travelling for the last 45 days: a country which had known eternal peace until we, two puny little black dots in its vastness, had the impudence to lift the curtain for a few brief days and look upon its beauty. Now that we were leaving it behind I had a feeling of intense pleasure in knowing that we had travelled its glaciers and scaled its mountains and come through safely. But this feeling was tinged with one of loss as though a friend had died, for the curtain had again dropped, and, in dropping, had hidden a scene difficult to put into words. Day after day we had travelled through silence which was absolute, not a depressing silence as of the dead, but a silence that had never known life. Even more impressive had been the sheer immensity of the country, and the atmosphere of mystery which seemed to dwarf us — the great mountains which have stood there untroubled for countless years, and the glaciers slowly forcing their way downwards, occasionally muttering in their depths to remind us that even here time goes on. . . . But the high plateau of Graham Land is no place to indulge in day-dreams, and we hurried on.'[1]

The camping and sledging routine developed at Hope Bay in the 1940s set a pattern for travelling that has hardly changed. New equipment and techniques have gone hand in hand with continuity so that although skidoos have replaced sledge dogs, the Nansen style sledge designed and used by BGLE has not changed in its essentials in the last 50 years. The three remaining BAS dog-teams are still used in winter and old Rothera hands will in years to come look back and be thankful that they caught the tail-end of an era and experienced the classical form of Antarctic sledging. It is the very essence of polar travel and there is no



39 Peak in Mercanton Heights (c. 1200m) on Arrowsmith Peninsula

Photo: Simon Fraser

better way of gaining a sense of intimacy with the country and the environment, and the personal and philosophical enjoyment derived from that close contact.

Techniques and scientific objectives may change but the impressions of those privileged to travel in the Antarctic Peninsula are broadly the same. Amongst these impressions, a sense of wonder is not least. It is a world of harmony and space, unspoilt, lonely, austere. Would that it may remain so.

[1] Quotation from *Southern Lights* by John Rymill.