OBITUARIES

ROBERT ABRAM BARTLETT was born at Brigus in Newfoundland on 15 August 1875, and died in hospital in New York on 28 April 1946. To the world in general he was known as Captain Bob. It was his good fortune to be chosen by Lieut. Peary as Mate of the *Windward* in 1898 under his uncle Samuel Bartlett; and Peary, knowing his man, in due course chose him to command the *Roosevelt*, first in 1905–06 and again in 1908–09. On the latter voyage Bartlett's success in taking the ship into winter quarters as far north as the north coast of Ellesmere Island was of the greatest value. Next to Peary he was the outstanding man of the expedition, and he proved himself not only as an ice-master, but also as a sledger of the first rank when as commander of the last supporting unit on the North Pole journey he brought back his party safe and sound to Cape Columbia.

Bartlett's abilities were further tested on Stefansson's Canadian Arctic Expedition. In December 1913 the *Karluk* was driven by a gale from the shore-waters of Alaska into the drifting polar pack, and a month later was crushed and sunk in the ice north of Ostrov Vrangelya (Wrangel Island). Bartlett during the next two months proceeded to shepherd his party across moving ice floes to Wrangel Island, and then himself travelled on to the Siberian coast to arrange for a relief ship. The story is told in the *Last Voyage of the "Karluk"* (Boston, 1916), in which Bartlett unconsciously becomes the central figure of a remarkable story of misfortune and endurance.

In his later years Bartlett acquired the 120-ton schooner *Effie M. Morrissey*, and made regular annual trips to the Arctic, for the purpose of making natural history collections or of introducing the student members of his crews to Arctic scenes and surroundings. His route usually took him to Baffin Bay, but in 1930 he broke new ground with a voyage to the East Greenland coast. He has described the *Morrissey* as his "home, office and magic carpet for 22 years". Bartlett was unmarried and became an American citizen shortly after returning with Peary from the North Pole. In the 1914–18 war he served as marine superintendent in the U.S. Army Transport Service, held the rank of Lt.-Cdr. in the U.S. Naval Reserve, and in the recent war, in command of the *Morrissey*, helped to establish military air bases in the far north. No notice of Bartlett can be complete which does not take count of his engaging personality and seamanlike bluffness, which was so much appreciated by all who had the privilege of knowing him.

J. M. W.

DAVID LEGGE BRAINARD was born at Norway, N.Y., on 21 December 1856 and died in Washington on 22 March 1946. General Brainard enlisted in the Second United States Cavalry at the age of nineteen and served in the Indian wars in 1877–78. He transferred later to the Signal Corps, and it was as a Sergeant in this unit that he became famous on Lieut. Greely's Arctic Expedition of 1881–84. Two years after the return of the expedition Sergeant Brainard was commissioned by President Cleveland as a Second-Lieut. in the Cavalry in recognition of his "distinguished and meritorious services" with the expedition. His services had in fact been outstanding. On 13 May 1882, with Lieut. Lockwood, he reached a farthest north record (which stood till Nansen's voyage in the *Fram*) on the north Greenland coast in lat. 83° 24′ 30″ N. Next year, when relief ships failed to arrive, Greely took his party south from Fort Conger to Cape Sabine on the west side of Smith Sound. Of the original party of twenty-five, only seven survived the winter, and that they did so was largely due to Brainard, who prolonged the existence of the party by

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collecting shrimps and kelp and distributing them among the others, and in this way he probably averted complete disaster. Greely said of him: "He is a man. He is a man among men."

Brainard with the rank of Colonel held the post of U.S. Military attaché to Argentina when Shackleton's Trans-Antarctic Expedition passed through Buenos Aires in 1914, and the efficient sergeant of 1882 had now become the white-haired and well-groomed diplomat. He was promoted Brigadier-General in 1917 and retired the next year after forty-two years army service. Since General Greely's death in 1935 General Brainard has been the leading American Arctic veteran, not only by length of years but by reason also of his reputation as a man of quite unusual determination and stamina.

J. M. W.

Aleksandr Yevgenyevich Fersman, a member of the Academy of Sciences of the U.S.S.R., died at Sochi on 20 May 1945, aged sixty-one. He was a geochemist and mineralogist, and was especially known for his work on the geochemistry of pegmatites formed from acid and alkaline magmas. He was largely concerned from 1920 until the time of his death with the discovery and development of the mineral deposits in the Khibinskaya tundra region of the Kola peninsula. The apatite deposits there, which he was instrumental in locating, were developed industrially from 1929 onwards and by the time of his death supplied the needs of the entire Soviet Union. He was closely connected with the Arctic Institute, on whose scientific soviet he served when the Institute was known as the Northern Scientific Industrial Expedition (between 1920 and 1925). He was elected an academician in 1919, and was awarded the Lenin Prize and the Stalin Prize. When he died he was director of several constituent bodies of the Academy of Sciences, notably the Kola Base for scientific work and the Institute of Geological Sciences. He was an honorary member of the Mineralogical Society of London, the Geological Society of America, and the Geological Society of London; the latter awarded him the Wollaston Medal for 1943.

Gunnar Horn died on 15 July in Spitsbergen. He was a geologist of high repute, and he had many friends in this country. Born in Oslo on 25 June 1894, he completed his education as a mining engineer in 1916 and then worked for the Store Norske Spitsbergen Kulkompani at Adventfjorden from 1917 to 1919. In 1919–20 he studied at the Royal School of Mines, and after finishing his work in London, went to the oilfields of Trinidad and Venezuela for Trinidad Central Oilfields Ltd. He returned to Norway in 1924 as geologist to the organisation which became the Norges Svalbard- og Ishavs-Undersøkelser. From that time until his death he was concerned mainly with the geology of Svalbard, with special reference to coal. In 1924 he worked as geologist with an expedition to Bjørnøya, and took over the leadership there for the season of 1925. In 1926, with A. K. Orvin, he investigated the possibilities of oil resources in Svalbard. In 1928 he took a doctorate in engineering at Berlin with a thesis on Svalbard coal. He was leader in 1929 of an expedition to Franz Josef Land, but could not reach his objective owing to adverse ice conditions. In 1930 he led a second expedition to Franz Josef Land, also visiting Kvitøya (White Island), Victoriaøya and Kong Karls Land in the *Bratvaag*. It was during this expedition that the remains of Andree's party were found on Kvitøya. After lecturing on these discoveries in the United States, he went on to East Greenland in 1932, when the Torgilsbu wireless station was moved to its present position. He then returned to his work in Norway and Svalbard.

His publications were important and authentic documents, and he did a great deal of other work in collaboration both in the organisation and publications of Norges

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Svalbard- og Ishavs-Undersøkelser, among which that on Svalbard place-names should be mentioned. His activities were heard of from time to time during the occupation of Norway. His friends rejoiced that he survived these years, and looked forward to renewed activities in his chosen field of work. His death at a comparatively early age is a grievous loss to the scientific exploration of the Arctic, and removes a man liked and greatly respected by all who had the good fortune to know him.

K. S.

BERNT LYNGE, the Norwegian botanist, died on 28 January 1942, aged fifty-seven. He took his first degree in 1909 and his Ph.D in 1917. In 1921 he went to Novaya Zemlya with Olaf Holtedahl and wrote an important paper on the vascular plant life of Novaya Zemlya in 1923, but his special field in which he was an acknowledged authority was the study of lichens. In 1926 he went to Svalbard and worked especially in the Bellsund area. In 1929 he visited East Greenland, and in 1937 and 1939 he went to Iceland. He became professor of botany at Oslo in 1935 and there carried out his extensive work on a number of lichen collections from all over Europe, and some from the Antarctic.

CECIL THOMAS MADIGAN, a prominent member of the Australasian Antarctic Expedition of 1911–14, and a leading Australian geologist and geographer, died on 14 January 1947 at the age of fifty-seven.

After graduating in Mining Engineering at Adelaide University, Madigan went to Oxford University as a Rhodes Scholar. He then joined the Australasian Antarctic Expedition and spent two winters and three summers in the far south. During that time he was in charge of a short winter journey over the plateau ice under record adverse weather conditions. In the summer of 1912–13 he was leader of a sledge party which successfully traversed and charted a length of about 300 miles of the coast of King George Land. His good sledging record determined for him appointment (by Captain J. K. Davis, the second-in-command of the expedition) to the charge of a small party left for a second year at Cape Denison to make a search for the leader of the expedition (Mawson) who was then overdue from a journey over the plateau ice. Madigan's graphic account of his summer sledge journey forms a section of the popular story of the expedition published as *The Home of the Blizzard* (London, 1915). He was chiefly responsible for the meteorological record of the Cape Denison station, published as a part of the expedition's scientific reports.

Dr Madigan served with the Royal Engineers throughout the whole period of the 1914–18 war, attaining the rank of Captain. With the outbreak of the recent world war he was appointed Chief Instructor in the Australian School of Military Field Engineering, attaining the rank of Lieut.-Colonel.

At the close of hostilities in 1918 he was appointed assistant geologist in the Geological Survey of the Sudan, but several years afterwards he resigned to take up the post of Lecturer in Geology at the University of Adelaide, which appointment he retained until his death. While on the staff of the University of Adelaide he conducted notable geological and geographical exploration in central Australia—work that will always be remembered as an important contribution to the knowledge of that region.

D. M.

HERSCHEL CLIFFORD PARKER died in California on 12 March 1944, aged seventy-six. He was for many years on the staff of the Department of Physics at Columbia University, and was for eight years, until 1911, assistant professor. He was a keen mountaineer for whom Alaska held a great interest. Having climbed a number of

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peaks in the Canadian Rockies, he made his first expedition to Mount McKinley in 1906. He approached the Alaskan range through the forest lying to the south of it, but spent too much time on this approach and was unable to get farther than the icefields on the south side of Mount McKinley. After gaining experience in glacier climbing in other areas during the following years, he made another attempt in 1912. This time he was almost at the summit when bad weather prevented him from reaching it. That was his last attempt, though he returned later to other parts of Alaska. The snow slope below the summit of Mount McKinley now bears his name.

CHARLES RABOT, who died at his farm "La Halenière" near Rennes on 1 February 1944, had travelled widely in Scandinavia and the European Arctic in the eighties and nineties of last century. His main interest was in glaciology, but his Arctic enthusiasms were very wide, and no Frenchman in recent years has rivalled his knowledge of both Polar Regions. He was also an expert linguist and, being himself a traveller, his translations into French of the accounts of Nansen's voyages to the Arctic and of Nordenskjöld's, Shackleton's and Amundsen's to the Antarctic have a special value.

Rabot was born at Nevers on 26 June 1856. His travels in the extreme northern parts of Norway and the Lapp areas of Sweden and Finland were made between 1880 and 1885, when they were comparatively unknown and unexplored. He travelled with one or at the most two companions, living under canvas among the unmapped mountains and glaciers, and in 1883 climbed Kebnekaise, the highest mountain in Swedish Lapland.

In 1882 he reached Recherchefjorden and Isfjorden in Spitsbergen in a fishing cutter with a crew of six, and from Sassenfjorden climbed the nearby Marmierfjellet. Greenland was visited in 1888. Rabot's biggest Arctic venture (which might have been a great voyage) was in the French naval vessel *La Manche* in 1892. From Jan Mayen the ship went to Spitsbergen, first to Recherchefjorden, then into Isfjorden and again to Sassenfjorden which Rabot had already visited ten years earlier. The ship's captain was unequal to his opportunity, and Rabot, who had hoped to cross to the east coast, was permitted to make only a short three-day dash inland from Sassenfjorden. He succeeded in reaching the top of Milne Edwardsfjellet, but had to turn back not far short of what is now called Rabotbreen, a name given in its original form (Rabot Glacier) by Conway on his journey to Storfjorden in 1896, who in this way marked his appreciation of how near Rabot had been to carrying out the first successful crossing.

J. M. W.

JOHAN WILHELM SANDSTRÖM, the Swedish meteorologist and oceanographer, died in January 1947, aged seventy-two. He was head of the meteorological division of the Stockholm Meteorological and Hydrographic Institute from 1919 to 1939. After leaving school, Sandström started work in a factory. While there he came to the notice of Professor I. Bendixson, Professor of mathematics at Stockholm University, who arranged for him to attend lectures at the University and took great interest in him. When he was twenty-four he became a pupil of Vilhelm Bjerknes, and soon he was writing meteorological papers embodying Bjerknes's theories. In 1910 the close association between the two men brought about the publication of *Dynamic Meteorology and Hydrology* (Washington) under their joint authorship. Although Sandström did not collaborate with Bjerknes in the production of the latter's *Physikalische Hydrodynamik* (Berlin, 1933), Bjerknes acknowledges his help and encouragement. In later life Sandström was occupied almost exclusively with the Gulf Stream and its influence on climate. This interest caused him to lead the Swedish Gulf Stream

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Expedition in the *Björnöy* in 1929. The expedition made two trips from Tromsø; the first along the west coast of Svalbard, down the Greenland coast as far as Scoresbysund, and back to Tromsø; the second to the west coast of Novaya Zemlya, thence towards Franz Josef Land as far as the ice would permit, and back to Tromsø via Hopen. The objects of this expedition were primarily to study the interplay of the Gulf Stream and arctic drift ice; also to carry out echo sounding and to survey the ice limit in the Greenland and Barents Seas In the previous year Sandström had been to Svalbard to take part in the search for the *Italia* survivors.

Ernest Thompson Seton, the well-known author of many animal stories, died on 23 October 1946 in New Mexico. He was born in South Shields in 1860, and his parents and nine brothers moved to Ontario when he was five. As a boy he loved the open air and was fascinated by American Indian lore. At sixteen he wrote his first nature story—a poem—and he soon followed it with others. He trained as an artist in Toronto, London and Paris, and started illustrating nature books. In 1898 he wrote *Wild Animals I Have Known* (New York), which he illustrated himself. This book immediately made him famous. Many more books of animal stories followed, and proved equally popular. Besides these, however, he produced two scientific works of great value: *Life Histories of Northern Animals* (London, 1910) in two volumes, and the four volumes of *Lives of Game Animals* (London, 1925–28), the latter being one of the best books ever produced on North American mammals. He was also interested in the Arctic, for in 1907 he made a seven-months' trip by canoe down the Athabaska river in Northern Canada; the story of this expedition is recorded in his book *The Arctic Prairies* (London, 1912).

Einar Sverdrup was killed in action in Spitsbergen on 13 May 1942. Early that year a small Norwegian Military Force under his command left Iceland to reoccupy the Isfjorden and Bellsund areas of Spitsbergen. On entering Grönfjorden the two ships, *Isbjörn* and *Selis*, were attacked by a powerful enemy air formation and sunk. The survivors reached the abandoned Russian coal mine at Barentsburg, and after many vicissitudes succeeded by a combination of bluff and skilful tactics in expelling the German forces of occupation. In the attack upon the two ships on 13 May, Sverdrup was killed. A member of a family distinguished in Polar history, he was born in 1895 and first visited Spitsbergen in the early 1920's as a young mining engineer, and almost all the rest of his life was to be spent in that island. As technical Director of the Store Norske Spitsbergen Kulkompani since 1930, it was largely by his great vision and energy that the Norwegian mines at Longyearbyen were developed and the new settlement, named in his honour Sverdrupbyen, was built. He also acquired for the Norwegian company in 1934 the Swedish mine at Sveagruva. Many Spitsbergen explorers and travellers in the inter-war years will remember with gratitude and pleasure the help and hospitality that Sverdrup generously offered at Longyearbyen.

In 1941 Sverdrup took the lead in convincing the Allied authorities of the importance of Spitsbergen in the prosecution of the war, and in particular in the maintenance of the supply route by the northern seas to Archangel and Murmansk. His death was a loss not only to Norwegian enterprise in Spitsbergen; it was a loss to Norway. With his exceptional talents, his energy and his clarity of thought he would have played a leading role in post-war developments in his country.

A. R. G.

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ARTHUR TREADWELL WALDEN died at Wonalancet, New Hampshire, on 26 March 1947, aged seventy-five. When he was twenty-four he went to Alaska and became interested in huskies. He bred and trained sledge dogs, which were in great demand when the gold rush to Alaska started two years later. After seven years in Alaska he settled in New Hampshire and continued to breed working dogs which he introduced into New England. His dogs won the three days' race at Berlin, New Hampshire, in 1932, and broke the New England record for the forty miles' race in 1926. In the same year he drove a team of six dogs to the top of Mount Washington, New Hampshire. In 1924 he helped to organise the New England Sledge-Dog Club. As a result of these activities he was chosen by Admiral Byrd to take charge of the dogs on the Antarctic Expedition of 1928–30; he received the Gold Congressional Medal for his services there. He wrote with authority on sledge dogs, and published *A Dog Puncher in the Yukon*, *Leading a Dog's Life*, and *Harness and Pack*.

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