OBITUARY

OLAF CHRISTIAN DIETRICHSON was born on 31 May 1856 at Skogn near Levanger in Norway, and died in February 1942. Dietrichson entered the army as a cadet in 1877, was commissioned in 1880, and became premierløjtnant in 1886. Two years later he joined Nansen's trans-Greenland expedition of 1888–89, as a surveyor and scientific observer, and was largely responsible for meteorological observations. On his return he was promoted, and rose finally to the rank of generalmajor.

ERICH VON DRYGALSKI was born on 9 February 1865 at Königsberg and died on 10 January 1949 at München. His studies at Bonn, Leipzig and Berlin, under Ferdinand von Richthofen, were followed by a period at Geodätisches Institut in Potsdam. He became closely interested in glacial phenomena and was chosen by the Gesellschaft für Erdkunde in Berlin to lead its expedition to Qarajaks Isfjord in West Greenland, 1891–93. In 1899 Drygalski became professor of geography and geophysics at Berlin. Two years later he was chosen to lead the German Antarctic Expedition in the *Gauss*, 1901–03. On his return, Drygalski published a general account of the work of the expedition, *Zum Kontinent des eisigen Südens* (Berlin, 1904). In 1906 he became Ordinarius für Geographie at München, a post which he retained until he retired in 1934. In 1910, he took part in Count Zeppelin's expedition to Spitsbergen, and studied the influence of glaciers on land features. After the 1914–18 war, he returned to München and devoted himself to the publication of the extraordinarily comprehensive series of *Gauss* expedition reports, *Deutsche Südpolar Expedition* (1905–31). To this work Drygalski made two important contributions, entitled "Das Eis der Antarktis und des subantarktischen Meeres" (Bd. 1, 1920) and "Ozean und Antarktis" (Bd. 7, 1926). In 1930 he made an important contribution about the Antarctic to Klute's *Handbuch der Geographischen Wissenschaft*. In the following year he visited Siberia, again to study the influence of glaciers. Drygalski's last important work was a contribution to the *Handbuch der Gletscherkunde* (Wien, 1942).

OTTO MIKAEL TOBIAS GABRIELSEN was born in Greenland on 21 January 1878 and died on 14 August 1945. He took part in the *Danmark* expedition, 1906–08, as a sledge-driver and hunter. In 1916–18 he accompanied Knud Rasmussen on the Second Thule Expedition to north Greenland. Gabrielsen also took part in the Danish East Greenland Expedition, 1926–27, and sledged with Lauge Koch from the expedition's base in Kong Christian den Xs Land to Danmarkshavn. In 1936 he assisted the French Trans-Greenland Expedition to transport its equipment and stores up to the inland ice. Gabrielsen worthily upheld the traditional part played by Greenlanders in the exploration of that country.

LEGANGER HANSEN was born at Nøtterøy in Norway on 9 November 1883 and died there on 30 January 1948. He went to sea at the age of fourteen, landed in America soon afterwards and spent eleven years engaged in salmon fishing and forestry work in Alaska. He returned to Norway in 1908 and took part with Marcus Bull in the whaling season off Iceland. In the following year he joined the firm of Christian Salvesen and went to South Georgia as foreman. Some seven years later he was appointed manager of Leith Harbour, South Georgia, a post he held until he retired in 1937. For a time Hansen ran his own shipping firm, Fagerheim. He was elected to the boards of several whaling companies and firms supplying equipment to the whaling industry. He will be remembered particularly for his benevolence to

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dependants of whaling men, especially during the 1939–45 war, and for the help which he so willingly gave to many Antarctic expeditions which have called at South Georgia.

Boris Lavrent'yevich Isachenko, who died in 1948 at the age of seventy-seven, achieved distinction in the U.S.S.R. as a botanist and microbiologist. He made his name with an important study of bacteria in the Barents Sea (*Issledovaniya nad bakteriyami Severnogo Ledovitogo Okeana*, Petrograd, 1914), the result of a year's work, 1906–07, with the Murman Scientific-Industrial Expedition. He visited the western Soviet Arctic for short periods in 1927, 1930 and 1933, and studied bacteria in the soil and from the sea bottom. He was Director of the Botanical Gardens at Leningrad from 1917 to 1929, and of the Academy of Sciences' Institute of Microbiology from 1938 until his death. He was elected an academician in 1946.

Charles Ocean Johnson was born at Hjälmseryd in Sweden on 21 March 1867 and died at Cape Town on 25 June 1949. In 1897 he went to Durban and soon became interested in the potentialities of commercial fishing in South Africa. By selling bicycles imported from the United States he was able to finance a line-fishing venture at Durban. He then returned to Sweden, where he had the 51-ft. steam trawler *Berea* built. Collecting a crew of volunteers, Johnson sailed the *Berea* to Cape Town in 1903 and it became one of the first trawlers to operate in South African waters. In 1907 he returned to Sweden once more and brought out the 94-ft. trawler *Bluff*. Two years later, in 1909, Johnson joined with George D. Irvin as co-founder of the firm of Irvin and Johnson, and helped to establish it as the largest fishing concern in South Africa.

Johnson then began to look southwards. Forming the Southern Whaling and Sealing Company, he fitted out the trawler *Victoria* to take down a sealing expedition to the Prince Edward Islands. The vessel made three unsuccessful attempts to reach the islands before Johnson decided to take her down himself in May 1909. A few months later she returned with a full cargo of seal oil. Following this success, Johnson sent the *Benedra* down to leave eighteen men on Marion Island. They were later picked up with a satisfactory cargo. Foreign concerns had by then become interested in the islands, so in October 1912 Johnson sent down the schooner *Seabird* with a party of men to secure the company's sealing rights. This vessel was wrecked on Prince Edward Island. The survivors suffered severe hardships until rescued by a whaler in 1913, and Johnson then turned his attention to whaling. He purchased the 3000-ton steamer *Restitution* and converted her into a floating factory—one of the first of her kind. She ran between South Georgia and Port Alexander and participated in many successful expeditions before she eventually foundered in the Bay of Biscay. Johnson frequently visited South Georgia, and he played an important part in building up the South African whaling industry. The firm of Irvin and Johnson (South Africa) Ltd. purchased the Shepstone Whaling Company in Natal, and also acquired a shore station at Donkergat in Saldanha Bay. Later, the Southern Cross Whaling Company, which operated a shore station at Cape Hangklip, was also acquired. By this time factory ships had proved their value in the Antarctic, and the converted cargo ships and liners had given way to vessels with slipways built specially for whaling. In 1930 the Kerguelen Sealing and Whaling Company, which had been formed to absorb the Southern Sealing and Whaling Company, took delivery of the 13,000-ton factory ship *Tafelberg*, then the largest whaling factory ship in the world. The firm of Irvin and Johnson (South Africa) Ltd., terminated its connection with whaling in 1941, when the *Tafelberg* was mined and sunk off Cardiff, but the Kerguelen Sealing and Whaling Company is still in existence. For many years this company held a lease of the Prince Edward Islands from the British Government. It also acquired certain

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rights from a French company to operate in the Iles de Kerguelen. Between 1909 and 1930 Johnson's sealing gangs added an interesting chapter to the history of the exploitation of both of these groups of sub-Antarctic islands. B. B. R.

Nikolay Nikolayevich Kalitin died in the Soviet Union on 21 August 1949, aged sixty-five. He studied astronomy at St Petersburg University, but he devoted most of his life to the study of actinometry, a field in which he was the leading figure in the U.S.S.R. It was at his instigation that actinometrical work was undertaken at selected polar stations. His large output of published work includes analyses of the results obtained at these stations, and also his own investigations into the properties of ice in relation to solar radiation.

David A. Nichols was born at Newboro, Ontario, in 1880, and in 1911 graduated from Queen's University (Kingston, Ontario), with the degree of B.Sc. in mining engineering. During his undergraduate years he spent the field seasons as a student assistant with the Geological Survey of Canada, and on graduation joined the Topographical Division of that organisation. He was continuously employed with the Geological Survey until ill health brought about his retirement in 1944. He died in hospital in Kamloops, British Columbia, on 18 June 1949.

As an undergraduate and as a student assistant with the Geological Survey much of Nichols's work and interest lay in geology. As a topographer the interest became specialised in physiography and the representation of land forms on topographical maps. To improve his knowledge, he was granted leave of absence during three college years for post-graduate work in physiography at Columbia University. Nichols made topographical maps for many years and in many parts of Canada. With his knowledge and interpretation of land forms, combined with skill in graphic representation of the natural and cultural features of an area, his maps were everywhere acknowledged as of exceptionally high standard.

In addition to topographical maps, his outstanding contributions to the physiography of Canada were three: first, a relief model of Canada, now on exhibition in the entrance hall of the National Museum, Ottawa. This model has a horizontal scale of 1 in. to 23·7 miles and a vertical scale of 1 in. to 8330 ft. It shows, in relief, the broad physical features of Canada on a portion of a sphere in exact proportion to the actual curvature of the earth. It is more than 5½ ft. high, with a floor radius of about 11 ft. The model, completed in sections and erected in 1938, was designed and its construction and erection supervised by Nichols. Secondly, his study of glaciation and post-glacial uplift among the Arctic islands of Canada. For several field seasons in the 1930's Nichols visited various parts of the Arctic islands in the *Nascopie*. He accumulated in this way a wealth of information on the physiography of the Arctic, and with his specialised interest and training made a very considerable contribution to the science in general and to knowledge of the Canadian Arctic in particular. Thirdly, the "Glacial map of North America" (1945). When the National Research Council of the United States formed a Committee to prepare a glacial map of North America, Nichols was chosen as a Canadian representative. The last eighteen months of his employment with the Geological Survey were fully occupied with compiling and assembling information bearing on the Canadian part of the map, and in supervising the design and drafting of the final map. K. G. C.

George Palmer Putnam was born at Rye, New York State, on 7 September 1887 and died at Trona, California, on 4 January 1950. After studying at Harvard and the University of California he entered the family publishing business in New York in 1909. In 1926 he directed the American Museum of Natural History expedition to north Greenland, and in the following year organised and led an expedition to the

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west side of Baffin Island. He was the author of *Andrée: the record of a tragic adventure* (1930) and *Mariner of the North* (New York, 1947), a biography of Captain R. A. Bartlett.

CHRISTIAN BENDIX THOSTRUP, who died on 27 February 1945, was known in Denmark for his extensive knowledge of the history of Greenland exploration. He was born in Viborg on 14 April 1876 and became a warrant officer cadet in the Danish navy in 1890. He took part in the *Danmark* expedition to north-east Greenland (1906–08) as third mate and secretary. He was largely responsible for the survey round Danmarkshavn, and also did archaeological work. In 1917 he was granted a commission with the rank of lieutenant. On retirement from the navy in 1932 he worked in Marinens Bibliothek, København, where there is a large polar collection. He collected material for the *Danmark* expedition's archives and became editor of *Publikationer om Østgrønland*. In 1933, he was appointed as a member of the committee administering the Trolle fund in memory of the *Danmark* expedition.

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