

Edward Sabine (1788-1883)

Edward Sabine, soldier, scientist, and arctic explorer, was a forceful and ambitious man, skilled in the politics of science, and very much in control of the enterprises he espoused. He was born in Dublin on 14 October 1788, educated in England, and entered the Royal Military Academy at Woolwich in 1803. His active service was relatively brief and based in Upper and Lower Canada, where in 1813 and 1814 he was engaged in resisting American attacks.

After the Napoleonic wars, he, like many others in the British army and the Royal Navy, found himself under-employed; he chose to pursue scientific studies, notably in ornithology, astronomy, and magnetism. In 1818 he was elected a Fellow of the Royal Society of London and shortly thereafter found himself appointed astronomer to John Ross's expedition in search of the Northwest Passage. Ross sailed in May on the *Isabella*, accompanied by William Edward Parry on H.M.S. *Alexander*.

Sabine was far more than the expedition astronomer. He carried out observations in natural history and anthropology, publishing his biological results and an account of the West Greenland Eskimos, including a tribe near Thule previously unknown to Europeans. On 25 July he discovered a new species of gull, the fork-tailed or Sabine's gull, at its breeding station off the west coast of Greenland. He carried out pendulum experiments, significant for acquiring a detailed understanding of the shape of the earth, and he also carried out magnetic observations. Once Ross tied the ships to icebergs while an observatory and tents were set up on shore for Sabine and his companions. On another occasion, the ships were lifted onto ice floes and driven into collision during a storm, which frustrated subsequent attempts to carve out safe docks in the ice field. Sabine and his companions meanwhile landed on Bushnan Island, where they found Eskimo remains.

John Ross believed that he had seen a chain of mountains closing the entrance to Lancaster Sound; none of the other officers saw the mountains, or rather what was surely a mirage, and Sabine seems to have led subsequent questioning about the correctness of Ross's decision not to advance farther up the sound. The ensuing controversy was sometimes bitter; John Barrow, Second Secretary of the Admiralty, sided against Ross and suggested that Sabine's scientific observations were the best thing to have come out of the expedition.

In May 1819 Sabine returned to the Arctic, this time under Parry on the Hull-built bomb *Hecla*. The expedition was a young one — Sabine, at 30, was the oldest member. Sabine again carried out a wide variety of scientific observations, collecting mineral specimens, observing the remains of Eskimo houses on Byam Martin Island, compiling geomagnetic data, and carrying out a series of pendulum experiments that were rewarded in 1821 with the Copley Medal of the Royal Society.

Parry succeeded in following the northern shore of Lancaster Sound until ice blocked farther progress. The ships wintered at Winter Harbour, slightly to the east of Cape Hearne. The crew were kept busy and entertained through a winter in which the sun was below the horizon for 96 days.

Sabine, besides maintaining a program of scientific observation, was also the editor and censor of the expedition's newspaper, the *North Georgia Gazette and Winter Chronicle*, published on board the *Hecla* and running to 21 numbers.

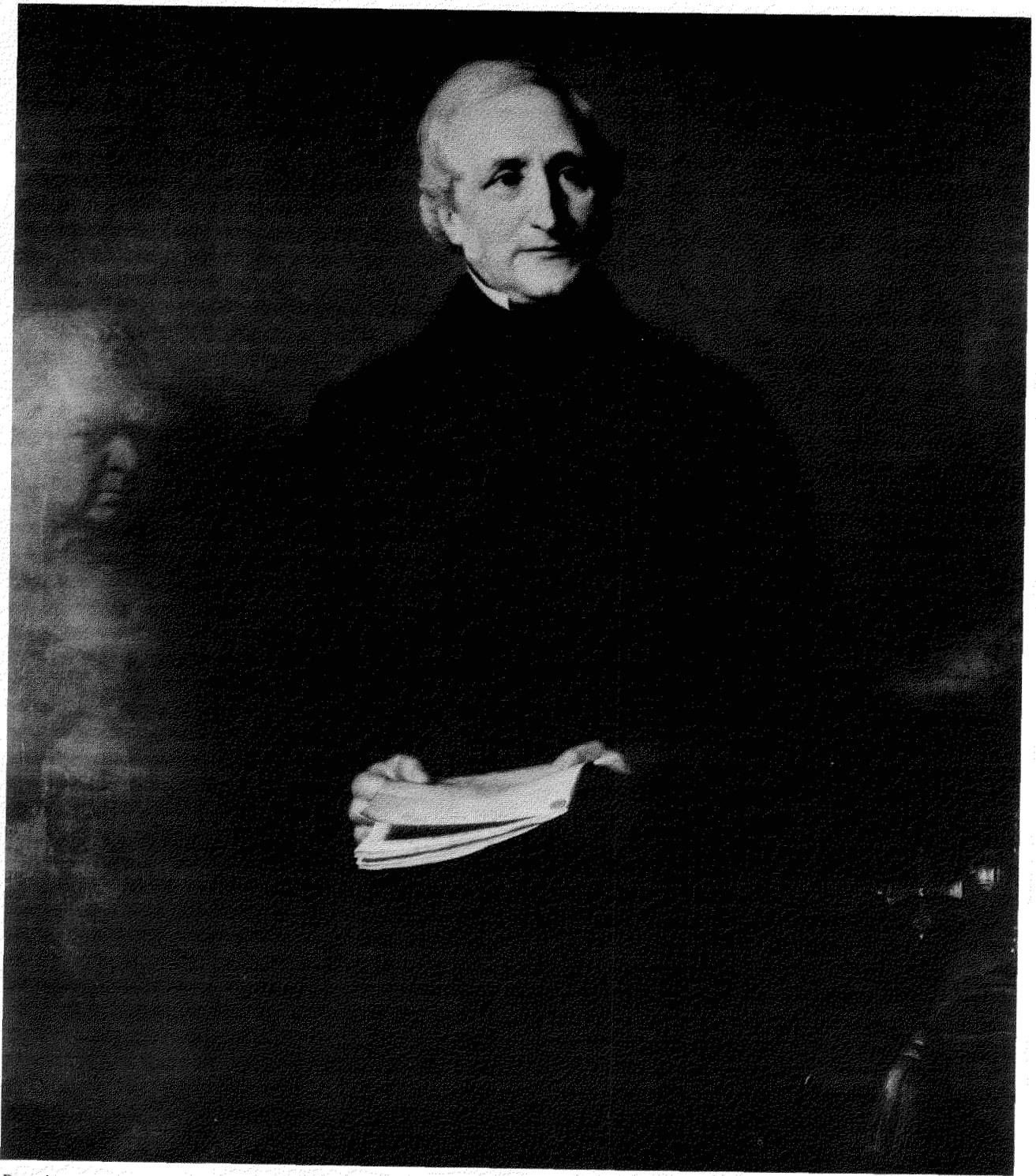
Sabine could be formidable in his professional capacity but seems to have been a genial and equable companion; certainly the *North Georgia Gazette*, which was mostly from his pen, displays sustained good humour and occasional whimsy. As for his tabulation of scientific data, this was well received not only by the Royal Society, but also by Parry. Indeed, Sabine was acknowledged as being responsible for almost all the scientific appendix to Parry's account of the expedition.

In 1821 Sabine again set out in pursuit of his geophysical researches, measuring the length of the seconds pendulum in different latitudes. He was away from the Arctic in H.M.S. *Pheasant* until 1823. Then, from May until December, he was on H.M.S. *Griper*, which had accompanied *Hecla* in 1819-1820. Now Sabine visited Greenland and Spitzbergen, where he killed another pair of Sabine's gulls, showing that this species was to be found to the east as well as the west of Greenland.

He was promoted first captain in 1827, and in the following year, after the abolition of the Board of Longitude, was appointed one of three scientific advisers to the Admiralty. His principal scientific activity was in geomagnetism. In 1823 he had been the first to demonstrate the correlation of magnetic variations on a chart. In 1834 he began work on a magnetic survey of Great Britain; his old arctic companion James Clark Ross joined him in the enterprise. In 1835 he led the British Association for the Advancement of Science in urging the government to sponsor an antarctic expedition in search of the south magnetic pole, and further lobbying contributed to the appointment of J.C. Ross, discoverer of the north magnetic pole, as commander of the British antarctic expedition of 1839-1843.

Sabine also became the key figure in the establishment of a chain of colonial magnetic observatories, including the Toronto observatory, from which John Henry Lefroy, on Sabine's orders, undertook his marathon magnetic survey of the Canadian Northwest. Sabine both encouraged and was jealous of Lefroy, whose sweep through Great Slave Lake, Athabasca, and Fort Simpson was on precisely the grand scale that Sabine advocated. Indeed, he wanted nothing less than world-wide data to resolve "the cosmical features of terrestrial magnetism."

Sabine continued to be consulted about arctic matters. He was one of the experts who recommended in February 1847 that there was as yet no need to send out a relief expedition to search for John Franklin. His career, however, was henceforth in science and in the army, not in the polar regions. He was president of the BAAS in 1852, president of the Royal Society from 1861-1871, author of more than 100 scholarly papers, and a general in the Royal Artillery. He died at Richmond on 26 June 1883.



Portrait courtesy of The Royal Society, London.

FURTHER READINGS

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