

*Historical note relative to the meteoritic fragments
labelled 'Cape of Good Hope' and 'Great Fish River.'*

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A SMALL specimen (weighing 20 grams), with a label carrying the inscription 'Meteoric Iron from the banks of the Great Fish River, South Africa,' was included in a mineral collection presented to the British Museum in 1873 by Mr. Benjamin Bright, of Bristol; the collection had been begun by Mr. Richard Bright (1754-1840), and increased by his son, Mr. Benjamin Heywood Bright (1787-1843), father of the donor. No lists or letters were handed over with the collection, and the history of the specimen and its label, prior to 1873, was thus unknown: as no additions to the collection seem to have been made by Mr. Benjamin Bright himself, the Great Fish River specimen had probably been acquired not later than 1843, the year in which his father had died.

The specimen has hitherto been regarded, by reason of its label, as part of the Great Fish River meteorite analysed by Sir John F. W. Herschel, and recorded in a paper entitled 'Notice of a chemical examination of a specimen of native iron from the East Bank of the Great Fish River,' which appeared in the *Philosophical Magazine*¹ for the year 1839, about the time when the specimen under consideration may have been acquired by Mr. Bright. The fragment examined by Sir J. Herschel, who was then living at the Cape of Good Hope, was one of several which had been given to Captain (afterwards Sir) J. E. Alexander during his journey through Great Namaqualand, perhaps when he was for the second time at Bethany in July, 1837². As no other of the fragments appears to have been preserved, and the behaviour of a polished surface of the iron, on being etched, has not been placed on record, comparison of the characters of the Bright specimen with those of an authenticated Alexander fragment is impossible.

But it can be shown that specimens cut from an iron mass which had

¹ Ser. 3, vol. xiv, p. 32.

² Journ. R. Geogr. Soc. London, 1838, vol. viii, p. 24.

been reported by Barrow¹ in 1801, and has long been known to collectors by the name of the Cape of Good Hope iron, may with reason, but inaccurately, have been labelled as 'from the banks of the Great Fish River' by a collector attempting to specify the part of the Colony of the Cape of Good Hope in which that iron mass had been found; the locality is, in fact, some hundreds of miles distant from the Cape from which the Colony itself, and thence the meteorite, had been given the name.

Barrow's statement is as follows:—

'Having recrossed the Great Fish River, we directed our course across a plain towards Graaff Reynet. On this plain was found some years ago, upon the surface of the ground, a mass of pure iron in a malleable state. Considered as a great curiosity, it was carried from place to place and is now in Cape Town. . . . It had probably been the thick part of a ship's anchor.'

The plain indicated by Barrow is about 33° 15' S., 27° E., and on the western side of the Great Fish River; it does not extend to the bank of the river, but is at some distance therefrom. In 1804 von Dankelmann² was taken to the very spot by the son of the finder of the mass, and states that it is between the Sunday River and Bushman River, which are themselves both on the west of the Great Fish River. It is thus inaccurate to label a specimen of the Barrow iron as from the (bank or) banks of that river.

Professor Partsch³, in 1843, assumed the Great Fish River mentioned by Captain Alexander to be identical with the long-known Great Fish River mentioned by Barrow, and was thus led to express the opinion that the masses recorded by the two explorers belong all to the same meteoritic fall; if such were the case, we should expect them to have identical characters. The etched surface of the Bright specimen is, in fact, indistinguishable from that of a specimen of the Barrow mass, although the kind of etched surface belongs to a rare type.

But on reference to the original work⁴, it at once becomes manifest that the Great Fish River of Alexander is different from that of Barrow, and till 1837 had remained virtually unmapped: the locality of the iron masses in question is indicated in Alexander's map, from hearsay statements only, as being 26° 5' S., 18° 5' E.; the localities of the Barrow and

¹ J. Barrow, 'An account of travels into the interior of Southern Africa in the years 1797 and 1798,' London, 1801, vol. i, p. 225.

² *Magazin für den neuesten Zustand der Naturkunde*, von J. H. Voigt, 1806, vol. x, p. 12.

³ 'Die Meteoriten . . . zu Wien,' 1843, p. 132.

⁴ 'An Expedition of Discovery into the Interior of Africa (countries of the Great Namaquas, Boschmans, and Hill Damaras)': by Sir J. E. Alexander, London, 1838.

Alexander masses are thus no less than 700 miles distant from each other, as the crow flies.

It is virtually certain that Alexander's book, in the appendix of which Sir John Herschel's paper was incorporated, was inaccessible at the time to Professor Partsch; indeed, the wording of the latter's statement, when critically examined, suggests that he was relying solely on such incomplete information as is given in the *Philosophical Magazine* reprint of Sir John Herschel's paper: in that reprint there is nothing to indicate that the Great Fish River mentioned therein is not the better-known one to which the name had been long applied.

Having regard to the rarity of the specimens belonging to this type of meteorite, and to the absence of reliable evidence of so wide a spreading of masses belonging to any meteor, the question arises as to whether the Bright specimen may not have been cut from the Barrow mass, and have no relation to Captain Alexander at all. That this is really the history of the specimen is rendered certain by the following considerations.

The London mineral dealer and author, James Sowerby (1757-1822), owned in the year 1806 a large piece of the Barrow mass; he figured and described it in his '*Exotic Mineralogy*'¹, published in 1817:—

'Fig. 3 is my specimen of the iron found near the Great Fish River; it was obtained at the Cape of Good Hope and brought to England by Fichtel. (The piece brought to England formerly by General Prehn I understand was sent to Holland.) . . . These properties rendered it an excellent material for a sword blade, consequently upon his Majesty the Emperor of Russia visiting England I had a slice $2\frac{3}{4}$ inches long, 2 inches wide, and nearly $\frac{3}{4}$ inch thick, hammered at a low red heat into a blade 2 ft. long and $1\frac{1}{2}$ inches wide—which, welded into a steel haft and mounted, I presented to his Majesty as a memorial of his visit. Previously to this a slice had been sawn off by Smithson Tennant. . . . The mass originally found was carried from place to place as a great curiosity; its weight was estimated by Barrow at about 300 lb.'

Probably Mr. Sowerby's piece was the only one from which collectors could obtain specimens of the Barrow iron by the method of purchase. According to Mr. Smithson Tennant², the piece was about 6 inches long, $4\frac{1}{2}$ inches broad, and 2 inches thick.

After the death of Mr. James Sowerby in 1822, the business passed into the hands of his son, Mr. George Brettingham Sowerby (1788-1854). That the latter possessed some of the Barrow iron as late as 1842 is proved by the fact that a hammered lamina of it was purchased directly

¹ Vol. ii, p. 137.

² *Tilloch's Philosophical Magazine*, 1806, vol. xxv, p. 182.

from him for the British Museum in October of that year; there was no label with the specimen, and no letters passed relative to the purchase: hence there is no evidence as to how Mr. G. B. Sowerby would have named the specimen. Mr. Charles König recorded, in the departmental archives, the purchase as being that of 'A laminated portion of the Cape meteoric iron of which a sword was made by Mr. Sowerby for the Emperor Alexander.'

And not long before, in 1840, a specimen had been acquired by Professor Partsch (through Mr. Bondi) from Mr. Heuland, of London, for the Vienna Collection. Professor Partsch adds:—

'It comes from the mineral collection of the late Mr. Sowerby, who possessed a large piece of the Cape Iron brought by Barrow [i. e. Fichtel] to England, and of which he had a sword forged for the Emperor Alexander of Russia.'

On comparison of the handwriting on the label of the Bright specimen with letters sent by Mr. G. B. Sowerby at various times to Mr. König, it becomes manifest that the label must have been written by him.

As the Alexander fragments were not then represented in the British Museum Collection, it is unlikely that Mr. G. B. Sowerby, if in possession of a specimen of the iron, would have disposed of it to a Bristol collector without first offering it in London. On the other hand, there is no evidence at all that Mr. Sowerby, or any other dealer, ever possessed one of the fragments brought back by Captain Alexander.

It may be added that the twelve other meteoritic specimens in the Bright Collection belonged all of them to falls well represented in 1843 in the British Museum and elsewhere, and that at least one of them (Red River) had been acquired from Mr. G. B. Sowerby.

All things considered, there can be no hesitation in concluding that the Great Fish River specimen in the Bright Collection had been acquired by Mr. Bright from Mr. G. B. Sowerby, and had been cut from the piece which Mr. James Sowerby had obtained from the Cape mass first recorded by Barrow: the label provided by Mr. G. B. Sowerby was doubtless based on the above-mentioned paragraph of his father's book.

It may also be inferred that the fragments brought back from Bethany by Captain Alexander were small bits, which had been broken from one or other of the masses, with the help of a hammer and chisel, and were suited rather for analytical than etching purposes; possibly they were fragments broken off by the Namaquas and intended for use as arrow-heads¹: that examined by Sir J. Herschel weighed only 1.4 gram.

¹ Compare Amer. Journ. Sci., 1853, ser. 2, vol. xv, p. 1.