

CORRESPONDENCE.

POST-GLACIAL UPLIFT IN NORWAY.

SIR,—Please add the following reference to that one already given in my review, "Irregularities in the Post-Glacial Uplift of Norway," *GEOLOGICAL MAGAZINE* for April, p. 174 :—

Gunnar Holmsen, "De brædæmte sjøer i Nordre østerdalen": *Naturen*, Feb. 1917, Bergen, pp. 48–60.

This paper has just arrived: it is a little fuller in some respects than the one already cited.

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THE ALKALINE ROCKS OF SOUTH-WEST AFRICA.

SIR,—In the *GEOLOGICAL MAGAZINE* for December, 1915, you published a letter from me under the above title. In that letter I expressed the intention of visiting the occurrences of alkaline rocks [in the desert south of Lüderitz Bay], and of describing the rocks in detail. I was aware at the time that Professor Erich Kaiser, the distinguished petrologist of Giessen, was in South-West Africa, but I was not aware that he had come out from Europe for the express purpose of studying these very rocks. I have now returned from a visit to South-West Africa, where I had the pleasure of renewing my acquaintance with Professor Kaiser, and I learned that he has utilized his enforced leisure in the country (as a prisoner of war) by studying these alkaline rocks most minutely and mapping the occurrences on special, large scale topographic sheets prepared for the requirements of the diamond-mining companies. Professor Kaiser and Dr. Betz most kindly arranged an extensive tour for me, when I was able to visit and collect material from all the principal localities. Under the circumstances I must of course renounce my intention of writing anything more about these rocks until Professor Kaiser's memoir appears; I can only assure you that that memoir, when it does appear, will possess a quite extraordinary interest for petrologists.

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February 8, 1917.

OBITUARY.

CHARLES BARRINGTON BROWN, Assoc. R.S.M., F.G.S.

BORN AUGUST 23, 1839.

DIED FEBRUARY 13, 1917.

CHARLES BARRINGTON BROWN was the second son of Richard Brown, F.G.S., F.R.G.S., of Cape Breton, Nova Scotia, the

author of several papers contributed to the earliest volumes of the Quarterly Journal of the Geological Society, whose drawings of sections of the Cape Breton coal-fields are found in most geological textbooks since Lyell's *Principles*.

Born at Cape Breton, he was educated at Harvard University, and at the Royal School of Mines, London (1862–4), taking his associateship in Geology. On the recommendation of Sir Charles Lyell, a close friend of his father, he was appointed to the Geological Survey of the West Indies (Jamaica) and of British Guiana (Demerara), on which he served with J. G. Sawkins from 1864 to 1870. For the next four years, from 1870 to 1873, he was in sole charge of the Survey. His reports on the Geology of British Guiana and of Jamaica in collaboration with that geologist are still the standard works on the subject, and earned the commendation of the Governors of those colonies.

During his travels on the Potaro River, a tributary of the Essequibo, he made the discovery, in April, 1870, of the famous Kaieteur Falls, the highest known true waterfall in the world, 822 feet in height and 123 yards wide; the chief wonder of British Guiana. An account of this discovery is to be found in one of Barrington Brown's books, *Canoe and Camp Life in British Guiana*, London, 1877, and in the Journal of the Royal Geographical Society (vol. xli, 1871). This is his description of the discovery:—

“Descending the river [Potaro] rapidly all day, we came within sound of the roar of a large fall. . . . When we came to the northern end of the savanna I observed that heavy masses of vapour were drifting before the north-east wind, making the trees, grass, and shrubs on our right dripping wet. This came from the great fall, to which we were in close proximity, but which was hidden from view by a grove of trees. Making a detour to the right through this grove, we came out on the flat rocks at the head of the great fall, and walking to the edge of the precipice, down which the water was precipitated, I gazed with wonder and delight at the singular and magnificent sight that lay before me.

“Not being prepared for anything so grand and startling I could not at first believe my eyes, but felt that it was all a dream.

“There, however, was the dark, silent flow of water down which we had travelled, passing slowly but surely to the brink of a great precipice, and breaking into ripples as it approached its doom. Then curving over the edge in a smooth mass of brownish tinge, changing into snow-white fleecy foam, it was precipitated downwards into a black seething cauldron hundreds of feet below. . . . I was prepared to meet with great falls on our way down . . . but nothing of so grand and extraordinary a nature as this ever entered my mind for a moment.”

Shortly afterwards he discovered the less well-known but nevertheless remarkable fall of Ourindouie, on the Ireng River, a tributary of the Rio Branco. It may be remembered that a Dr. Bovallius announced, in 1907, the discovery of a waterfall on that river “rivalling Niagara”, which he proposed to call the “Chamberlain Fall”. Brown, on reading this account, recognized a description of

the Ourindouie Fall, and was able to prove its identity by publishing a sketch he had made of the fall, in 1870, in the *Daily Graphic* of November 29, 1907. Accounts of this fall, and of the mysterious mountain of Roraima, which, in common with Sir Robert Schomburgk, at an earlier date, he in vain tried to ascend, are found in the above-mentioned book.

In 1873 to 1875 he was engaged in further exploration of the Amazon River and its tributaries for the Amazon Steam Navigation Company; an account of his travels is given in his *Fifteen Thousand Miles on the Amazon and its Tributaries*, London, 1878. Again, in 1887, 1889, and 1891 he examined gold placers and reefs in British Guiana, and also at other times in Surinam.

During this period, too, he was appointed by the Secretary of State for India to report on the ruby mines of Burmah, which resulted in a paper, written in conjunction with Professor J. W. Judd, which was published in the *Philosophical Transactions* of the Royal Society of London in 1896. This work is regarded as a classic contribution to the history of corundum.

Thereafter, in 1889 to 1902, he devoted his time chiefly to the mining of gem-stones in North Carolina, Ceylon, and New South Wales, at Inverell; and in later years was interested in the development of certain graphite mines in Ceylon.

Towards the latter part of his life, the hardships and vicissitudes of travel in such varying climates, and the fevers contracted on the Amazons, began to tell on his iron constitution, and it is almost surprising that he reached the advanced age of 77 years.

He had that rare quality of endearing himself to those with whom he came in contact, whatever their race or creed; and was a close associate of such men as Judd and Bennett Brough.

A lifelong friend, Dr. G. R. M. Pollard, who travelled with him in British Guiana, wrote of Barrington Brown: "There was no one more popular amongst his fellows than he, and I cherish the memories of many pleasant hours spent in his companionship. There was one characteristic that impressed everybody who came into business relationship with him, and that was his absolute integrity. His word was his bond; and his transparent honesty of purpose and fairness of dealing enabled him to manage and control, without difficulty, the many uncertain tempers of the men he had to employ in subordinate positions."

Besides contributing various papers to the *Quarterly Journal* of the Geological Society of London, to which he was elected a Fellow in 1879, and to the *Journal* of the Anthropological Society, he presented specimens, collected in his travels, to the Royal Gardens at Kew, the British Museum, and the Royal United Service Institution at Whitehall. A list of his published works is appended (p. 238).

After a life full of years useful to the cause of science and to our knowledge of the world, he passed away peacefully, in London, in his 78th year.

C. B. B., JUN.