

publicly that the pores have the position there assigned to them, and gives a properly enlarged drawing or photograph in support of his statement, scepticism will be more than justified.

F. A. BATHER.

CORRESPONDENCE.

THE SUBMERGED PLATFORM OF WESTERN EUROPE.

SIR.—The question of whether the border of this platform is an escarpment or not cannot be left where Professor Hull leaves it, for, as it stands, one of us must certainly have a false idea of the meaning and use of the word *escarpment*. I am consequently obliged to refer Professor Hull to textbooks for a definition, and it will probably suffice if I quote the Student's Manual of Geology, by Jukes & Geikie (3rd edition, p. 474): "An escarpment is a cliff or precipitous bank formed by the outcrop of a bed or series of beds of harder consistency than those on which they rest."

Professor Hull asserts that the question "is really one of form" or shape of the ground, and he implies that the submerged declivity is an escarpment because it "has a terraced upper surface, has a descent sometimes almost precipitous, and falls off in a slope, sometimes gentle, at its base into the abyssal plain." Then he proceeds to put geological structure aside, which is precisely what the definition of an escarpment forbids him to do. It is quite true that the height and length of a declivity are matters of degree, but if he cannot show that a given declivity is formed by the outcrop of one series of beds he has no right to call it an escarpment.

Professor Hull, however, has another argument: he says, "the question of the origin of the escarpment might have remained problematical," but for the existence of the river channels which cross the platform and open out through the "escarpment." He regards these channels as being "unquestionable proof of subaerial origin, both of themselves and of the physical features with which they are connected." This is a novel argument certainly, but how the existence of river-made valleys can possibly prove the declivity to have been made by subaerial agencies passes my comprehension.

Let us apply the argument to an existing terrestrial surface, and for choice let us take Portugal; then we have this syllogism:—The surface of Portugal is trenched by river-valleys which open through the cliffs that form the western border of the land; such valleys prove all the physical features with which they are connected to be of subaerial origin; therefore the sea-cliffs of Portugal are "escarpments" of subaerial origin!

No one wants to deny that the surface of the platform has once been a land-surface, but I do deny that its border can properly be called an *escarpment* or that there is any proof of its having been fashioned by subaerial agencies.

A. J. JUKES-BROWNE.

ORTHITE.

SIR,—In the interesting and instructive paper on Scottish Rocks containing Orthite, communicated by Dr. Flett to the September number of the GEOLOGICAL MAGAZINE, the author states that the

occurrence of this mineral in Great Britain has not, so far as he is aware, been observed up to the present.

May I point out that Orthite was reported from the granite of Criffel (which is close to Dr. Flett's first locality) as early as 1858. It is mentioned in Greg & Lettsom's book, which is of course the standard work of reference for British localities, and is referred to in all the larger manuals of Mineralogy, e.g. Dana's.

Since the discovery in Kirkcudbrightshire by Dr. Heddle, many additional localities have been recorded by the same energetic investigator. Without attempting to give an exhaustive list of the localities published, I may mention Aboyne, Anguston, Tilquilly, and Badnagauch, in Aberdeenshire; and Lairg and Tongue, in Sutherland. In the last edition of the "Encyclopædia Britannica" will be found figures of Orthite from Boat of Garten and from Urquhart.

It will thus be seen that the occurrence of this mineral in Scotland is already well established, and that Orthite has a considerable geographical range. Many more localities will no doubt be given in Professor Heddle's forthcoming work on the Mineralogy of Scotland, to which mineralogists are now looking forward with much interest.

JAMES CURRIE.

LARKFIELD, GOLDENACRE, EDINBURGH.

October 3, 1898.

OBITUARY.

JOSEPH CHARLES HIPPOLYTE CROSSE.

BORN 1826.

DIED 7TH AUGUST, 1898.

DR. H. CROSSE, the celebrated conchologist, was born at Paris in 1826, and from 1861 was co-editor of the *Journal de Conchyliologie* with the late Dr. Paul Fischer, whom he has not long survived. His sole palæontological paper was written in conjunction with Fischer, and treats of some fossil land mollusca from Madagascar; but no man could write, as he did, between 300 and 400 papers on mollusca, mostly descriptive of new exotic forms, without producing work of considerable interest to palæontologists as well. He died at Paris, 7th August, 1898.

FÉLIX BERNARD.

BORN 1863.

DIED AUGUST, 1898.

By the death of M. Félix Bernard, of the Paris Museum, science loses another brilliant malacologist. His "Éléments de Paléontologie," published in 1895, is well known; but his researches into the morphology of the hinge in the Pelecypoda mark a new era, and will help materially towards the foundation of a classification of that group that shall prove acceptable to the palæontologist as well as the conchologist. His work was marked by an amount of exactitude and care that one would fain see more widely imitated, and we are therefore glad to learn that the summary of the results of his observations, which has been left in a fit state for publication, is to appear shortly in the *Annales des Sciences naturelles*.