

CORRESPONDENCE.

THE RIVER OF THE BALTIC.

SIR,—Mr. Hudleston's paper "On the Eastern Margin of the North Atlantic Basin" is so full of important facts, and so carefully thought out, that I am almost afraid to criticize even a minor detail. But in rejecting, with a note of sarcasm, the suggestion that the deep channel which runs round the southern lobe of Norway may at one time have carried off the drainage of the Baltic area (then land), because the soundings go down to 440 fathoms in the Skagerak, off Arendal, and are not more than 160 fathoms in one part west of the Naze, has he not overlooked some possibilities? Obviously "the river of the Baltic must have had some difficulty in draining towards the Atlantic under these circumstances." But have "these circumstances" always existed; in other words, are we entitled to assume (as he has tacitly done) that the present slope of the bed is the original one? Apart from that, if the channel is not a portion of an old river system—an ancient valley—what is it? If it be made by crust movements, the shape is singular, and we may fairly ask, if called upon to put away our belief, for something better as a substitute. Or would Mr. Hudleston allow it to be a valley, but draining southward? If so, what became of it, and is there any evidence of a general drainage in that direction as the Pliocene period was nearing its end? If ever the bed of the Baltic became dry land its drainage would have to go somewhere, and one or two North German rivers also would have to be accommodated. I am aware that the second set of movements in the Alpine chain greatly modified the drainage system of Europe, but I doubt whether there have been any revolutionary changes since that epoch. Assuming then, as I suppose we are justified in doing, this channel to be a Pre-Glacial feature, are we warranted in also assuming its bed to have retained its original slope and contours without any alteration? The present form is peculiar and suggestive. In Bohus Bay, almost west of Lake Wetteren, is a limited area in which the soundings reach 355 fathoms (a larger one being below the 250-fathom contour), and in one place, slightly north of the latitude of Christiansand, we find 430 fathoms. The channel round the southern end of Norway (the deeper part being on that side) seems to vary from 250 to 300 fathoms. Then (north-west of the Naze) it rises for a little while to from 150 to 175 fathoms, and afterwards, till about opposite to the Sogne Fjord, it barely reaches 200 fathoms. But then it steepens steadily till off the Romsdal Fjord, where it returns to 400 fathoms. Doubtless this variation in depth is remarkable, but we must remember that if the channel be Pre-Glacial much débris must have been 'dumped' irregularly on its floor, even though it proved a barrier to the westward march of the Scandinavian ice-sheet. We must also remember that the Post-Glacial movements of recovery in Norway have been very far from uniform. There is, however, another remarkable fact which appears to have escaped my friend's notice. This basin of the Skagerak lies on the westward

prolongation of a belt which, beginning with the Gulf of Finland, runs across Sweden in a direction slightly south of west; thus including the fjord-pierced coast about Stockholm and the Lakes Malar, Wetteren, and Wenern—a belt which is suggestive of special depression. May not this Skagerak basin be only a drowned lake? It is no doubt much deeper than either Wetteren or Wenern, for the one is about 50 fathoms at most, and the other is shallower, about 20 fathoms; but making some allowance for débris, not a deeper basin than the Lake of Geneva. Mr. Hudleston seems to admit that the deeper part of St. George's Channel may be a drowned river-valley, but the slope of this, if I remember rightly, exhibits some anomalies, which, though on a minor scale, seem best explained by a certain amount of differential movement in the earth's crust. That such movements have occurred comparatively late in geological times, would, I suppose, now be generally admitted.

T. G. BONNEY.

OBITUARY.

PROFESSOR SIR FREDERICK MCCOY, K.C.M.G., M.A.,
D.Sc. (CANTAB), F.R.S., F.G.S.

BORN 1823.

DIED MAY 16, 1899.

It is with deep regret we have to record the loss of another accomplished Naturalist, Geologist, and Palæontologist, belonging really to the first half of the present century, but who has survived almost to its close. The cable announcement appeared in the London daily newspapers of May 18, of the decease of Sir Frederick McCoy, Professor of Natural Science in the University of Melbourne, Australia, in his 76th year. His last communication to the GEOLOGICAL MAGAZINE appeared in the May Number, p. 193. Professor McCoy was the acknowledged chief of the scientific world of Australasia, where his name and fame will be perpetuated by the splendid Museum of Natural History and Geology in Melbourne, of which he was the founder and lifelong presiding genius.

Frederick McCoy was the son of Dr. Simon McCoy, M.D., of Dublin, and was born in that city in the year 1823. He was educated originally for the medical profession, and attended lectures, hospital practice, etc., in Dublin and also in Cambridge; but while yet too young to be admitted to the profession he devoted himself assiduously to the study of all branches of Natural Science, classifying the collections of the Geological and Royal Societies of Dublin, with the object of applying recent Zoology to Palæontology as the basis of stratigraphical geology. About this time he accepted the offer of Sir Richard Griffith to make the palæontological investigations required for the Geological Map of Ireland for the Boundary Survey, publishing the results in a large quarto volume in 1844, with numerous plates including figures of several hundred new species of fossils, entitled "Synopsis of the Carboniferous Limestone Fossils of Ireland," and a smaller work in 1846, "Synopsis of the Silurian Fossils of Ireland." He was then invited by Colonel Sir Henry