

have been transported, more of them than we imagine may be so; that therefore they do not necessarily indicate former levels of the sea; and that every case is to be judged of by its own evidence.

As regards Chapelhall, I certainly pointed out the slender evidence on which it rested, it being, so far as I know, quite exceptional in this respect; but I may say, on behalf of all the Committee, that it was a disappointment to them that the shelly clay was not found; for it was hoped that a careful examination of it would throw light on its origin and mode of formation. This would have been much more satisfactory to them than finding it at all.

But Mr. Mellard Reade makes a far more important mistake than any regarding the purport of my poor papers. Referring to the suggestion that the Ayrshire beds have been laid down by a Frith of Clyde glacier, he says—"I can only point out that the hypothetical course of such a glacier does not correspond with that of any map I have yet seen which professes to give the lines of glacial flow in Scotland." Now, this is a point which should be easily settled. I suppose that the two best, most recent, and most authoritative maps of the ice-flow in Scotland are those by the Messrs. Geikie—Sir Archibald's sketch-map in his "Scenery of Scotland," 2nd edition, p. 248; and Professor James Geikie's of the British Isles in his "Great Ice Age," 3rd edition, p. 69. Both of these maps distinctly show the lines of ice-flow extending from the mountainous region around the heads of Loch Lomond, Loch Long, etc., across the opening of the Frith of Clyde, over the low grounds of Renfrewshire and Ayrshire, and curving out to sea in the neighbourhood of Ayr, as the West Highland ice came into contact with the ice from the Southern Uplands. And Sir Archibald Geikie expressly says, referring to the striations along the estuary of the Clyde—"These markings prove that the mass of ice moved southward from Loch Lomond, crossed the Clyde, passed over the hills of Renfrewshire, and crept down into the heart of Ayrshire, where it united with the ice that was streaming northward from the Southern Uplands" ("Scenery of Scotland," 2nd edition, p. 246). Professor James Geikie also notices the trend of the ice-markings in the lower reaches of the Clyde in similar terms ("Great Ice Age," 3rd edition, pp. 69, 70).

Now, will Mr. Mellard Reade kindly say what maps he has seen, "professing to give the lines of glacial flow in Scotland," which show them differently from the above? We may then come to understand how he does not appear to have seen Messrs. Geikie's maps, nor I those to which he refers.

GLASGOW, *March 8, 1897.*

DUGALD BELL.

CYCADEOIDEA GIGANTEA, SEWARD: AN OMISSION.

SIR,—May I make use of your Magazine for the purpose of pointing out an unfortunate omission in a recent paper on a new Cycadean stem from Portland. In the last number of the Quarterly Journal of the Geological Society I gave a description of the

Uncorrected Proof, for the use of Fellows only.

1. 'On the Morte Slates and Associated Beds in North Devon and West Somerset.—Part II.' By Henry Hicks, M.D., F.R.S., P.G.S. With Descriptions of the Fossils by the Rev. G. F. Whidborne, M.A., F.G.S.

In the first part of this paper, read by the Author before the Society in February 1896, he described the Morte Slates as they occur in North Devon, and the fossils found in them. In this, the second part, he refers mainly to the rocks classified as Morte Slates in West Somerset. He shows that the latter differ in some important characters from those in North Devon, and have an entirely distinct fauna. The fossils obtained from North Devon show that there the beds must in the main be classed with the Silurian rocks; but in West Somerset, so far as discoveries have yet been made, the fossils indicate that they should be classed with Lower Devonian rocks. The Author's contention that the Morte Slates which extend through the centre of North Devon and West Somerset from Morte Point to the north of Wiveliscombe, a length of about 40 miles, are the oldest rocks in the area and form an axis with newer rocks lying to the north and to the south, is therefore fully proved by stratigraphical and palæontological evidence. The fossils are carefully described by Mr. Whidborne, and he shows that there are numerous forms in common between them and those considered to be characteristic of the Lower Devonian rocks of the continent of Europe and in America.

magnificent specimen of *Cycadeoidea*, which is now in the British Museum Fossil Plant Gallery.

Since this was published my attention has been called to the fact that it is to Mr. A. M. Wallis, guide and quarryman, of Portland, that we are primarily indebted for this valuable addition to the National Collection. Mr. Wallis, on discovering the specimen, at once realized its scientific value, and took care that it fell into the hands of those who appreciated its worth. I am much indebted to Mr. Strahan for calling my attention to this omission, and for furnishing me with the above facts.

A. C. SEWARD.

CAMBRIDGE, March 11, 1897.

THE AGE OF THE MORTE SLATES.

SIR,—If Dr. Hicks had only claimed that the Morte Slates are older than the Ilfracombe Beds, probably no palæontologist would have objected on the evidence at present available. But Dr. Hicks claimed that the fossils proved the Morte Slates to be Silurian.

If Dr. Hicks considers the Oriskany Sandstone to be Silurian, his views are as reactionary regarding the Devonian rocks of America as they are revolutionary regarding those of England.

In reference to the suggestion that I had not noticed that the specimen shown in figure 3 in the text did not belong to the same individual as the specimen shown in pl. x, fig. 6, I would ask whether the fossil fox on the staircase of the Geological Society and the fossil fox in the British Museum are to be called one specimen? I should think most people would call them two specimens representing one individual.

I am grateful to Dr. Hicks for emphasizing my argument that *Modiolopsis* cannot be recognized without seeing the dentition. But as this is not shown in any of the Morte Slate specimens, why were they referred to the typically Silurian genus *Modiolopsis*?

In regard to the identification of the big Brachiopod, I did not refer to the "characteristic ribbing," as I did not think the character worth referring to. I have nothing to add or retract from my remarks about this fossil, and prefer to leave the question to the ultimate decision of palæontologists.

J. W. GREGORY.

OBITUARY.

CHARLES TOMLINSON, F.R.S.

BORN IN 1808.

DIED FEBRUARY 15, 1897.

By the death of Charles Tomlinson science has lost a man of great learning, and who may perhaps be appropriately described as a Natural Philosopher of the old school. Although best known for his researches on physical and chemical subjects, as Lecturer on Experimental Science at King's College, and as one of the founders of the Physical Society; he was also a man of great literary attainments, and one who had given a good deal of attention to subjects of Natural History, including Geology.

He joined the Geologists' Association soon after it was established in 1859, and was for several years an active member, serving on