

GRAPTOLITES.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—In my short note in the February number of your Journal I recorded some observations I had made relative to the affinities of Graptolites with recent animals. Will you permit me to make one or two remarks on Mr. Nicholson's reply to some of those observations in your last number.

Your correspondent objects to my saying that he had only one specimen showing the mode of connection which he figures. I am yet unable to make his original statement mean anything else, and his subsequent explanation shows that this interpretation is correct, for he says he has in fact three specimens, "and in the two, which I did not figure, the position of the mucro could not be made out!" That is only one specimen which showed the relation as he figures it. But he has other evidence. He has found pustules or pits on his *Didymograpsus anceps*. Does he not see that if these have any connection with the capsules they entirely destroy his position, as they indicate a connection by a small point and not by a wide mouth? Even Mr. Nicholson then must allow that we yet want evidence of the connection between the 'capsules' and the graptolite.

I am sorry if I have hurt your correspondent's feelings in supposing that he could fall into an error so gross as not to recognize specimens of *Siphonotreta micula*; but he will find, if he will again turn to my note, that I never imagined this, but only stated that my powers of observation led me to think that his drawing was not at all unlike that minute brachiopod. And though I do not yet doubt his powers, I am afraid that, until I have further evidence than his drawing and description, I must believe in his possession of capsules so preserved simply on his *ipse dixit*.

I regret that I inserted in the proof from memory the name *Diplograpsus Whitfieldii* instead of *D. marcidus*, which is Hall's synonym for my *D. tricornis*. Your correspondent may, however, advantageously add to his knowledge of *D. Whitfieldii*, Hall, by examining Hall's figure (*Palæontology of New York*, iii. p. 516), where he will find that it has more than one mucronate radicle.

In regard to the spines of *D. pristis*, Mr. Nicholson may, perhaps, some day discover that his *D. quadri-mucronatus* is very different from Hall's species, and not very different from *D. pristis*, His.; but into this and other critical remarks, which his paper in your last number suggests, I will not now enter, as I hope to have a more fitting opportunity before long when I perform my long-entertained plan of describing the Dumfriesshire Graptolites.

WM. CARRUTHERS.

RECENT EARTHQUAKES.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—It may be interesting to some of your readers to notice the following shocks of earthquakes that have occurred during the last three months:—

1st. A shock at Valparaiso, noticed in the "Illustrated London News," for January 5th.

2nd. The great earthquake at Algeria, on the 2nd inst., through which the villages of Chiffa el Affran, El Ain Ben Rasmi, and Mouzaïaville were almost destroyed, and the town of Blidah greatly damaged. At Mouzaïaville 37 people were killed and 100 injured, and other mischief done.

3rd. A second shock in Algeria on the 4th January.

4th. A prolonged shock, experienced at San Salvador.

5th. An earthquake causing loss of life and property, and destroying Lixuri, at Cephalonia, on the 5th of February. This shock was also felt at Zante and Patras.

6th. Two shocks felt at Malta, during a calm, on the 4th February.

Yours, etc., L. C. CASARTELLI.

THE CRESCENT, SALFORD,
February 18, 1867.

FISH IN THE DEVONIAN (NOT OLD RED) ROCKS.

Mr. Pengelly has the pleasure to inform Mr. Salter, in reply to the queries contained in his letter which appeared in the GEOLOGICAL MAGAZINE for March last (p. 134), that the information he desires has already been published in the Reports of the British Association for 1862, Trans. Sec., p. 85; in the Geologist, vol. v. p. 456; and in the Trans. Roy. Geol. Soc. of Cornwall, vol. vii. p. 441. The specimen (which consists of a single scale of *Phyllolepis*) is in Mr. Pengelly's private collection.

It was seen and examined by the late Dr. S. P. Woodward, and by Professor Owen, and identified by Mr. W. Davies as the *Phyllolepis concentricus*, of Agassiz, with the figure of which species it agrees well.

The fossil was found by Mr. Alfred Pengelly in the gritty slate, at the foot of the cliff, between Meaford beach and Hope's Nose, Torbay.

Mr. William Pengelly was present, and assisted his son in extracting it from the matrix.

LITHODOMOUS PERFORATIONS IN LIMESTONE CLIFFS.

With reference to Mr. D. Mackintosh's letter on Denudation,—which appeared in the GEOLOGICAL MAGAZINE for March, 1867, pp. 136–139,—Mr. Pengelly calls attention to the fact of his having read a paper in Sept. 1864, "On Changes of Relative level of Land and Sea in South-Eastern Devonshire, in connexion with the antiquity of man" (which under the title of "Early Man in Devonshire," was printed, nearly in full, in the "Reader" of Nov. 19, 1864).

Mr. Mackintosh's earliest paper on Denudation appeared in the GEOLOGICAL MAGAZINE, Vol. II. April, 1865, p. 154, and therefore subsequent to Mr. Pengelly's communication.

Mr. Pengelly has no doubt the perforations mentioned by him in his paper (quoted above), to which Mr. Mackintosh refers in his letter, were drilled by marine mollusks; but he has not ventured to refer them to any species of *Pholas*.