

the point, he has I think, proved that I was in error, by finding portions of the schist entangled in the syenite-trap.

I know that the last edition of the Geological Survey Map represents the rocks as altered on the north side, and unaltered on the south. There can hardly be this difference. My friend Mr. Hicks believes there is alteration on the south side too; so both authorities are against me at present. There are plenty of sections, but so many cross-faults which require to be allowed for, before even the true succession can be established, that I cannot admit that I am beaten until the syenite has been thoroughly examined on both flanks; and I can only hope good observers will go again and again to this interesting point. The last edition of the Survey Map confines the syenite to St. David's and its neighbourhood; while it makes the trap of Ramsey Island a greenstone, similar, I suppose, to that of St. David's Head, and altering similar rocks. We may assume that it is a continuation of the St. David's trap, as I ventured to do in my paper. But if the trap and schists of Ramsey Island be really quite different from those of St. David's, opposite, an unmarked fault, N. and S., of no little magnitude, must occupy the Sound. The whole thing, therefore, wants investigation. Who will do it? I am quite certain, whoever does will have the cordial co-operation of my friend Mr. Hicks; and I really have no time to find out my own mistake, if it be one. Altered rocks are crotchety things to deal with; and a sharp anticlinal like that of St. David's does not take place without many a parallel fault which may bring the unaltered rock against the trap, and deceive others, as it appears to have deceived

Yours truly, J. W. SALTER.

ON THE FOSSILS FROM THE SILURIAN SHALES OF MOFFAT, DUMFRIESSHIRE.

My colleague Mr. Carruthers, and Mr. Young of the Hunterian Museum, Glasgow, having called my attention to the communication of Mr. Brown (*ante*, p. 382) regarding his discovery of fossils in the Moffat Graptolite Shales, I have, through the kindness of Mr. Brown, been permitted to examine his specimens. I submitted them to Mr. Carruthers, who is acquainted with the beds from which they were obtained, and he has supplied me with the following notes regarding the fossils and the strata.

Besides the Graptolites which abound in these shales, there have been found two species of a phyllopodous crustacean, *Peltocaris*, described by Mr. Salter in the 'Quarterly Journal of the Geological Society,' vol. xix. p. 87. viz., *P. aptychoides*, Salt., and *P. Harknessi*, Salt. Prof. Harkness has found specimens of the small brachiopod, *Siphonotreta micula*, M'Coy (Cat. of Fossils in Mus. of Pract. Geol., p. 17). Mr. J. Stevens, for some time an enthusiastic explorer of the Moffat Shales, discovered a single specimen of *Tentaculites*. The lighter coloured arenaceous deposits of Hunterbreck Hill contain the impressions of *Crossopodia Scotica*, M'Coy; *Nereites Cambrensis*, M'Coy, and other Annelids (Murchison's 'Siluria,' p. 199). These

organisms, together with the Graptolites, have caused the Moffat Shales to be referred without doubt to the Llandeilo Flags.

Mr. Brown's fossils are, however, a very interesting discovery. They are not Molluscan, but Crustacean, being the remains of a phyllopodous animal that cannot be referred to any described genus. It is more nearly allied to *Dithyrocaris* than to *Peltocaris*, which is found in the same deposits. One specimen is preserved, so as to exhibit the dorsal aspect of the whole carapace, which is in one piece, with the exception of the separate rostrum, as in *Dithyrocaris*. The round carapace, marked by concentric rings of growth, might be easily mistaken for a *Discina*. Several specimens are compressed laterally, and exhibit only the half of the carapace, having the appearance of an *Estheria*, or even of a *Modiolopsis*.—H. W.

MISCELLANEOUS:

THE vast Wealden formation at the back of the Isle of Wight, between Black Gang and Brooke, has long been celebrated for the great variety and wealth of its fossil remains. Numerous bones of Reptiles have been found in this formation near Brooke, principally belonging to that enormous lizard, the Iguanodon, which, with the Megalosaurus, Hylæosaurus, and other extinct monsters, passed their lives on the banks of this great Wealden river. Within the last few days, the Rev. W. Fox, of Brixton, near Brooke, well known among palæontologists for his labours in this branch of geology, has discovered in these beds a new reptile of the Dinosaurian family. The only parts of the skeleton wanting are the head and neck. The animal was above six feet long from the shoulder to the rump, and was furnished with a massive tail five feet long. The legs were about four feet in length, terminating in a broad, short foot. One of the most remarkable features of this strange reptile is the manner in which it is clothed in bony armour. Plates of bone from half an inch to four inches in diameter, and about half an inch thick, covered its body, with the exception of its back, which was protected by a great bony shield. Another remarkable characteristic of this animal was a very curious process of spine-like bones, which ran along the body and the tail, some of which are fifteen inches long, and weigh seven pounds. The remains of this extinct monster were examined last week by Prof. Owen, as well as the Wealden formation from which they were extracted; and we understand that, with reference to the extraordinary nature of the spine-like bones to which we have alluded, Prof. Owen is of opinion that the most appropriate name for this new Saurian would be *Polacanthus*.—*Athenæum*, August 5.
