

As for the Piora schists, I am sorry to have misunderstood Dr. Stapff, but think he would have done better to refer to my letter as published in the *GEOLOGICAL MAGAZINE* (1892, p. 90) instead of to an abstract of it, necessarily condensed. He will find my words to be "If I am right in understanding Dr. Stapff to assign the Piora schists to the Carboniferous system," etc. The fact is that I had great difficulty in coming to a conclusion both as to the exact position of the divisions which he had drawn in his published sections and paper, and as to how much was covered by the terms which he employed. The terminology of petrologists at present is rather unsettled, so that we do not seldom find difficulties of this kind arising in regard to details. But if the Piora schists are part of a series extending "from the Carboniferous to the Jurassic age," I fear that I must leave the remainder of the sentence partly quoted at the top of page 160 otherwise unaltered.

My remark as to the inadequacy of photographs to decide whether organisms occurred in the Altkirche marble applies equally to the "sand grains" in the Guspis gneiss. That a gneiss may be of sedimentary origin I do not deny, but I doubt whether it would be possible to recognize with certainty the original clastic grains, unless they had been so large as to make this term inappropriate. For instance, I have examined many quartz-schists, in which I suspected certain grains to indicate the position of original constituents, but have met with only one case which I felt would satisfy a sceptic (discovered by Mr. J. Eccles last summer), and here they were pebbles rather than grains. But I have seen many cases where a structure, due to the crushing of a crystalline rock, wonderfully simulates that of an ordinary elastic rock, so, as I have been more than once led into error in this matter, the proverb holds good, "once bit, twice shy."

T. G. BONNEY.

DR. ALEX. BROWN ON *SOLENOPORA*.

SIR,—In Dr. Brown's article on the structure of *Solenopora* there is a slight error in the horizon given for the Yorkshire specimens which should be corrected, especially as the rock in question was for some time considered to be the equivalent of the Great Oolite. The Malton specimens are obtained from the Corallian, and they are also very abundant throughout the Ayton-Brompton Coral Rag.

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MR. WATTS'S PAPER ON THE TARDREE PERLITE.

SIR,—On thinking over the subject of Mr. Watts's interesting paper read before the Geological Society on March 21st last, in which he endeavoured to prove—by means of very beautiful magnified sections of the Tardree trachyte—that the perlitic structure is sometimes continued from the glassy magma into the enclosed crystals of quartz, it seems to me that the essentially distinct molecular structure of the two mineral substances was not sufficiently taken into account, and that it is only on a recognition