rocks, but apatite is always found in them, while tridymite occurs not unfrequently.

The author described a number of structural variations in the augite-andesite from different localities. Among the most interesting is a variety containing as much as 69 per cent. of silica.

Among the less abundant rocks are the enstatite-andesite, the quartz-augite-andesite, and the hornblende-andesites. The plagioclase-basalts of Japan can only be distinguished from the augite-andesites by the presence in them of olivine. Magma-basalts are rare, most of the varieties being of the dolerite type; but under the name of "basalt-lavas" the author describes varieties with a glassy base.

In an Appendix some account is given of a number of pre-Tertiary rocks, including granite, one variety of which contains the new mineral, reinite, of Fritsch (the tetragonal form of the ferrous-tungstate), quartz-mica-diorite, diorite-porphyry, and diabase.

CORRESPONDENCE.

REPLY TO PROFESSOR LINDSTRÖM.

Sir,—I am much obliged to Prof. Lindström for giving a correct translation of the generic diagnosis of *Pholidophyllum*. He has possibly a right to complain that in my communication to the Geological Society the word *likformight* was translated *like-formed*, but I am free to confess that I do not understand the term which he uses, "homogeneous stereoplasma." With regard to the unfortunate mistakes in the spelling of generic names, I find, thanks to Mr. Dallas, that my manuscript is still in existence, and that I was correct. My reliance on the able reader of the printers of the Society was unfortunately in this instance impossible, for he was taken from amongst us. Hence the errors in print.

Prof. Lindström, when he comes over to England, will find at the Museum in Jermyn Street, and at the British Museum, specimens of what he calls *Pholidophyllum* from the Upper Silurian of England. On the other hand, he will find specimens of all the species of *Palæocyclus*, Ed. and H., without a trace of the characteristic exothecal (or whatever they may be) structures of *Pholidophyllum*. In many the outside is so well preserved that there is no trace of the structures any more than there is to the eye in the lithograph, fig. 20, plate viii. of Prof. Lindström's work on the Operkelbärande Koraller, Stockholm, 1882. I have looked into the subject with some care, and I still believe that his curiously covered corals are not of the same genera as those described by Edwards and Haime. Those authors do not mention these structures, which would have been palpable enough to their sight if they had existed in their forms.

But there is another way of looking at the question, which interferes with the value of *Pholidophyllum* as a genus. What is the true

meaning and what is the classificatory value of these exterior bodies, which I find also in the mud filling up the calices? As soon as time will permit, and drawings can be made, I will trouble you with my views on these questions. P. Martin Duncan.

THE COMPLETION OF THE ONE-INCH MAP OF THE GEOLOGICAL SURVEY OF ENGLAND AND WALES.

Sir,—An interesting article on the above subject appeared in the "Times" of February 15th, and was reprinted in "Nature" of the following week. No fault can be found with its general accuracy, but I shall be glad to be allowed to say a few words on some omissions that deserve notice.

It is obvious that the goodness of a geological map depends largely on the accuracy of the Ordnance Map on which the geology is placed. No mention, however, is made in the above article of the fact that the one-inch Ordnance Map of England and Wales is a work of various periods and of men with very variable standards of accuracy. Now the six northern counties had accurate six-inch and one-inch maps when the geological survey was begun in them, and their geology has been worked-out on the six-inch maps and thence transferred to the one-inch maps. But in the southern counties the geological work has been done on old and inaccurate one-inch maps. Every year new and accurate six-inch and one-inch Ordnance Maps of the counties around London are published, yet there is no allusion in the "Times" article to the desirability of having the geology of the district put upon these new maps. Should any one think this work unnecessary, let him test the matter himself by trying to transfer the geology of some part of Kent or Surrey from the old Ordnance Maps, on which it now appears, to one of the new sheets, and he will soon find he has undertaken an impossible task, and be convinced of the necessity of a resurvey on accurate maps. And as regards the completion of the survey of the superficial deposits, mentioned in the "Times" as one of the things remaining to be done, it is obvious that to do this on old one-inch Ordnance Maps would be simply to waste the time of the Geological Surveyors and the money of the public. Of course it may or may not pay to publish six-inch geological maps of any given area, but the advantages of working on maps of that scale are enormous (even when the production of one-inch maps is the sole object in view) both as regards the amount and the accuracy of information displayed on the latter. When the whole of England and Wales shall have been geologically surveyed on the six-inch scale, and the result transferred to accurate one-inch maps, the duties of the Geological Survey of that part of the United Kingdom will consist simply in keeping the maps up to date—but not till then. T. V. Holmes.

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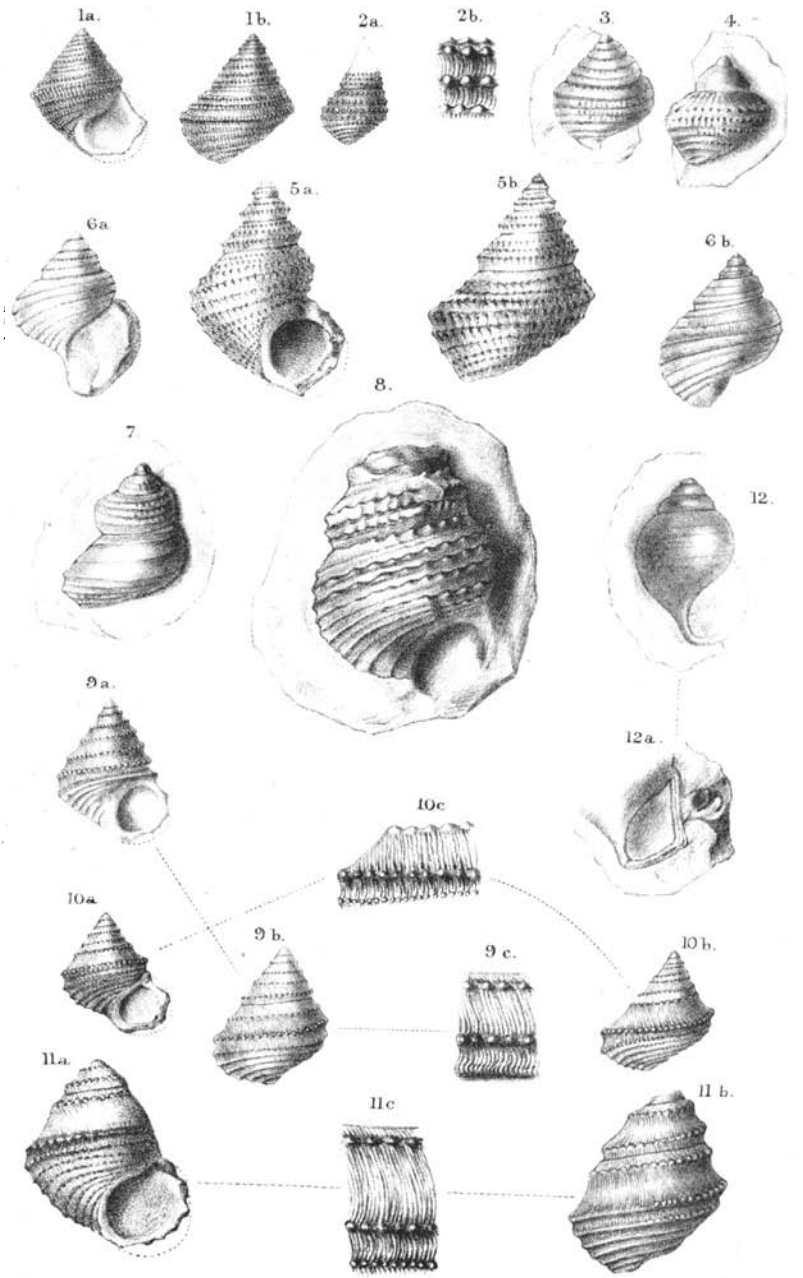

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