

NOTES AND QUERIES.

1.—TRUE Syenite is an aggregate of Amphibole and Orthoclase, and quartz is often present (this ignores all other accessories present). If a rock consists of Amphibole + Orthoclase + Oligoclase, what should it be called? Quartz may be also present, not necessarily an essential—G. H. K. (Answer to 1. "Syenite" still.—T. R. J.)

2.—KAOLIN occurs as a decomposed Felstone *in situ*. Does it often occur as a subaqueous rock, and where?—G. H. K. (Answer to 2. "As the white pipe-clay of Bovey-Tracey, Wareham, Bournemouth, Alum Bay," etc. T. R. J.)

3.—In speaking of the typical varieties of the felspars, Orthoclase, Oligoclase, and Labradorite, we wish to express the proportions of acid in each case. How can we do this? Is not Orthoclase a *neutral* or fully saturated salt. What prefix can be applied to the felspar in order to express the proportion of the saturation in each case.—H. L.

4.—DANA gives as Diorite a compound of Amphibole and Albite. This, however, appears to be incorrect, as Diorite ought to be a compound of Amphibole and Orthoclase, with or without Labradorite. What is the proper name for a compound of Amphibole and Albite, and when does it occur?—G. H. K.

5.—DAUBUISSON gave the name of *Eurite* to certain felstones on account of their fusibility, in fact to basic felstones in which Orthoclase was not present, or only in a subordinate quantity. Some authorities confine the name to an almost compact rock, an intimate mixture of Felspar and Quartz, occasionally showing specks of quartz. Still, however, there are more or less granular rocks, which must be classed among the Eurites, as they merge the one into the other. In some of these granular rocks Amphibole is visible, and by some the rock would be called *Diorite*. What percentage of Amphibole ought a Diorite to contain? (By a Diorite I mean a rock principally composed of Amphibole and Felspar, not Orthoclase.)—H. L.

6.—NAUMANN confines the term *Greenstone* to Diabase, *Brongniart* to Diorite. Jukes, Cotta, and others use it, as a general rule, for all basic Plutonic rocks (the Trappean rocks of Jukes). To which class of rock is it best to apply it?—H. L. (Answer to 6. "Use 'Greenstone' as a general term for greenish trap-rocks; and do not make a special term of it." T. R. J.)

7.—LYELL, in his new work (The Student's Elements of Geology), mentions that "the recent researches of Vom Rath and others, prove that the Mineral Tridymite, which is crystallized Silica of sp. gr. 2.3, is of common occurrence in the Volcanic Rocks of Mexico, Auvergne, the Rhine, and elsewhere, although hitherto entirely overlooked." Does it (Tridymite) occur as a rock constituent in these localities or as an accessory? In Trachyte, for instance, does it replace the ordinary quartz it may contain, is it associated with it, or does it merely occur in drusy cavities, and must its specific gravity be ascertained, that its presence may be determined?—H. L.

8.—CONCRETIONARY structure in a piece of plaster on the inside walls of a ruined house on the banks of the Eniff river, Mayo, Ireland. To what is it due? Each line seems to be an aggregate of minute crystals. The lines A and B seem to be shrinkage fissures or joints.—G. H. K. (What is the plaster composed of? Edit.—GEOL. MAG.)



Concretionary Structure seen in old plastered wall, Co. Mayo, Ireland.

For Rock nomenclature "Cotta's Classification of Rocks" should be followed, we have no other work *at present* which can be equally recommended to students.

Answers to rest of queries will appear next month.—Edit. GEOL. MAG.