

tive. Again, in the case of metamorphic sedimentary rocks, we find one group which exhibits foliation very distinctly, another which does not. Now there is no name, so far as I am aware, for the rock in the latter group, which is the equivalent of gneiss in the former.¹ Again, unless we accept such a term as Hornblende rock (which I do not like), we have no name for the equivalent of Hornblende schist; and the same is true of other schists. Names like Hällflinta, Hornstone, Lydian stone or Lydite, Porcellanite, want definitely fixing or deliberately leaving as indefinite—we have, in fact, no satisfactory nomenclature for the extensive group of compact felstone-like or flinty altered rocks.

In the case of the igneous rocks, also, several points require settlement. The limits of the terms Quartz-felsite (or Quartz-porphry, a name I much dislike), Quartz-trachyte, and Rhyolite require fixing. We have to consider whether we ought or ought not to separate the microcrystalline from the cryptocrystalline Quartz-felsites, and then to decide what are the essential characteristics of a Quartz-trachyte, what are the limits of the name Rhyolite, and what view is to be taken of devitrified rhyolites. At present, as it seems to me, there is no line drawn between some Quartz-felsites and Quartz-trachytes, other than geologic age, which I for one do not think a safe basis for classification. Again, assuming that we take crystalline condition as the basis of subdivision in our groups, separated at first by mineral (or chemical) composition, the meaning of the term basalt requires fixing, and the groups of the nepheline and the leucite rocks are very unsettled. The same may be said of the "mica-traps," peridotites, and others, which, did space allow, it would be easy to name; but the above remarks may suffice to call attention to a real difficulty, which I imagine is widely felt by students of petrology.

ST. JOHN'S COLLEGE, CAMB 116F,
November 20th, 1879.

T. G. BONNEY.

DR. WAAGEN'S VIEWS ON THE GEOLOGY OF THE SALT RANGE
IN INDIA.

SIR,—With reference to part of my letter in your September Number bearing upon Dr. Waagen's suppression of the Silurian group in the Indian Salt Range, I have since learned he has made the important admission: that for a time Stoliczka and himself were of opinion the fossils which I found in the *Obolus* group belonged to the Silurian period, and even now [May, 1879] he was "not prepared to maintain with certainty that that opinion was incorrect."² Notwithstanding this, in the case in point,³ Dr. Waagen has not hesitated to condemn the classification adopted by me, although he elsewhere confessed himself uncertain of its being in error.

A. B. WYNNE.

¹ I have proposed that of granitoidite, Q. J. G. S. vol. xxxv. p. 322.

² Neues Jahrbuch für Mineralogie, etc., 1879, "Ueber einige strittigen Punkte in der Geologie Indiens. Dr. W. Waagen. Wien, 1 Mai, 1879."

³ Pal. Ind. Series xiii. Salt Range Fossils.