felsite pebbles in which come from the same source. Lastly, he showed that the signs of the metamorphism and apparent "melting down" asserted to be visible on the sides of Llyn Padarn, proved, on microscopic examination, to be mainly superficial. Hence, he maintained that these rocks were rhyolitic lava-flows of Pre-Cambrian age.

5. "On the Metamorphic Series between Twt Hill, Caernarvon, and Port Dinorwic." By the Rev. Prof. T. G. Bonney, M.A., F.R.S., F.G.S., and F. T. S. Houghton, Esq., B.A.

In the Geological Survey Map this district is coloured as "intrusive felsite," together with those spoken of in the last paper. It was asserted to be probably metamorphic rock by Prof. Hughes and Dr. Hicks in a communication made to the Society last year, and the first author confirmed that view by microscopic examination of a specimen collected by them. The authors had during the past autumn more minutely examined the district, and found:—(1) that the general character of the series was that of a metamorphic one; (2) that the rocks of granitoid aspect were associated with well-marked beds of conglomerate; (3) that this series extended up to a little beyond Port Dinorwic, where the quartz-felsite set in. The paper described the microscopic structure of some of the rocks, and the authors expressed the opinion that the more granitoid specimens were probably the results of alterations of felspathic grits.

CORRESPONDENCE.

THE TRIPARTITE DIVISION OF THE SILURIAN AND CAMBRIAN FORMATIONS.¹

SIR,—Will you allow a still small voice from the frontiers of *Siluria* to say a word on Mr. Lapworth's proposal to call the rocks of the Second Fauna *Ordovician*? The lines have fallen to me in the pleasant places of South Shropshire, amidst the monuments of Murchison's genius. But Murchison is gone, the surveyors are gone (it is to be hoped they will come back again), and I am left almost alone to represent *Caer Caradoc* and *Wenlock Edge*. By the names of Murchison and Sedgwick (now, perhaps, in still happier hunting-grounds, recounting their old exploits, and wondering at their ancient squabbles), I implore the rival schools to accept the olive-branch! He who holds it is worthy to propose the compromise. Moffat and Girvan have witnessed his renown. Scores of faults and flexures testify to his skill. He has won an *Ordovicia* in the Scottish Uplands. Let true scientific frontiers be established! Let *Barrande* and *Hughes* meet together; let *Cambria* and *Siluria* recede from each other!

I am bound to record my humble protest against the present imbroglío. The want of a proper name for the rocks of the second fauna is most embarrassing. I have used "*Lower Silurian*" under protest, and "*Cambro-Silurian*" with dissatisfaction. Working some time ago amongst the Upper Cambrians of *Salop*, and being anxious

¹ This and the two following letters have been unintentionally delayed in publication.—EDIT. GEOL. MAG.

for all information on the subject, I eagerly waited for a paper announced for the Geological Society on a new "Cambrian" find in North Wales. The paper appeared, and the "Cambrian" turned out to be *Arenig*. The author, of course, was a student of the Cambridge School. Those of us who are simply workers, and not sectarians, should not have our tools broken by the worshippers of great names.

CHARLES CALLAWAY.

WELLINGTON, SALOP, January 6th, 1878.

CHLORITIC MARL AND UPPER GREENSAND.

SIR,—I beg the favour of space for a brief reply to Mr. A. J. Jukes-Browne's questions which appeared in the GEOLOGICAL MAGAZINE for January, 1879. Mr. Jukes-Browne asks:

(1). "Why has he (Mejer) changed his mind regarding bed 13 (of the Beer Head Sections), and why does he not identify it with the zone of *Belemnites plenius*?"

(2). "What does he mean in saying that he was therefore wrong in giving *Holaster subglobosus* so wide a range in his tables of fossils? Is it not found in the beds where he marks it as occurring?"

In reply to question (1): It would be hardly correct to say that I have changed my mind regarding bed 13. In 1874 I described it as representing Chalk Marl. More recent examination has convinced me that I am right in placing it *above* the Chloritic Marl, and I now identify it with the zone of *Belemnites plenius*.

To question (2) I can but repeat my acknowledgment (in GEOL. MAG. for Dec. 1878) of error in my tables of fossils of the Beer Head Sections.

For the rest I shall be happy to continue this discussion so soon as Mr. Jukes-Browne may have found "an opportunity of refreshing his recollection of the Isle of Wight sections," by reference to the disputed rocks and fossils *in situ*. By such time perhaps some acceptable term may have suggested itself which may replace that of *Chloritic Marl*.

C. J. A. MEJER.

January 6th, 1879.

SIR,—Having informed Mr. Mejer of the typographical error which occurred in my last letter,¹ he has been good enough to send me fuller particulars, in answer to my questions, than are contained in his reply sent to you for insertion in the GEOLOGICAL MAGAZINE. I gladly avail myself of his permission to transmit them to you for publication, as they contain fresh evidence regarding the zones in the Devon cliffs. Mr. Mejer writes to me as follows:—

"You may remember that in my description of bed 13 in 1874, I referred it to the base-bed of the Chalk Marl. That is to say, I considered it then as the lowest representative of the Chalk Marl of that particular district. I described it as distinct from the Chloritic Marl, because it even then appeared to me to represent Chalk Marl as to its matrix and older beds

¹ At p. 48, line 9 from foot of page, for "not" read "now."