

often more clear and trenchant—so much so that those fathers of British geology who made a separation between the Palæozoic and Mesozoic groups exercised a wise discretion in making the division at the junction of the two formations. This physical break is represented by the remarkable change in the fauna and flora of the formations on either side of the boundary, a fact which I fear neither of your correspondents has sufficiently considered.

EDWARD HULL.

THE AGE OF THE PENNINE CHAIN.

SIR,—Having given some attention during the past few years to the Permian Formation in the North-east of England, I should feel obliged if you would allow me to say a word or two on the above subject. I can corroborate all that Mr. E. Wilson has said with respect to the physical break which exists on the north-east side of Pennine Chain between the Permian and Carboniferous formations; for at some of the new collieries which have recently been put down through the Permians in the Nottingham and Derbyshire Coal-field, the difference in dip nearly amounted to twenty degrees, whilst in every case the unconformability between the two formations was most marked.

The westerly attenuation of not only the Marl Slates but of the Permian Formation as a whole, and the sedimentary materials with which on the west it is intermingled, point to the existence of high ground in that direction during Permian times; whilst the great differences which undoubtedly exist in the character and thickness of the same formation on both sides of the existing anticlinal are facts altogether in favour of its existence at the time these deposits were laid down. I remember the surprise quite well which Professor Hull expressed when the Scarle boring proved the Permians to attain such a vast thickness in that locality, and the difficulty he experienced in recognizing the Marl Slates (about 150 feet in thickness), which he afterwards placed in the Carboniferous system.

Under these circumstances, I fail to see how Professor Hull and Mr. Teall can object to the existence of the Pennine Chain during the deposition of the Permian formation, when such reliable facts in support of such an existence can be produced.

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ROWLAND GASCOIGNE, F.G.S.

CRETACEOUS GASTEROPODA.

SIR,—Mr. Wm. Gault, of Belfast, now engaged in compiling a list of the Irish Cretaceous fossils, has kindly forwarded to me for examination those which appeared to be Limpets and Dentalia. The result has proved that the Irish species, hitherto known as *Dentalium septangulare* of Fleming, is really an Annelid. Mr. Etheridge and Prof. Morris agree with me in this opinion, but it is especially to Dr. Gwyn Jeffreys that I am indebted for a most critical examination. He states regarding them—“They differ from the Solenoconchia and agree with the Testaceous Annelida in the following particulars. They are much more solid and more curved, and the mouth or aperture is decidedly constricted. The microscopic structure showing the lines of periodical