

GEOLOGY OF NORTH DEVON.

SIR,—Mr. Kinahan has made a statement in his communication to you, in February, which I cannot allow to remain any longer unnoticed. At the end of his "Note in Press," p. 74, whilst attributing but little value to the fossil evidence as determining the position of the North Devon beds, he writes, "The species have been collected without that care and precision which can alone render them of use in marking horizons. The localities assigned to the specimens, in the collections chiefly relied upon, are such as Torquay, Chudleigh, etc.; where two, if not more, distinct groups of rocks are developed." Now, I must leave the South Devon geologists to defend themselves, and the care with which their collections have been made, and the localities properly assigned; they have plenty of hard work before them in their attempt to correlate these extremely puzzling beds with the Northern beds. A recent visit to Torquay strengthens my view of this; but so far as the fossil evidence affects the question of the regular sequence of the beds, from the Foreland Sandstones to the Pilton beds, I venture to think nothing can well be clearer. As to the care and precision with which the collections have been made, I boldly assert none can be greater. I need only refer to those of Mr. Townshend Hall and Mr. Valpy; and to the Catalogue of North Devon Fossils published by the former in *Quart. Journ. Geol. Soc.* 1867, p. 376. Mr. Hall's accuracy and knowledge of the North Devon strata will not be questioned by any one who knows him. And to Mr. Valpy's keen eye for fossils, his care in assigning the proper localities to them, and his intimate knowledge of the coast-line from the Foreland to Baggy Point, I, who have spent many a long and pleasant day with him, can most fully testify.

A word as to the stratigraphical position of the beds. If "Jukes's fault" has not been sufficiently disposed of by Mr. Etheridge, I invite my friend Mr. Kinahan to attend the approaching Meeting of the Devonshire Association at Ilfracombe, where he, with his fellow-countrymen, who have looked at the Devon geology across the water from an Irish point of view, will have a hearty welcome; and I ask him to prove then to the satisfaction of the Secretary, Mr. Pengelly, the disproof of an "hypothetical" fault, which has never yet been proved. Can he do it? The coat has been trailed: let him take up the challenge.

H. H. WINWOOD.

BATH, *March 21st*, 1879.

KINAHAN'S GEOLOGY OF IRELAND.

SIR,—In Mr. Kinahan's *Manual of the Geology of Ireland* (p. 315), I find a reference to Mr. Jukes' explanation of the formation of the valleys in S.W. Ireland, accompanied by the following footnote: "Jukes at the time considered that the Cork rocks were once covered by the Carboniferous Limestone of the central plain. Subsequently he had to allow that this was incorrect, and his theory formed on the supposed Limestone hills therefore falls to the ground, although it is still quoted."

In Mr. Kinahan's former book, "Valleys and their Relations to Fissures, etc.," the following passage occurs: "The first of these propositions [that limestone once existed over the whole of S.W. Ireland] Mr. Jukes subsequently gave up. . . . This, however, does not much affect the present subject [i.e. formation of river-valleys], as some of the other rocks are nearly as easily denuded as limestone."

I should feel obliged to Mr. Kinahan if he would explain the full meaning of the extraordinary statement contained in the first of the above quotations, and also how the latter passage is to be reconciled with the former.

I entirely fail to see how Mr. Jukes' theory depends on the supposition that the Carboniferous Limestone once extended over the South-west of Ireland, and if Mr. Kinahan will carefully re-read the original paper in the Quart. Journ. Geol. Soc., vol. xviii., I think he will see that he has been under a misapprehension regarding the "supposed Limestone hills." There is only one passage in which such hills are supposed, and this forms part of a hypothesis mentioned only to be presently dismissed as leading to utter absurdity and confusion. The dominant ridges really involved in Jukes' explanation are the great anticlinals of so-called Old Red Sandstone separating the synclinal valleys in Cork and Waterford; he supposes the streams to have commenced the erosion of their channels along the surface of a plain of marine denudation which sloped southwards from these dominant ridges.

I am aware that Mr. Kinahan has published his idea of the origin of these and other valleys, and I have no desire to enter into a discussion regarding his peculiar views; but I must protest against so summary a dismissal of Jukes' well-considered theory. I need only add that I am one of those who believe that it completely explains the courses of many river-valleys both in England and Ireland.

HIGHGATE, March 10.

A. J. JUKES-BROWNE.

PROF. HULL AND G. H. KINAHAN.

SIR,—The statements of Prof. Hull in the GEOLOGICAL MAGAZINE for March, 1879, being mostly personal, I cannot think my answering them would be any advantage to Science. My facts cannot be disproved, and any one interested in the question can judge which is right by examining the Irish rocks for themselves. As to the supposed Permian, if Prof. Hull is mistaken, I am not bound blindly to follow him; and my opinion as to the age of the rocks is backed by the opinions of Griffith and others, also by the fossils found in the rocks.

G. HENRY KINAHAN.

GEOLOGICAL SURVEY OF IRELAND.

OCCURRENCE OF *EURYNOTUS* IN THE CARBONIFEROUS LIMESTONE OF BELGIUM.

SIR,—Prof. de Koninck has, in the recently published first part of his new great work on the "Faune du calcaire Carbonifère de la Belgique," p. 25, plate iii., described, under the name of *Platysomus* (?) *insignis*, De Kon., a fish from the Carboniferous Limestone