

Fuller details of this research and pictures of the relevant ammonites will be published in due course. The essential information is contained in the following bibliographical references.

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LONDON, S.W. 7.
14th January, 1960.

DEVONIAN-CARBONIFEROUS BOUNDARY

SIR,—I wonder why the explanation of the relations between the Carboniferous and Devonian rocks of S.W. England and S.W. Ireland did not occur to workers on these problems many years ago.

Anyone looking at the fossils in the Barnstaple Museum must recognize at once that the Pilton Beds are in part of Upper Devonian Age. Also, it is obvious, as Vaughan claimed, that some part of the Pilton Beds may extend into the lower part of the Carboniferous, possibly into the *Zaphrentis* zone. Thus the Pilton Beds form an apparently continuous passage between the Upper Devonian and the lower part of the Carboniferous.

In the Pembroke and Tenby Memoir, E. E. L. Dixon showed that such a passage occurred in S.W. Pembrokeshire and it was impossible to suggest where a boundary could be drawn between the two formations. These results confirm the remarkably acute observations of Salter who showed that in Pembrokeshire the Upper Old Red Sandstone developed into a marine facies which could be closely compared with the Pilton, Baggy, and Marwood Beds of North Devon.

A little earlier than the Pembroke and Tenby Memoir, another Geological Survey Memoir—Haverfordwest—had appeared. In that memoir the gradual encroachment of the base of the Millstone Grit on the Carboniferous Limestone (Viséan) development was described until in the neighbourhood of Haverfordwest, *Reticuloceras*-bearing shales rested unconformably on S₁ of the Viséan and a few miles further west the Millstone Grit had overstepped the whole of the Viséan.

You have only to combine these two relationships as developed in S.W. Pembrokeshire to arrive at the solution of the so-called Carboniferous Shale problem which was raised by Jukes in Ireland. In S.W. Ireland fossiliferous marine Upper Devonian in a slaty development apparently passes up conformably into Coal Measure slates without the intervention of the Carboniferous Limestone so typically developed further east around Cork.

73 BARTON ROAD,
CAMBRIDGE.
8th February, 1960.

O. T. JONES.