

THE DATE OF THE WORDS "ALTERED DEVONIAN" ON THE OLD GEOLOGICAL MAP OF SOUTH DEVON.

SIR,—Your reviewer has raised the interesting question as to the date when the words "Altered Devonian" were placed on the old Ordnance Survey Map of Devonshire of 1809.

As the Devonian system was only constituted in 1839 it must have been at or after that time. As De la Beche's Report was published in the same year all his work for the Report was completed before the term Devonian had come into use.

I venture to suggest the possibility that the term "Altered Devonian," whenever inserted, was not intended to apply to the metamorphic schist series but to the rocks immediately north of them, which, on the shores of Start Bay, are, I believe, universally admitted to be more or less altered. It seems impossible that De la Beche would ever have applied the term to the metamorphic schists further south, as he spared no opportunity to indicate his conviction that the latter were entirely distinct. De la Beche in his Report describes the different formations in successive chapters according to age. The schists are described in the chapter preceding that allotted to the grauwacke; and, in the epitome of contents, the superior antiquity of the schists is indicated without the shadow of doubt.

A. R. HUNT.

January 14th, 1905.

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GEOLOGY OF THE KINGSBRIDGE AND SALCOMBE DISTRICT.

SIR,—In a somewhat lengthy notice of the Geological Survey Memoir on the "Geology of the Country round Kingsbridge and Salcombe," which appeared in your last issue (January, 1905, pp. 26-37), on p. 32 we read: "The general strike of the green schist zone, where the two bands coalesce to form one, would seem to be approximately north-west and south-east. This direction is oblique to the general strike of the Devonians on the north, and, taken in conjunction with the fact that the eastern half of the Metamorphic boundary consists of green schists and the western half of mica-schists, seems to point to a considerable difference of orientation in the two systems. Yet the author fails to trace any evidence of pre-Devonian disturbance."

The general strike of the green schist zone here referred to merely applies to about a mile of country between the Moulton and Marlborough (see pp. 38-39 of the Memoir), where the flattening out of the great mica-schist anticline of the Start in a series of minor folds allows the southern band of green schist to coalesce with the northern band which all along its range is conformable in strike to the general strike of the Devonian rocks. The green schists are thrown out along a series of small east and west folds on the west of the Salcombe estuary, and it is owing to this circumstance, and not to any difference of orientation, that mica-schists are in contact

with Devonian on the west of the estuary. The maps bear out the above statements, and will show that the term band was not intended to mean a continuous outcrop.

Mr. Teall's description of the original character of the Metamorphic rocks and their likeness to Devonian sediments and igneous rocks associated therewith is a fact which deserves more consideration than the writer of the review seems inclined to give to it. As regards my own opinion as to the true boundary of Hope, that would depend on the acceptance of one view or the other, and to the age of the Metamorphic or metamorphosed rocks. Cogent facts are wanted, not opinions, and I am not prepared to enter any horse to win with. Certainly if I were I should not consider a plication of such magnitude as to repeat the Middle Devonian at Hope, a feat of legerdemain on the one side, or the repetition of similar conditions of deposit and of vulcanicity in the same area at widely different geological times, an impossibility on the other.

To be a strong partisan saves a good deal of troublesome investigation. Although no one can fail to see that the acceptance of an ancient series in the extreme south of Devon would be a convenient way of accounting for any extra disturbance in the Devonian rocks, the evidences of such, if present, are insufficient to afford material support to the pre-Devonian hypothesis.

W. A. E. USSHER.

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‘DEUTOZOIC.’

SIR,—When I used the word ‘Deutozoic’ I took it for granted that most of the readers of the *GEOLOGICAL MAGAZINE* knew that the illustrious geologist who introduced the longer (and, etymologically, more correct) term ‘Deuterozoic’ had publicly sanctioned the employment of the word in its shortened form. J. G. GOODCHILD.

ROYAL SCOTTISH MUSEUM.  
January 8th, 1905.

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ON THE TERM ‘DEUTEROZOIC.’

SIR,—The earliest work in which, to my knowledge, the word *Deuterozoic* is employed is Page & Lapworth's “Introductory Text-book of Geology,” 12th edition, 1888, pp. 132, 133 (see also pp. 127, 129, 179, and 187 of same work). It includes the upper division of the Palæozoic, i.e. Old Red Sandstone, or Devonian, Carboniferous, and Permian. The lower division of the Palæozoic is termed *Proterozoic*, and comprises the Cambrian, Ordovician, and Silurian formations.

These terms *Proterozoic* and *Deuterozoic* do not seem to have taken hold, and have been neglected and forgotten except perhaps by Lapworth. I do not find any mention of them in any earlier geological work. In Lapworth's “Intermediate Text-book of Geology,” 1899, he writes (p. 157):—

“By others [i.e. other geologists] the Palæozoic itself is divided