

Adelaide chain of metamorphic and slate rocks, where they are covered up by a Pliocene drift (of pluvial or glacial origin), containing remains of extinct marsupialia and trees only.

The two sets of deposits are shown in the Well-section alluded to, which is as follows:—

	Estimated thicknesses. Feet.
PLIOCENE—	
“ Mallee ” clay .....	40
MIOCENE (marine).	
Light-coloured sandstone with casts of shells .....	10
Gravelly ironstone and bands of clay } .....	81
Blue marl } .....	
Sandstone without shells .....	17
Loose sand .....	6
	154
Actual depth .....	154

UNIVERSITY OF ADELAIDE,  
June 18th, 1877.

RALPH TATE.

ELEPHAS MERIDIONALIS IN DORSET.

SIR,—At a recent visit to the Blackmore Museum at Salisbury, I was surprised to see two specimens of the teeth of *Elephas meridionalis*, which were labelled as found at Dewlish, in Dorsetshire. This being a preglacial species, it would be interesting to learn under what conditions they occurred at that locality, which is situated among the Chalk downs. The specimens were white, and had the appearance of having come out of Chalk debris.

The only specimen I have seen from any English locality besides the Cromer Forest-bed was a fragment at the Chichester Museum, said to have been found on the neighbouring Sussex coast.

Can any of your correspondents give information about these specimens?

O. FISHER.

REVERSED FAULTS IN BEDDED SLATES.

SIR,—I should like to call Mr. Hebert's attention to a few points in his article on the above subject in the October Number, which appear to require further consideration. Though it may be the established rule in some coal-mining districts that the hade of a fault is to the downthrow, there are in other districts exceptions to this rule, in which the faults are 'reversed,' or, as they are commonly called here, overlap faults. The cause of these reversed faults is, as stated, no doubt horizontal pressure, the results produced varying with the angle of hade, friction, and so forth. The causes of these horizontal pressures I should be glad to see further discussed by the author. The cooling of the earth, and consequent contraction of the nucleus beneath the solid crust, has, as well as the more local effects of earthquakes and volcanic intrusions, been suggested as a cause. It is evident that a local subsidence under an arched portion of strata will, if the abutments are stronger than the arch at the line of subsequent rupture (or fault), cause an overlap or reversed fault when the arch gives way, or it is evident that the matter may