

Waveney and Little Ouse, first as one valley, then as two valleys, then as two valleys inosculating. But the upper part of every so-called river valley on earth is always purely a "rain valley or dry valley" *sine flumine vallis*, as in myriads of cases *entire* valleys are, especially in porous-strata like Chalk. And in nature, at the dividing ridge, each opposite dry valley or water-flow may be seen to stretch its fingers up each opposite water-slope to join hands across the intervening water-parting. Hence the low parts of a dividing ridge alternating with high parts, for which we have the modern northern terms, gap, saddle, col, &c. Hence the southern sierra or serra (saw), and the Latin "*juga montium*," from the saw-like, or yoke-like ups and downs of dividing ridges. The very name of jugum (hill or yoke) originates here. But these opposite dry valleys, which run up to these low parts of the dividing ridge, these beginnings of valleys are not caused by rivers. They are caused by the cause of rivers—rain.

GEORGE GREENWOOD, Colonel.

BROOKWOOD PARK, ALRESFORD, December 7, 1868.

THE MAMMALIA OF THE CRAG.

SIR,—I observe that the Rev. O. Fisher, at page 547 of your last number, states, on the authority of the Rev. J. Gunn, that *Elephas meridionalis* occurs in the Red Crag. He also speaks of the "Crag period" in such a way as to make it clear that he regards the terrestrial Mammalian fauna of the Suffolk Bone-bed as identical with that of the Mammalian Norfolk Crag. It has always been to me a matter for much regret that the able students of the Norfolk Crags will not give due attention to the facts known as to the Suffolk Crag, for by their assistance the students of the latter might hope to unravel the mysterious history of that strange deposit, the Red Crag. What grounds have the Rev. John Gunn and the Rev. O. Fisher for stating that *E. meridionalis* is found in the Red Crag? The only elephant tooth supposed to come from the Red Crag—known to the late Dr. Falconer—is referred by him to *E. antiquus* (Palæont. Mem. vol. ii. p. 181), and there is no real reason for believing it to be a Red Crag specimen at all. It is true that *Mastodon Arvernensis* is common to the Norfolk and Suffolk deposits; but have you in Norfolk *Rhinoceros Schleiermacheri*, *Hyaena antiqua*, *Hipparion* (*Ursus arvernensis* is, I think, found there)? Though the character of the lowest beds of the Suffolk and Norfolk deposits is similar, there seems to me, at present, reason to regard the terrestrial Mammalian fauna of the Suffolk Bone-bed as older than that of the Norfolk Crag generally. It is most important to remember that they are *older than the Coralline Crag*.

E. RAY LANKESTER.

ON THE OCCURRENCE OF TITANIUM, ETC., IN MAYO.

SIR,—I have lately discovered a new locality for the mineral Titanium, viz., on Cushcamcurragh, a mountain in the townland of Treel, near Newport, Mayo. It occurs in the form of fine crystals of Rutile, imbedded in quartz and schist, in the neighbourhood of a landslip of considerable extent which took place last year at the head