

The author exhibited and described an astragalus of *Iguanodon* from the collection of E. P. Wilkins, Esq., F.G.S. The bone was believed to be previously unknown. It is a bone of irregular form, having on its lower surface the characteristic pulley-shape of a movable hinge-joint. The upper surface presents a form exactly adapted to that of the distal end of the tibia, so that the applied surfaces of the astragalus and tibia must have interlocked in such a manner as to have precluded all motion between them. The author remarked upon the interest attaching to this fact in connexion with the question of the relationship between the Dinosauria and Birds.

4. "Note on a very large Saurian Limb-bone, adapted for progression upon land, from the Kümmeridge Clay of Weymouth, Dorset." By J. W. Hulke, Esq., F.R.S., F.G.S.

The bone described by the author presents a closer resemblance to the Crocodilian type of humerus than to any other bone, and he regarded it as the left humerus of the animal to which it belonged. Its present length is 54 inches, but when perfect it could hardly have been less than 63 inches in length. The middle of the shaft is cylindroid. Its transverse section is of a subtrigonal figure, and presents a large coarsely cancellated core, inclosed in a compact cortical ring. The bone is considerably expanded towards the two extremities; the distal articular surface is oblong, and divided into a pair of condyles by a very shallow vertical groove; below, the anterior border, in its proximal half, is much wider than the corresponding portion of the posterior border, and is flattened and produced downwards into a ventrally projecting crest; and the distal half of this border forms a thin, rough crest, projecting forwards. The presence of these crests distinguishes the present humerus from those of *Pelorosaurus* and of *Ceteosaurus Oxoniensis*; but the general correspondence of the bone with the humerus of the latter species leads the author to refer it provisionally to a species of *Ceteosaurus*, which he proposes to name *C. humero-cristatus*.

Discussion.—Mr. Seeley remarked that the internal structure of the bone resembled that found in *Gigantosaurus*, and the general form of the humerus was such as might be expected did it belong to an animal of that genus.

5. A despatch from Mr. Alfred Biliotti, British Vice-Consul at Rhodes (dated June 16, 1873), communicated by H. M. Secretary of State for Foreign Affairs, and relating to the volcanic outburst in the island of Nissiros, one of the Sporades, in which there existed a volcano supposed to be extinct. Shortly before the 10th June new craters opened in this volcano, and from them ashes, stones, and lava were ejected; many fissures, from which hot water flowed, were produced in the mountain, and the island was daily shaken by violent earthquakes. From Rhodes, at a distance of about 50 miles, the smoke rising from the new craters could be seen.

CORRESPONDENCE.

THE CHESIL BANK.

SIR,—Having within the last three weeks examined the Chesil Bank, I was much pleased to see by your November Number that the Rev. O. Fisher offers what I consider the true theory of that remarkable phenomenon, and one identical with the explanation noted down by me at the time.

The bank is undoubtedly the resultant of the mechanical action of the tides and prevailing winds, as modified by the leading features of coast configuration. Its regularity—appearing almost as an artificial embankment—is most striking, and points to a wonderful uniformity of action over a lengthened period of the producing causes. At Burton Cliff, its western extremity, it commences as a beach, gradually developing as it passes over the low lying land to the eastward into a bank or ridge with seaward and landward slopes, until it approaches the Coast Guard Station, where it again becomes a beach against a low cliff, cut by the sea into loose materials

forming a projecting lip of land. At this point it is transversely cut through by deep gulleys, excavated by several little rills of water. Further on it again becomes a bank, and sweeps round in a majestic curve past Abbotsbury to Portland. Its independence of the minor configuration of the coast lying between Burton Cliff and Portland is very remarkable. The seaward slope, whether bank or beach, is in a continuous curve from its two extremes. The Fleet is only the natural consequence of the barriers built on the low lands.

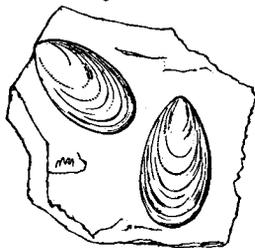
BLUNDELSANDS,

November 17th, 1873.

T. MELLARD READE, C.E.

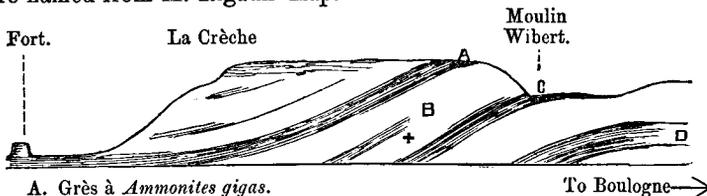
DISCOVERY OF *LINGULA OVALIS* IN THE KIMMERIDGE CLAY AT BOULOGNE-SUR-MER.

SIR,—Whilst on a short geological tour abroad early in September, I was fortunate enough to discover a *Lingula* in the Cliffs near Boulogne; and on my return home, I gave it to T. Davidson, Esq., F.R.S. He sent information of it to MM. Rigaux and de Loriol (who are publishing a work on the Boulogne fossils), and they both say it has never been discovered (or recorded) before, in the Kimmeridge Clay of Boulogne; though those cliffs have been searched for years, by French, English, and other geologists! The shell in question, *Lingula ovalis*, occurred in a block of shale, and was a beautiful specimen, quite perfect when I first found it, but it has got damaged since. Mr. Davidson has kindly drawn the following figure for me:



Lingula ovalis, Sow., Kimmeridge Clay, Boulogne-sur-mer.

I also give a rough sketch (from memory) of the place where I found it, for the benefit of geological visitors to Boulogne—the strata are named from M. Rigaux' map.



A. Grès à *Ammonites gigas*.

B. Schistes à *Thracia depressa*.

C. Grès à *Pygurus*.

D. Calcaire à *Arca longirostris*.

* Place where I found the *Lingula*: in the Bay a few hundred yards south of La Crèche point.

It is not a little singular that within a fortnight after this discovery, I also found the same shell in the same formation in a core from the