

I conclude with appending a table in which the various local beds are correlated as far as possible with one another. I would point out that the horizon of the Malm-rock is somewhat uncertain, but that its fauna appears to belong to that of the *P. asper* zone; also that I have included Etage B, and beds 5 and 6 of the Devon section, in the same division, thus giving to it a thickness of from 35 to 45 feet.

While thus endeavouring to limit satisfactorily the three stages into which the Gault and Greensand can be divided, and which it is important to recognize, it must be remembered that they really pass into one another and form a continuous series; so that it is impossible to draw very definite lines between them such as that which does exist above the *P. asper* zone and divides it from the overlying Chalk-marl.

Zones.	COMPARATIVE SECTIONS.						
	Folkestone (Price)	Merstham (Barrois)	Selbourne (Geol. Sur.)	I. of Wight (Barrois)	Devon (Meyer)	Wiltshire (Barrois)	Camb
6. ?	Clayey marls	Chalk Marl	Chalk Marl	Marl with <i>Turritiles</i>	(Absent.)	Marl with <i>Rh. Martini</i>	Marl with Brachiopods
5. <i>Plocoscyphia meandroides</i>	Qty. of <i>Ploc. meandroides</i>	?	?	Qty. of <i>Ploc. meandroides</i>	(Absent)	?	Absent
4. <i>Scaphites?</i> <i>equalis</i>	Zone of <i>Stauronema</i>	?	Chloritic Marl	Chloritic Marl	No. 13.	Chloritic Marl	Camb Greensand
3. <i>Pecten asper</i>	Absent?	Upper sands & Firestone	Upper sands and Malm Rock	Sandstones D. C. & B.	5 to 12 Warminster beds.	Warminster beds	Absent.
2. <i>Ammon. inflatus</i>	Sandy and marly clays	Lower sands and marls	Sandy marls	Sands and Sandy-clays = A.	2 to 4 Blackdown fauna	Micaceous sands and clays	Absent or base only
1. <i>Ammon. lautus</i>	Gault clays	Gault	Gault (part)	Black clay.	Black clay	Dark clay	Gault.

NOTICES OF MEMOIRS.

I.—PROFESSOR OWEN'S FOSSIL MAMMALS OF AUSTRALIA.

IN pursuance of his aim to leave records of the vertebrate fossils of our Colonies, Prof. Owen, after the issue of his "Catalogue of the Fossil Reptilia of South Africa" (4to. 1876), proceeded to prepare for press his notes "On the Fossil Mammals of Australia," portions of which have from time to time appeared in the "Philosophical Transactions." To the materials systematically arranged in the work now issued he has premised a chapter on the Fossil Marsupials of Great Britain, the whole being included in two quarto volumes, one of text (pp. 522, with interspersed woodcuts); the other of plates, 132 in number, under the title "Researches on the Fossil Remains of the Extinct Mammals of Australia." The aim of this work is, mainly, to afford the Australian students of Palæontology a ready means of comparison of the mammalian fossils which may

come under their observation; and for this purpose illustrations of the osteology and dentition of existing Marsupials are given, more especially of species of the families of the Kangaroos (*Macropodidæ*) and Wombats (*Phascolomyidæ*).

Of the genus *Diprotodon*, indicated, in 1835, by a fragment of lower jaw with an incisor of a young individual, fossil evidences since received, and described in this work, have enabled the author to give a restoration of the skeleton of the largest species (*D. australis*). Of the genus *Nototherium* much of the skeleton is restored and three species defined—*N. Mitchellii*, *N. Victoriae*, and *N. inerme*.

An extinct genus (*Phascolonus*), of the Wombat family, is founded on fossils indicative of a species which attained the bulk of a Tapir; and evidences of five extinct species of *Phascolomys* are adduced from fossils more nearly the size of the existing Wombat. In addition to larger species of the existing genus *Macropus*, e.g. *Macr. Titan*, the author adduces characters of the dentition and limbs referable to seven extinct genera of the Kangaroo family.

II.—NOTE PRÉLIMINAIRE SUR LE TERRAIN SILURIEN DE L'OUEST DE LA BRETAGNE. Par Dr. CHAS. BARROIS. (Ann. de la Soc. Géol. du Nord, vol. iv. p. 38.)

IN this paper the author pursues a similar course with regard to the Silurian, to that which he took a short time since with the Devonian deposits of this district.¹

The stratified deposits in this locality rest on the Gneiss of Brest, and are divided by the central granite plateau of Brittany into two great masses, a northern and a southern, each of which is again subdivided into eastern and western basins, and it is the Silurian beds in the western basin of the southern mass—the Finisterre basin—that are here treated of. They consist of a series of schists, sandstones and quartzites, and may be tabulated as follows, commencing with the Gneiss de Brest, then follow in ascending order:—Mica-schists; Phyllades vertes de Douarnenez; Poudingues et Schistes rouge lie-de-vin du Cap la Chèvre; Grès blancs des Montagnes Noires à *Scolitus linearis*; Schistes de Morgat à *Calymene Tristani*, the most fossiliferous division of the group; Schistes et Quartzites de Plougastel. The last named have been classed by some previous observers as Devonian; but are considered by M. Barrois to be of Silurian age, and the equivalents of the "Grès blancs sans fossiles" of Dalimier in the Rennes and Cotentin basins.

M. Barrois maintains that these Silurian beds of the Finisterre basin exhibit precisely the same divisions as in the better studied regions of the province; the modern ideas of their true stratigraphy being founded on misconceptions as to the real age of the schists and quartzites of Plougastel, whilst a large fault running down the valley of the river Elorn and the estuary of Brest has been entirely overlooked.—B. B. W.

¹ Ann. de la Soc. Géol. du Nord, vol. iv. p. 59; GEOL. MAG. June, 1877, p. 280.

III.—NATURAL HISTORY TRANSACTIONS OF NORTHUMBERLAND AND DURHAM. Vol. V. Part III. (London: Messrs. Williams and Norgate.)

THIS number contains two palæontological papers of interest. The first, "On the Skull and other Bones of *Loxomma Allmanni*, Hux., from the Low Main, Newsham, Northumberland," by Messrs. Dennis, Embleton, and T. Atthey, contains a most careful and minute description of the most complete specimen of the skull of this reptile yet found, the upper surface and border being perfect. Close by it were found the two halves, right and left, of a lower jaw, fitting it, and probably belonging to the same individual, as well as some vertebræ, ribs and other bones. When viewed from above, the skull has a general resemblance to that of *Archegosaurus* and the *Crocodylia*, and of the latter, the Alligator rather than the Crocodile. The teeth are nearly all broken off transversely, and exhibit a beautiful labyrinthodontine structure, which is well figured on pl. iv.

Its affinities with the fishes are shown by the existence of one concave articular surface instead of a condyle or condyles, and by the existence of two facets on the exoccipitals for articulation with the neural arch of the atlas; whilst the form, size, and solidarity of the skull, together with its peculiarly reticulated surface, resembles that of the Alligator. Its zoological position is defined as being between the Salamandroid fishes and the *Crocodylia*.

The second paper contains an equally elaborate description, by Mr. T. Atthey, of the largest by far of the three Labyrinthodonts yet found in the Northumberland Coal-field—*Anthracosaurus Russelli*, Hux. The parts treated of are the upper and under surface of the skull, both rami of the mandible, the teeth scutes and other bones.

The plates illustrating these two papers are admirably executed.—

B. B. W.

REVIEWS.

I.—THE LAKE DWELLINGS OF SWITZERLAND AND OTHER PARTS OF EUROPE. By Dr. FERDINAND KELLER. Translated and arranged by JOHN EDWARD LEE, F.S.A., F.G.S., etc. Forthcoming second edition. (London, Longmans, Green & Co.)

(PLATE XI.)

STUDENTS of Prehistoric Archæology in this country are largely indebted to Mr. John Edward Lee, of Torquay, for the valuable service he has rendered them in presenting to English readers so excellent a version of Dr. Ferdinand Keller's great work on the Lake-Dwellings of Switzerland, noticed by us in the *GEOLOGICAL MAGAZINE* for 1866, Vol. III. p. 460.

So thoroughly has Mr. Lee's labour been appreciated, that a new edition has been called for, and is actually completed, and will shortly appear.

In the eleven years that have intervened since the appearance of the first edition, the Swiss antiquaries have largely added