

of the characteristics of the Elephant, Hippopotamus, Tapir, and the marine Manatus (Dugong), in its skull; but its nearest relations are with the Elephant or Mastodon. One fine skull was dug up at Eppelsheim in Germany; and the remains have been found also in France, Switzerland, and other parts of Europe, and also in Sind, India.

In the Miocene, Europe had its species of Ant-eater, the *Macrotherium*, which was an Ungulate, related to the later *Chalicotherium*.

The Pliocene of Europe has afforded also species of the Baleen Cetaceans (Whale-bone Whales). Species of the genus *Cetotherium* occur in the Pliocene of England and Belgium, and also, according to Lydekker, in the Miocene of Patagonia, along with Cetaceans of other genera.

All the Fishes, Reptiles, Birds, and Mammals of the Tertiary are extinct species.

#### *Subdivisions and Characteristic Species.*

**Lower Eocene.** — (1) CERNAYSIAN (= PUERCO). — Beds at Reims and La Fere in the adjoining departments of Marne and Aisne in northern France. At Cernay, near Reims, occur the following Mammals: — MARSUPIAL: *Neoplagiaulax*. CREODONT: *Arctocyon*, *Hyodectes*, *Heteroborus*. INSECTIVORE: *Adapisorex*. QUADRUMANA: *Plesiadapis*, *Protodapis*. There are also the BIRDS, *Gastornis Edwardsi*, *Eupterornis*.

In overlying beds occur *Hyænodictis*, *Proviverra*, *Plesiadapis*, with *Teredina personata*; and some sand-beds afford *Cyrena cuneiformis*, *Melania inguinata*, *Cerithium variabile*.

(2) SUESSONIAN of d'Orbigny (= Wasatch, the *Landenian* of Belgium). Includes the Thanet sands of the London basin (*Thanetian*, of Lapparent). Also, (a) the marls of Meudon, with (b) Lignitic clays, and (c) Plastic clay, but more marine in Belgium, to which correspond the stages (a) *Maudunian*, (b) *Sparnacian*, and (c) *Ypresian*. The *Paniselian beds* of Dumont are part of the Ypresian.

IN ENGLAND. — Thanet sands. — *Pholadomya cuneata* Sow., *Cyprina Morrisii* Sow., *Corbula longirostris* Desh., *Scalaria Bowerbankii* Morr.

Woolwich and Reading beds. — *Cyrena cuneiformis* Fer., *C. tellinella* Fer., *Melania inguinata* Dfr., *Ostrea bellovacina* Lam.

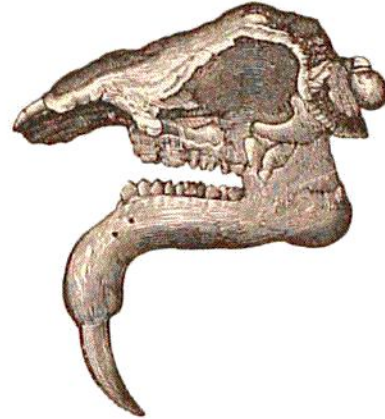
London Clay (Island of Sheppey, etc). — *Nautilus centralis* Sow., *N. imperialis* Sow., *Aturia ziczac* Bronn, *Belosepia sepioidea* Blv., *Voluta Wetherellii* Sow., *V. nodosa* Sow., *Aporrhais Sowerbyi* Mant., *Cyrena cuneiformis*, *Cryptodon (Axinus) angulatus* Sow., *Leda amygdaloides* Sow., *Pinna affinis* Sow.

VERTEBRATES of the London clay. — FISHES AND REPTILES: *Tetrapterus priscus* Ag., *Pristis bisulcatus* Ag., *Lamna elegans* Ag., *Palæophis toliapicus* Owen. MAMMALS. — MARSUPIAL: *Didelphis*. UNGULATES: *Lopiodon*, *Miolophus*, *Hyracotherium*, *Coryphodon*.

In France, at Meudon, *Coryphodon*, *Palæonictis*, *Phenacodus*, with *Gastornis*.

**Middle and Upper Eocene.** — PARISIAN (= the Bridger beds). (1) The *Calcaire grossier* of Paris (*Lutetian* of Lapparent); with above, (2) the sands of Beauchamp, France, etc.; Bagshot sands of the London Basin, and the Barton clay of the Hampshire Basin, England (*Bartonian*).

1547.



*Dinotherium giganteum* (× 4).