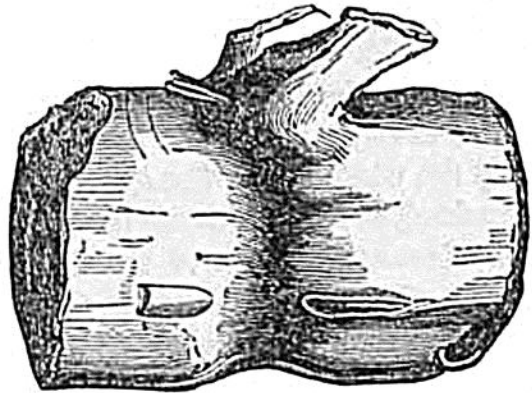


but in parts very compact and calcareous. It contains several peculiar corals, and a large Nautilus allied to *N. ziczac*; also in its upper bed a gigantic cetacean, called *Zeuglodon* by Owen.\*

Fig. 245.



Fig. 246.



*Zeuglodon cetoides*, Owen.  
*Basilosaurus*, Harlan.

Fig. 245. Molar tooth, natural size.

Fig. 246. Vertebra, reduced.

The colossal bones of this cetacean are so plentiful in the interior of Clarke County as to be characteristic of the formation. The vertebral column of one skeleton found by Dr. Buckley at a spot visited by me, extended to the length of nearly 70 feet, and not far off part of another backbone nearly 50 feet long was dug up. I obtained evidence, during a short excursion, of so many localities of this fossil animal within a distance of 10 miles, as to lead me to conclude that they must have belonged to at least forty distinct individuals.

Prof. Owen first pointed out that this huge animal was not reptilian, since each tooth was furnished with double roots (see fig. 245), implanted in corresponding double sockets; and his opinion of the cetacean nature of the fossil was afterwards confirmed by Dr. Wyman and Dr. R. W. Gibbes. That it was an extinct mammal of the whale tribe has since been placed beyond all doubt by the discovery of the entire skull of another fossil species of the same family, having the double occipital condyles only met with in mammals, and the convoluted tympanic bones which are characteristic of cetaceans.

Near the junction of No. 2 and the incumbent limestone, No. 3, next to be mentioned, are strata characterized by the following shells: *Spondylus dumosus* (*Plagiostoma dumosum*, Morton,) *Pecten Poulsoni*, *Pecten perplanus*, and *Ostrea cretacea*.

No. 3 (fig. 244) is a white limestone, for the most part made up of the *Orbitoides* of D'Orbigny before mentioned (p. 232), formerly supposed to be a nummulite, and called *N. Mantelli*, mixed with a few lunulites, some small corals, and shells.† The origin, therefore, of this cream-colored soft stone, like that of our white chalk, which it much resembles, is, I believe, due to the decomposition of these foraminifera. The surface of the country where it prevails is sometimes marked by the absence of wood,

\* See Memoir by R. W. Gibbes, Journ. of Acad. Nat. Sci. Philad. vol. i. 1847.

† Lyell, Quart. Journ. Geol. Soc. 1847, vol. iv. p. 15.