sion are salient, in high relief, and afford models of the feet, toes, and claws of the animals which trod on the clay. On the same surfaces Mr. J. Cunningham discovered (1839) distinct casts of rain-drop markings.

As neither in Germany nor in England any bones or teeth had been met with in the same identical strata as the footsteps, anatomists indulged, for several years, in various conjectures respecting the mysterious animals from which they might have been derived. Professor Kaup suggested that the unknown quadruped might have been allied to the *Marsupialia*; for in the kangaroo the first toe of the fore foot is in a similar manner set obliquely to the others, like a thumb, and the disproportion between the fore and hind feet is also very great. But M. Link conceived that some of the four species of animals of which the tracks had been found in Saxony might have been gigantic *Batrachians*; and Dr. Buckland designated some of the footsteps as those of a small web-footed animal, probably crocodilean.

In the course of these discussions several naturalists of Liverpool, in their report on the Storton quarries, declared their opinion that each of the thin seams of clay in which the sandstone casts were moulded had formed successively a surface above water, over which the *Cheirotherium* and other animals walked, leaving impressions of their footsteps, and that each layer had been afterwards submerged by a sinking down of the surface, so that a new beach was formed at low water above the former, on which other tracks were then made. The repeated occurrence of ripple-marks at various heights and depths in the red sandstone of Cheshire had been explained in the same manner. It was also remarked that impressions of such depth and clearness could only have been made by animals walking on the land, as their weight would have been insufficient to make them sink so deeply in yielding clay under water. They must therefore have been air-breathers.

When the inquiry had been brought to this point, the reptilian remains discovered in the Trias, both of Germany and England, were carefully examined by Prof. Owen. He found, after a microscopic investigation of the teeth from the German sandstone called Keuper, and from the sandstone of Warwick and Leamington (fig. 437), that neither of them could be referred to true saurians, although they had been named *Mastodonsaurus* and *Phytosaurus* by Jäger. It appeared that they were of the *Batrachian* order, and attested the former existence of frogs of gigantic dimensions in comparison with any now living. Both the Continental and English fossil teeth exhibited a most complicated texture, differing from that previously observed in any reptile, whether recent or extinct, but most nearly analogous to the *Ichthyosaurus*. A section of one of these teeth exhibits a series of irregular folds resembling the labyrinthic windings of the surface of the brain; and from this character Prof. Owen has proposed the name *Labyrinthodon* for the new genus. The annexed representation (fig.

Fig. 437.

Tooth of *Labyrinthodon*; nat. size. Warwick sandstone.