

time upon the surface of the cooling globe. We have said that the seas of the epoch were then dominated by the fishes known as *Ganoids* (from *γανος*, *glitter*), from the brilliant polish of the enamelled scales which covered their bodies, sometimes in a very complicated and fantastic manner; the *Trilobites* are curious Crustaceans, which appear and altogether disappear in the Primary epoch; an immense quantity of Mollusca, Cephalopoda, and Brachiopoda; the *Encrinites*, animals of curious organisation, which form some of the most graceful ornaments of our Palæontological collections.

But, among all these beings, those which prevailed—those which were truly the kings of the organic world—were the Fishes, and, above all, the *Ganoids*, which have left no animated being behind them of similar organization. Furnished with a sort of defensive armour, they seem to have received from Nature this means of protection to ensure their existence, and permit them to triumph over all the influences which threatened them with destruction in the seas of the ancient world.

In the Primary epoch the living creation was in its infancy. No



Fig. 77.—Lithostrotion.  
(Fossil Coral.)

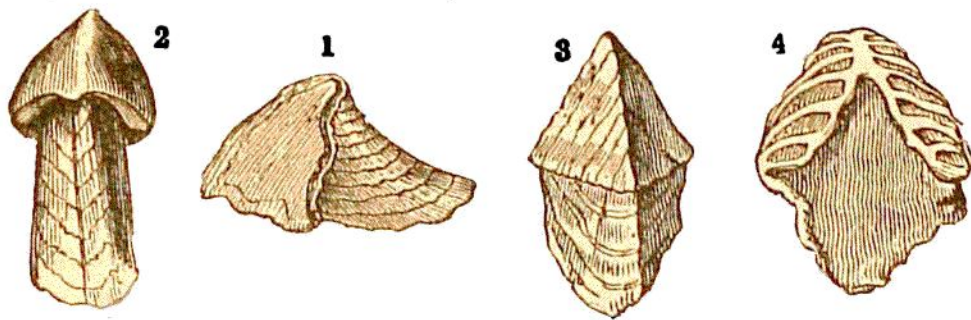


Fig. 78.—Rhyncholites, upper, side, and internal views. 1, Side view (Muschelkalk of Luneville); 2, Upper view (same locality); 3, Upper view (Lias of Lyme Regis); 4, Calcareous point of an under mandible, internal view, from Luneville. (Buckland.)

Mammals then roamed the forests; no bird had yet displayed its wings. Without Mammals, therefore, there was no maternal instinct; none of the soft affections which are, with animals, as it were, the precursors of intelligence. Without birds, also, there could be no songs in the air. Fishes, Mollusca, and Crustacea silently ploughed their way in the depths of the sea, and the immovable Crinoid lived there. On the land we only find a few marsh-frequenting Reptiles, of