

tinuing or being renewed, we find the sediments changed; chalk replaces the oolites—perhaps because the ocean was now opened to new sources, and closed against those which had been long in action. The sandstones and shales of the oolitic series in Yorkshire came by inundations from the north; the oolitic element was in great degree the effect of lime separated from the sea by the functions of animal life. The chalk, in like manner, contains evidence of the effect of such vital powers, but not so abundantly in Yorkshire as in the southern counties. Its numerous bands of flint nodules are in a lower part of the mass than in other parts of England. Sponges are not usually found in these nodules, but lie in the chalk itself (the upper part), and are remarkably distinct in appearance and character, because their tissue is siliceous*. With them lie many Marsupites, Apiocrinites, Echinida, and Belemnites; other Cephalopoda and some Fishes do occur, but they are not frequent.

Organic remains.—These are purely marine, and wholly of animal origin. The groups at present discovered are fewer in Yorkshire than in the south of England; Dimyaria, Gasteropoda, and Reptiles being as yet unknown here. The Reptile from which the group is named (Mosasaurus) occurs in the south of England. The most numerous of all are the Amorphozoa, Crinoidea, Echinida, and Belemnites.

Amorphozoa.	Monomyaria.
Foraminifera.	Brachiopoda.
Polyparia.	Annulosa.
Asterida.	Cephalopoda.
Crinoidea.	Fishes.
Echinida.	

PALÆOTHERIAN PERIOD.—No monuments of this, the Eocene period of Lyell, occur in Yorkshire, nor is any special fact observed from which the state of things here at that time may be correctly *inferred*. The absence from Yorkshire of the deposits

* Mr. Charlesworth has availed himself of this property, and by immersion in dilute acid has obtained for the Yorkshire Museum beautiful specimens.