

which the undulating ridges of the sand are preserved, and even the footmarks of small Crustaceans are still visible.

On the opposite page (PLATE XVII.) is represented an ideal landscape of the period of the Lower Oolite. On the shore are types of the vegetation of the period. The *Zamites*, with large trunk covered with fan-like leaves, resembled in form and bearing the existing *Zamias* of tropical regions; a *Pterophyllum*, with its stem covered from base to summit with its finely-cut feathery leaves; Conifers closely resembling our Cypress, and an arborescent Fern. What distinguishes this sub-period from that of the Lias is a group of magnificent trees, *Pandanus*, remarkable for their aërial roots, their long leaves, and globular fruit.

Upon one of the trees of this group the artist has placed the *Phascolotherium*, not very unlike to our Opossum. It was amongst the first of the Mammalia which appeared in the ancient world. The artist has here enlarged the dimensions of the animal in order to show its form. Let the reader reduce it in imagination one-sixth, for it was not larger than an ordinary-sized cat.

A Crocodile and the fleshless skeleton of the Ichthyosaurus remind us that Reptiles still occupied an important place in the animal creation. A few Insects, especially Dragon-flies, fly about in the air. Ammonites float on the surface of the waves, and the terrible Plesiosaurus, like a gigantic swan, swims about in the sea. The circular reef of coral, the work of ancient Polyps, foreshadows the atolls of the great ocean, for it was during the Jurassic period that the Polyps of the ancient world were most active in the production of coral-reefs and islets.

#### MIDDLE OOLITE.

The terrestrial flora of this age was composed of Ferns, Cycads, and Conifers. The first represented by the *Pachypteris microphylla*, the second by *Zamites Moreana*. *Brachyphyllum Moreanum* and *B. majus* appear to have been the Conifers most characteristic of the period; fruits have also been found in the rocks of the period, which appear to belong to Palms, but this point is still obscure and doubtful.

Numerous vestiges of the fauna which animated the period are also revealed in the rocks of this age. Certain hemipterous insects appear on the earth for the first time, and the Bees among the Hymenoptera, Butterflies among the Lepidoptera, and Dragon-flies