

The "Black Jura" of Germany corresponds to the Lias; the "Brown Jura" or "Dogger" to the Lower Oölyte and Callovian; and the Upper or White Jura, or Malm, to the rest of the Middle and the Upper Oölytes, from the Callovian to the Portland beds inclusive. To the Kimmeridgian group belongs the fine-grained lithographic limestone of Solenhofen at Papenheim, in Bavaria, near Munich, about 80' thick, noted for its wonderfully perfect preservation of fossil Crustaceans, Squids, Insects, impressions of birds' feathers and of wings of Pterodactyls.

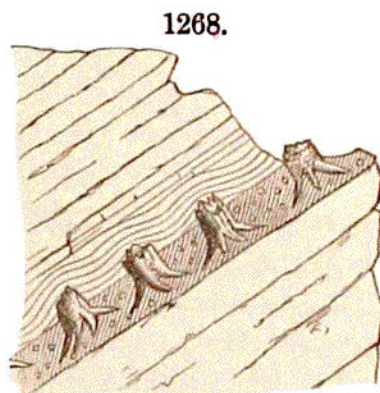
In Peninsular India, in the district of Cutch, the beds referred to the Jurassic have a thickness of 6000', the lower chiefly marine, and the upper as prominently fresh-water. Outside of the peninsula the Jurassic occurs in the Salt Range and northwest Himalaya, with characteristic fossils.

In Australia, Jurassic rocks with many fossils have been observed in Western Australia, of the periods of the Middle and Upper Lias and Lower Oölyte; and in Queensland, of the Upper Oölyte (C. Moore, *Q. J. G. Soc.*, 1870).

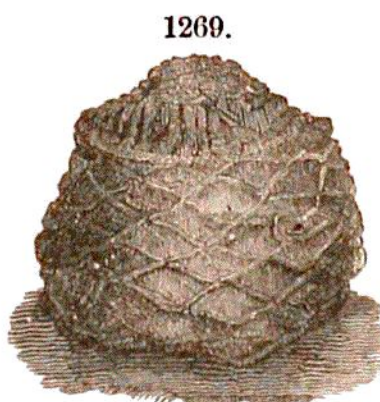
Aucella-bearing beds have been observed, as C. A. White states in Becker's *Report* (see page 835), near Moscow, in Petschora-land, near the Caspian, in northern Siberia, in Nova Zembla, Spitzbergen, in the Kuhn Islands near the east coast of Greenland, in southern India, in New Zealand, and in Brazil; and they have been referred by most authors to the Jurassic; but Professor Eichwald makes them Neocomian, and Zittel refers those of New Zealand to the Jura or Lower Cretaceous.

LIFE OF THE FOREIGN JURASSIC.

The Lias and Oölyte of Britain and Europe afforded the first full display of the marine fauna of the world since the era of the Subcarboniferous. Very partial exhibits were made by the few marine beds among the Coal-measures; still less by the beds of the Permian, and far less by the Triassic. The seas had not been depopulated. The occurrence of over 4000 invertebrate species in Britain in the single Jurassic period is evidence, not of deficient life for the eras preceding, but of extremely deficient records. Further, this meagerness in American records continued until the Cretaceous period. Moreover, in order to put together rightly the American and European records, it is necessary to note that the events of the epochs of the Lias and Lower Oölyte, with their vertebrate life, have their place, according to



1268.



1269.

Fig. 1268, Section from near Lullworth Cove, showing stumps of trees in the Portland "dirt-bed"; 1269, stump of the Cycad, *Mantella megalophylla* ($\times \frac{1}{2}$). Buckland.

present knowledge, before those of the American *Atlantosaurus* beds; that is, between those of the Middle Oölyte and of the Triassic.

PLANTS.—The land plants of the Jurassic period were mainly *Cycads*, *Conifers*, *Ferns*, and *Equiseta*, as in the Triassic. Leaves and stems occur in many

strata, and especially in the Lower Oölyte in the Yorkshire beds and in the