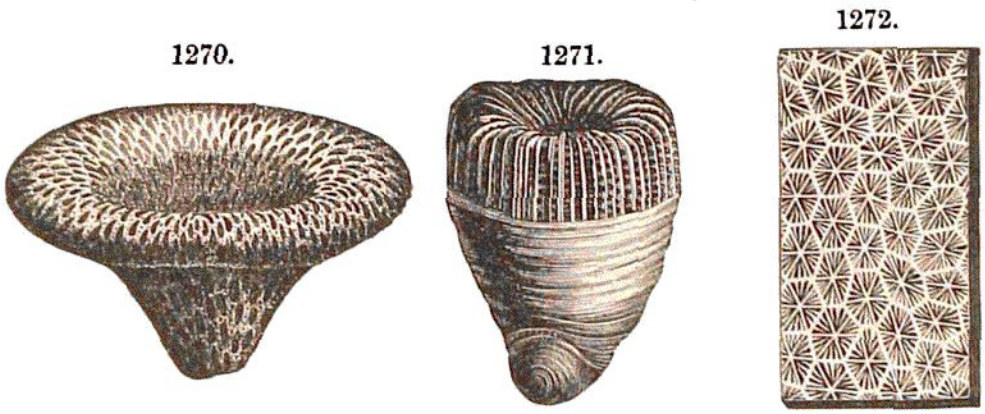
Stonesfield slate, chiefly near Woodstock, where have been found over 80 species of Ferns, nearly 20 of Conifers, and 40 of Cycads. The Middle and Upper Oölyte have afforded about 16 other species. The Conifers are of the genera *Taxites*, *Thuyites*, *Cupressites*, *Araucarites*, — names which express their modern relations. There were also Endogens of the Arum and Pandanus families; but *no* Angiosperms or Palms. The "dirt-bed" at the base of the Purbeck has afforded stumps of Cycads (Fig. 1268), including three species of *Mantellia*, one of which is shown in Fig. 1269. There is also a species of Pine (*Pinites*), besides a few other plants.

Invertebrates. — Siliceous *Sponges*, both the Hexactinellid (Fig. 1270) and Lithistid kinds, were very common in the Middle and Upper Oölyte, and so-called sponge-beds occur in the European Oölyte at different levels.

Polyp-corals were of many kinds, of the modern Hexacoralla type (having the rays a multiple of 6). The Corals flourished like the species of



Sponge, of the Oölyte. — Fig. 1270, Tremadictyon reticulatum. Polyp-corals, of the Oölyte. — Fig. 1271, Montlivaltia caryophyllata; 1272, Isastræa oblonga. D'Orbigny.

modern coral reefs (1) in the pure ocean waters, and (2) many too in the shallow waters of the ocean's borders, as about modern coral reefs. For (1) the limestones make several alternations with the sediments, clays, and sand-beds of the sea margins; and (2) only the purer limestones contain the corals. They abound in England in some beds of the Lias, in both sections of the Lower Oölyte, the Inferior and the Great Oölyte, in the Corallian of the Middle Oölyte, but are absent from the Kellaway beds or Oxford clay of the Middle, and from all of the Upper Oölyte beds in England, excepting a single species, *Isastræa oblonga* (Fig. 1272), in the Portland limestone. The reef species of the Oölyte may have flourished at greater depths than those of existing reefs, but appear not to have been, in general, abyssal species.

The most of the species of the Lias are of the genera *Montlivaltia* (*M. caryophyllata*, Fig. 1271, from the Bath Oölyte), *Thecosmilia*, *Astrocœnia*, *Isastræa*; and excepting *Astrocœnia* these, with *Thamnastræa*, are the most prominent genera in the Lower Oölyte.