



Fig. 2, *Astrea purpurea*, (DANA.)

Figure 2 will give an idea upon a small scale of a dome-shaped coral. This figure is copied from Silliman's American Journal of Science, New Series, vol. 3, page 3. In that volume of the Journal there are several fine articles on Corals, written by Professor James Dana, who spent several years among the Coral Islands of the

Pacific and other seas, and whose magnificent work upon the ZOOPHYTES* is considered to be one of the best contributions ever made to any department of Natural History. Mr. Dana says in one of the articles in question:—"Many of the various shapes which these zoophytes assume, are familiarly known. Madrepor shrubs and trees, and the sea-fan and other Gorgoniae from the West and East Indies, are common in collections.—The hemispheres of *brain-coral* (*Meandrina*,) and also of *star-coral* (*Astrea*,) are often met with. It is very generally supposed that these are by far the most frequent, if not the only shapes presented; but, on the contrary, the varieties are extremely numerous, as we have already intimated. Some species grow up in the form of large leaves rolled around one another like an open cabbage, and *cabbage-coral* would be no inapt designation for such species. Another foliated kind consists of leaves more crisped and of more delicate texture, irregularly clustered;—*lettuce-coral* would be a significant name. Each leaf has a surface covered with polyp-flowers, and was formed by the growth and secretion of these polyps. Clustered leaves of the *acanthus* and *oak*, are at once called to mind by other species; a sprouting *asparagus-bed* by others. The mushroom is here imitated in very many of its fantastic shapes, and other fungi, with mosses and lichens, add to the variety.

"Vases of Madreporae are common about the reefs of the Pacific.—They stand on a cylindrical base, which is enveloped in flowers when alive, and consist of a network of branches and branchlets, spreading gracefully from a centre, covered above with crowded sprigs of tinted polyps. The vases in the collections of the Expedition, at Washington, will bear out this description, although but the lifeless coral.

"The domes of *Astreae* are of perfect symmetry, and often grow to a diameter of ten or twelve feet without a blemish. The ruder hillocks of *Porites* are sometimes twenty feet across. Besides these, we might describe columns, Hercules' clubs, and various strange shapes which are like nothing but themselves.

"It is an enquiry of much interest, how these various forms proceed from the budding process.

* *Zoophyte*, from the Greek, (*Zoon*,) an animal, and (*Phyton*,) a plant.—The word is used with various limitations of meaning by different authors, but seems to be synonymous with *Polyp*.