

aster consists of a tinted disk bordered with one or more series of petals. And, in exact analogy, the polyp flower, in its most common form, has a disk fringed around with petal-like organs called tentacles. Below the disk, in contrast with the slender pedicel in the ordinary plant, there is a stout cylindrical pedicel or body, often as broad as the disk itself, and sometimes not much longer, which contains the stomach and internal cavity of the polyp; and the mouth, which opens into the stomach, is at the centre of the disk. Here then the flower-animal and the garden-flower diverge in character, the difference being required by the different modes of nutrition and other characteristics in the two kingdoms of nature. The coral polyp is as much an animal as a cat or a dog.

The figures of the frontispiece, and others on pages 6, 7, 9, sustain well the description here given, and afford some idea also of the diversity of form among them.

The prominent subdivisions of polyps here recognized are the following:—

I. ACTINOID POLYPS.—Related to the Actinia, or Sea-anemone, in tentacles and interior structure, and having, as in them, the number of tentacles and interior septa a multiple of *six*. The name *Actinia* is from the Greek *ray*.

II. CYATHOPHYLLOID POLYPS.—Like the Actinoids in tentacles and interior structure, except that the number of tentacles and interior septa is a multiple of *four*. Ludwig and De Pourtales state that the number in the earliest young state is *six*, and that therefore the fundamental ratio is the same as in the Actinoids; and that they pass from this ratio by developments of tentacles and septa more rapidly on one side than the opposite, and in such a manner that the number becomes after the first stage a multiple of four. The Cyathophylloid polyps hence combine this characteristic of the Actinoids with one feature of the Alcyonoids. The Cyathophylloids were the earliest of polyps, and the most abundant species in Paleozoic time.

III. ALCYONOID POLYPS.—Having eight fringed tentacles, and other characters mentioned beyond; as the Gorgoniæ and Alcyonia.