cavity containing both the viscera and the principal nervous cord, the latter situated below the alimentary canal. The species included are Insects, Spiders, Centipedes, Crustaceans (or Crabs, Lobsters, Shrimps and the like), and Worms.

3. Sub-kingdom of MOLLUSKS—or, as the name implies, species having soft fleshy bodies, which are characterized also by a simple bag-like structure, and by the absence of joints both from the body and all appendages. As in Articulates, similar organs are repeated on the right and left sides of a median plane, instead of around a central axis; but there is no succession of segments in the body, or of corresponding ganglia (nervous masses) in the nervous system; and, consequently, Mollusks have not that composite feature that characterizes and distinguishes Articulates. Examples are the Oyster, Clam, Snail, Cuttle-fish, and Bryozoans (mentioned on page 81). Many of the species have shells, as an external covering; but many also are without them.

4. Sub-kingdom of RADIATES, the subject of this note.

5. Sub-kingdom of PROTOZOANS, briefly described on a following page.

The division of Radiates is thus the lowest but one in the system of animal life, and its species are strikingly distinct from the higher kinds in the radiate arrangement of the parts within and without.

Radiates are of three Classes.

1st. *Polyps*, whose characters have already been stated (p. 3 and beyond).

2d. *Acalephs*, or Jelly-fishes, or Medusæ, as many of them are called. Acalephs are often nearly transparent and jelly-like in aspect, though not in consistence. They have sometimes the shape of a disk, convex above, or a hemisphere, or a bell-shaped spheroid, and vary in diameter from a fraction of an inch to three yards or more. Attached either to the margin, or to the under concave surface about the mouth, there are usually four tentacles or groups of tentacular appendages, or a continuous fringe of tentacles; or there are other tasselings beneath the pellucid body; and these organs, like the tentacles and some other parts of an Actinia, are furnished with myriads of lasso-cells. The whole structure is as completely radiate within and without as that of a Polyp; but there are radiating, and radiately branching, vessels passing outward from the stomach cavity instead of radiating compartments. Acalephs, or jelly-fishes, float in the ocean, usually with the mouth downward, moving ordinarily by the contraction and expansion of the sides of the body. Hydroids (p. 76) are sexless forms under one division of Acalephs; they are usually attached, and look like polyps.

3d. *Echinoderms*. Examples of this class are, *first*, the *star-fishes*, or *five-fingers*, whose bodies, although containing calcareous plates, are somewhat flexible, and ordinarily either five-rayed (fingered) or five-angled (but sometimes more than five):—*second* the *Echinus* or