

diversified parts of the same system. Surely, the head of a fish is not to be called by another name than that of Birds or Mammals, because it is not separated from the chest by a long neck; nor are we to have as many different names as there are different combinations of structure in the parts of the face. The olfactory organ, or the nose, must be called nose or olfactory organ, whether it be as prominent as the proboscis of the elephant, or as blunt as the snout of a fish. The ear must be called ear, be it ever so prolonged externally, or entirely concealed below the surface of the head. All this can be readily done among Vertebrates and among Articulates, because the structure of all these animals is sufficiently well known to force a uniform nomenclature upon the attention of any one who studies them.

The correspondence of the rings of an Articulate, be it a Worm or a Crustacean or an Insect, is evident, whether it be altogether deprived of locomotive appendages, or provided with legs only, or with wings as well as legs; and it will be at once understood, by any one who extends these comparisons sufficiently, that the parts now generally called legs and wings among Insects, though bearing the same names for the present, are not homologous with legs and wings in Vertebrates. The parts of the mouth of a sucking or a chewing Insect, on the contrary, will with the same readiness be recognized as homologous with their so-called legs. Unfortunately, this is not the case with the Radiates. We find almost as many different opinions respecting the parts of Echinoderms, Aculephs, and Polyps, as there are writers on the subject. Even with reference to Echinoderms alone, there are authors who have denied the homology of the solid parts of the Sea-urchins with those of the Star-fishes, and described the solid frame of the one as external, and that of the other as internal.

It is not my intention here to consider the general homologies of the Radiates in detail, as I shall take up the subject again at the end of this monograph. But for the purpose of introducing a more uniform nomenclature among these animals, or, at least, paving the way to it, I will attempt such a general comparison between them as may facilitate a reference of the parts of one class to the parts of another.

The plan upon which the Radiates are built is so peculiar, and so distinct from that of the Mollusks, Articulates, and Vertebrates, that the essential elements of their structure are entirely different. A common Star-fish or a common Sea-urchin is as readily divided into five segments, as a common Medusa into four, or an individual animal of a Gorgonia into eight, or that of an Actinoid Polyp into a larger number, according to different families. Such segments bear to the body as a whole, a relation similar to that observed in the ring of an Insect as one of the essential elements of its structure, or a vertebra with its muscular band