

given on the Table (p. 160), furnish various proofs of the validity of the law of progress by their historical development and by the systematic development corresponding to it. As however these subordinate groups of Molluscs are in themselves of no further special interest, I must refer to the sketch of their pedigree on p. 161, and to the detailed pedigree of Molluscs which I have given in my General Morphology, and I shall now at once turn to the consideration of the tribe of Star-fishes.

The Star-fishes (Echinoderma, or Estrellæ) among which are the four classes of Sea-stars, Sea-lilies, Sea-urchins, and Sea-cucumbers are one of the most interesting divisions of the animal kingdom, and yet we know less about them than about any. They all live in the sea. Every one who has been at the sea shore must have seen at least two of their forms, the Sea-stars and the Sea-urchins. The tribe of Star-fishes must be considered as a completely independent tribe of the animal kingdom on account of its very peculiar organization, and must be carefully distinguished from the Animal-plants—Zoophytes, or Coelenterata, with which it is still frequently but erroneously classed under the name Radiata (as for example, by Agassiz, who even to this day defends this error of Cuvier's, together with many others).

All Echinoderma are characterized, and at the same time distinguished from all other animals, by a very remarkable apparatus for locomotion, which consists of a complicated system of canals or tubes, filled with sea water from without. The sea water in these aqueducts is moved partly by the strokes of the cilia, or vibratile hairs lining their walls, and partly by the contractions of the muscular walls of the tubes themselves, which resemble india-rubber bags.