

anatomy, and by the ontogeny of some Star-fishes (Coelastrea), and of segmented worms. The many-jointed Ring-worms (Annelida) in their inner structure are closely allied to the individual arms or radii of the Star-fishes, that is to the original single worms, which each arm represents. Each of the five worms of the Star-fish is a chain composed of a great number of equi-formal members, or metamera, lying one behind the other, like every segmented Worm, and every Arthropod. As in the latter a central nervous cord, the ventral nerve cord runs along the central line of the ventral wall of each segment. On each metameron there is a pair of non-jointed feet, and besides these, in most cases, one or more hard thorns or bristles similar to those of many Ring-worms. A detached arm of a Star-fish can lead an independent life, and can then, by the radially-directed growth of buds at one end, again become a complete star.

The most important proofs, however, of the truth of my hypothesis are furnished by the ontogeny or the individual development of the Echinoderma. The most remarkable facts of this ontogeny were first discovered in the year 1848 by the great zoologist, Johannes Müller of Berlin. Some of its most important stages are represented on Plates VIII. and IX. (Compare their explanation in the Appendix.) Fig. *A* on Plate IX. shows us a common Sea-star (Uraster), Fig. *B*, a Sea-lily (Comatula), Fig. *C*, a Sea-urchin (Echinus), and Fig. *D*, a Sea-cucumber (Synapta). In spite of the extraordinary difference of form manifested by these four representatives of the different classes of Star-fishes, yet the beginning of their development is identical in all cases. Out of the egg an animal-form