

colony of worms. The Sea-lilies, or Crinoida, differ least from them, but having given up the free, slow motion possessed by other Sea-stars, they have become adherent to rocks, etc., and form for themselves a long stalk. Some Encrinites, however (for example, the Comatulæ, Fig. *B*, on Plates VIII. and IX.), afterwards detach themselves from their stalk. The original worm individuals in the Crinoida are indeed no longer preserved in the same independent condition as in the case of the common star-fish; but they nevertheless always possess articulated arms extending from a common central disc. Hence we may unite the Sea-lilies and Sea-stars into a main-class, or branch, characterized as possessing articulated arms (Colobrachia).

In the other two classes of Echinoderma, the Sea-urchins and Sea-cucumbers, the articulated arms are no longer present as independent parts, but, by the increased centralization of the stock, have completely fused so as to form a common, inflated, central disc, which now looks like a simple box or capsule without arms. The original stock of five individuals has apparently degenerated to the form-value of a simple individual, a single person. Hence we may represent these two classes as a branch characterized as being without arms (Lipobrachia), equivalent to those which possess articulated arms. The first of these two classes, that of Sea-urchins (Echinida) takes its name from the numerous and frequently very large thorns which cover the hard shell, which is itself artistically built up of calcareous plates. (Fig. *C*, Plates VIII. and IX.) The fundamental form of the shell itself is a pentagonal pyramid. The Sea-urchins probably developed directly out of the group of Sea-stars. The different classes and orders of