

CHAPTER X.

THE OLDEST AIR-BREATHERS.

ANIMAL life had its beginning in the waters, and to this day the waters are the chief habitat of animals, especially of the lower forms. If we divide the animal kingdom into great leading types, the lowest of these groups, the Protozoa, includes only aquatic forms; the next, that of the coral animals and their allies, is also aquatic. So are all the species of the Sea Urchins and Star Fishes. Of the remaining groups, the Mollusks, the Crustaceans, and the Worms are dominantly aquatic, only a small proportion being air-breathers. It is only in the two remaining groups, including the Insects and Spiders on the one hand, and the Vertebrate animals on the other, that we have terrestrial species in large proportion.

The same fact appears in geological time. The periods represented by the older Palæozoic rocks have been termed ages of invertebrates, and they might also be termed ages of aquatic animals. It is only gradually, and as it were with difficulty, that animals living in the less congenial element of air are introduced—at first a few scorpions and insects, later, land snails and amphibian reptiles, later still, the higher reptiles and the birds, and last of all the higher mammalia.

We need not wonder at this, for the conditions of life with reference to support, locomotion, and vicissitudes of temperature are more complex and difficult in air, and require more complicated and perfect machinery for their maintenance. Thus it was that probably half of the whole history of our