quite distinct in their nature and affinities. This at once excludes the supposition that they can all have been derived from each other within the limits of the coal period. No transmutationist can have the hardihood to assert the convertibility, by any direct method, of a snail into a millipede or an insect, or of either into a reptile. The plan of structure in these creatures is not only different, but contrasted in its most essential features. It would be far more natural to suppose that these animals sprang from aquatic species of their respective types. We should then seek for the ancestors of the snail in aquatic Gasteropods, for those of the millipede in worms or Crustaceans, and for those of the reptiles in the fishes of the period. It would be easy to build up an imaginary series of stages, on the principle of natural selection, whereby these results might be effected; but the hypothesis would be destitute of any support from fact, and would be beset by more difficulties than it removes. Why should the result of the transformation of water snails breathing by gills be a *Pupa?* Would it not much more likely be an *Auricula* or a *Limnea?* It will not solve this difficulty to say that the intermediate forms became extinct, and so are lost. On the contrary, they exist to this day, though they were not, in so far as we know, introduced so early. But negative evidence must not be relied on; the record is very imperfect, and such creatures may have existed, though unknown to us. It may be answered that they could not have existed in any considerable numbers, else some of their shells would have appeared in the coal-formation beds, so rich in crustaceans and bivalve mollusks. Further, the little Pupa remained unchanged during a very long time, and shows no tendency to resolve itself into anything higher, or to descend to anything lower, while in the lowest bed in which it occurs it is associated with a round snail of quite different type. Here, if anywhere, in what appears to be the first introduction of air-breathing invertebrates, we should be able to find the