Next, let us recur to the nature of the geological succession of organic types. Every tyro in geological science has learned that we have here, viewed as a whole, a gradually ascending succession of forms. Among other sequences, we find the fish followed in time by the batrachian, which in its embryo state is fish-like, and in its adult state is reptile-like. The batrachian was followed by the strictly air-breathing reptile, in which the ventricle is not separated by a partition—a condition existing in the heart of the embryo mammal. Finally, reptiles were succeeded by quadrupeds and man.

Again, the earliest crustaceans were Trilobites, followed by Phyllopods. These were followed by long-bodied lobsters (Macrourans), and these, in turn, by the crabs (Brachyurans). Now this succession of forms is the same as is expressed in the embryonic history of the highest form of crustacean.

Still, again, fishes with cartilaginous skeletons and (so-called) heterocercal—unequally-lobed—tails predominated in the earlier periods, while our existing waters are tenanted by fishes with bony skeletons and (so-called) homocercal tails. It is a curious fact that this order of succession is represented by the embryonic stages of the common whitefish of Europe, and corresponds also to the discriminations of rank which are recognized in the class of fishes.

Coral animals furnish us with another beautiful illustration of these harmonies. It has been shown by Agassiz, who has enjoyed remarkable facilities for the study of all classes of animals, that the polyps, structurally considered, present a gradation which is expressed, in ascending order, by the following arrangement of groups: *Actiniæ*, *Fungidæ*, *Astræans*, *Porites*, *Madrepores*, *Halcyonoids*. From the *Actiniæ*, whose soft bodies and indefinite multiplication of tentacles mark them lowest in the scale, to the *Halcy-*