

*As representatives of Species*, individual animals bear the closest relations to one another; they exhibit definite relations also to the surrounding elements, and their existence is limited within a definite period.

*As representatives of Genera*, these same individuals have a definite and specific ultimate structure, identical with that of the representatives of other species.

*As representatives of Families*, these same individuals have a definite figure exhibiting, with similar forms of other genera, or for themselves, if the family contains but one genus, a distinct specific pattern.

*As representatives of Orders*, these same individuals stand in a definite rank when compared to the representatives of other families.

*As representatives of Classes*, these same individuals exhibit the plan of structure of their respective type in a special manner, carried out with special means and in special ways.

*As representatives of Branches*, these same individuals are all organized upon a distinct plan, differing from the plan of other types.

Individuals then are the bearers, for the time being, not only of specific characteristics, but of all the natural features in which animal life is displayed in all its diversity.

Viewing individuals in this light, they resume all their dignity; they are no longer absorbed in the species to be for ever its representatives, without ever being any thing for themselves. On the contrary, it becomes plain, from this point of view, that the individual is the worthy bearer, for the time being, of all the riches of nature's wealth of life. This view further teaches us how we may investigate, not only the species in the individual, but the genus also, the family, the order, the class, the type, as indeed naturalists have at all times proved in practice, whilst denying the possibility of it in theory.

Having thus cleared the field of what does not belong therein, it now remains for me to show what in reality constitutes species, and how they may be distinguished with precision within their natural limits.

If we would not exclude from the characteristics of species any feature which is essential to it, nor force into it any one which is not so, we must first acknowledge that it is one of the characters of species to belong to a given period in the history of our globe, and to hold definite relations to the physical conditions then prevailing, and to animals and plants then existing. These relations are manifold, and are exhibited: 1st, in the geographical range natural to any species, as well as in its capability of being acclimated in countries where it is not primitively found; 2d, in the connection in which they stand to the elements around them, when they inhabit either the water, or the land, deep seas, brooks, rivers and lakes, shoals, flat, sandy, muddy, or rocky coasts, limestone banks, coral reefs, swamps,