

varieties produced. The largeness of the area as regards environment plays a more important part than the isolation of the different races. But one may object that these varieties do not differ from one another as widely as do species. True, but varieties are species only in the process of formation, or as Darwin calls them, incipient species. How then does the lesser difference between varieties become augmented into the greater difference which exists between species? We have, say, three varieties of the same species modified by variability, or adaptation to environment, and if these multiply naturally and at their natural rate, they must necessarily migrate, come into relation with new conditions come into new environment which will tend to still further increase the varieties and the differences between them. When one considers that the process goes on through ages, it can easily be understood how a new species might arise. The more diversified the modifications the antecedents acquire, due to variability and environment, the more places will the progeny be able to occupy. The multiplication and divergence in character will go on, the modified descendants will multiply and take the place of earlier and less improved branches, and ultimately we get a new and well defined species.

We thus see that in this theory of evolution there are two factors, the nature of the organism itself and the nature of its surroundings. The different varieties have arisen from the co-adaptation of life to its environment, the different species from this co-adaptation continued through countless ages.

But the question arises, is this variability due merely to the chance occurrence in an individual of a species of a peculiarity which is merely by chance favorable to its continued excellence? Does this variation arise haphazard, and are those which are useful transmitted to the descendants producing varieties and ultimately species; or does environment tend to modify the individual? According to Darwin, environment might be said to occupy a passive function, as it were culling off those who were unable to bear its privations, and allowing those who by chance were fitted with a variation which was favorable to continue to live. It of course cannot be doubted that the struggle for existence is universal and that the fittest survive, but later authorities have held that Darwin paid too much attention to this principle and attempted to explain too much by it. He scarcely, if at all, attempted to explain variation, and failed to see deeper facts underlying it. He regarded variations as spontaneous, that is, that it was not possible to assign them to any definite cause. Recognising this difficulty a later school of evolutionists has been founded by Lanarh. They attempt to explain variations by importing consciousness which they regard as a fundamental property of all protoplasm, and they state that this con-