

tant particular from that of the "Origin of Species," according to Darwin, or the history of government, manufactures, commerce, language, etc., according to Spencer and Huxley. Their relation is that of parallel lines. They are each and every one, as they exist to-day, the products of a purely natural evolution.

Darwin published his "Origin of Species" in 1859. In the twenty-seven years which have since elapsed, evolutionists have found it necessary to modify the hypothesis as propounded by Darwin, in order to make it harmonize with facts which further investigation has brought to light. In this particular the fate of the hypothesis of evolution has been but that of almost every other hypothesis which has ever attained to the dignity of an accepted theory in the scientific world. Seldom or never has a theory appeared full-formed and complete at the beginning.

At an early date Huxley found it necessary to modify the original hypothesis in so far as its postulate of evolution by insensible gradations, and through long ages, was concerned, and to substitute therefor, at least in some instances, "saltative evolution," as it has been called; *i. e.*, evolution by leaps, great changes wrought at one and the same time. Later on he found a further modification of the original hypothesis necessary. In view of the geological fact that "certain existing species of animals show no distinct signs of modification or transformation, in the course of a lapse of time vastly greater than thirty thousand years," in his New York lectures, delivered in 1876, he writes:

"Facts of this kind are undoubtedly fatal to any form of the doctrine of evolution which postulates the supposition that there is any intrinsic necessity, on the part of animal forms which have once come into existence, to undergo continual modification; and they are distinctly opposed to any view which involves the belief that such modification as may occur must take place at the same rate in all the different types of animal and vegetable life. The facts as I have placed them before you, obviously, indirectly contradict any form of the hypothesis of evolution which stands in need of these two postulates."—(*Lect. II.*)

This second modification of the original hypothesis is far more serious than the first, inasmuch that it admits that the law of evolution is possibly not a universal law of nature.

A further modification of Darwin's original hypothesis has lately been proposed by Grant Allen, in his two very interesting volumes, "Vignettes from Nature" and "The Evolutionist at Large," republished in this country three or four years ago. Grant Allen is the only evolutionist, in so far as I know, who has ever attempted to carry this hypothesis with him out into the field, and apply it in detail, to explain the phenomena there presented, and then given the results of this attempt to the public.

One of the conclusions to which this attempt at a practical use of the hypothesis of evolution has led Grant Allen, I will give the reader in his own words. Referring to the woodrush, he writes :