

Erasmus Darwin (1731-1802), grandfather of Chas. Darwin, was one of the poets of the evolution idea. Like some of the early Greek writers he believed in the doctrine of spontaneous generation, but in the lower forms of life only. In the chapter on Generation in his "Zoonomia" (1794) he takes little account of the laws of heredity, but believes that by the addition of parts resulting from changes of environment exciting the "living filament" into action, new characters are acquired and these are capable of being transmitted. This theory it will be seen anticipated that of Lamarck.

THE LAMARCKIAN THEORY.

Lamarck (1744-1829) was the real founder of the modern theory of descent and is the most noted scientist and writer between the time of Aristotle and that of Chas. Darwin. Laboring under discouraging conditions and receiving nothing but disdain by the majority of his contemporaries he succeeded nevertheless in contributing much to natural science. In his "Philosophie Zoologique" (1809) he expresses certain views which correspond closely with those held by E. Darwin and expressed by him in his Zoonomia. The main theory which Lamarck advanced and which is now known as the Lamarckian theory in contradistinction to the Darwinian theory, claims that evolution takes place through the inheritance of characters acquired during the lives of individuals so that in time new species may be created. The endeavour to satisfy certain wants brings about certain modifications which are inherited in part at least. This theory made no great impression at the time although it has been revived within recent times by a school known as the Neo-Lamarckians to which school Herbert Spencer and other prominent scientists belong. While the theory seems to explain many of the facts of inheritance yet it fails to show a case wherein a single acquired character has been permanently transmitted. As an instance we have the continued docking of horses and lambs, yet there is no case on record of one of these animals being born without a tail.

Goethe (1749-1832), the great poet of evolution, developed the "unity of type" idea in 1796. This led him to explain the existence of vestigial structures which constitutes one of the strongest evidences of evolution.

Bory de St. Vincent (1780-1846) believed that species are formed spontaneously and that this process goes on more rapidly in countries of comparatively modern formation. His idea was that the existence of a long series of ancestors tends to fix the type.