

Laurentian period, enclosed cytods were probably the first to arise (vol. i. p. 345), by the naked, structureless, albuminous substance of the Monera becoming condensed in the form of a pellicle on the surface, or by secreting a membrane. At a later period, out of these enclosed cytods genuine vegetable cells probably arose, as a kernel or nucleus separated itself in the interior from the surrounding cell-substance or plasma.

The three classes of Green Algæ, Brown Algæ, and Red Algæ, are perhaps three distinct classes, which have arisen independently of one another out of the common radical group of Primæval Algæ, and then developed themselves further (each according to its kind), and have variously branched off into orders and families. The Brown and Red Algæ possess no close blood relationship to the other classes of the vegetable kingdom. These latter have most probably arisen out of the Primæval Algæ, either directly or by the intermediate step of the Green Algæ.

It is probable that Mosses (out of which, at a later time, Ferns developed) proceeded from a group of Green Algæ, and that Fungi and Lichens proceeded from a group of Primæval Algæ. The Phanerogamia developed at a much later period out of Ferns.

As a second class of the Vegetable Kingdom we have above mentioned the *Thread-plants* (Inophyta). We understood by this term the two closely related classes of *Lichens* and *Fungi*. It is possible that these Thallus plants have not arisen out of the Primæval Algæ, but out of one or more Monera, which, independently of the latter, arose by spontaneous generation. It appears conceivable that many of the lowest Fungi, as for example, many ferment-causing