

fungi (forms of *Micrococcus*, etc.), owe their origin to a number of different *archigonic* Monera (that is, Monera originating by spontaneous generation).

In any case the Thread-plants cannot be considered as the progenitors of any of the higher vegetable classes. Lichens, as well as fungi, are distinct from the higher plants in the composition of their soft bodies, consisting as it does of a dense felt-work of very long, variously interwoven, and peculiar threads or chains of cells—the so-called *hyphæ*, on which account we distinguish them as a province under the name Thread-plants. From their peculiar nature they could not leave any important fossil remains, and consequently we can form only a very vague guess at their palæontological development.

The first class of Thread-plants, the *Fungi*, exhibit a very close relationship to the lowest Algæ; the Algo-fungi, or Phycomycetes (the Saprolegniæ and Peronosporæ) in reality only differ from the bladder-wracks and Siphonææ (the *Vaucheria* and *Caulerpa*) mentioned previously by the want of leaf-green, or chlorophyll. But, on the other hand, all genuine Fungi have so many peculiarities, and deviate so much from other plants, especially in their mode of taking food, that they might be considered as an entirely distinct province of the vegetable kingdom.

Other plants live mostly upon inorganic food, upon simple combinations which they render more complicated. They produce protoplasm by the combination of water, carbonic acid, and ammonia. They take in carbonic acid and give out oxygen. But the Fungi, like animals, live upon organic food, consisting of complicated combinations of carbon, which they receive from other organisms and