

of the colossal forests of Sargasso in the Atlantic ocean, those immense banks of Algæ, covering a space of about 40,000 square miles—the same which made Columbus, on his voyage of discovery, believe that a continent was near. Similar but far more extensive forests of Algæ grew in the primæval ocean, probably in dense masses, and what countless generations of these archilithic Algæ have died out one after another is attested, among other facts, by the vast thickness of Silurian alum schists in Sweden, the peculiar composition of which proceeds from those masses of submarine Algæ. According to the recently expressed opinion of Frederick Mohr, a geologist of Bonn, even the greater part of our coal seams have arisen out of the accumulated dead bodies of the Algæ forests of the ocean.

Within the branch of the Algæ we distinguish four different classes, each of which is again divided into several orders and families. These again contain a large number of different genera and species. We designate these four classes as Primæval Algæ, or Archephyceæ, Green Algæ, or Chlorophyceæ, Brown Algæ, or Phæophyceæ, and Red Algæ, or Rhodophyceæ.

The first class of Algæ, the *Primæval Algæ* (Archephyceæ), might also be called *primæval plants*, because they contain the simplest and most imperfect of all plants, and, among them, those most ancient of all vegetable organisms out of which all other plants have originated. To them therefore belong those most ancient of all vegetable Monera which arose by spontaneous generation in the beginning of the Laurentian period. Further, we have to reckon among them all those vegetable forms of the simplest organization which first developed out of the Monera in the Laurentian period,