the emerged and emerging lands; the large excess of carbonic acid and oxygen in the air and water a source of rock-destruction; before the close of the era, the formation of limestones and iron-carbonate by chemical methods, removing carbonic acid from the air and so commencing its purification; the accumulation of sediments without immediate crystallization or metamorphism, and thereby the beginning of the earth's *supercrust*.

III. The **Archæozoic** æon. Life in its lowest forms in existence.

1. The ERA OF THE FIRST PLANTS: Algæ, and later of aquatic Fungi (Bacteria), commencing with the mean temperature of the ocean at possibly 150° F., since plants *now* live in waters up to and even above 180° F. Limestones formed from vegetable secretions, and silica deposits from silica secretions; iron-carbonate, and perhaps iron oxides formed through the aid of the carbonic acid of the atmosphere and water; large sedimentary accumulations, where conditions favored, thickening the supercrust.
2. The ERA OF THE FIRST ANIMAL LIFE: mean temperature at the beginning probably about 115° F., and at the end 90° F., or lower; limestones and silica deposits formed from animal secretions; deposits of iron-carbonate and iron-oxides continued; large sedimentary accumulations.

The sedimentary or stratified beds of Archæan time are the oldest and most obscured parts of the geological record. Sooner or later in the Archæozoic era "dynamical metamorphism" began, or metamorphism dependent on heat from a dynamical source, that is, heat generated by movements in the thickening crust, aiding the heat still in the earth's mass, or statical heat. Thereby, during a crisis of upturning, the thick accumulations of sediment became metamorphic or crystalline; but the statical heat was still so great that the temperature was easily made that of fusion, and consequently the fusing of fusible sedimentary beds took place and outflows through openings or fissures of granite, syenyte, dioryte, gabbro, and other like rocks, derived severally from granitic, syenytic, diorytic, and gabbronitic or related sediments; but deep-seated igneous effusions may not have been common, for strains in a thin, rather hot supercrust might extend little below it, and, moreover, igneous ejections from a deep-seated source and through volcanoes reached their maximum in the later part of geological time.

Although these eras are not marked off in the rocks, there are facts enough to prove that they represent, in a general way, the system of progress in Archæan time. Millions of years must have elapsed during the cooling from over 2500° F. to 500° F.; a very long era during that from 500° F. to 150° F.; and another long era during that from 150° F. to 115° F.; and still another during that from 115° F. to 90° F. Archæan time was long, immensely long.