Archaia.

Their occasional veins of graphite or bands of crystaline limelife. stone afford but doubtful evidence of their having once been stratified or that they were the habitat of animal and vegetable life. To the strata superimposed upon these primitive rocks geology points us for its evidence of the way in which the earth's crust has been formed and as indices of the time that has elapsed during its form-These stratified rocks have been divided into three great ation. periods,-the Palœozoic or most ancient, the Mezozoic or middle and the Cainozoic or latest. These divisions are again subdivided into numerous minor strata each determined and in some sense seperated from the others by its peculiar organic remains. These strata are shown to be either the result of vegetation, as in the coal measures, or of animal life, as in the Silurian and other rocks, or of aqueous deposition. These three forces if we may so speak have been the agencies by which the earth's crust has been mainly formed. Now to any one who can form an idea of the succession of organic life, the remains of which these strata contain, and of the slow action of aqueous depositions it must be obvious that the crust of the earth is of immense antiquity-that from the period of the earliest Silurian seas up to the recent stratum upon which man dwells, there is the unquestionable lapse of countless ages. This is one of the certain inductions of geology concerning which there can scarcely be any dispute.

It is a further fact than in these strata we find evidences of a constant succession of animal and vegetable life.

First, there is a long period, the Silurian, in which the lower forms of marine animal life vastly predominate and in which but few traces of vegetable life are found and these exclusively marine or Algoid ?

A second step leads us into a region in which there is added to the invertebrate life of the first a large and magnificent group of Ganoid vertebrate fishes with some forms of the higher land plants recently discovered by Principal Dawson.

By a third step upwards we reach the great carboniferous or coal measures, in which we find a thickness of about 10,000 feet of fluvio-marine strata and for the first time a predominance of land plants, comprising the two lower members of the vegetable kingdom—the cryptogamic and gymospermic plants. Here also we are introduced to the oldest known reptiles, the discovery of which is in a great measure due to Principal Dawson.

A fourth step brings us among the great Batrachian reptiles