latter having been sub-aerial, that is, erupted on the surface, by which the gaseous products were allowed to escape; while the former were sub-marine, having been ejected beneath the sea, or under extensive sedimentary deposits, and subjected to great pressure, by which the volatile elements were confined, and underwent new combinations. In like manner, chalk when burnt in the open air is converted into lime, the carbonic acid gas escaping; but when exposed to the same heat under pressure, it becomes granular marble. (*Wond.* p. 91.)

From these ancient crystalline rocks very generally underlying the sedimentary strata, and never appearing as if they had overflown from a cone or crater, the term *hypogene* (*underlying*) is employed by Mr. Lyell to designate the whole class; and they are subdivided into, *Plutonic*, those in which all traces of sedimentary origin are lost, as granite; and *Metamorphic*, those which still manifest traces of stratification, as mica-schist, &c.

The sedimentary fossiliferous rocks, are, for the convenience of study, separated into three grand divisions.

1. The Tertiary; comprising all the deposits from the alluvial drifts to the chalk.

2. The Secondary; from the Chalk to the Old Red, or Devonian system, inclusive.

3. The Silurian; from below the Devonian to the upper part of the Cambrian system, in which all traces of organic remains disappear.

In the following arrangement the strata are