

movement, which is continually in progress upon the surface of our planet, are the subjects now to be examined. It would be desirable to adopt some general term to embrace the whole of this range of inquiry. For this end the word *epigene* may be suggested as a convenient term, and antithetical to *hypogene*, or subterranean action.

The simplest arrangement of this part of Geological Dynamics will be into three sections:

I. *Air*.—The influence of the atmosphere in destroying and forming rocks.

II. *Water*.—The geological functions of the circulation of water through the air and between sea and land, and the action of the sea.

III. *Life*.—The part taken by plants and animals in preserving, destroying, or originating geological formations.

The words destructive, reproductive, and conservative, employed in describing the operations of the epigene agents, do not necessarily imply that anything useful to man is destroyed, reproduced, or preserved. On the contrary, the destructive action of the atmosphere may cover bare rock with rich soil, while its reproductive effects may bury fertile soil under sterile desert. Again, the conservative influence of vegetation has sometimes for centuries retained as barren morass what might otherwise have become rich meadow or luxuriant woodland. The terms, therefore, are used in a strictly geological sense, to denote the removal and redeposition of material, and its agency in preserving what lies beneath it.

Section i. *Air*

The geological action of the atmosphere arises partly from its chemical composition and partly from its move-