

The object of this work was to propose and attempt to solve four problems, the solution of which must constitute the foundation of any true theory of the earth. 1st. What are the natural effects of the movements of the terrestrial waters on the surface of the globe? 2nd. Why is the sea confined to a basin and within limits that always separate it from the projecting dry land? 3rd. Has the basin of the sea always existed as we now see it, and if not, what is the cause that led to its being elsewhere, and why is it not there still? 4th. What is the influence of living organisms on the mineral substances of the earth's surface and crust, and what are the general results of this influence?

1. Lamarck realised more clearly than most of his contemporaries, the part played by terrestrial waters on the surface of the land. He recognised that nothing can ultimately resist the alternating influence of wetness and drought, combined with that of heat and cold, and that the disintegration of mineral substances by these atmospheric conditions prepares the way for the erosive action of running water in all its various forms. As the result of this action, plains are hollowed out into ravines, and these are widened into valleys. The spaces between rivers are worn into ridges, which in course of time become high crests.

Naturelle &c." Paris, An X (1802). It is interesting to note that this volume and Playfair's *Illustrations of the Huttonian Theory* were published in the same year, and to contrast the opinions of the two writers. In all that relates to the organic world, the French naturalist had a far wider outlook than the Scottish philosopher, while on the other hand, the latter showed a truer insight into most of the physical problems of geology with which he dealt.