

posit of material, on the other, as to suggest that the present coast-lines of the globe cannot be aboriginal, but must be referred to the operation of geological agents still at work. This inference is amply sustained by more detailed investigation. While the general distribution of land and water must undoubtedly be assigned to terrestrial movements affecting the solid globe, the present actual coasts of the land have chiefly been produced by local causes. Headlands project from the land because, for the most part, they consist of rock which has been better able to withstand the shock of the breakers. Bays and creeks, on the other hand, have been cut by the waves out of less durable materials. Again, by the sinking of land, ranges of hills have become capes and headlands, while the valleys have passed into the condition of bays, inlets, or fjords. By the uprise of the sea-bottom, tracts of low alluvial ground have been added to the land. Hence, speculations as to the history of the elevation of the land, based merely upon inferences from the form of coast-lines as expressed upon ordinary maps, to be of real service, demand a careful scrutiny of the actual coast-lines, and an amount of geological investigation which would require long and patient toil for its accomplishment.

Passing from the mere external form of the land to the composition and structure of its materials, we may begin by considering the general density of the entire globe, computed from observations and compared with that of the outer and accessible portion of the planet. Reference has already been made to the comparative density of the earth among the other members of the solar system. In inquiries regarding the history of our globe, the density of the whole