

sea. To-day we may gather up the fragments, not from the bottom of the sea, but raised again mountain high, or incorporated into the fabric of new-built continents! Sublime ruins! What are the marbles of Nineveh, or the columns of the Parthenon, in comparison with these hoary relics of Nature's primeval structures?

I said that the fury of the waves strewed the ocean's bed with the ruins of these ancient islands. This is no fancy. The demonstration is before our eyes. The floor of the sea was first formed of rocks that had cooled from a state of fusion. The few islands that existed were but exposed portions of this floor. The *débris* scattered over this foundation would be arranged in layers, as water always arranges its sediments. The coarser materials would be transported by the more powerful action and deposited in one place; the finer materials would be carried beyond by

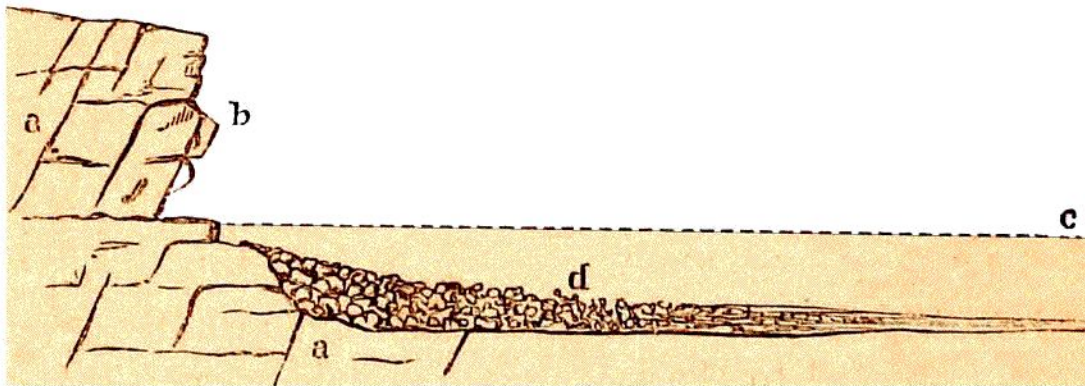


Fig. 15. Shore Erosion and Distribution of Sediments.

a, a. The primordial igneous crust. b. A sea-side cliff gnawed by the waves. c. The ordinary sea-level. d. The ruins of the cliff—the coarser deposited near the shore, and the finer floated to greater depths.

the feebleness of the agency, and deposited in a remoter region. Thus some of the first-formed strata would be finer and others would be coarser; but all must be composed of materials derived from the pre-existing rocks. This deduction is again corroborated by well-known facts. Every where do we find reposing upon the ancient igneous floor a bed of stratified materials composed of the same constituent