

show that they have undergone; for since the Tertiary began (or the preceding period, the Cretaceous, closed) more than 10,000 feet have been added to the Rocky Mountains, and parts of the Andes, Alps, and Himalayas.

Between the New Hedrides and Australia the reefs and islands mark out another area of depression, which may have been simultaneously in progress. The long reef of one hundred and fifty miles from the north cape of New Caledonia, and the wide barrier on the west, cannot be explained without supposing a subsidence of one or two thousand feet at the least. The distant barrier of Australia is proof of great subsidence, even along the border of that continent. But the greatest amount of sinking took place, in all probability, over the intermediate sea, called the "Coral Sea," where there are now a considerable number of atolls.

III. EFFECT OF THE SUBSIDENCE.

The facts surveyed give us a long insight into the past, and exhibit to us the Pacific once scattered over with lofty lands, where now there are only humble monumental atolls. Had there been no growing coral, the whole would have passed without a record. These permanent registers exhibit in enduring characters some of the oscillations which the "stable" earth has since undergone.

From the actual size of the coral reefs and islands, we know that the whole amount of high land lost to the Pacific by the subsidence was at the very least fifty thousand square miles. But since atolls are necessarily smaller than the land they cover, and the more so, the further subsidence has proceeded; since many lands, owing to their abrupt shores, or to volcanic agency, must have had no reefs about them, and have disappeared without a mark; and since others may have subsided too rapidly for the corals to retain themselves at the surface; it is obvious that this estimate is far below the truth. It is apparent that, in many cases, islands now disjoined have been once connected, and thus several atolls may have been made