

mulating during the summer on the south side, are all washed around the south-west point and are heaped up on the western side, forming a plateau along the beach two or three hundred feet wide, nearly covering the shore platform, and eight or ten feet deep. With October and November comes the winter swell from the north-north-east, which sweeps along the western shore, and from the force of which the south side is in its turn protected. Then the sand begins to travel from the western to the southern side; and, after a month or two, nothing remains of the great sand plateau but a narrow strip; while on the south side, the beach has been extended two hundred or three hundred feet. This lasts until February or March, when the operation is repeated."

II. CAUSES MODIFYING THE FORMS AND GROWTH OF REEFS.

Coral reefs, although (1) *dependent on the configuration of the submarine lands for many of their features*, undergo various modifications of form, or condition, through the influence of extraneous causes, such as (2) *unequal exposure to the waves*; (3) *oceanic or local currents*; (4) *presence of fresh or impure waters*. In briefly treating of these topics, we may consider first, reefs around high islands, and afterwards, atoll reefs. The effect of the waves on different sides of reefs has already been considered, and we pass on, therefore, at once to the influence of oceanic or local currents, and fresh or impure waters.

I. BARRIER AND FRINGING REEFS.

The *existence of harbours* about coral-bound lands, and of entrances through reefs, is largely attributable to the action of tidal or local marine currents. The presence of fresh-water streams has some effect toward the same end, but much less than has been supposed. These causes are recognized by Mr. Darwin in nearly the same manner as here: yet the views