

When the tide is three feet, beach accumulations of large masses seldom exceed *eight* feet above high tide, and the finer fragments and sand may raise the deposit to *ten* feet; but with a tide of six feet twice this height may be attained. With the wind and waves combined, or on prominent points where these agents may act from opposite directions, such accumulations may be *fifteen* to *twenty* feet in height, and occasionally *thirty* to *forty* feet. These latter are drift deposits, finely laminated, generally with a sandy texture, and commonly without a distinguishable fragment of coral or shell; and in most of these particulars they are distinct from reef-rocks.

2. On islands not coral, *the existence of sedimentary deposits, or layers of rolled stones, interstratified among the layers of igneous or other rocks constituting the hills.*

B. Evidence of subsidence.

1. *The existence of wide and deep channels between an island and any of its coral reefs; or in other words, the existence of barrier reefs.*

2. *The existence of lagoon islands or atolls.*

3. *The existence of submerged atolls.*

4. *Deep bay-indentations in the coasts of high islands as the terminations of valleys.*—In the course of remarks upon the valleys of the Pacific Islands, presented by the author in his Geological Report, it is shown that they were in general formed by the waters of the land, unaided by the sea; that the sea tends only to fill up bays, level off the coast, and so give it an even outline. When, therefore, the several valleys of an island continue down *beneath* the sea, and their inclosing ridges stand out in long narrow points, with abrupt sides, there is reason to suspect that the island has subsided after the formation of its valleys. For such an island as Tahiti could not subside even a few scores of feet without changing the even outline into one of deep coves or bays, the ridges projecting out to sea on every side, like the spread legs of a spider. On the contrary, the absence of such coves, or deep-valley bays, may be evidence that no subsidence has taken place, or only one of comparatively small amount.