

of last century it appears that the north of Sweden has risen about 7 feet in the last 154 years, but that the movement has lessened southward until in Scania it has been replaced by one in a downward direction (see p. 493).

§ 2. **Subsidence.**—It is more difficult to trace a downward movement of land, for the evidence of each successive sea-margin is carried down and washed away or covered up. The student will take care to guard himself against being misled by mere proofs of the advance of the sea on the land. In the great majority of cases, where such an advance is taking place, it is due not to subsidence of the land, but to erosion of the shores. It is, indeed, the converse of the deposition above mentioned (p. 482) as liable to be mistaken for proof of upheaval. The results of mere erosion by the sea, however, and those of actual depression of the level of the land, cannot always be distinguished without some care. The encroachment of the sea upon the land may involve the disappearance of successive fields, roads, houses, villages, and even whole parishes, without any actual change of level of the land. Certain causes, however, referred to below, may come into operation, producing an actual submergence of land without any real subsidence of the land itself. The following kinds of evidence are usually cited to prove subsidence.

Submerged Forests.—As the land is brought within reach of the waves, and its characteristic surface-features are effaced, the submerged area may retain little or no evidence of its having been a land-surface. It will be covered, as a rule, with sea-worn sand or silt. Hence, no doubt, the reason why, among the marine strata which form so much of the stratified portion of the earth's crust, and contain so many proofs of depression, actual traces of land-surfaces are comparatively rare. It is only under very favorable circumstances, as, for instance, where the area is sheltered from prevalent winds and waves, and where,