

sion. Yet such a wave appears to have of itself little or no power to grind down the surface of the rocks on which it beats, for that surface, even after a storm, is found to be just as plentifully coated with living barnacles as before. If the friction of the water could rub down the stone, these cirripedes would be removed first. It is only where its enormous weight and impetus can break off a loosened mass of rock, that a wave may be said to act by its own sheer force.

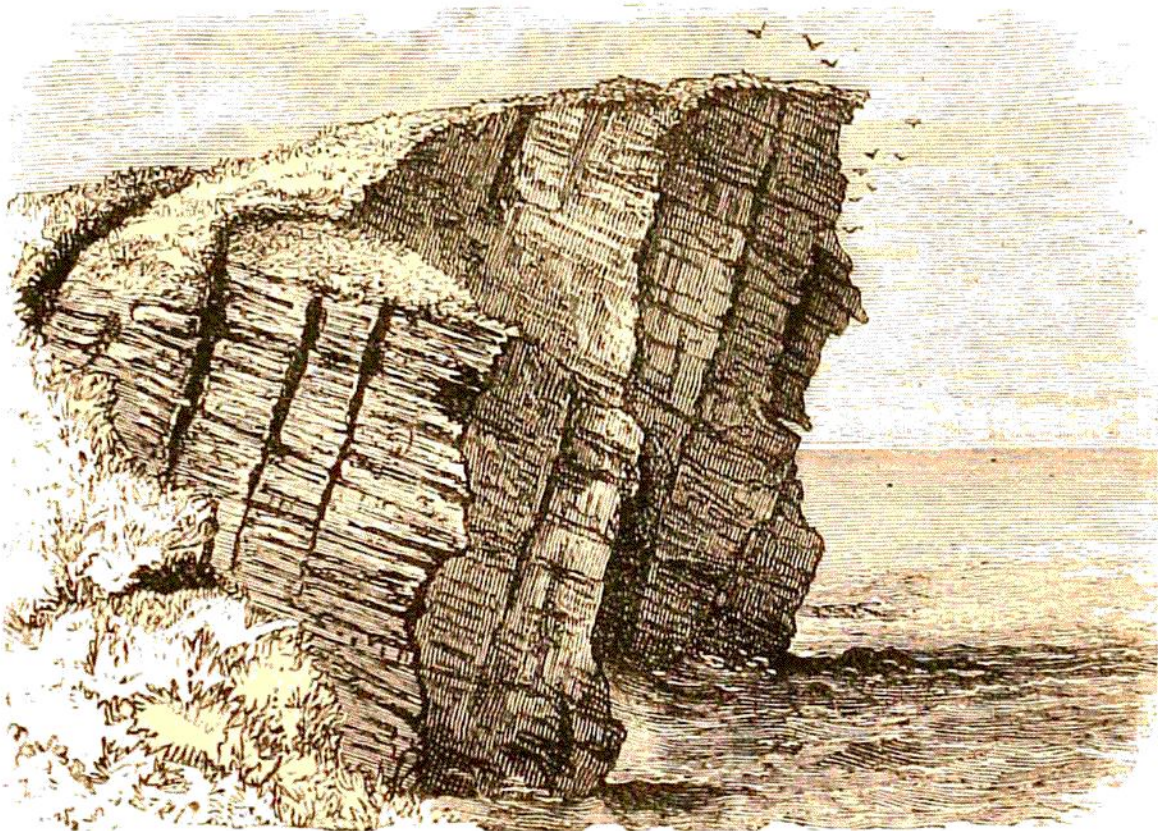


FIG. 8.—Flagstone Cliffs, Brough of Birsa, Orkney.

In the great majority of cases, however, breaker-action eats into a coast-line either by battering down the rocks with their own debris, or by enlisting the co-operation of the air. A wave that lifts up and sweeps forward gravel, boulders, and even large blocks of stone, is a far more formidable instrument of destruction than even a large wave which is not armed with the same weapons. The stones that are thus swung on by the tempest fall with prodigious force against