

been dug out of the slope by the slow wear of the waves, in the unreckoned course of that period during which the present sea was bounded in this locality by the existing line of coast. (See Frontispiece, sect. 3.)

I know not a more instructive walk for the young geologist than that furnished by the two miles of shore along which this section extends. Years of examination and inquiry would fail to exhaust it. It presents us, I have said, with the numerous organisms of the Lower Old Red Sandstone; it presents us also, towards its western extremity, with the still more numerous organisms of the Lower and Upper Lias; nor are the inflections and faults which its strata exhibit less instructive than its fossils or its vast denuded hollow. I have climbed along its wall of cliffs during the height of a tempestuous winter tide, when waves of huge volume, that had begun to gather strength under the night of the Northern Ocean, were bursting and foaming below; and as the harder pebbles, uplifted by the surge, rolled by thousands and tens of thousands along the rocky bottom, and the work of denudation went on, I have thought of the remote past, when the same agents had first begun to grind down the upper strata, whose broken edges now projected high over my head on the one hand, and lay buried far under the waves at my feet on the other. Almost all mountain chains present their abrupt escarpements to the sea, though separated from it in many instances by hundreds of miles — a consequence, it is probable, of a similar course of denudation, ere they had attained their present altitude, or the plains at their feet had been elevated over the level of the ocean. Had a rise of a hundred feet taken place in this northern district in the days of Cæsar, the whole upper part of the Moray Frith would have been laid dry, and it would now have seemed as inexplicable that this roof-like ridge