

our hands while contemplating the mighty waste produced by atmospheric variations on rocks which in our monumental buildings have stood the injuries of a thousand years ; and we have turned from the perishing granite of Arran, or the bleached and weathered limestones of the Wye or the Meuse, to compare these proofs of partial and slow decay with the deep chasms and wide valleys which now diversify the surface of the land, and to inquire whether the same causes long continued, or other causes operating with greater intensity, have given to the earth this

“ Pleasure situate in hill and dale.”

The intellectual enjoyment of contrasted scenes, far from being diminished by the application of scientific methods of research into the causes of their differences, is, in fact, very incomplete without such addition ; and few persons really do feel gratification in contemplating the beauties of nature, or the miracles of art, who have not learned to associate with the mere perceptions of form and colour, circumstances of higher and deeper interest for the mind.

Outline of Land and Sea.

One of the circumstances most obvious to a geologist, but most unintelligible to an ordinary observer, is the real and necessary dependence of the form and aspect of the earth's surface on the quality and arrangement of the rocky materials beneath. If the reader will place before him a coloured geological map of the British Islands*, he will easily perceive the truth of this statement, by comparing the outline of the coast with the geological structure. There is a remarkable tendency in the English and Scottish coasts to run out into long points and retire into bays in lines more or less directed from south-west to north-east, as the long projections of Cornwall, Cardiganshire, Carnarvonshire, the Isle of

* One recently published by the author of this volume, at a moderate price, may be used for this and other purposes of reference. ..