

of these regions have long witnessed and lamented the consequent decline in their wealth and population, without appreciating or being but very partially aware of the abundant means contained within the soil itself for its regeneration and improvement. The immense deposits of shell man, to say nothing of other substances discovered, now ascertained to be so generally dispersed over the whole extent of this region as to be easily accessible to every part, would of themselves suffice to warrant the expectation, that those once beautiful districts would at no very distant day, be made again to teem with fertility, could an adequate knowledge of these immense resources be universally diffused, and the enterprise of the great body of the agriculturists be by this means directed to its proper use and application; necessity in some instances, and enlightened policy in others, have heretofore prompted individuals to search out and successfully apply these means of renovation; but such instances are comparatively rare, and stand like the green isles of the ocean, in the waste that surrounds them; they serve, however, while they fortify the calculations of science by practical demonstrations, to show the rising tendency of the public mind, and mark the present as the propitious period for taking proper steps to shed abroad the lights of scientific research and careful investigation. When the qualities and properties of the soil are once certainly and accurately known, the appropriate remedy for existing defects is readily suggested, and when there is good reason to expect that further scientific research would, in a great majority of cases, exhibit abundant supplies of the material for such remedy within convenient distance, it is difficult to appreciate fully the advantages of such research; no longer would the enterprising agriculturists need the tedious and often expensive test of actual experiment at every step he would make at improvement; no longer would the discouraging effect of occasional injudicious and consequently unsuccessful applications of fossil and other manures be found to mar the prosperity and retard the advance of whole neighbourhoods; the cause of such failures would be known, understood, avoided, every one would be guided by an accurate knowledge of material facts and renewed confidence, cheered and enlivened by frequent success would give a stimulus to exertions in this department of industry, the beneficial results of which cannot be estimated.

But immense as would undoubtedly be the benefits re-