

that the separation of the calcareous matter from the water of the lake is owing; and though, in some parts of the deposit, all trace of their individual forms is lost, (as in certain coral reefs the organic structure is obliterated by the decomposition and recondensation of the mass), there is reason to think the greater part of the marls is really a congeries of organic exuviae. Horns of the stag lie in the marls. There are no unionidæ among the shells.

### SUBTERRANEAN AND SUBMARINE FORESTS.

#### *Buried Trees on the Course of a River.*

It appears that sometimes the violence of river floods was so great as to sweep down to the tide-line abundance of land plants, which, covered by sediment, constitute by their accumulation one kind of buried or subterranean forest. A very interesting case of this kind was exhibited some years ago, by the deep cutting of a canal connected with the Aire and Calder navigation, near Ferrybridge. At a depth of 12 feet from the surface of the fine alluvial sediment, here occupying the broad valley of the Aire, a quantity of hazel-bushes, roots, and nuts, with some mosses, freshwater shells (*Limnæa*, *Planorbis*, &c.), and bones of the stag were met with. In some part of the superjacent sediments, an English coin was found, and oars of a boat were dug up. Where a little water entered this peaty and shelly deposit, from the adjacent upper magnesian limestone, it produced in the wood a singular petrification; for the external bark and wood were unchanged, but the internal parts of the wood were converted to carbonate of lime, in which the vegetable structure was perfectly preserved. In like manner, some of the nuts were altered; the shell and the membranes lining it were unchanged; but the kernel was converted to carbonate of lime, *not crystallised*, but retaining the peculiar texture of the recent fruit.