

occasion to refer to these appearances hereafter. We must also remark that there are certain kinds of mollusca, or shell-fish, that can only live in fresh water; others that are confined to the sea; while a third class is restricted to the brackish waters of estuaries. Accordingly, in the deposits under consideration, the river and estuary species are abundant, while the marine only occur as stragglers, and are comparatively rare. Land plants, and those which affect a marshy soil, as the equiseta, or mare's-tails, reeds, rushes, &c. are likewise often accumulated in such quantities as to form beds of peat.

33. LEWES LEVELS.—It will serve to impress the subject more forcibly upon our minds, if we refer to some local example of fluviatile deposits: and from its immediate vicinity to Brighton, I select the valley of the Ouse, between Newhaven and Lewes, which is one of several estuaries from whence the sea has retired within the last eight or ten centuries. This valley is bounded by an amphitheatre of chalk hills, into which the river enters through a gorge of the Downs on the north, and pursuing a tortuous course, discharges its waters at Newhaven. This alluvial plain is called Lewes Levels, and is here and there flanked by headlands, and ancient cliffs; while a few insular mounds of chalk rise up through the fluviatile depositions, which have been accumulating during a long period of time. The following diagram represents a section of the valley of the Ouse, from east to west.