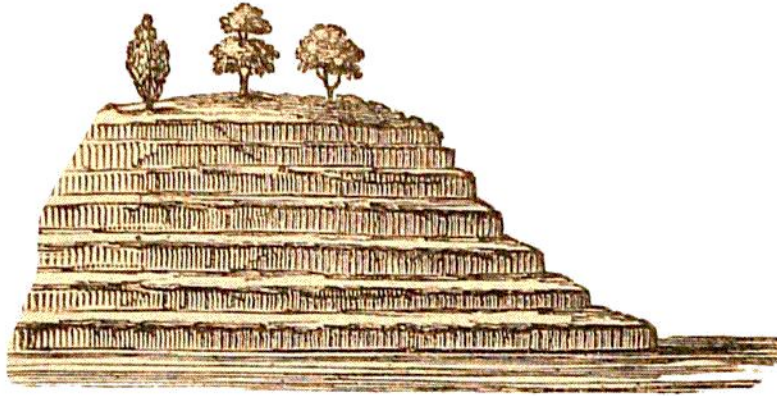


inches above the other. I was informed that the action of the waves raised by the steamboats causes this undermining of the bank. It appeared to me an exact miniature representation of the form in which the waves of the sea have denuded the land on the sides

Fig. 8.



Form of mud-banks of the Ohio River.

of some valleys in the limestone districts of Sicily and other countries bordering the Mediterranean.

When at Marietta, I examined, with Dr. Hildreth, some of the uppermost beds of the coal-measures, consisting of red shale, in which impressions of ferns, especially *Pecopteris cyathæa* Brongn., or a species closely allied to it, abound. From a locality in this part of Ohio, which I did not visit, but which must belong to the newest division of the carboniferous strata, the trunks of silicified trees have been procured in abundance, with one of which Dr. Hildreth presented me, and which Mr. R. Brown has since ascertained to belong to the genus *Psaronius* of Cotta. These stems, usually called Psarolites, have also been described by M. Ad. Brongniart as composed of two distinct parts, an outer zone, consisting of a great number of nearly cylindrical bundles of vessels, supposed to have been roots which proceeded from