

shells, of which we collected twenty species, are all specifically identical with those now inhabiting the valley of the Mississippi.

The resemblance of this loam to that fluviatile silt of the valley of the Rhine, between Cologne and Basle, which is generally called "loess" and "lehm" in Alsace, is most perfect. In both countries the genera of shells are the same, and as, in the ancient alluvium of the Rhine, the loam sometimes passes into a lacustrine deposit containing shells of the genera *Lymnea*, *Planorbis*, and *Cyclas*, so I found at Washington, about seven miles inland, or eastward from Natchez, a similar passage of the American loam into a deposit evidently formed in a pond or lake. It consisted of marl containing shells of *Lymnea*, *Planorbis*, *Paludina*, *Physa*, and *Cyclas*, specifically agreeing with testacea now inhabiting the United States. With the land-shells before mentioned are found, at different depths in the loam, the remains of the mastodon; and in clay, immediately under the loam, and above the sand and gravel, entire skeletons have been met with of the megalonyx, associated with the bones of the horse, bear, stag, ox, and other quadrupeds, for the most part, if not all, of extinct species. This great loamy formation, with terrestrial and fresh-water shells, extends horizontally for about twelve miles inland, or eastward from the river, forming a platform about 200 feet high above the great plain of the Mississippi. In consequence, however, of the incoherent and destructible nature of the sandy clay, every streamlet flowing over what must originally have been a level table-land, has cut out for itself, in its way to the Mississippi, a deep gully or ravine. This excavating process has, of late years, proceeded with accelerated speed, especially in the course of the last thirty or thirty-five years. Some attribute the increased erosive action to partial clearings of the native forest, a cause of which the power has been remarkably displayed, as before stated, within the last twenty years, in Georgia.\* Others refer the change mainly to the effects of the great earthquake of New Madrid, in 1811-12 by which this region was much fissured, ponds being dried up and many landslips caused.

\* See ante, p. 29.