

Bones of vertebrated animals are rare in the loess, but those of the mammoth, horse, and some other quadrupeds have been met with. At the village of Binningen, and the hills called Bruder Holz, near Basle, I found the vertebræ of fish, together with the usual shells. These vertebræ, according to M. Agassiz, belong decidedly to the Shark family, perhaps to the genus *Lamna*. In explanation of their occurrence among land and freshwater shells, it may be stated that certain fish of this family ascend the Senegal, Amazon, and other great rivers, to the distance of several hundred miles from the ocean.*

At Cannstadt, near Stuttgart, in a valley also belonging to the hydrographical basin of the Rhine, I have seen the loess pass downwards into beds of calcareous tuff and travertin. Several valleys in northern Germany, as that of the Ilm at Weimar, and that of the Tonna, north of Gotha, exhibit similar masses of modern limestone filled with recent shells of the genera *Planorbis*, *Lymnea*, *Paludina*, &c., from 50 to 80 feet thick, with a bed of loess much resembling that of the Rhine, occasionally incumbent on them. In these modern limestones used for building, the bones of *Elephas primigenius*, *Rhinoceros tichorinus*, *Ursus spelæus*, *Hycæna spelæa*, with the horse, ox, deer, and other quadrupeds, occur; and in 1850 Mr. H. Credner and I obtained in a quarry at Tonna, at the depth of 15 feet, inclosed in the calcareous rock and surrounded with dicotyledonous leaves and petrified leaves, four eggs of a snake of the size of the largest European Coluber, which, with three others, were lying in a series, or string.

They are, I believe, the first reptilian remains which have been met with in strata of this age.

The agreement of the shells in these cases with recent European species enables us to refer to a very modern period the filling up and re-excavation of the valleys; an operation which doubtless consumed a long period of time, since which the mammiferous fauna has undergone a considerable change.

* Proceedings of Geol. Soc. No. 43, p. 222.