

and for which in 1833 I proposed the name of Miocene, selecting the faluns of the valley of the Loire in France as my example or type. No strata contemporaneous with these formations have as yet been met with in the British Isles, where the lower crag of Suffolk is the deposit nearest in age. The term "faluns" is given provincially by French agriculturists to shelly sand and marl spread over the land in Touraine, just as the "crag" was formerly much used to fertilize the soil in Suffolk. Isolated masses of such faluns occur from near the mouth of the Loire, in the neighborhood of Nantes, to as far inland as a district south of Tours. They are also found at Pontlevoy, on the Cher, about 70 miles above the junction of that river with the Loire, and 30 miles S. E. of Tours. Deposits of the same age also appear under new mineral conditions near the towns of Dinan and Rennes, in Brittany. I have visited all the localities above enumerated, and found the beds on the Loire to consist principally of sand and marl, in which are shells and corals, some entire, some rolled, and others in minute fragments. In certain districts, as at Doué, in the department of Maine and Loire, 10 miles S. W. of Saumur, they form a soft building-stone, chiefly composed of an aggregate of broken shells, bryozoa, corals, and echinoderms, united by a calcareous cement; the whole mass being very like the Coralline Crag near Aldborough and Sudbourn in Suffolk. The scattered patches of faluns are of slight thickness, rarely exceeding 50 feet; and between the district called Sologne and the sea they repose on a great variety of older rocks; being seen to rest successively upon gneiss, clayslate, various secondary formations, including the chalk; and, lastly, upon the upper freshwater limestone of the Parisian tertiary series, which, as before mentioned (p. 111), stretches continuously from the basin of the Seine to that of the Loire.

At some points, as at Louans, south of Tours, the shells are stained of a ferruginous color, not unlike that of the Red Crag of Suffolk. The species are, for the most part, marine, but a few of them belong to land and fluviatile genera. Among the former, *Helix turo-nensis* (fig. 45, p. 30) is the most abundant. Remains of terrestrial quadrupeds are here and there intermixed, belonging to the genera *Deinotherium* (fig. 161), *Mastodon*, *Rhinoceros*, *Hippopotamus*, *Chæropotamus*, *Dichobune*, *Deer*, and others, and these are accompanied by cetacea, such as the *Lamantine*, *Morse*, *Sea-Calf*, and *Dolphin*, all of extinct species.

Fig. 161.

*Deinotherium giganteum*, Kaup.

Professor E. Forbes, after studying the fossil testacea which I obtained from these beds, informs me that he has no doubt they were formed partly on the shore itself at the level of low water, and partly at very moderate depths, not exceeding ten fathoms below that level. The mol-