

Pliocene period, being represented not only in Europe and Britain, but in South America and India.¹

As before stated, the Miocene deposits are not known to occur in Britain. In France, however, the Lower Miocene at Touraine (Indre et Loire), in Auvergne, Cantal and Velay, is met with in isolated, widely-extended patches, seldom more than 50 feet thick, comprising certain beds (mostly of marine origin), known as "Faluns." In the valley of the Loire occur the typical European deposits of Upper Miocene age. Among the fossils are numerous corals and 300 species of Mollusca; all the genera are those of southern latitudes, indicating a warmer climate than that of Southern Europe at the present time. About 25 per cent. of the shells of the Faluns are identical with existing species. The Mammalian remains include *Rhinoceros*, *Hippopotamus*, *Chæropotamus*, and *Mastodon*, &c.

Mayence Basin.—F. Sandberger² has done much to elucidate the history of the Mayence Miocene deposits, which are brackish, freshwater, and marine; Pliocene, Miocene, and Oligocene strata occur in succession. The chief interest attached to this group is through the Mammalian remains, which include the *Deinotherium*, *Microtherium*, and *Hippotherium*.³

Vienna Basin.⁴—Von Hauer, in his "Geologie," divides the whole group into two stages:—

- I. The Sarmatian or Cerithium stage, containing 3 subdivisions—
 - a. The Upper Sarmatian Tegel or Muscheltegel.
 - b. Cerithium sand.
 - c. Hernals Tegel.
- II. Mediterranean or marine stage, divided into 5 subdivisions—
 - a. Leithakalk.
 - b. Tegel of Baden.
 - c. Marl of Gainfahren, Grinzing, Nussdorf.
 - d. Sand of Pötzleinsdorf.
 - e. Sandstone of Sievering.

Greenland.⁵—Heer has described a flora in North Greenland extending as far as up to 70° N. latitude, containing 137 species, 46 of which are found in the central European Miocene basins. From

¹ Vide Gaudry: "Les Enchainements." Professor Boyd Dawkins: "Early Man in Britain," p. 57.

² "Untersuchungen über das Mainzer Tertiärbecken," 1853; and "Die Conchylien des Mainzer Tertiärbeckens," 1863.

³ The order Proboscidea comprises the three genera, *Elephas*, *Mastodon*, and *Deinotherium*, the two latter being extinct. The order came into existence in the Miocene period, in which occur all these genera. Little is known of *Deinotherium* except through its enormous skull. In the lower jaw are two very large tusk-like incisors, bent abruptly downwards; in the true elephants they are directed forwards. *Deinotherium* hitherto has only been found in the Miocene deposits. Some naturalists would place this remarkable Miocene mammal in the order Sirenia, but the limb-bones are of Proboscidean type.

⁴ Consult Von Hauer's "Geologie," p. 617 (Die Geologie und ihre Anwendung auf die Kenntniss der Bodenbeschaffenheit der österr.-ungar. Monarchie).

⁵ Heer: "Flora Fossilis Arctica," p. 207, Q. J. Geol. Soc., vol. xxxiv., 1878, p. 66. Nordenskiöld: Geol. Mag., vol. iii. p. 207, 1876.