

In these beds Professor Heer had, as early as 1859, determined 475 species of fossil plants, and 900 insects.

The plants of the Swiss Miocene period have been obtained from a country not one-fifth the size of Switzerland, yet such an abundance of species, which Heer reckons at 3,000, does not exist in any area of equal extent in Europe. It exceeds in variety, he considers, after making every allowance for all not having existed at the same time, and from other considerations, the Southern American forests, and rivals such tropical countries as Jamaica and Brazil. European plants occupy a secondary place, while the evergreen Oaks, Maples, Poplars, and Plane-trees, Robinias, and Taxodiums of America and the smaller Atlantic islands, occupy such an important place in the fossil flora that Unger was induced to suggest the hypothesis, that, in the Miocene period the present basin of the Atlantic was dry land—and this hypothesis has been ably advocated by Heer.

The terrestrial animals which lived in the Miocene period were Mammals, Birds, and Reptiles. Many new Mammals had appeared since the preceding period; among others, Apes, Cheiropteras (Bats), Carnivora, Marsupials, Rodents, Dogs. Among the first we find *Pithecus antiquus* and *Mesopithecus*; the Bats, Dogs, and Coati inhabited Brazil and Guiana; the Rats North America; the Genettes, the Marmots, the Squirrels, and Opossums having some affinity to the Opossums of America. Thrushes, Sparrows, Storks, Flamingoes, and Crows, represent the class Birds. Among the Reptiles appear several Snakes, Frogs, and Salamanders. The lakes and rivers were inhabited by Perches and Shad. But it is among the Mammals that we must seek for the most interesting species of animals of this period. They are both numerous and remarkable for their dimensions and peculiarities of form; but the species which appeared in the Miocene period, as in those which preceded it, are now only known by their fossil remains and bones.

The *Dinotherium* (Fig. 159), one of the most remarkable of these animals, is the largest terrestrial Mammal which has ever lived. For a long time we possessed only very imperfect portions of the skeleton of this animal, upon the evidence of which Cuvier was induced erroneously to place it among the Tapirs. The discovery of a lower jaw, nearly perfect, armed with defensive tusks descending from its lower jaw, demonstrated that this hitherto mysterious animal was the type of an altogether new and singular genus. Nevertheless, as it was known that there were some animals of the ancient world in which both jaws were armed, it was thought for some time that such