the importance of the lake from the fact that the deposits formed in its waters are upward of 9000 feet thick. Thanks to the untiring labors of Prof. Heer, we know more of the vegetation of the mountains round that lake, during Oligocene and Miocene time, than we do of that of any other ancient geological period. The woods were marked by the predominance of an arborescent subtropical vegetation, among which evergreen forms were conspicuous, the whole having a decidedly American aspect. Among the plants were palms of American type, the Californian coniferous genus Sequoia, alders, birches, figs, laurels, cinnamon-trees, evergreen oaks, with many other kinds.

A portion of the great Flysch formation of the Alps (which has been already referred to as partly Cretaceous, partly Eocene) is referred to the Oligocene series. It includes the shales of Glarus, long known for their fish-remains.

Vienna Basin.[77]—This area contains a typical series of Tertiary deposits, sometimes classed together as "Neogene." At the bottom lies an inconstant group of marls and sandstones (Aquitanian stage), containing occasional seams of brown-coal and fresh-water beds, but with intercalations of marine strata. The marine layers contain Cerithium plicatum, C. margaritaceum, etc. The brackish and fresh-water beds yield Melania Escheri and Cyrena lignitaria. Among the vertebrates are Mastodon angustidens, M. tapiroides, Rhinoceros sansaniensis, Amphicyon intermedius, Anchitherium aurelianense, and numerous turtles. These strata have suffered from the upheaval of the Alps, and may be seen sometimes standing on end. It is interesting also to observe that the subterranean movements east of the Alps culminated in the outpouring of enormous sheets of trachyte, andesite, propylite, and basalt in Hungary and along the flanks of the Carpathian chain into Transylvania. The volcanic action appears to have begun during the Aquitanian stage, but continued into later time. Further curious changes in physical geography are revealed by the other "Neogene" deposits of southeastern Europe. Thus in Croatia, the Miocene marls, with their abundant land-plants, insects, etc., contain two beds of sulphur (the upper 4 to 16

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[77] Suess, "Der Boden von Wien, "1860. Th. Fuchs, "Erläuterungen zur Geol. Karte der Umgebungen Wiens," 1873; and papers in Zeitsch. Deutsch. Geol. Gesel. 1877, p. 653; Jahrb. Geol. Reichsanst. vols. xviii. *et seq.* Von Hauer's "Geologie."