

For many years it was customary to consider as Miocene certain plant-bearing strata, of which a small detached basin occurs at Bovey Tracey, Devonshire, but which are mainly distributed in the great volcanic plateaus of Antrim and the west of Scotland. These strata have since been regarded as equivalents of what are now termed Oligocene formations on the Continent. At the Bovey Tracey locality, which is not more than 80 miles from the Eocene leaf-beds of Bournemouth and the Isle of Wight, a small but interesting group of sand, clay, and lignite beds, from 200 to 300 feet thick, lies between the granite of Dartmoor and the Greensand hills, in what was evidently the hollow of a lake. From these beds, Heer of Zurich, who has thrown so much light on the Tertiary floras of both the Old World and the New, described about 50 species of plants, which, in his opinion, place this Devonshire group of strata on the same geological horizon with some part of the Molasse or Oligocene (Lower Miocene) groups of Switzerland. Among the species are a number of ferns (*Lastræa stiriaca*, *Pecopteris* [*Osmunda*] *lignitum*, etc.); some conifers, particularly *Sequoia Couttsiæ*, the matted débris of which forms one of the lignite beds; cinnamon-trees, evergreen oaks, custard-apples, eucalyptus, spindle-trees, a few grasses, water-lilies, and a palm (*Palmacites*). Leaves of oaks, figs, laurels, willows, and seeds of grapes have also been detected—the whole vegetation implying a subtropical climate.<sup>65</sup> More recently, however, Mr. Starkie Gardner has expressed the opinion that this flora is on the same horizon as that of Bournemouth, that is, in the Middle Eocene group.<sup>66</sup> If this view were established, the volcanic rocks of the northwest, with their leaf-beds, might be also relegated to the Eocene period. In the meantime, however, they are placed in the Oligocene series as probable equivalents of the brown-coal and molasse of the Continent.

The plateaus of Antrim, Mull, Skye, and adjacent islands are composed of successive outpourings of basalt, which are prolonged through the Faroe Islands into Iceland, and even far up into Arctic Greenland. In Antrim, where the great basalt sheets attain a thickness of 1200 feet, there occurs in them an intercalated band about 30 feet thick, consisting of

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<sup>65</sup> Phil. Trans. 1862.

<sup>66</sup> "British Eocene Flora," Palæont. Soc. 1879, p. 18. See also Q. J. Geol. Soc. xli. p. 82. The great uncertainty in the correlation of deposits by means of land-plants has been already referred to (pp. 1095, 1111, 1577).