

Over the Rocky Mountain region and the vast plateau lying to the east of that range the older Tertiary formations consist mainly of lacustrine strata of great thickness, the extraordinary richness of which in vertebrate and particularly mammalian remains, already referred to (p. 1593), has given them a high importance in geological and palæontological history. The following subdivisions in descending order were established some years ago:

4. Uinta group (400 feet) or "Diplacodon beds."
3. Bridger group (5000 feet) or "Deinoceras beds."
2. Green River group (2000 feet).
1. Wahsatch (Vermilion Creek) group (5000 feet).

More recent researches in Colorado and elsewhere have somewhat modified this grouping. In the Denver region the so-called "Laramie" series (p. 1575) has been found to consist of three divisions: (1) a lower member, 700 to 800 feet thick, conformable with the Cretaceous Fox Hills group, containing productive coal-seams and a flora and fauna characteristic of the Laramie group as usually understood; (2) a middle member, called the Arapahoe group, resting on the first unconformably, with a conglomerate at its base, containing pebbles of the underlying formation and other older rocks; (3) an upper member, the Denver group, 1400 feet thick, unconformable to the middle division, and largely composed of the débris of andesitic lavas. The strong unconformability between the Laramie beds (No. 1) and the Arapahoe group (No. 2) is believed to mark a considerable interval of time between the highest Cretaceous and oldest Tertiary deposits of this region.<sup>51</sup> In southern Colorado the Eocene strata have been described as 7000 feet thick, resting unconformably on the Laramie series. The lowest member (Poison Cañon), 3500 feet thick, and the next division (Cuchara), 300 feet thick, are classed as Lower Eocene; the upper (Huerfano), 3300 feet thick, is believed to be equivalent to the Bridger group.<sup>52</sup>

**Australasia.**—Though vast areas in this region are covered with strata which sometimes attain a depth of several hundred feet, containing both terrestrial and marine deposits, and which are referable to various parts of Cainozoic time, no satisfactory correlation of the beds with European equiv-

<sup>51</sup> Whitman Cross, *Amer. Journ. Sci.* xxxvii. 1889, p. 261; xlv. 1892, p. 19; *Proc. Colorado Sci. Soc.* Oct. 1892.

<sup>52</sup> R. C. Hills, *Proc. Colorado Sci. Soc.* iii. 1888, p. 143, 1889, p. 217, 1891.