

red sandstones, passing sometimes into conglomerates, and often including shales and impure limestones. But an important distinction may be drawn between the system as developed in the eastern and central parts of the continent, on the one hand, and along the Pacific slope on the other. In the former wide region, the rocks, evidently laid down in inland basins, like those of the same period in central Europe, are remarkably barren of organic remains. Their fossil contents include remains of terrestrial vegetation, with footprints and other traces of reptilian life, but with hardly any indications of the presence of the sea. This is the German type of the system.

The fossil plants of the Triassic rocks in the valley of the Connecticut and New Jersey present a general facies like that of the European Triassic flora. Among them are horse-tails (*Equisetum*, *Schizoneura*), cycads (*Pterophyllum* [some European species], *Zamites*, *Otozamites*, *Sphenozamites*, *Nilssonia polymorpha*, *Dioonites*), ferns (*Pecopteris*, *Neuropteris*, *Tæniopteris*, *Clathropteris*) and conifers (*Cheirolepis*).⁸⁸ In Virginia, where two distinct Mesozoic floras have been preserved, the older appears to be not more ancient than the Rhætic stage. So abundant is the vegetable matter in the sandy strata of the series as to form seams of workable coal, one of which is sometimes 26 feet thick. The plants include species of *Equisetum*, *Schizoneura*, *Macrotæniopteris*, *Acrostichites*, *Cladophlebis*, *Lonchopteris*, *Clathropteris*, *Pterophyllum*, *Ctenophyllum*, *Podozamites*, *Cycadites*, *Zamiostrobus*, *Baiera*, *Cheirolepis*, etc. Again in North Carolina a coal-bearing formation occurs with a similar flora, 41 per cent of the plants being also found in Virginia.⁸⁹

The fauna of the North American Triassic rocks is remarkable chiefly for the number and variety of its vertebrates. The labyrinthodonts are represented by footprints, from which upward of fifty species have been described. Saurian footprints have likewise been recognized; in a few cases their bones also have been found. Some of the vertebrates had bird-like characteristics, among others that of three-toed hind feet, which produced impressions exactly like those of birds (p. 1432). But, as already remarked, it

⁸⁸ J. S. Newberry, *Monographs of U. S. Geol. Survey*, vol. xvi. 1888, and *Amer. Journ. Sci.* xxxvi. 1888, p. 342.

⁸⁹ W. M. Fontaine, *Monogr. U. S. Geol. Surv.* vol. vi. 1883. The younger Mesozoic flora of Virginia is probably Neocomian (postea, Sect. iii. § 1).