

The Labyrinthodonts which appeared in Carboniferous times as the magnates of the vertebrate world had a salamander-like body with relatively weak limbs and a long tail. Sometimes the limbs seem to have been undeveloped, so that the body was serpent-like. The head was protected by bony plates, and there was likewise a ventral armor of integumentary scales. The British Carboniferous rocks have yielded about 20 genera (*Anthracosaurus*, *Loxomma*, *Ophiderpeton*, *Pholiderpeton*, *Pteroplax*, *Urocordylus*, etc.). These were probably fluviatile animals of predaceous habits, living on fish, crustacea, and other organisms of the fresh or salt waters of the coal-lagoons. The larger forms are believed to have measured 7 or 8 feet in length; some of the smaller examples, though adult and perfect, do not exceed as many inches.¹⁹⁴ The coal-field of Bohemia, which may be in part Permian, has likewise furnished a considerable number of genera and species of Labyrinthodonts and fishes.¹⁹⁵ The terrestrial fauna obtained from the interior of fossil trees in the Coal-measures of Nova Scotia includes land-shells of which several genera are now known (*Dendropupa*,¹⁹⁶ *Pupa*, *Anthracopupa*, *Zonites*, and *Dawsonella*).

Fossil plants do not serve so well for purposes of geological classification as fossil animals (pp. 1081, 1096, 1110). In the Saxon Coal-field, however, Geinitz (1856) distinguished five zones, each characterized by its own facies of vegetation. 1st. The Culm with *Lepidodendron veltheimianum*, *Calamites transitionis*, followed by the remaining four zones, which comprise the productive coal-measures; viz. 2d, the

¹⁹⁴ Miall, Brit. Assoc. 1873, 1874.

¹⁹⁵ O. Feistmantel, Archiv. Naturw. Landesdurchforsch. Böhmen. v. No. 3, 1883, p. 55; A. Fritsch, "Fauna der Gaskohle Böhmens," 1879 and subsequent years.

¹⁹⁶ J. W. Dawson, Phil. Trans. vol. 173, 1882, p. 621.