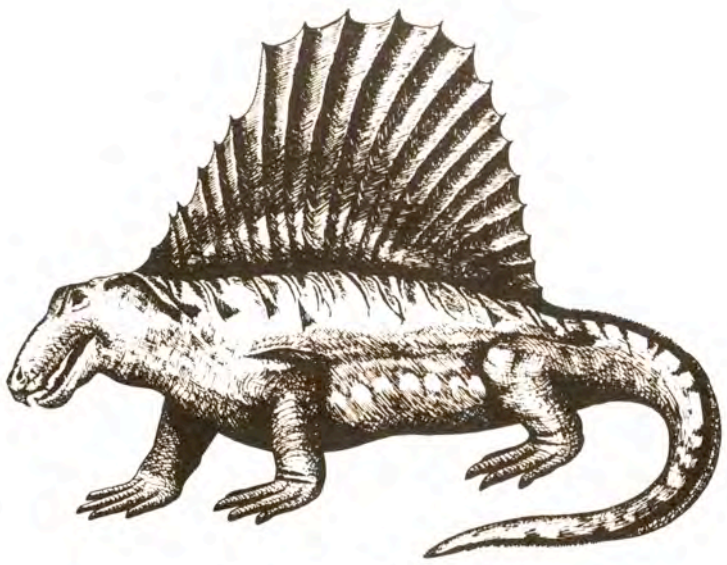

FIGURE 9.13.
A simulated sketch of a *pleycosaur*, a primitive reptile that may have been able to regulate its body temperature. This branch of reptiles may have been ancestors of the mammal-like reptiles known as therapsids.

reptiles left the land, seas, and air empty of large animals. Whatever gradual or sudden catastrophe caused the extinction of these giants, the small burrowing animals survived it. The meek were to inherit the Earth.

THE DIFFERENCE BETWEEN MAMMALS AND REPTILES

With the Earth empty of the long-dominant dinosaurs, the way was now open for the mammals to move to the center stage of history. Mammals differ from reptiles in several important ways. One major difference is in the manner in which they care for their young. Instead of laying a shelled egg like a reptile, mammals internalize the egg. The embryo is nurtured within the body of the female animal where it can be developed and protected. The baby mammal is then born live and nurtured by its mother with the milk produced by the mammary glands from which mammals derive their name.

The other major difference between reptiles and mammals is in the manner in which they maintain their body temperature. Reptiles are said to be cold-blooded, but this term is misleading. Their blood can get very warm indeed. Their blood temperature varies with the surrounding air and exposure to sunshine. They are *ectotherms*. The warm-blooded mammals, on the other hand, maintain a constant body temperature. They are *endotherms*. Mammals are thus able to lead a more active life and adapt to extremes of heat and cold.

This advantage is not without its cost, however, as mammals must eat a great deal more than reptiles to maintain their internal body temperature. The advent of the grasses 60 million years ago was