

swimming or walking on soft mud, or both. That the hind limb was adapted for walking is shown, not merely by the form of the bones, but also by that of the pelvis, the best preserved specimen of which is represented in Fig. 28; but an iliac limb of still larger size is figured in the Journal of the Geological Society, Vol. IX.

The external scales are thin, oblique-rhomboidal or elongated-oval, marked with slight concentric lines, but otherwise smooth, and having a thickened ridge or margin; in which they resemble those of *Archegosaurus*, and also those of *Pholidogaster pisciformis*, recently described by Huxley from the Edinburgh coal-field,—an animal which indeed appears in most respects to have a close affinity with *Dendrerpeton*. The microscopic structure of the scales is quite similar to that of the other bones, and different from that of the scales of ganoid fishes, the shape of the cells being batrachian as in Fig. 11. Figs. 18 and 19 exhibit different forms of the scales.

With respect to the affinities of the creature, I think it is obvious that it presents some points of resemblance, on the one hand to *Archegosaurus*, and on the other, to *Labyrinthodon*; and that it has the same singular mixture of ichthyic, batrachian, and reptilian characters which distinguish these ancient animals, and which give them the appearance of prototypes of the reptilian class. Professor Owen regards *Archegosaurus* as the type of the order *Ganocephala*, which he characterizes as having the head protected by sculptured and polished ganoid plates, no occipital condyles, teeth with converging folds of cement at their basal half, the notochord persistent, the ribs short and straight, the limbs natatory and small; and holds that *Dendrerpeton* approaches more nearly to this order than to the *Labyrinthodonts*. But at the time when this opinion was expressed, he was not fully aware of the development of the limbs and ribs, and of the ossified condition of the vertebræ; characters which, with the form of the skull, the arrangement of the teeth, and the probable possession of occipital condyles, appear to determine the scale in favour of the *Labyrinthodonts*. At the same time it must be admitted that *Dendrerpeton* is far removed from the typical genus *Labyrinthodon*, and that in the characters in which it differs, it leans toward *Archegosaurus*; closely resembling in this its contemporary *Pholidogaster pisciformis* already referred to.

This ancient inhabitant of the coal swamps of Nova Scotia, was, in short, as we often find to be the case with the earliest