

torted in the most remarkable manner. In the bones, in short, as in the plants of the coal, the flattened specimen must not be accepted as representing the original form. The bone represented in Fig. 12, for example, must have been strong, and nearly cylindrical in its middle portion, and much curved, but it has given way to pressure, and has as it were been *faulted* along certain lines, so as to lose almost entirely its original relief. The sectional view in Fig. 13, represents some of these faults, with the present profile of the bone, its original outline being represented by the dotted line. The title of the present species to the specific name *planiceps*, is also in part dependent on this cause. No doubt its head, like that of other batrachians, was somewhat flat, but this has been much increased by pressure; in so much that the fragments of the specimen show that the palate is almost brought into contact with the roof of the skull, and that scarcely a quarter of an inch is left in some places for the depth of the great orbits. The interior of the skull must have been filled with soft slime, and this has been compressed into a hard stone. In like manner, I shall have occasion to show, in reference to other reptiles of the coal, that their bones have been much altered in form, so that limb bones, which, when buried in a nearly erect position, show broad and flat articulating surfaces, have these compressed into mere edges, when the specimens lie horizontally, and that hollow bones have been fractured longitudinally, and pressed almost perfectly flat. Anatomists may be very easily misled by such appearances, and should carefully enquire as to the possibility of their occurrence, before deducing inferences from the forms of bones.

Of the general form and dimensions of *Baphetes*, the facts at present known, do not enable us to say much. Its formidable teeth and strong maxillary bones show that it must have devoured animals of considerable size, probably the fishes whose remains are found with it, or the smaller reptiles of the coal. It must in short have been crocodilian, rather than frog-like, in its mode of life; but whether, like the labyrinthodonts, it had strong limbs and a short body, or like the crocodiles, an elongated form and a powerful natatory tail, the remains do not decide. One of the limbs, or a vertebra of the tail would settle this question, but neither have as yet been found. That there were large animals of the labyrinthodontal form in the coal period, is proved by the footprints discovered by Dr. King in Pennsylvania, which may have been