

skull of *Baphetes planiceps* was derived. It is a laminated bed, sometimes hard and containing much ironstone, in other places soft and shaly, but always black and carbonaceous, and often with layers of coarse coal, though with few fossil plants retaining their forms. It contains large round flat scales and flattened curved teeth, which I attribute to a fish of the genus *Rhizodus*, resembling, if not identical with, *R. lancifer*, Newberry. With these are double-pointed shark-like teeth, and long cylindrical spines of a species of *Diplodus*, which I have named *D. acinaces*.¹ There are also shells of the minute *Spirorbis*, so common in the coal measures of other parts of Nova Scotia, and abundance of fragments of coprolitic matter, or fossil excrement, sometimes containing bones and scales of fishes.

It is evident that the "Holing stone" indicates one of those periods in which the Albion coal area, or a large part of it, was under water, probably fresh or brackish, as there are no properly marine shells in this, or any of the other beds of this coal series. We may then imagine a large lake or lagune, loaded with trunks of trees and decaying vegetable matter, having in its shallow parts, and along its sides, dense brakes of *Calamites*, and forests of *Sigillaria*, *Lepidodendron*, and other trees of the period, extending far on every side as damp pestilential swamps. In such a habitat, uninviting to us, but no doubt suited to *Baphetes*, that creature crawled through swamps and thickets, wallowed in flats of black mud, or swam and dived in search of its finny prey. It was, in so far as we know, the monarch of these swamps, though there is, as already stated, evidence of the existence of similar creatures of this type quite as large in other parts of the Nova Scotia coal field. We must now notice a smaller animal belonging to the same family of Labyrinthodonts.

¹ "Supplement to Acadian Geology," pp. 43 and 50. These fishes are now known under the generic name *Leptacanthus*.