

and shales of Jurassic, Triassic, Permian, Carboniferous, and Devonian age. Beneath this again are beds not as yet definitely determined as regards age, terminating below in a band of yellow sandstone and shale assigned to the middle Cambrian. The total thickness of the beds approximates 13,000 feet. The accompanying cut illustrates Mr. Dowling's present views regarding the succession of the members of this section, the asterisks indicating the two localities at which the fish remains occurred.



FIG. I.—Diagrammatic section through Roche Miette and Bullrush mountain.

The specimen from Roche Miette is a small, detached, anterior tooth referable to the genus *Helodus*, Agassiz, of the selachian family *Cochliodontidae*. The specimen was embedded in bluish grey limestone holding many fragments of crinoid stems.

It is transversely elongated and arched, and appears to be somewhat worn (Plate II, figs. 1, 2, and 3.) The crown rises gradually to a well-defined rounded central prominence. On the side slopes the surface is rounded with a slight indication of angulation. On each side of the central prominence, midway between it and the lateral ends of the crown, and in the line of the angulation, is a faint elevation which might be more pronounced in an unworn tooth. One half of the crown is narrower than the other. The root in this specimen is broken off, but enough of its base remains in the concave lower surface to indicate that it was antero-posteriorly compressed and that its breadth about equalled that of the crown. The upper surface of the tooth is smooth and exhibits minute punctæ crossing the crown obliquely in moderately well-defined rows. There are about six punctæ in a space of 1 mm. in a row, and the rows themselves are a like distance apart. The long diameter of the tooth is 12.7 mm., at right angles to which it measures 4.6 mm. The maximum height of the crown beneath the central tubercle is 4 mm.