

Transverse sections show that the axial region is composed of two sets of tubes; the larger average 0.25 mm. in diameter and are hexagonal to octagonal in outline; the smaller are generally between 0.1 and 0.15 mm. in diameter and display triangular or quadrangular outlines. Peripheral region comparatively thin, less than 0.4 mm. in width in a section across a branch with a diameter of 3.9 mm.

Longitudinal sections display slightly flexuous zooecial tubes which intercept the surface quite obliquely and lack the decided curvature commonly found in other species of the genus. Mesopores are indistinguishable from the proximal portion of zooecial tubes and doubtless the two had similar functions. Diaphragms numerous and quite regularly spaced, crossing zooecial tubes in proximal and axial regions at distances equal to from one to two times the diameter of tube. Near the surface diaphragms are more numerous and generally two or three of them occur in a space equal to their diameter.

That the specimens at hand are mature individuals, even though the zooecial tubes approach the surface obliquely with little curvature from axial to peripheral regions, is evident from the closer spacing of the outermost two or three diaphragms in each tube as well as from the thickening of the wall near the aperture.

In comparison with *H. angularis*, which it resembles in the angular appearance of apertures, this species is distinguished by its smaller zooecia, the generally more slender branches of the zoarium, and the obliquity of the zooecial tubes. *H. obliqua* is probably more nearly related to *H. ampla* and *H. goodhuensis* than to any other described member of the genus. Its branches are on the average slenderer than the smaller of those two species while its zooecia are intermediate in size between them. More significant, however, is the much fewer number of diaphragms in the peripheral zone of the material at hand.

Horizon and locality: Lower Trenton limestone; Wolfe Island, Ontario, (Station 224).

Class BRACHIOPODA.
Order NEOTREMATA.
Family TREMATIDAE.
Genus TREMATIS Sharpe.

TREMATIS sp.

The shell thus identified is imperfectly preserved but undoubtedly represents a new species of this genus. The specimen is very small, about 3 mm. long and 4 mm. wide, and consists of a pedicle valve, from which the apex is broken away, revealing a portion of the interior of the brachial valve. The apex appears to have been much nearer the posterior margin than the center of the valve. Surface markings are of the *T. umbonata* type and consist of radiating rows of circular pits