

ACTINOSTROMA TENUIFILATUM, *Parks.*

For description see University of Toronto Studies, *op. cit.* Briefly, the species is characterized by continuous radial pillars and straight laminae, so spaced that about seven of each occur in the space of one mm. Vertical sections therefore present the appearance of a square network. While approaching the structure of the type specimen, the examples under review present some differences as follows: The laminae are not evenly spaced, but show more closely crowded bands alternating with wider spaced portions. There is also evidence of upward inflections in the laminae—a feature which is characteristic of the species next to be described. It would appear therefore that the present examples are intermediate between typical *A. tenuifilatum* and typical *A. inflectum*.

*Localities.*—Station 641, Pagwachuan River, W. J. Wilson, July, 1904; Pagwachuan River near mouth, W. J. Wilson, July, 1904.

ACTINOSTROMA INFLECTUM, *sp. nov.*

Judging from the number of specimens, this species is by far the most prolific in the region. While fragments only are available the inference is obvious that the coenosteum is of hemispherical shape, and that it reaches considerable dimensions. Vertical sections show it to be composed of delicate horizontal elements, the spacing of which is extremely variable—as many as ten or as few as three laminae occurring in the space of one mm. The concentric layers are connected by continuous radial pillars which occur to the number of six or seven in a mm. Instead of maintaining a horizontal direction, the laminae are bent sharply upwards at intervals of about one mm. As each overlying lamina follows the same course, and as the identity of the lamina is lost at the apex of the fold, the coenosteum appears to be traversed by vertical columns made up of loose vesicular tissue. These columns do not show the compact structure of those of Nicholson's *Stylodictyon*, but the general appearance of vertical sections is very suggestive of that genus. A similar arrangement is not uncommon in different Stromatoporoids, and it is very questionable whether it is a feature of generic value. These inflected portions doubtless represent astrorhizal systems, but horizontal canals are not perceptible. Owing to the upturnings of the laminae it is difficult to prepare sections which follow the course of the pillars over any considerable extent, in consequence one may easily mistake this species for a *Clathrodictyon*.

Tangential sections do not reveal any astrorhizal canals, nor is the preservation sufficiently good to reveal the whorls