

based on the inner cast of the outer wall, is not, so it appears to me, of generic value. The same structure is shown in fig. 2 of pl. v, a specimen that I doubtfully refer to this species in preference to *E. Rensselaericum*; the reason for this is shown by fig. 2, pl. iv, the holes being the openings through the septa connecting the interseptal spaces; the outer wall having been removed in figs. 2, 2b, of pl. v. We shall await further evidence before accepting the genus *Protocyathus*.

Formation and locality.—Middle Cambrian. Conglomerate limestone, on the ridge east of the city of Troy, New York.

Genus LEPTOMITUS n. gen.

Leptos (fine), mitos (thread).

Elongate bodies, formed of fine thread-like longitudinal lines (?) apparently imbedded in a delicate membrane (?), slowly expanding from a narrow base.

The appearance of these bodies is such as might be formed by the tuft of long silicious spicules of the glass-rope sponge, *Hyalonema*, if the latter were pressed out between the layers of the shale and the animal matter formed a film about the fine, delicate, thread-like spiculæ. In the type specimen a confused mass of spiculæ (?), crossing each other at right angles, occurs at the larger end. Type *Leptomitius Zitteli*.

LEPTOMITUS ZITTELI n. sp.

Plate ii, figs. 2, 2a.

Several fragments of this form were found in the fine-grained argillites at Parker's quarry in association with *Olenellus Thompsoni*, *Protocaris Marshi*, &c. The resemblance to a bundle of the elongate spiculæ of *Hyalonema* is very striking, and the occurrence of the confused and broken spicules at the larger end of the best preserved specimen, and the crossing of the lines or striæ and their breaking up into several parts at the opposite end, give added force to the comparison.

Although we have no proof that the sharp raised lines were slender silicious spicules, there is little doubt in my mind that in this form we have a representative of *Hyalonema* in the Middle Cambrian.

My first impression was that the species was related to *Serpulites dissolutus* Billings, of the Trenton limestone, but an examination with a magnifying glass at once dispelled the idea and caused a reference to the *Spongiæ*.

Formation and locality.—Middle Cambrian, Georgia Formation. Parker's quarry, Georgia, Franklin County, Vermont.