

resemblance in composition and sculpture between these plates and the tests of trilobites some years ago, we did not then suspect them to be parts of Barnacles, and it was only after finding the plates of another species (*S. triangularis*) in intimate relation to the detached plates hereafter described as Cirripodites that we were led to suspect that they might be parts of Barnacles, and possibly such a hollow caudal plate as Dr. Clarke figures for *Strobilepis*. If we admit this, however, we must also be prepared to allow that while this caudal plate was of calcareo-chitinous composition the lateral plates of the same creature were thicker and calcareous.

Another possible explanation of these little plates is that they correspond to the dorsal row of small conical plates such as is seen on *Strobilepis*, but this seems less likely on account of their comparative thinness and flexibility.

Among the fossils of the St. John group which the author in previous papers has assigned to *Stenotheca* there are two types, that just described and another chiefly characteristic of a lower horizon. It is true that all these minute fossils have certain characters in common, as the compressed conical form, the strong ribbing of the surface and the thickened dorsal band. But they have also points of difference. For in the forms described below the ribs (except in one) do not increase in number on the dorsal side; they are more distant from each other, and there are pores or perforations at their extremities; these pores or holes form a row along the dorsal ridge and sometimes also along the ventral.

The acquisition of better examples of *Stenotheca triangularis* than were in hand when this form was described, has led the writer to conclude that there are important differences between it (and some others described with it) and the typical *Stenothecæ*, enough to constitute specific, if not generic differences between them, if they were complete organisms; but as they are possibly only parts of organisms it is unnecessary to make any generic distinction until the general structure is known.

In the first examples studied it was not observed that the surface visible was not the outer surface of the test, but the surface of the mould of the interior, and the "long cylindrical apex" described and figured is really an internal tube in the apex of the cone.

*STENOTHECA TRIANGULARIS.* (Plate XIV., figs. 4a and 4b.)

*Stenotheca triangularis*, Trans. Roy. Soc. Can., vol. iii., pt. iv., p. 58, pl. vi., figs. 5 and 5a.

*Stenotheca triangularis*, Trans. Roy. Soc. Can., vol. viii., pt. iv., pp. 133, 134.