

Cosmarium tetraophthalmum Bréb.

This large, universally distributed species was found only in the *Hippuris* swamp at Herschel island, where it was in fair quantity. All specimens observed were of full size and showed both the granulate and punctate character of the wall clearly and the relatively smooth apex.

Cosmarium trachyleurum Lund. var. **minus** Racib. (Plate IV, fig. 4)

A small form of this variety occurred in a mixture of plankton and bottom deposits from a tundra pond, and also in a pond between the lake and sea at Teller.

Cosmarium Turpinii Bréb.

This species was almost as common as *C. Botrytis*. It was found in the lagoon lake at Teller and Demarcation point, and in the plankton and bottom samples of the big lake and in the river bed at Bernard harbour.

Cosmarium undulatum Corda

This species, although widely distributed in the world, is not generally common. It was found by the expedition only at Bernard harbour, where it occurred in a plankton collection and a general collection from the big lake.

Xanthidium Ehrenb.

This genus, which has numerous widely distributed species, was represented by only three species, all from the *Hippuris* swamp at Herschel island.

Xanthidium antilopaeum (Bréb.) Kütz.

This was the commonest member of the genus. However, it was not very plentiful. All specimens observed were quite normal and of average size.

Xanthidium cristatum Bréb. var. **bituberculatum** nov. var.

(Text fig. 1, a, b)

A species typica maxime distinctum semicellulis majoribus, paulo longioribus quam lat., minus angulatis; area centralis tuberculis duobus munita; a vertice visae (semicellulae) ellipticae, lateribus bituberculatis.

Cells slightly smaller than in the type, a little longer than broad. Sinus open and deeply constricted. Vertical view elliptic. Semi-cell somewhat sub-semicircular with a convex base furnished with spines as in the type, but less angular at the spines. The central area is provided with two circular tubercles in a line parallel to the long axis of the semi-cell. Apical view elliptical, showing

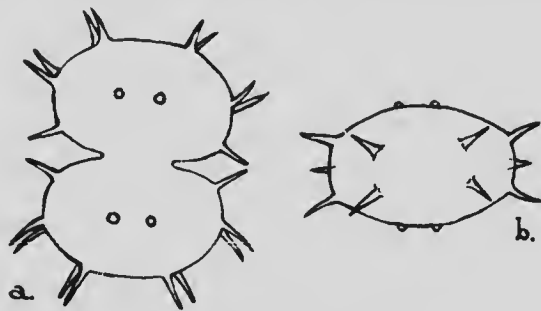


Fig. 4. *Xanthidium cristatum* Bréb. var. *bituberculatum* nov. var. $\times 500$; a, face view, b, end view.