

Mastogloia, Thwaites.

This genus was established by Thwaites in 1848, and is thus referred to by the late Dr L. Rabenhorst, who contributed so much to our knowledge of Cryptogams, in his *Flora Europæa Algarum aquæ dulcis et submarinæ* :—

“*Frustula* rectangulo-oblonga, aggregata vel solitaria, valvis naviculaceis transverse costatis, costis plerumque abbreviatis, nodulo centrali distincto.”

Pritchard, in his *History of Infusoria*, defines the genus in the following words :—

“*Frustules* oblong, naviculoid, annulate, in a gelatinous mammillate cushion or frond ; annuli loculated ; loculi opening by foramina along the line of suture.”

The chief difference between these two definitions consists in the fact that, in the former, the characteristic circumstance that the frustules are annulate and that the annulus is loculate, has not been referred to. It should, however, be noted that I have several times observed valves of *Mastogloia* entirely or partially devoid of such an annulus, so that this structure must be regarded as one of unessential significance.

Mastogloia thaitiana, n. sp. (Plate XXVI. fig. 11.)

Valvis elliptico-lanceolatis ; apicibus productis, obtusis ; striis decussatis lineam mediam simplicem attingentibus ; annulo costato totum valvæ circuitum ambiente. Ad oras Thaiti.

This small form was obtained in an extraordinarily rich sounding made in the waters around Tahiti. The profile is precisely similar to that of *Mastogloia apiculata*,¹ W. Sm., but in the latter the striæ are transverse, while in the former they are decussate and oblique to the direction of the raphe.

The specific name of this Diatom has reference to the locality in which it was found.

Mastogloia kerguelenensis, n. sp. (Plate XV. fig. 11.)

Forma elliptica ; apicibus cuneato-rotundatis ; annulo loculato, medio latiori, hinc ad apices decrescente ; valvæ area centralis ordine subquadrato granulata in sex fascias longitudinales dividitur ; nodulus centralis in area lævi inscribitur. Ad insulam Kerguelen.

This singular and interesting species has an elliptical valve with cuneato-rotundate extremities. The loculate annulus is wide in the centre, but diminishes regularly and is very narrow at the ends of the frustule. The striation is transverse, subradiate, and formed by lines of granules disposed in a subquadrate manner. The central area, circumscribed by the loculate annulus, is divided by a raphe and by four symmetrically disposed longitudinal lines. The central nodule is represented by a smooth areola, which has an indistinct outline.

The specific name has reference to the locality in which the frustule was found.

¹ *Op. cit.* vol. ii. p. 65, pl. lxii. fig. 387.