

Glyphodesmis (Grev.), Cstr.

It is by no means easy to define the two organisms which are represented on Plate XVIII. figs. 12 and 13, in their valval and zonal aspects. Both are navicular, but the one, which is elliptical in form, is very much elongated, while the other has two lateral protuberances. In the centre they possess a very pronounced nodule, as may be well observed when they are viewed from their zonal sides. At each extremity the valve is provided with a small but somewhat elevated cushion, which is extended and flat, and acts as a support between two adjacent frustules of the series. The valve, which is clathrate, is ornamented with quadrate granules disposed in parallel rows.

Naviculoid clathrate valves provided with central nodules are to be found in the Grevillean genus *Glyphodesmis*, but in the latter there are no small terminal cushions such as those present in the frustules represented in our present figures. In Plate x. fig. 7, of the Quarterly Journal of Microscopical Science, vol. ii., new series, 1862, a series of frustules of *Glyphodesmis eximia*, Grev., is represented. These present in their zonal aspects three projecting points which bring about a contact between adjoining frustules, namely, a central one corresponding to the nodule, and two terminal ones. The last are small smooth terminal cushions, and, although not distinctly marked, the presence of terminal protuberances in all *Glyphodesmides* may be regarded as verified, and on this account should be referred to in the definition of the genus. Hence the following definition may be taken instead of that given by Greville:¹—

Frustulis seriatim conjunctis, valvis navicularibus, nodulo centrali et pulvinulis terminalibus, structura clathrata, granulis transverse quadrato ordine dispositis, linea centrali subconspicua.

Glyphodesmis murrayana, n. sp. (Plate XVIII. fig. 12.)

Maxima, longe elliptica (novies longior quam latior); structura clathrata, granulis subquadratis quadrato ordine dispositis; pulvinulis terminalibus lævibus ellipticis; area centrali transverse elliptica, cui nodulum rotundum inscribitur. Ad insulas Philippinas.

This frustule is remarkable on account of its size, elegance, and clearness of detail. It is ornamented with large subquadrate granules which are arranged in parallel longitudinal and transverse lines and give relief to the smooth oval extremities as well as to the transversely elliptical central area where the large round nodule is conspicuous. When viewed in the zonal aspect the central nodule is seen to be large, elevated, and somewhat flattened at the top. It may also be noted that the nodule does not present an opening or osteole so as to produce a communication between the surrounding medium and the

¹ Greville's definition ran as follows: "Frustules united into a filament; lateral view naviculoid, with a central nodule, median line, and transverse rows of granules; structure clathrate, the granules being developed within square cellules, arranged in parallel series."—*Quart. Journ. Micr. Sci.*, vol. ii., new series, p. 234.