

on the valve of *Glyphodesmis*—its generic determination must remain uncertain. This being so, the specific characters, which can be better divined than decided with certainty, may at present be left out of consideration.

Plagiogramma, Grev.

Greville¹ instituted this genus in 1859, and defined it as follows:—Frustules quadrangular, direct, two or more united into a filament; valves linear or elliptical; striæ moniliform; vittæ two or more, pervious, parallel with the striæ.

Plagiogramma thaitiense, n. sp. (Plate XIX. fig. 4.)

Frustulis rectangularibus subinflatis; vittis duabus centralibus perviis; striis transversis tenuioribus ad extremum usque. Ad portum Thaiti.

This Diatom was obtained at the port of Tahiti. It recalls the *Plagiogramma jamaicense*² of Greville in the fact that the striæ, which appear on the margins of the connecting zone, are continued to the angles. In the type now under examination, however, while the striæ extend absolutely as far as the extremities, they are much more delicate than in the Grevillean species, while the margins of the frustule, when viewed in the zonal aspect, are somewhat protuberant in the centre, whereas in *Plagiogramma jamaicense* they are straight if not even slightly concave.

Although each of these points of distinction when taken by itself may be of small value, when they are considered collectively they must be regarded as sufficient for the establishing of a new species.

Plagiogramma margaritaceum, n. sp. (Plate XIX. fig. 13.)

Valvis late ellipticis, convexiusculis; granulis distinctioribus quadrato ordine dispositis; granuli inter medias costas vacant, ad apices evanescent. In portu Thaiti.

This frustule, which is also from the port of Tahiti, possesses an elliptical outline, and, as indicated by the curves of the transverse lines which separate the rows of granules, is markedly convex. The striation is continued to the extreme apices but the striæ are not moniliform—a fact which, however, cannot be regarded as of essential importance. On this ground *Plagiogramma tessellatum*, to which Gregory affixed a note of interrogation, must also be admitted to be a true *Plagiogramma*.

¹ *Micr. Journ.*, vol. vii. p. 208. Greville here divided the genus into three sections, according to the character of the vittæ, viz., SECT. I. Vittæ two, central; SECT. II. Vittæ two, central, and one at each end of the valve; SECT. III. Number of vittæ between the two central ones and the ends of the valve indefinite.

² *Micr. Journ.*, vol. vii. p. 208, pl. x. fig. 3.