

late processes. The granules, which are of equal size, are arranged in rows at right angles to the margins, but in a central triangular space they are disposed irregularly. The demarcation of this central area is clearly indicated by a few well-marked granules or denticles, placed at intervals along its sides. In the area itself there are a few scattered minute spines or apiculi. In these respects this frustule resembles the *Triceratium armatum* of Roper,<sup>1</sup> but it may readily be distinguished from the latter by the denticles referred to above. Brightwell has already (Quart. Journ. Micr. Sci., vol. iv. p. 274, Plate xvii. figs. 9, 9*b*, 10, 11, 11*b*, 12) notified several varieties of the typical species, and the present form may be similarly referred to as var.  $\delta$ .

*Triceratium fimbriatum*, Wall., var. nov. (Plate IX. fig. 12.)

This form resembles in its general characters the *Triceratium fimbriatum* of Wallich,<sup>2</sup> but its terminal processes are much more elevated, and its extremities somewhat more dilated.

*Triceratium incrassatum*, n. sp. (Plate IX. fig. 10.)

Trigonum, areolatum; valva lateribus convexis tumida; areolis hexagonalibus; apicibus obtuso processu terminantibus. In mari Japonico.

This form corresponds in general outline to the *Triceratium grande* of Brightwell,<sup>3</sup> and its hexagonal areolation is also similar. The extremities, however, are here remarkably depressed and obtuse, instead of being more acute and attenuated. The ocelli are nearly in the plane of the valve, which is evidently tumid. The three sides are slightly convex, and the hexagonal areolæ vary somewhat both in size and shape even in the central region of the valve.

*Triceratium grunowianum*, n. sp. (Plate XVI. fig. 5.)

Forma triangularis, latissime areolata; apicibus aspero processu erecto instructis; areolis subhexagonalibus; valvis finissime et radianter punctulatis; margine convexo lævi. Ad insulas Philippinas.

This Diatom is remarkable from the enormous size of its unequal hexagonal areolæ, its strong terminal processes, covered with inequalities, and its very delicate radiating punctiform striation. The three sides of the valve are slightly convex outwards, and in immediate contact with these is a hyaline belt which bears irregularly elliptical or clavate granules. At the bases of each of the three terminal somewhat infundibuliform processes there are also several irregularly scattered angular granules which serve to give greater prominence to this region. The narrower and more distal parts of each process bears a series of fine striæ which radiate into the proximal and wider end of the funnel. The specific name has been given in honour of Mr Albert Grunow, the well-known observer of Diatoms.

<sup>1</sup> *Micr. Journ.*, vol. ii. p. 283, fig. 1.

<sup>2</sup> *Micr. Journ.*, vol. vi. p. 247, pl. xii. figs. 4-9.

<sup>3</sup> *Micr. Journ.*, vol. i. p. 249, pl. iv. fig. 8; = (1.) *Triceratium orientale*, Harv. et Bail.; (2.) *Triceratium favus* (large), Pritchard, *op. cit.*, p. 856. The original specimens of *Triceratium grande*, Bright., were found on *Tridachnidæ* and other shells from the Indian seas.