

portion surmounted by short sharp points. Although the extremities can hardly be called calyptriform, the generic determination that has here been given cannot be questioned, more especially as an abundant supply of siliceous matter has been proved to occur in its walls by subjecting it to a process of incineration.

Rhizosolenia imbricata, Bright. (Plate XXIV. figs. 1 and 1 bis.)

The form which is represented on Plate XXIV. fig. 1 under a magnifying power of 130 diameters, and at fig. 1 bis under a power of 640 diameters, belongs without doubt to the *Rhizosolenia imbricata* of Brightwell.¹ In connection with fig. 1 the unimportance of attaching any significance to the proportion between the transverse axis and the length of the frustule may be noted, and it may also be observed that in the middle of the granulated series of rings there occurs a smooth ring. Here it is probable that the process of division takes place, by the formation of a diagonally placed diaphragm, which arises in such a manner as to bring about the formation of two new calyptræ.

The arrangement of the moniliform striæ on the other rings is radiating, the radiation taking place outwardly from a median axial line. Each ring is flanked by two small triangular and similarly sculptured spaces, from which it may be inferred that the entire annulus is composed of two trapezoidal parts, on each of which the striæ run in different directions.

Plate XXIV. fig. 14, represents a form bearing on its calyptriform extremity two long and very acute mucrones. Whether this appearance is normal or teratological, or whether it is merely accidental—one mucro alone belonging to the frustule, the other being casually apposed—cannot be determined. Should further observations prove that both belong to the same Diatom, it must be regarded as a new species, but at present there is nothing to show that it is not a monstrous form.

Rhizosolenia robusta, Norman, var. nov. (Plate XXIV. fig. 5.)

Here there is shown the calyptriform extremity of a *Rhizosolenia*, which is remarkable on account of its extraordinary size and the sculpturing of simple radial lines which it presents. These characters coincide with those of *Rhizosolenia robusta*, Norman, which is figured in Plate viii. fig. 42 of Pritchard's History of the Infusoria. The form of the latter, however, unlike that of the former, is compressed, and its mucro is described as being "short, delicate, and nearly linear," instead of being short and cuneato-acute, as in the present case. Yet these points of difference cannot be regarded as possessing more than a varietal significance.

The parts entering into the composition of the rings of this variety are sub-rectangular.

¹ *Micr. Journ.*, vol. vi. p. 94, pl. v. fig. 6.