

same collection. It is true that much significance cannot be attached to the arcuate curvature, which is here very manifest, but the small protuberant, massive, and almost spherical mucro forms a well-marked characteristic, and must be viewed as of specific importance.

Rhizosolenia sima, n. sp., var. nov. (Plate XXIX. fig. 9).

This form differs from the type, not merely by its size—a circumstance of little importance and attributable to pressure acting on the frustule—but rather in the construction of the terminal calyptra, which is not simple but formed by the union of several pieces.

Rhizosolenia japonica, n. sp. (Plate XXIII. fig. 7.)

Forma subcylindrica, annulata; annulorum divisione transversa; striis imperviis; mucrone terminali longissimo tenuissimo. In mari Japonico.

Only one specimen of this interesting type, which was obtained in the Sea of Japan, has been observed. It is characterised by its very long terminal mucro, a circumstance in which it perhaps does not differ from *Rhizosolenia styliiformis*, Bright.¹—and by the fact that its rings are divided transversely—a character which is not found in Brightwell's species. Although its minute characteristics have still to remain incompletely determined, it cannot be regarded as a teratological specimen, but must be looked upon as the type of a true species.

The organism shown in Plate XXIII. fig. 8, although bearing certain external resemblances to the *Rhizosoleniæ* in its general form and in the nature of its extremity, may not improbably ultimately be determined to be of an animal nature. The absence of any trace of division and of any indication of the origin of the mucro, as well as the presence of a very pronounced granulation, are opposed to its being regarded as a Rhizosolenian Diatom, while the fact that the specimen has been found in a preparation of fresh material made on board the Challenger has rendered it impossible to determine whether its walls are provided with or are devoid of siliceous matter.

Rhizosolenia murrayana, n. sp. (Plate XXIV. fig. 12.)

Cylindrica, constans partibus rectangularibus reticulatim dispositis, et convexe terminata, et mucrone terminali instructa. In mari Antartico.

This very singular form presents an entirely novel aspect, yet possesses all the characters necessary to its being regarded as a member of the present genus. It has the form of a small cylinder, and is composed of a large number of distinct equal rectangular parts, which are cemented together, the tube being closed at both extremities by a convex

¹ *Micr. Journ.*, vol. vi. p. 94, pl. v. fig. 5; Norman, *Ann. Mag. Nat. Hist.*, vol. xx. 1857, p. 158; Schultze, *Micr. Journ.*, vol. vii. p. 18, pl. ii. fig. 1; Pritchard, *op. cit.*, p. 865, pl. vii. fig. 32.