

been accepted, as it is not sufficiently distinct from that of *Asteromphalus*, to which the forms in question accordingly remained annexed.

*Asteromphalus ovatus* presents, however, several points of resemblance to the *Asteromphalus shadboltianus* of Greville,<sup>1</sup> who described this latter Diatom as an *Asterolampra*, having endeavoured to join the two genera *Asteromphalus* and *Asterolampra* into one under the latter name, because by supposing one radius of *Asterolampra* to remain undeveloped there would be left no means of distinguishing them. This supposition, however, has failed to meet with the acceptance of other micrographers. The points of difference which may be noted between the frustule now before us and *Asteromphalus shadboltianus*, Grev., are the following: (1.) The form of the umbilical lines which proceed from the superior margin of the pyriform area of the obliterated radius are angularly curved and almost broken in the Grevillian species, while in the present form they are straight, with the exception of those separating the inferior radial areas, which are slightly curved, but by no means bent in a zigzag manner, as in the other case. It is to be remarked, however, that the occurrence of a bending in the umbilical lines is of little significance, because all gradations may be found in the same species, from the most decided curves to simple lines which are but slightly tortuous or may even be straight. (2.) The present form is smaller than the species established by Greville; and (3.) the former, instead of being round like the latter, is oval. From these considerations the specific value of *Asteromphalus ovatus* cannot be questioned.

*Asteromphalus roperianus*, Grev., var. *atlantica*, nov. (Plate V. fig. 3.)

This frustule also belongs to the group designated *Spatangidium* by Brébisson. It presents a beautiful granulated disc on which a hyaline star with six radii—apart from that which is obsolete—occurs. It is very closely allied to *Asteromphalus roperianus*, Grev.:<sup>2</sup> in both there is the same number of radii, of interradial areas with straight vertices, and the central area of the obsolete radius, at which the other umbilical lines meet, is campanulate in both. It differs from Greville's species, however, in the following respects: (1.) The extremities of its radial areas are slightly expanded, and terminate some distance from the margin of the frustule. (2.) The granulated segments at the apices terminate abruptly and not in a somewhat undulating manner, as in the figure given by Greville, who represents two slightly convex curves as starting from the two angles of the apex and meeting in a slight involution at the intermediate umbilical line. Notwithstanding these points of difference, however, the present frustule can only be regarded as a variety of Greville's species, and it has been named *atlantica* from the locality in which it was found.

<sup>1</sup> A monograph on the genus *Asterolampra*, including *Asteromphalus* and *Spatangidium*, by R. K. Greville in *Micr. Journ.*, vol. viii. p. 121, pl. iv. fig. 19, 1860.

<sup>2</sup> *Micr. Journ.*, vol. viii. pl. iv. fig. 14, 1860.