

Eucampia, Ehrenb.

This genus is defined by Pritchard in his History of the Infusoria (p. 937) as follows:—"Frustules hyaline, imperfectly siliceous, cuneate, without terminal puncta, united in a jointed spiral filament." With regard to this definition, it may be noted that although, with the relatively imperfect microscopes used by Ehrenberg and W. Smith, by means of which the minute sculpturing could not be detected, it was admissible to speak of the frustules as *hyaline*, it is now possible to detect minute rows of points, so that that term can no longer be made use of.

Akin to the genus *Eucampia*, Professor Cleve of Upsala, in his paper entitled Examination of Diatoms found on the Surface of the Sea of Java,¹ instituted another genus which he named *Mölleria*, in honour of the well-known mounter of Diatoms, and gave a definition which agrees with that of *Eucampia*, except that, in *Mölleria*, the extremities of the valves are produced into long processes, and the connecting membrane is ornamented with numerous costæ (rudiments of diaphragms?). That the presence of long processes is an insufficient character upon which to establish a genus is manifest, and in his Synopsis of the British Diatomaceæ, W. Smith,² in representing a superb specimen of *Eucampia zodiacus*, Ehrenb., indicates a slight puncturing on the valve, and traces of several costæ on the connecting zone. Hence the genus *Mölleria* cannot be accepted on the grounds quoted by Cleve. But in *Mölleria cornuta*, Cleve, there exists a central nodule which—as I observed in the case of a valve found in the original collection from the Sea of Java, which was kindly placed at my disposal by Professor Cleve—is ornamented by minute radiating puncta. Hence it only remained to be shown that, in *Eucampia*, no central nodule occurred, in which case the genus *Mölleria* could be reserved for those forms of *Eucampia* possessing such a structure, and defined as indicated on page 98.

Among the Challenger collections, series of cuneate frustules, without the terminal point or appendage, and having all the peculiarities required by the definition of *Eucampia*, Ehrenb.—except that, instead of being imperfectly siliceous or hyaline, they were furnished with large granules—have been seen on several occasions. Hence the characters of *Eucampia*, as established by Ehrenberg, may be emended thus:—Frustula cuneata in duas inæquales extremitates abrupte desinentia et in seriem spiralem conjuncta.

Eucampia balaustium, n. sp. (Plate XVIII. fig. 5.)

Valvis ellipticis convexis superne in duos inæquales processus truncatos desinentibus et medio inflatis; granulis grandiusculis nullo certo ordine stipatis. In mari Antartico.

Each frustule here consists of two elliptical valves, which terminate above in two unequal imperfect processes, between which a slight protuberance exists. The valves,

¹ *Bihang k. Svensk. Vet. Akad. Handl.*, Bd. I. No. 11, p. 7.

² Smith, *Synop. Brit. Diat.*, vol. ii. p. 25, pl. xxxv. fig. 299., and *Suppl.*, pl. lx. fig. 299.