

cave, and its marginal portion notably convex. The central area is ornamented with round radiating granules, while the broad margin has these arranged in a decussate manner. From the border of the central concave part there extends to the peripheral ring a series of eleven strongly marked radiating areas, which are raised above the plane of the valve.

Although this singular valve differs from any of the other specific forms of *Cestodiscus*, its characters still coincide with those expressed in the definition of this genus as given by Greville. By the use of extremely oblique light, and the homogeneous immersion objective of Zeiss, I have been able to recognise that the long elevated areas project horizontally from their origin, and separate afterwards like the talons of a bird of prey—an observation which has suggested the specific name that has been applied to this interesting form.

Eupodiscus, Ehrenb.

While Pritchard, in his *History of Infusoria* (p. 842), notifies the characteristics of this genus, which is especially distinguished by the processes disposed around its valves, he very justly observes that the genus *Actinocyclus* of Ehrenberg is probably identical with *Eupodiscus*, and that therefore it is wrong to ascribe the former to the *Coscinodisci*. The only notable difference between *Actinocyclus* and *Eupodiscus* consists in the number of the pseudo-noduli or submarginal processes, of which only one occurs in the former, while two or more are to be found in the latter.

In the Challenger Collection *Eupodiscus jonesianus*, Grev., is pretty frequent, having been collected in several localities, such as the Sea of Japan, at Hong-Kong, in the Arafura Sea, in the Southern Ocean between Kerguelen and Heard Islands, and elsewhere. At first, however, it is difficult to determine this Diatom specifically. Notwithstanding the well-known facility which Greville possessed of drawing the most delicate and elegant diatomaceous frustules, his figure of this species does not agree sufficiently exactly with its natural appearance. This will be at once admitted when a comparison is made between plate ii. fig. 3 of the *Transactions of the Microscopical Society of London*, vol. x., new series, 1862, and the description which Greville himself gives at page 22 of the same volume. This description, however, perfectly coincides with the valves collected by the Challenger, but it is necessary to remark that among the many specimens in my possession not one is furnished with more than two submarginal processes, while these are disposed as if the periphery were tripartite, the place of the third process remaining vacant.

Eupodiscus insutus, n. sp. (Plate XIX. fig. 6.)

Disciformis; tribus processibus submarginalibus munitus; valvis areolatis et radianter punctulatis; areolis grandiusculis, subrotundis, rariusculis. In Oceano Atlantico meridionali.