

Actinocyclus clevei, n. sp. (Plate IV. fig. 6.)

E maximis; dense et decussatim punctulatis; centrum sex cellulis oblongis distinguitur, a quo duplices perspicuorum punctulorum lineæ dimanant, superficiem in partes æquales dividentes; pseudo-nodulo intramarginali grandiusculo. Diametrum 360 μ . In mari interno Japonico.

This disc has a diameter of 360 μ , and the great delicacy of its punctation contrasts distinctly with its unusually large size. A central rosette is constituted by a few large irregular oblong cellules, and from this region numerous double lines of more salient points radiate outwards and terminate at the circumference, while the equal interspaces are ornamented by very minute puncta arranged in a decussate manner. The submarginal pseudo-nodule is rather large, and is somewhat elevated above the surface in a subulate manner. The specimen figured was collected in the Sea of Japan.

The specific name has been given in honour of the well-known diatomist Professor Cleve of Upsala.

Actinocyclus japonicus, n. sp. (Plate IV. fig. 3.)

E maximis; valvis fasciculatim punctulatis; fasciculi punctulati lineis radiantibus dissepiti quæ in denticulo desinunt; punctuli circum in zonam decussatim dispositi; pseudo-nodulum submarginale grandiusculum. Ad oras Japonicas.

This magnificent discoid form is not smaller than *Actinocyclus clevei*, but differs notably from the latter in all its remaining characteristics. The puncta, which are disseminated over the valve, are less delicate and more sparsely disposed, and at the centre there exists a group of small points in the middle of an irregular hyaline area. A series of radiating punctated lines divide the surface of the valve into a number of equal segments, which are sculptured by rows of fasciculated granules that are arranged in quincuncial order near the circumference. The radiating lines terminate in submarginally placed denticules, and the external limiting circlet is ornamented by well-defined striæ. The Diatom was found in the vicinity of the coast of Japan.

Actinocyclus ralfsii, W. Sm., var. *challengerensis*, nov. (Plate XXX. fig. 1.)

The frustule here shown was also collected in the neighbourhood of Japan. Although in the course of engraving the striæ have been somewhat unduly reduced in number, it is manifest that it closely resembles the *Actinocyclus ralfsii* of W. Smith. It may be noted, however, that the marginal denticules are more pronounced than in the latter case, while the system of striæ is fasciculate rather than radiating. Notwithstanding these distinctions, it can only be looked upon as a variety of Smith's species.