

Calcareous ring of ten simple pieces, devoid of prolongations posteriorly; the interradial carry anteriorly one point, the broad radial have four.

*Habitat.*—(?).

Genus *Eucyclus*, Lampert, 1885.

Tentacles twenty, in two crowns, each crown composed of ten equal tentacles; those of the inner crown smaller and radial in position, those of the outer crown larger and interradial. Pedicels equally distributed all over the body. Calcareous ring like that in *Thyone chilensis*, composed of only five simple pieces, devoid of prolongations posteriorly.

*Eucyclus duplicatus*, Lampert, 1885.

Body ovate, slightly curved. Deposits—sparsely scattered, small, tuberculated rods, slightly enlarged and usually perforated at each end, thus resembling those in *Thyone chilensis*.

*Habitat.*—Callao, Peru (Lampert).

A detailed comparison of the descriptions of *Eucyclus duplicatus* and *Thyone chilensis* clearly shows that the two forms are very nearly related, and that the only points of distinction are the number and arrangement of the tentacles. Supposing that Semper is right in stating the number of tentacles to be ten in his *Thyone chilensis*, it remains unexplained how it is possible that species of two different genera, which also belong to different subfamilies, can be developed in "every detail" like one another. For my own part I am very much tempted to think that Semper has made a mistake in counting the tentacles, in which case the two forms will be identical, but if he be right, there is still weighty reason for placing the two forms side by side, in spite of the differences in the number of tentacles, because they present the most obvious similarity in every other respect. I fear that the individual variations in regard to the tentacles in many Dendrochirotes may be much more extensive than has been hitherto supposed, and that this variation principally takes place in the "polychirote" Dendrochirotes. In all those Dendrochirotes, on the contrary, which are characterised by possessing only ten tentacles, *these* appear to be almost constant in number, size, and position. From deficient knowledge in these respects it does not seem very suitable at present to found the subfamilies above mentioned merely on the differences in the tentacles.

Lampert has associated with the following three forms, incompletely described by Rathbun, Anderson and Barrois, the names of their respective discoverers:—

*Holothuria rathbunii*, Lampert, 1885 = *Holothuria*, sp. mihi, p. 239.

*Colochirus andersoni*, Lampert, 1885 = *Holothuria*, sp. mihi, p. 240.

*Semperia barroisi*, Lampert, 1885 = *Thyone fusus*, mihi, p. 134.