

*Cucumaria sykion* (*Semperia*), Lampert, 1885.

Ventral surface with pedicels only on the ambulacra, placed in four or five irregular rows on each. Dorsal surface with pedicels on the ambulacra as well as on the interambulacra, though those on the latter are smaller. Deposits like those in *Cucumaria dubiosa*, Semper. Calcareous ring devoid of bifurcate prolongations posteriorly.

*Habitat*.—Algoa Bay (Lampert).

This species must be very nearly related to *Cucumaria dubiosa* and *Cucumaria köllikeri*, but is distinguished from them principally by the arrangement of the pedicels.

The genus *Semperia*, founded by Lampert, comprises all forms of *Cucumariæ* which have two or more rows of pedicels on the ambulacra, and also scattered ones on all the interambulacra, or on some of them. He retains the old name of the genus for all those species which have the pedicels arranged in two or more rows on the ambulacra alone. For my own part, I cannot understand the necessity of this separation, considering the very natural affinity between all or most of the species in question. Besides, it is the fact that a good many of those forms which would be referred to "*Semperia*," when they are young are provided with pedicels only on the ambulacra.

As is known, Semper grouped the dendrochirotus Holothurians under the three subfamilies, Stichopoda, Gastropoda, and Sporadipoda, according to the arrangement of the pedicels. Bell, in his paper on *Amphicyclus*, in 1884, gave particular attention to the position and number of the tentacles in the Dendrochirotes, and proposed the name "polychirote Dendrochirotae" for those forms which have more than ten tentacles, and "decachirote Dendrochirotae" for those with only ten tentacles. The views of Bell were recently adopted and further explained by Lampert, who places the dendrochirotus Holothurians under the two new subfamilies of "Decachirotæ" and "Polychirotæ," according as the tentacles are ten or more than ten; moreover, he divides the latter subfamily into two groups, "Monocyclia" and "Amphicyclia," according as the tentacles form a single or a double crown. I refrain from offering any opinion on the validity of this division, which in several respects, it must be confessed, seems to be better than that of Semper, but in others, especially from the view of natural relationship, can scarcely be satisfactory.

*Cucumaria cognita* (*Semperia*), Lampert, 1885.

Body tapered towards each extremity. Pedicels arranged in a double row along each ambulacrum, and also scattered over all the interambulacra at the swollen middle portion of the body. Towards the extremities of the body, where the interambulacra are naked, the pedicels become transformed into small, conical, white, rough papillæ; terminal plates absent. Deposits—elongated, smooth plates of a somewhat asymmetrical appearance, perforated with one or two irregular