

The suborder *Plectoidea*, hitherto known by few species only of "Plagiacanthida," comprises a large number of interesting *NASSELLARIA*, which belong partly to the simplest and most primitive forms of this legion. It may be divided into two different families, *Plagonida* and *Plectanida*. In the first family, *Plagonida*, the monopylean central capsule is supported by a simple or rudimentary skeleton, composed only of a variable number of radial spines united in a common centre. In the second family, *Plectanida*, the branches of these radial spines become united and form a loose irregular framework with wide meshes, partly enclosing the central capsule, but never a perfect lattice-shell.

The *Plectoidea* differ from the following suborder, the *Stephoidea*, in the absence of the ring, characteristic of the latter. Some slight traces, however, indicate a near affinity between the ringless *Plectoidea* and the ring-bearing *Stephoidea*. Both these suborders of *Plectellaria* differ from the closely allied *Cyrtellaria* (*Spyroidea*, *Botryodea*, and *Cyrtoidea*) in the absence of a complete lattice-shell. The morphological relation and phylogenetic affinity between the former and the latter have already been discussed in the preceding description of the legion *NASSELLARIA* (compare pp. 891-894).

The first known species of *Plectoidea* was observed in the North Atlantic (on the Norwegian shore) in 1855 by my late friend Edouard Claparède, and described and figured in his *Études, &c.* (1858), under the name *Plagiacantha arachnoides*. He considered it as a new genus of *Acanthometrina*. Another species, from the Mediterranean, was described in the same year by Johannes Müller as *Acanthodesmia dumetum* (1858, *loc. cit.*, Taf. i. fig. 3). A third species, also Mediterranean, was figured by me in 1865 under the name *Acanthodesmia polybrocha*. Finally, Richard Hertwig, 1879, in his *Organismus der Radiolarien*, gave a very accurate description of another Mediterranean form, *Plagiacantha abietina* (*loc. cit.*, Taf. vii. fig. 6). He first recognised the true character of *MONOPYLEA* in their monaxonian central capsule, and observed at the same time the first *NASSELLARIUM* without skeleton, called by him *Cyrtidium inerme* (*loc. cit.*, Taf. vii. fig. 1). To these four known species, representing three different genera, the rich collection of the Challenger has added so many new forms that we may distinguish here not less than seventeen genera and sixty-one species. In my *Prodromus* (1881, p. 423) I arranged these in two subfamilies, the *Plagonida* and *Plectanida*, constituting together the family *Plectida* (identical with the "Plagiacanthida" of Hertwig and Bütschli). But at present, regarding the important relations of these *Plectida* to the other *NASSELLARIA*, it seems more convenient to give to them the rank of an independent suborder of *Radiolaria*, under the name *Plectoidea*.

The peculiar structure of the central capsule of the *Plectoidea*, first recognised by Richard Hertwig, allows no doubt of their being true *MONOPYLEA* or *NASSELLARIA*; and also their siliceous, originally triradiate skeleton indicates the nearest affinity to