

Even *Archidiscus pyloniscus* may possibly represent the same form among the Porodiscida as *Triodiscus lenticula* among the Pylodiscida; this important form indicates clearly the close affinity of the two families.

If we take the latter, nearly identical form as the common starting point of both families of Cyclodiscaria, then probably *Triopyle* and *Triolene* must be regarded as retrograde forms, derived from *Triodiscus* in the one case, from *Archidiscus* in the other, by reduction of three interrarial arm-chambers, whilst three perrarial only remain. But it is also possible that the most simple form, *Triolene*, originated independently from some *Cenosphæra*, three simple radial chambers, like the latticed central chamber, being derived from the latter by apposition in three equidistant radii, whilst three other radii between them remained free. In this case the other genera of Pylodiscida are derived from their common ancestral form *Triolene*.

Adopting this latter view, we find that all eight genera of Pylodiscida, here distinguished, may be regarded as following members of a continuous series. If the three simple arm-chambers of *Triolene*, surrounding the equal central chamber, become united at their distal ends by a concentric equatorial ring, then originates *Triopyle*; and this graduates into *Triodiscus* by fenestration of the three open gates between the three latticed arms. Whilst these three genera form together the subfamily Triopylida, a second family, Hexapylida, is composed of three other analogous genera, in which the same process of development becomes repeated.

*Pylolena*, the most simple form of Hexapylida, arises from *Triodiscus* by the development of three new arm-chambers (of the second order) which are apposed at the distal end of the three primary arm-chambers (of the first order) in the same radius. If the distal ends of these three secondary arm-chambers become united by a concentric latticed ring or girdle, we get *Hexapyle* (with six open gates, two in each radius), and if its six gates become afterwards closed by loose lattice-work, we arrive at *Pylodiscus* (a repetition of *Triodiscus*).

A third subfamily, Discopylida, is formed by the building of a chambered equatorial girdle around the margin of *Pylodiscus*. This girdle has quite the same structure as the similar chambered rings or girdles of the Porodiscida and Coccodiscida. Between the two sieve-plates of the disk surface is enclosed a variable number (twelve to twenty-four or more) of chambers, imperfectly separated by radial beams, which connect the margin of the *Pylodiscus*-shell with an outer peripheral concentric ring. In *Discozonium* this marginal ring is perfect, whilst in *Discopyle* it is interrupted by a peculiar large opening, a "marginal osculum" surrounded by a corona of spines, quite the same remarkable formation which we encountered in *Ommatodiscus* among the Porodiscida.

All Pylodiscida are therefore triradial (with three perrarial arms and three interrarial gates between them), and many of them have a great resemblance to certain triradial Porodiscida and Spongodiscida, perhaps not only a morphological resemblance, but also: