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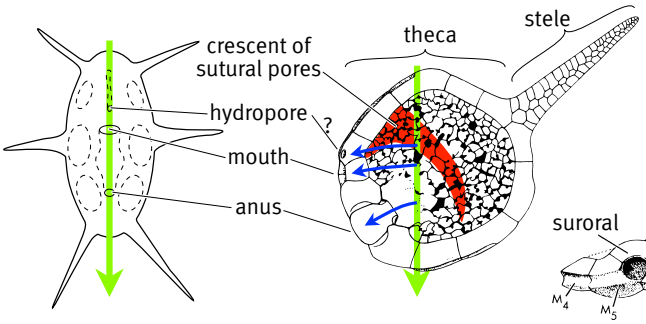
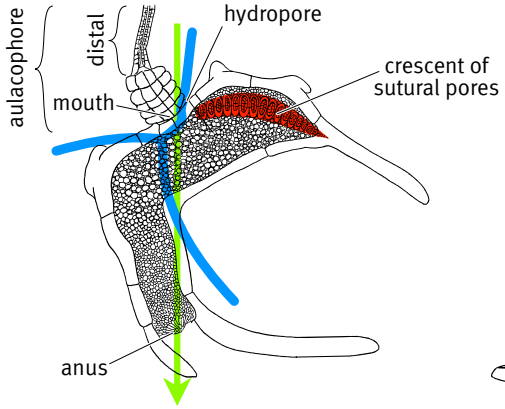


tripartite larva

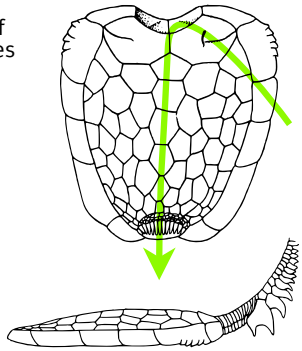
The **homostelean** *Trochocystites*.

In the adult **homostelean**, the larval ventral side is upward, the larval anteroposterior axis is oblique. The hydropore is interpreted on marginal M4. According to Ubaghs the stele is formed as a narrow region of the theca bordered by margins.

Stylophorans consist of the asymmetric **cornutes** and the more symmetric **mitrates**.



Cothurnocystis



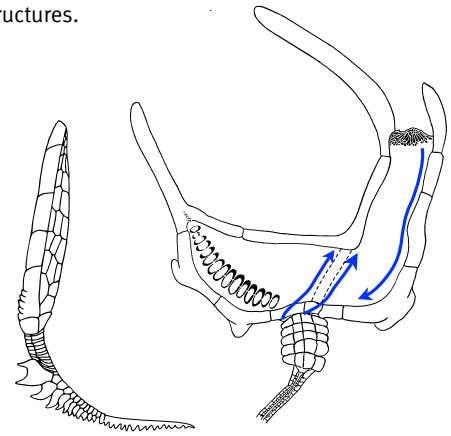
Mitrocystites

The body is trilobate (**blue curves**); each lobe is associated with an opening. Marginals separate the lobes (zygal between anal and hydropore lobe).
The oral lobe is formed by the **aulacophore**. The distal part of the aulacophore is a specialized **stele** equipped with an ambulacral region.

General Discussion

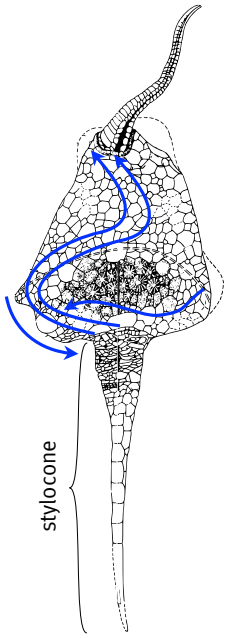
Several clades of homalozoans tended to evolve a symmetrical configuration of marginals and spines (Zomora, 2012). However, a symmetrical configuration of thecal pores has never been observed (Ubaghs, 1975). Earlier hypotheses have been discussed by Ubaghs and Caster in the Treatise Vol S2 (1967).
The monophyly of homalozoans is supported; homoiosteleans are a subclass of stylophorans. The aulacophore (and stylocone) are fundamentally revised as thecal lobe with specialized distal stele. The homalozoans show a fundamentally threelobate body, with a new anteroposterior axis. This threelobate schema is shared with helicoplacoids.

Homoiostelea are reinterpreted as subclass of the Stylophora.
Considerations: 1. The stylocone bears remarkable resemblance to the aulacophore, is very unlike a homostelean stele, and is not related to the nearby anal cone. 2. The relative locations of mouth and hydropore are reversed. 3. The arm is remarkably simple, and apparently bears just ambulacral structures.



Hypothetical evolutionary scenario: 1. Instead of lifting the aulacophore, the theca is lifted. (Possibly to escape predation.) 2. Ambulacral structures become detached from aulacophore and form an arm. 3. Mouth, arm, and hydropore-lobe migrate to new top, along the border of the anal lobe, while latter migrates downward.

Discussion: The thecal plating of homoiosteleans is highly disordered, consistent with extensive migrations. 2. The anus is sometimes located on the right side of the stele, but the hydropore is always to left from the mouth (Caster, 1967). 3. Stylocone might also migrate to some degree.



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