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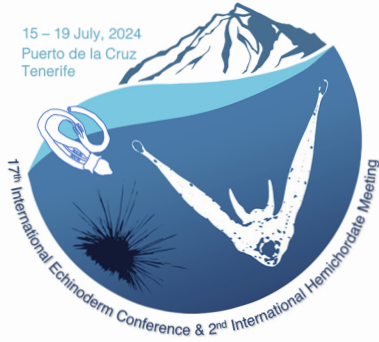
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NEW DATA ON PARANACYSTIDS, A POORLY KNOWN CLADE OF SILURO–DEVONIAN MITRATES (STYLOPHORA)

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Stylophorans were strongly affected by the Hirnantian biotic crisis, with e.g. the extinction of all cornute families. Within the mitrates, only four clades survived during the Silurian and eventually diversified in the Early and Middle Devonian. In the last 150 years, most studies of Siluro–Devonian mitrates have focused primarily on two of these clades: Allanicystidiinae (e.g. *Placocystella*) and Anomalocystitinae (e.g. *Placocystites*, *Rhenocystis*). Very little is known about the two other clades: Peltocystida (e.g. *Jaekelocarpus*) and Paranacystidae (e.g. *Paranacystis*, *Yachalicystis*). The objective of this presentation is to review the numerous recent discoveries of paranacystids, in order to reconstruct their post-Ordovician evolution.

Paranacystids originated from a *Eumitrocystella*-like ancestor (Sandbian, Morocco). They are characterized by an oblique, left-oriented anal opening, a relatively large posterior sub-triangular marginal, and two large adorals. All post-Ordovician paranacystids show the same evolutionary trend towards more elongate and narrower outlines, achieved through the loss of thecal plates. In this context, the enigmatic stylophoran *Dalejocystis casteri* (Eifelian, Czech Republic) is reinterpreted here as a paranacystid mitrate. Reassessment of its morphology is essential to make sense of other problematic paranacystids, such as *Paranacystis simoneae* (Eifelian, South Africa) and *Yachalicystis triangularis* (Lower Devonian, Argentina), but also for comparison with new occurrences in Bolivia, France, Germany, and Sweden.

Paranacystids have been long considered a typical Gondwanan (Ordovician) and/or Malvinokaffric (Siluro–Devonian) clade. However, new findings do not confirm this interpretation, but rather suggest that paranacystids were relatively widespread and almost cosmopolitan in post-Ordovician times.