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A revision of the genus *Baltoplana* Karling, 1949 (Rhabdocoela: Schizorhynchia: Cheliplanidae): Phylogenetic Insights and Seven New Species

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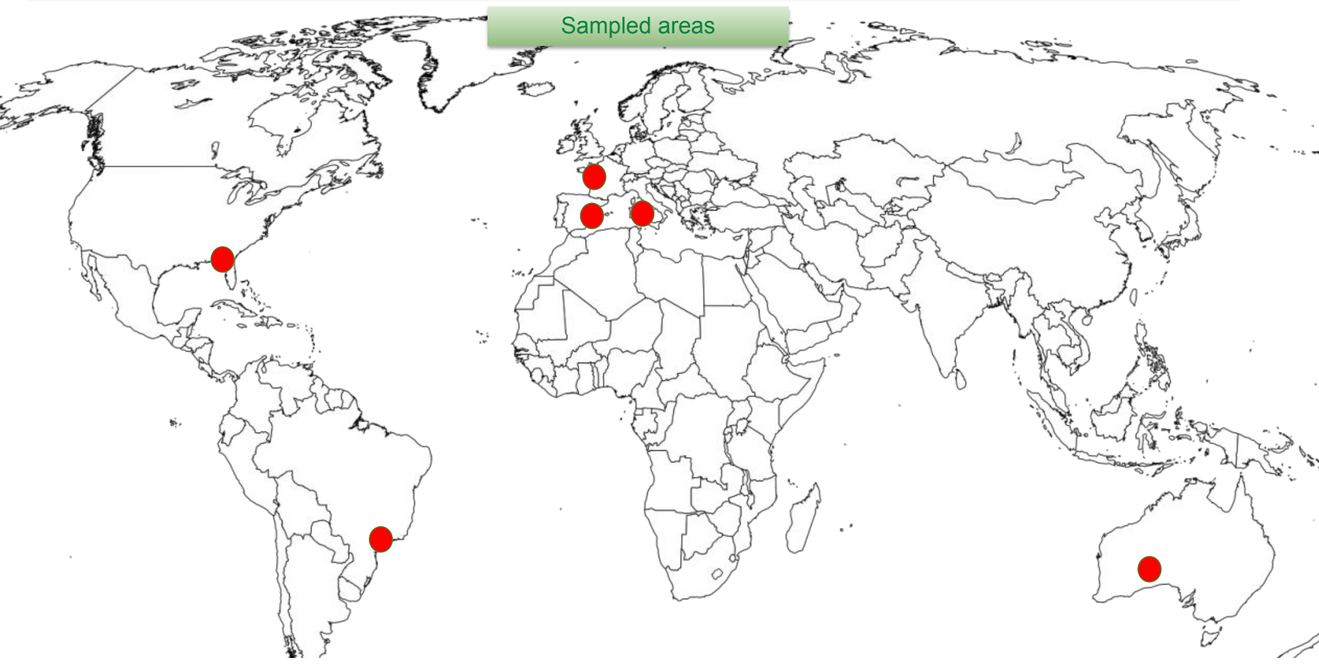
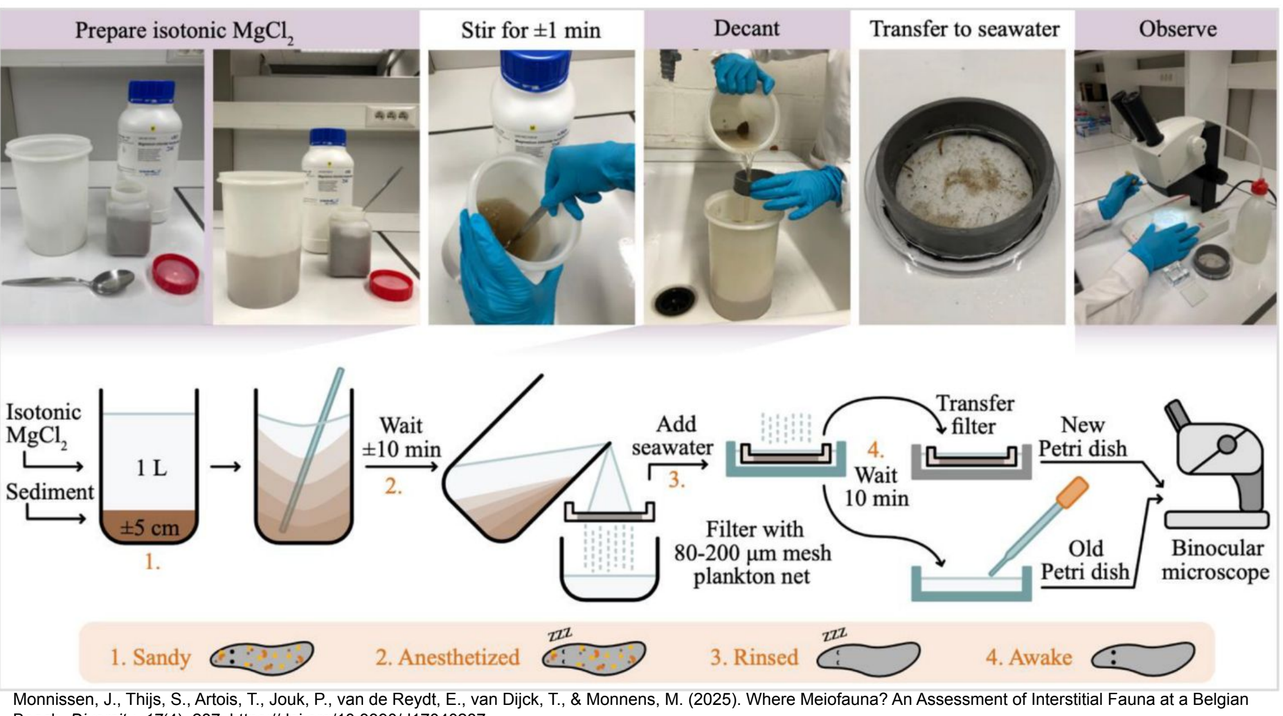
INTRODUCTION & AIM

Schizorhynchia is a taxon of marine free-living platyhelminthes that is generally characterized by having a divided proboscis; however, current taxonomy fails to accurately represent the evolutionary history of species within Schizorhynchia. Here, we present an integrative taxonomic revision and phylogenetic analysis of the genus *Baltoplana* Karling, 1949 (Cheliplanidae)

METHOD





Monnissen, J., Thijs, S., Artois, T., Jouk, P., van de Reydt, E., van Dijck, T., & Monnens, M. (2025). Where Meiofauna? An Assessment of Interstitial Fauna at a Belgian Beach. *Diversity*, *17*(4), 287. https://doi.org/10.3390/d17040287

A preliminary phylogeny of *Baltoplana* was constructed based on newly collected material, confirming its position within Cheliplanidae. The analyses we used to build the phylogenetic tree refer to boostrat, ultrafastboostrat and the approximate Bayesian probability. We also provide new distributional data for seven new species of *Baltoplana;* they are described based on DNA sequences and the morphology of the male copulatory organ, particularly of the cirrus and accessory cirri.

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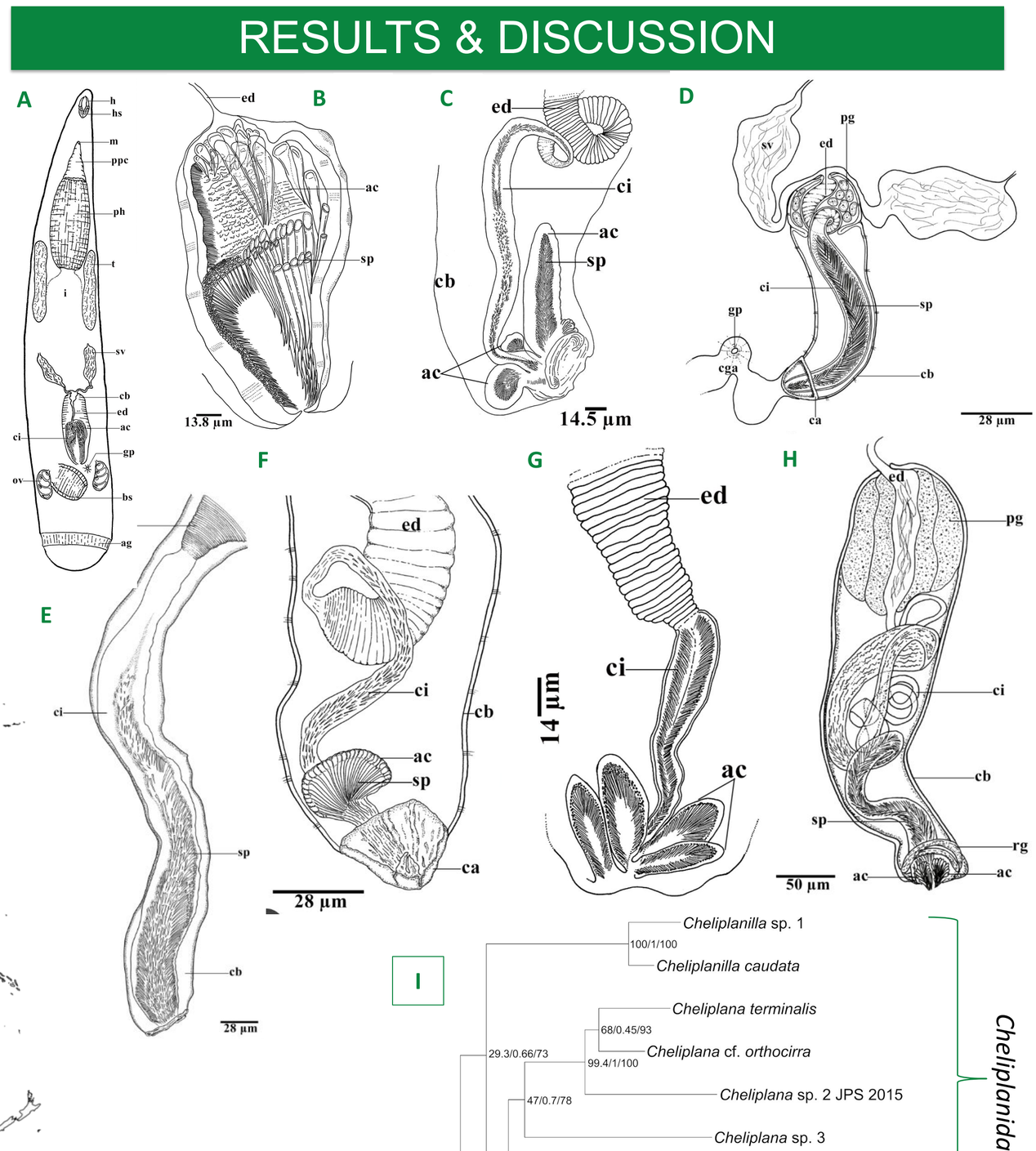
RESULTS & DISCUSSION



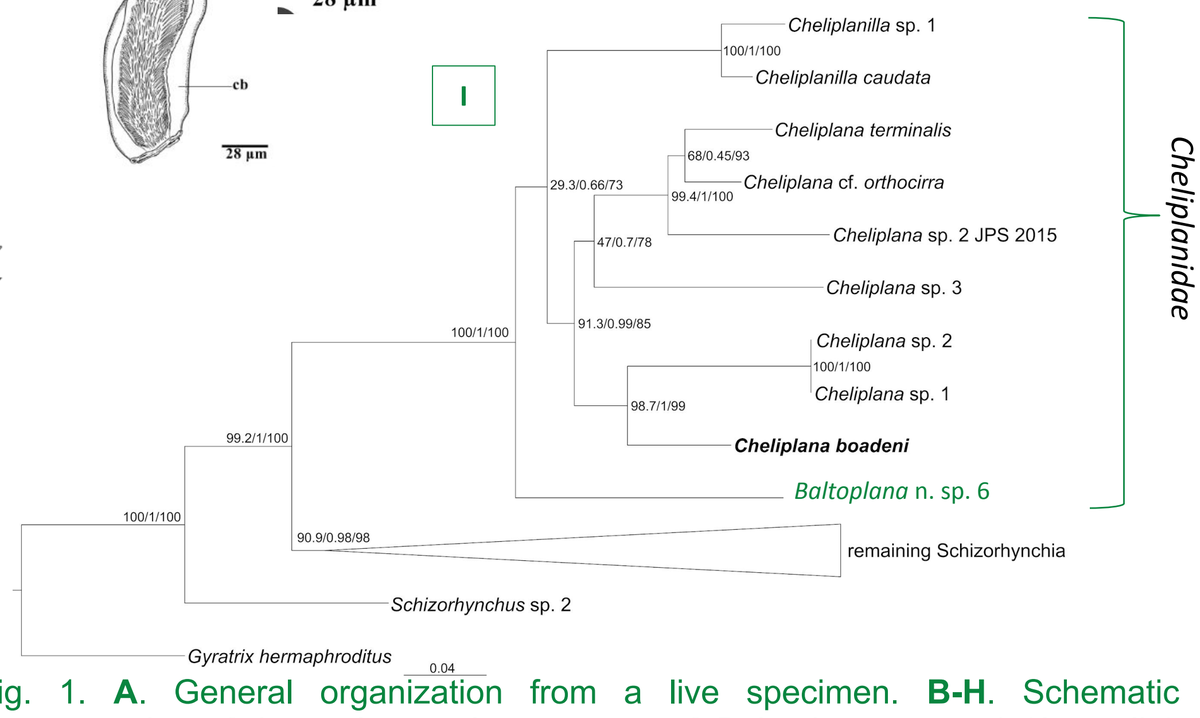


Fig. 1. **A**. General organization from a live specimen. **B-H**. Schematic representation of the male copulatory organ of *Baltoplana* n. sp. 1 (Australia), *Baltoplana* n. sp. 2 (Australia), *Baltoplana* n. sp. 3 (Brazil), *Baltoplana* n. sp. 4 (Brazil), *Baltoplana* n. sp. 5 (Spain, France and Italy), *Baltoplana* n. sp. 6 (Australia), and *Baltoplana* n. sp. 7 (USA); respectively. **I.** The preliminary phylogenetic analysis places the genus ***Baltoplana*** in the family Cheliplanidae. Boostrat, ultrafastboostrat and the approximate Bayesian probability test, are shown in branches respectively.

CONCLUSION

We describe seven new species and provide new morphometric data of known species. The new species of *Baltoplana* are mainly distinguished by the shape and size of the (un)armed cirrus, the presence or absence of accessory cirri, and the presence or absence of sclerotized tissue (cap) in the distal region of the male copulatory organ.

Phylogenetic work based on newly acquired 18S and 28S rDNA sequences confirms that the family Cheliplanidae is monophyletic, for the first time positions *Baltoplana* within Cheliplanidae, and reveals *Baltoplana* as the sister taxon of *Cheliplana.*