Integrative Taxonomy of North Atlantic *Acanthocope* with description of a new species

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03-07 18S and TCS Abstract

- A quick preview to the 18S phylogeny: genetic result
- Abstract for TCS Meeting Paris: TCS Abstract
- All drawing scans are here

02-28 Loan request ZMH (Pending)

1. **Type materials**

- *A. puertoricana*: ZMH K–46195 (Holotype), ZMH K–46196, ZMH K–46198 (Puerto Rico Trench)
- *A. eleganta*: ZMH K–40716 (Holotype), ZMH K–40717, ZMH K–40718. (Weddell Sea)

2. **ZMH K–46200**: *A. eleganta*

A. eleganta morphologically identified by Malyutina et al. (2018), found at the same station as *A. puertoricana* (Puerto Rico Trench). A big support that *A. eleganta* and *A. puertoricana* are the same species if we can pull genetics and proteomics from them.

3. **ZMH K–46199**: *A. annulatus*

> **Note**
>
> Malyutina et al. (2018):
>
> Acanthocope annulatus Menzies, 1962 (Fig. 16)
>
> Acanthocope annulatus (Menzies, 1962: 155, Fig. 44 B, C; Malyutina and Brandt, 2004: 11, Figs. 6–10. Material examined: 1 male (5.9 mm TL), ZMH K–46199, Puerto Rico Trench abyssal area, RV Sonne, Vema-TRANSIT cruise, 25 January 2015, C-EBS, station 14-1, 19°1.63 N 67°9.73 W, 4552 4552 m depth, supranet, bottom temperature: 2.25 °C, bottom O2: 261.13 µM, bottom current: 5.25 cm/s.
>
> Remarks: The only specimen of the species, found at the same station as A. puertoricana sp. nov., was identified as it has all described characters of the Acanthocope annulatus Menzies, 1962. This new record is located at more than 10000 km far away from the type locality in the southeastern Atlantic (SW of Cape Town). Future sampling in the Atlantic and genetic investigations might shed some light on the true distribution of this species.

Abstract

Science still struggles with reliable taxonomy that forms the foundation for many subsequent studies on marine ecosystems. A case study with integrative approach reports first phylogenetic understanding of the genus *Acanthocope* (Isopoda: Munnopsidae) as well as its biogeography in the North Atlantic, in addition with the description of a new species.

(… more with results: Hybridization of Morphogroup 2? Confirm of monophyly? etc.)

(… what impact does this have? “Contributing to current understanding of evolution pattern of Munnopsidae”??)

Malyutina, M. V., Frutos, I., & Brandt, A. (2018). Diversity and distribution of the deep-sea Atlantic Acanthocope (Crustacea, Isopoda, Munnopsidae), with description of two new species. *Deep Sea Research Part II: Topical Studies in Oceanography*, *148*, 130–150. https://doi.org/10.1016/j.dsr2.2017.11.003