



<http://dx.doi.org/10.11646/zootaxa.3826.3.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:F8B3E420-4362-401E-A01B-0B4BEBD48467>

Two new species of *Kudinopasternakia* Guțu, 1980 (Crustacea: Tanaidacea: Sphyrapodidae) with remarks on setology nomenclature

KÁTIA CHRISTOL DOS SANTOS

Laboratório de Carcinologia, Museu de Zoologia, Universidade de São Paulo, Av. Nazaré, 481, Ipiranga, CEP 04263-000 São Paulo, SP, Brazil. E-mail: tanaidaceadobrasil@yahoo.com.br

Abstract

Two new species of sphyrapodid tanaidaceans, *Kudinopasternakia falconae* n.sp. and *Kudinopasternakia serejae* n.sp., are described and illustrated from benthic samples taken at 680–790m depth in the Campos Basin, off the coast of south-eastern Brazil. The main characters used for the separation of the species are the number of maxillule palp distal setae, the number and length of spiniform setae on the ventral surface of the carpus and propodus of pereopod 1, the ornamentation of the ventral margin of the unguis of pereopods 4 to 6, and the pleonal epimera. Exopods were also observed on pereopods 4 and 5 of the manca of both new species. Some nomenclatural terms related to setae are discussed. A key to the genus *Kudinopasternakia* is presented.

Key words: *Kudinopasternakia*, Sphyrapodidae, Apseudomorpha, Tanaidacea, Brazil, Campos Basin, Atlantic Ocean, bathyal

Introduction

Ten species of *Kudinopasternakia* Gutu, 1991 are known, including the two species described below, six of them recorded from the South Atlantic (and no less than four from the Campos Basin). The taxonomy of this genus is getting complex, because each new species is perceived to have few or no exclusive characters, but is diagnosed by a unique combination of features. Some minute characters are now being considered to avoid confusion, but some of them were not used or illustrated in previous descriptions. In addition, standardization of the nomenclature of setae is not complete, and several names have been used for the same structure.

For example, the propodus of pereopod 4 has conspicuous terminal and subterminal crowns of unequal setae on the dorsal surface that bear tiny ornamentation on their distoventral margins. This kind of seta has been named as “spiniform setae” (Viskup & Heard, 1989: 111; Gutu & Heard, 2002: 84), “serrate setae” (Kakui *et al.*, 2007: 40) and “distally serrate” (Santos, 2007:32, 38). There is also a thick seta with foliaceous terminal lobes that is recorded for some species (*K. bispinosa* Gutu & Heard, 2002; *K. amazonica* Santos, 2007; *K. trispinosa* Santos, 2007). This structure was attracting detailed descriptions: “thick seta, ramified in five foliaceous lobes, terminally” Gutu & Heard (2002: 84), “distodorsal thick seta ornamented ventrally, serrate on proximal half and with eight spines on distal half” for *K. amazonica* Santos (2007: 28), and “bifurcated setae distodorsally, with tiny spiniform setae on its proximal half” for *K. trispinosa* Santos (2007: 38).

Similarly, the setae of the mandible and maxillule palps are also varied, but I believe that more careful and detailed illustrations can reveal best their shape, because they do not follow a pattern, especially the delicate “anchor-like” forms on the maxillule.

Published descriptions of pereopods 5 and 6 have probably not fully considered all surfaces of the propodus and the ventral margin of the unguis. I believe that when there is conspicuous ornamentation on both mesial and lateral surfaces, an illustration can show clear position and important details. Moreover, setae of different types also occur on the outer surface of the propodus of pereopods 5 and 6. These setae are disposed in rows, usually transversely. Kakui & Kajihara (2011) listed the nomenclature proposed until then by several authors for these

Acknowledgements

The author wishes to thank FAPESP for financial support for a post-doctoral scholarship (Proc. 09/05454-4), and Petrobras for the possibility of studying the collected material from the HABITATS Project. I extend thanks to an anonymous reviewer for critical reading of earlier versions of the manuscript improving its structure and content.

References

- Guțu, M. (1980) *Pseudosphyrapus*, a new genus of a new family (Sphyrapidae) of Monokonophora (Crustacea, Tanaidacea). *Travaux du Muséum National d'Histoire naturelle "Grigore Antipa"*, 22, 393–400.
- Guțu, M. (1989) Tanaidacea (Crustacea) collected by the "Benthédi" French Expedition (1977) in the South-Western Indian Ocean. I. *Travaux du Muséum National d'Histoire naturelle "Grigore Antipa"*, 30, 135–160.
- Guțu, M. (1991) A few remarks on the Sphyrapidae (Crustacea, Tanaidacea) and the description of a new genus *Kudinopasternakia*, belonging to this family. *Travaux du Muséum National d'Histoire naturelle "Grigore Antipa"*, 31, 341–348.
- Guțu, M. & Heard, R. (2002) A new genus and four new species of parapseudid and sphyrapid apseudomorphans (Crustacea, Tanaidacea) from the Caribbean Sea and the Gulf of Mexico. *Travaux du Muséum National d'Histoire naturelle "Grigore Antipa"*, 44, 69–92.
- Kakui, K., Kajihara, H. & Mawatari, S.F. (2007) Two new sphyrapodid species (Crustacea, Tanaidacea, Apseudomorpha) from south-western Japan. *Zootaxa*, 1563, 37–54.
- Kakui, K. & Kajihara, H. (2011) *Pseudosphyrapus cuspidiger* sp.nov. from the Nansei Islands, Japan, with a Supplementary Description of *Kudinopasternakia balanorostrata* Kakui, Kajihara and Mawatari, 2007 (Crustacea: Tanaidacea: Apseudomorpha: Sphyrapodidae). *Bulletin of National Museum of Natural Sciences, Series A*, 5 (Supplement), 53–70.
- Lang, K. (1968) Deep-sea Tanaidacea. *Galathea Reports*, 9, 23–209.
- Larsen, K. (2003) Proposed new standardized anatomical terminology for Tanaidacea (Peracarida). *Journal of Crustacean Biology*, 23(3), 644–661.
- Larsen, K. (2005) *Crustaceana Monographs*, 5. *Deep-sea Tanaidacea (Crustacea, Tanaidacea) from Gulf of Mexico*. Koninklijke Brill NV, Leiden, The Netherlands, 381 pp.
- Larsen, K. (2012) Tanaidacea (Crustacea) from Macaronesia II. The deep-water fauna from the Azores archipelago, Portugal. *Zootaxa*, 3250, 26–42.
- Santos, K.C. (2007) Three new species of *Kudinopasternakia* Guțu, 1991 (Crustacea: Tanaidacea: Sphyrapodidae) from Brazilian waters. *Zootaxa*, 1666, 23–41.
- Viskup, B.J. & Heard, R.W. (1989) Tanaidacea (Crustacea, Peracarida) of the Gulf of Mexico. VII. *Pseudosphyrapus siegi*, n. sp. (Sphyrapidae) from the continental slope of the northern Gulf of Mexico. *Gulf Research Reports*, 8 (2), 107–115.
- Watling, L. (1989) A classification system for crustacean setae based on the homology concept. In: Felgenhauer, B.E., Watling, L. & Thistle, A.B. (Eds.), *Functional Morphology of Feeding and Grooming. Crustacean Issues*, 6, 15–27.