



<http://dx.doi.org/10.11646/zootaxa.3815.3.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:D67EA0F0-296A-45A4-BFA8-7E09F20D5C35>

## Deep-sea Bodotriidae, Diastylidae and Pseudocumatidae (Cumacea, Crustacea) from the southeastern Atlantic

UTE MÜHLENHARDT-SIEGEL

Biozentrum Grindel und Zoologisches Museum, Martin-Luther-King-Platz 3, D-20146 Hamburg

E-mail: [muehsie@zoologie.uni-hamburg.de](mailto:muehsie@zoologie.uni-hamburg.de)

### Table of contents

|   |     |
|---|-----|
| Abstract .....  | 301 |
| Introduction .....  | 302 |
| Material and methods .....  | 302 |
| Taxonomic results .....   | 303 |
| Bodotriidae .....   | 303 |
| <i>Cyclaspoides longimerus</i> Mühlenhardt-Siegel, 2005 .....                     | 303 |
| <i>Bathycuma squamosa</i> Mühlenhardt-Siegel, 2005 .....                          | 307 |
| Diastylidae .....   | 312 |
| <i>Leptostylis</i> aff. <i>macrura</i> Sars, 1869 .....                           | 312 |
| <i>Makrokylindrus (Makrokylindrus) meteorae</i> Mühlenhardt-Siegel, 2005e .....   | 316 |
| <i>Makrokylindrus (M.) abyssalis</i> sp. n. ....                                  | 323 |
| <i>Makrokylindrus (Adiastylis) renatae</i> Mühlenhardt-Siegel, 2005 .....         | 327 |
| <i>Makrokylindrus (A.) duplosetosus</i> Mühlenhardt-Siegel, 2005 .....            | 327 |
| <i>Makrokylindrus (A.) totzkei</i> Mühlenhardt-Siegel, 2005 .....                 | 327 |
| <i>Makrokylindrus (A.)</i> sp. 1 .....  | 327 |
| <i>Makrokylindrus (A.)</i> aff. <i>paramonodi</i> Mühlenhardt-Siegel, 2005e ..... | 332 |
| <i>Diastylis</i> cf. <i>algoae</i> Zimmer, 1908 .....                             | 332 |
| Pseudocumatidae .....   | 336 |
| <i>Petalosarsia longirostris</i> Jones, 1973 .....                                | 336 |
| Leuconidae .....  | 339 |
| <i>Leucon galeronae</i> Mühlenhardt-Siegel, 2010 .....                            | 339 |
| Acknowledgements .....  | 339 |
| References .....  | 339 |

### Abstract

Nine species of the family Diastylidae, two species of the family Bodotriidae and one species of the family Pseudocumatidae are present in the DIVA II and Ifremer collections. Two new species were recognized and described herein. However, one of the new species has to remain in open nomenclature due to its young developmental stage. The new species are *Makrokylindrus (Makrokylindrus) abyssalis*, and *M. (Adiastylis) sp. 1*. The distribution range is enlarged based on the new findings for seven species.

**Key words:** Cumacea, Bodotriidae, Diastylidae, Pseudocumatidae, deep sea, southeastern Atlantic, new species

## Leuconidae

### *Leucon galeronae* Mühlenhardt-Siegel, 2010

**Material.** BIOZAIRE 3, KGS #63: 1 ovigerous female (decalcified) MNHN-IU-2012-1358.

**Distribution.** Angola Basin, 1298–3154 m depth.

## Acknowledgements

Many thanks to crew and colleagues aboard RV “Meteor”, especially Drs Nils Brenke, Jürgen Guerrero Kommritz and Myriam Schüller for their help with the EBS and Dr. Michael Türkay (scientific leadership). Laura Würzberg sorted the EBS samples, Natalie Rotermund and Simon Weigmann gave technical assistance, especially during the digital photography and the pencil drawing, the latter also gave critical comments to the text. Dr. Brigitte Ebbe kindly corrected the English. The material from IFREMER was collected during the BIOZAIRE project undertaken by IFREMER in partnership with the oil company “Total” under the scientific leadership of Dr. Myriam Sibuet. The material was sent by Joëlle Galéron (IFREMER, Centre de Brest, Laboratoire Environnement Profond). Dr. Pedro Martinez Arbizu successfully applied for a grant given by the DFG (MA 2557/8-1). The Zoological Museum, University of Hamburg, provided a working space.

## References

- Alberico, N. & Roccatagliata, D. (2008) *Diastylis fabrizoi*, a new species and brief redescription of *D. planifrons* Calman, 1912 (Crustacea, Cumacea, Diastylidae) from South America. *Journal of Natural History*, 42 (13–16), 1039–1063.
- Akiyama, T. & Gerken, S. (2012) The cumacean (Crustacea: Peracarida) genus *Petalosarsia* (Pseudocumatidae) from the Pacific Ocean. *Zootaxa*, 3320, 1–35.
- Băcescu, M. (1962) Contribution a la connaissance du genre *Makrokyllindrus* Stebbing (Crustacea, Cumacea). *Vema Research Series*, 1, 209–223.
- Băcescu, M. (1972) *Cumella africana* n. sp. and *Makrokyllindrus (Coalescuma) reynsi* n. sp. (Cumacea, Crustacea) from the Saharian bottom of the Atlantic. *Revue Roumaine de Biologie, Série de Zoologie*, 17 (3), 143–151.
- Băcescu, M. (1992) Cumacea II (Fam. Nannastacidae, Diastylidae, Pseudocumatidae, Gynodiastylidae et Ceratocumatidae). In: Gruner, H. & Holthuis, L.B. (Eds.), *Crustaceorum Catalogus*, Pars 8. SPB Academic Publishing The Hague, pp. 175–468.
- Bate, C.S. (1858) On a new genus and species of Diastylidae. *Journal of the Royal Dublin Society*, 2, 101–104.
- Brenke, N. (2005) An epibenthic sledge for operations on marine soft bottom and bedrock. *Marine Technology Society Journal*, 39 (2), 10–21.  
<http://dx.doi.org/10.4031/002533205787444015>
- Calman, W.T. (1905) The marine Fauna of the west coast of Ireland. Part IV. *Fisheries of Ireland*, Scientific Investigations, appendix 1, 1–50.
- Coleman, C.O. (2003) “Digital inking”: How to make perfect line drawings on computers. *Organisms, Diversity and Evolution*, 3, 1–14.  
<http://dx.doi.org/10.1078/1439-6092-00081>
- Coleman, C.O. (2006) Substituting time-consuming pencil drawings in arthropod taxonomy using stacks of digital photographs. *Zootaxa*, 1360, 61–68.
- Day, J. (1980) Southern African Cumacea. Part 4. Families Gynodiastylidae and Diastylidae. *Annals of the South African Museum*, 82 (6), 187–292.
- Fage, L. (1928) Cumacés de la côte Atlantique du Maroc. *Bulletin de la Société des Sciences Naturelles du Maroc*, 8, 173–181.
- Fage, L. (1929) Cumacés et Leptostracés des campagnes scientifiques de S. A. S. le Prince Albert I<sup>er</sup> de Monaco. *Resultats des campagnes scientifiques accomplis par le Prince Albert I, Monaco* fasc. 77, 1–51.
- Garm, A. (2004) Revising the definition of the crustacean seta and setal classification systems based on examination of the mouthpart setae of seven species of decapods. *Zoological Journal of the Linnean Society*, 14Z, 233–252.
- Gerken, S. & McCarthy, A. (2008) *Kerguelenica petrescui* (Cumacea, Crustacea), a new species from Australian waters. *Journal of Crustacean Biology*, 28 (3), 564–571.  
<http://dx.doi.org/10.1651/07-2916r.1>
- Hansen, H.J. (1895) Isopoden, Cumaceen und Stomatopoden der Plankton Expedition. *Ergebnisse der Plankton Expedition*, 2, 1–105.  
<http://dx.doi.org/10.5962/bhl.title.10413>

- Jones, N.S. (1973) Some new Cumacea from deep water in the Atlantic. *Crustaceana* 25 (3), 297–319.  
<http://dx.doi.org/10.1163/156854073x00290>
- McCarthy, A.M., Gerken, S., McGrath, D. & McCormack, G.P. (2006) *Monopseudocuma*, a new genus from the North East Atlantic and redescription of *Pseudocuma gilsoni* Băcescu, 1950 (Cumacea, Pseudocumatidae). *Zootaxa*, 1203, 39–56.
- Mühlenhardt-Siegel, U. (2003) A new Cumacea genus (Crustacea, Peracarida, Diastylidae) from the deep-sea expedition DIVA I with RV „Meteor“ to the Angola Basin. *Beaufortia*, 53 (7), 159–165.
- Mühlenhardt-Siegel, U. (2005a) New Cumacea species (Crustacea, Peracarida) from the deep-sea expedition DIVA I with RV „Meteor“ to the Angola Basin in July 2000. Families Lampropidae, Bodotriidae. *Organisms, Diversity and Evolution*, 5, 113–130.  
<http://dx.doi.org/10.1016/j.ode.2004.10.008>
- Mühlenhardt-Siegel, U. (2005b) New Cumacea species (Crustacea, Peracarida) from the deep-sea expedition DIVA I with RV „Meteor“ to the Angola Basin in July 2000. Family Leuconidae. *Organisms, Diversity and Evolution*, 5, 131–149.  
<http://dx.doi.org/10.1016/j.ode.2004.10.009>
- Mühlenhardt-Siegel, U. (2005c) New Cumacea species (Crustacea, Peracarida) from the deep-sea expedition DIVA I with RV „Meteor“ to the Angola Basin in July 2000. Family Nannastacidae. *Organisms, Diversity and Evolution*, 5, 151–170.  
<http://dx.doi.org/10.1016/j.ode.2004.10.010>
- Mühlenhardt-Siegel, U. (2005d) New species of the family Nannastacidae (Cumacea, Crustacea) from the Angola Basin, southeastern Atlantic: Deep-sea expedition DIVA I. Addendum. *Mitteilungen des hamburgischen zoologischen Museums und Instituts*, 102, 85–97.
- Mühlenhardt-Siegel, U. (2005e) New species of the family Diastylidae (Peracarida: Cumacea) from the Angola Basin (southeastern Atlantic). Deep-Sea Expedition DIVA-1. *Mitteilungen des hamburgischen zoologischen Museums und Instituts*, 102, 99–152.
- Mühlenhardt-Siegel, U. (2010) Deep sea Leuconidae (Cumacea, Peracarida) in the southeastern Atlantic. *Marine Biodiversity*, 41, 211–260.  
<http://dx.doi.org/10.1007/s12526-010-0051-2>
- Mühlenhardt-Siegel, U. (2011) Nannastacidae (Crustacea, Cumacea) of the southeastern Atlantic deep-sea. *Marine Biodiversity*, 42 (2), 109–135.  
<http://dx.doi.org/10.1007/s12526-011-0096-x>
- Sars, G.O. (1865) Om den aberrante Krebsdygruppe Cumacea og dens nordiske Arter. *Forhandlingar Videnskap Selsk Kristiania*, 64, 128–208.
- Sars, G.O. (1869) Undersogelser over Christianiafjordens Dybvandsfauna. *Nyt Magazin for Naturvidenskaberne*, 16, 305–362.
- Stebbing, T.R.R. (1912) The Sympoda (Part VI. of S. A. Crustacea, for the Marine Investigations in South Africa). *Annals of the South African Museum*, 10 (5), 129–176.
- Zimmer, C. (1908) Die Cumaceen der Deutschen Tiefsee-Expedition. *Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition „Valdivia“*, 8, 155–196.
- Zimmer, C. (1921) Mitteilungen über Cumaceen des Berliner Zoologischen Museums. *Mitteilungen des zoologischen Museums Berlin*, 10, 117–149.  
<http://dx.doi.org/10.1002/mmzn.4830100104>