



<http://dx.doi.org/10.11646/zootaxa.3905.1.5>

<http://zoobank.org/urn:lsid:zoobank.org/pub:F66C212C-1B72-44E1-B2F8-66215DBC6928>

A new genus and two new species of hymenosomatid crabs (Crustacea: Brachyura: Hymenosomatidae) from the southwestern Atlantic and eastern Australia

MARCOS TAVARES^{1,3} & WILLIAM SANTANA²

¹Museum of Zoology, University of São Paulo, Ave. Nazareth 481, Ipiranga 04263-000, São Paulo, SP, Brazil. E-mail: mdst@usp.br

²Laboratório de Sistemática Zoológica, Pró-Reitoria de Pesquisa e Pós-Graduação, Universidade Sagrado Coração – USC, Rua Irmã Armanda, 10-50, Jd. Brasil, 17011-160, Bauru, SP, Brazil. E-mail: william_santana@yahoo.com.br

³Corresponding author

Abstract

A new genus, *Teramnonotus* n. gen., is erected for *Elamena gordonae* Monod, 1956. The new genus includes two new species, *T. johnlucasi* n. gen., n. sp. and *T. monodi* n. gen., n. sp., described herein from eastern Australia (Queensland) and the southwestern Atlantic (Brazil), respectively. *Teramnonotus* n. gen. superficially resembles *Elamena* H. Milne Edwards, 1837, and *Trigonoplax* H. Milne Edwards, 1853, of which it can be easily distinguished by a combination of characters: eyes and ocular peduncle, rostrum, carapace, thoracic sternite 8 and thoracic pleurite 8, and the inhalant water openings. The validity of the obscure species *Elamena mexicana* H. Milne Edwards, 1853, is not supported and it is synonymised with *Halicarcinus planatus* (Fabricius, 1775).

Key words: Australia, Brazil, biodiversity, false spider crab, *Elamena*, Decapoda, Eubrachyura

Introduction

The family Hymenosomatidae consists of approximately 118 species in 19 genera, mostly Indo-West Pacific (Guinot 2011a). Many hymenosomatid species are conspicuously small and cryptic, and many are only known from their type material. Such is the case of *Elamena gordonae* Monod, 1956, to which Monod referred to as "... une très petite forme, qui risque de passer inaperçue" (Monod 1956: 472). It was originally described from two small females (one ovigerous) obtained in 1948 in the Atlantic coast of Africa and never again collected. Two ovigerous females collected in 1952 from eastern Australia (Queensland) were assigned to *E. gordonae* by Lucas (1980), but additional specimens have not been recorded from Australia ever since. Three ovigerous females were dredged in 1994 from Rio de Janeiro State (southeastern Brazil) by the first author. Additional specimens attributed to *E. gordonae* were obtained in 2002 and following years from northeastern Brazil (Almeida *et al.* 2007; Almeida & Coelho 2008; Coelho Filho & Coelho 2002; Coelho *et al.* 2008). The Atlantic and Australian specimens of *Elamena gordonae* are said to form a single species, but such status has not been conclusively established because the above-mentioned authors did not compare their specimens directly with West African ones. A direct comparison of the southwestern Atlantic and the Australian specimens with the type specimens of *E. gordonae* revealed that they actually belong to two undescribed species. These two new species are described herein.

A comparison between *Elamena gordonae* s. str. and representatives of the genus *Elamena* (including its type species) showed that *E. gordonae* cannot be retained in *Elamena* H. Milne Edwards, 1837. A new genus, *Teramnonotus* n. gen., is therefore proposed herein to receive *E. gordonae* Monod, 1956, along with the new species from the southwestern Atlantic and eastern Australia, namely *Teramnonotus monodi* n. gen., n. sp. and *Teramnonotus johnlucasi* n. gen., n. sp.

The descriptive terminology follows that used by Lucas (1980) with additions from Ng & Chuang (1996) and Guinot (2011a, b). Abbreviations: Mxp3, third maxilliped; P1, cheliped; P2–P5, second to fifth pereiopods; P12–P15, second to fifth pleopods; PIT, pleotelson; St 8, thoracic sternite 8. Measurements are expressed in

References

- Abele, L.G. (1982) Introduction of two freshwater decapod crustaceans (Hymenosomatidae and Atyidae) into Central and North America. *Crustaceana*, 23(3), 209–218.
<http://dx.doi.org/10.1163/156854072x00129>
- Alcock, A. (1900) Materials for a Carcinological Fauna of India. No. 6. The Brachyura Catometopa or Grapsoida. *Journal of the Asiatic Society of Bengal*, 69 (3), 279–486.
- Almeida, A.O., Guerrazzi, M.C. & Coelho, P.A. (2007) Stomatopod and decapod crustaceans from Camamu Bay, state of Bahia, Brazil. *Zootaxa*, 1553, 1–45.
- Almeida, A.O. & Coelho, P.A. (2008) Estuarine and marine brachyuran crabs (Crustacea: Decapoda) from Bahia, Brazil: checklist and zoogeographical considerations. *Latin American Journal of Aquatic Research*, 36 (2), 183–222.
<http://dx.doi.org/10.3856/vol36-issue2-fulltext-4>
- Almeida, A.O., Souza, G.B.G., Boehs, G. & Bezerra, L.E.A. (2010) Shallow-water anomuran and brachyuran crabs (Crustacea: Decapoda) from Southern Bahia, Brazil. *Latin American Journal of Aquatic Research*, 38 (3), 329–376.
<http://dx.doi.org/10.3856/vol38-issue3-fulltext-2>
- Aronson, R.B., Frederich, M., Price, R. & Thatje, S. (2014) Prospects for the return of shell-crushing crabs to Antarctica. *Journal of Biogeography*, 42 (1), 1–7.
<http://dx.doi.org/10.1111/jbi.12414>
- Boschi, E.E. (2000) Species of decapod crustaceans and their distribution in the American marine zoogeographic provinces. *Revista de Investigación y Desarrollo Pesquero*, 13, 7–136.
- Boschi, E.E., Fischbach, C.E. & Iorio, M.I. (1992) Catalogo ilustrado de los crustáceos estomatópodos y decápodos marinos de Argentina. *Frente Marítimo*, 10 (A), 7–94.
- Boschi, E.E. & Gavio, M.A. (2005) On the distribution of decapod crustaceans from the Magellan Biogeographic Province and the Antarctic region. *Scientia Marina*, 69 (Supplement 2), 195–200.
- Chopra, B. & Das, K.N. (1930) Further notes of Crustacea Decapoda in the Indian Museum. On two new species of hymenosomatid crabs, with notes on some other species. *Records of the Indian Museum*, 32, 413–429.
- Coelho Filho, P.A. & Coelho, P.A. (2002) Ocorrência de *Elamena gordonae* Monod, 1956 no Oceano Atlântico Ocidental (Crustacea, Decapoda, Hymenosomatidae). *Resumos do XXIV Congresso Brasileiro de Zoologia*, 124.
- Coelho, P.A., Almeida, A.O. & Bezerra, L.E.A. (2008) Checklist of the marine and estuarine Brachyura (Crustacea: Decapoda) of northern and northeastern Brazil. *Zootaxa*, 195, 1–58.
- Davie, P.J.F. (2002) Crustacea: Malacostraca: Eucarida (Part 2: Anomura, Brachyura). In: Wells, A. & Houston, W.W.K. (Eds.), *Zoological Catalogue of Australia. Vol. 19.3b*. CSIRO Publishing, Melbourne, 641 pp.
- Desmarest, A.G. (1823) Crustacés Malacostracés. In: *Dictionnaire des Sciences Naturelles. Tome 28*. F. G. Levrault et Le Normant, Strasbourg et Paris, pp. 38–425. [Malacostracés: 211–285, Atlas, vol. 4, pls. 1–58]
- Filhol, H. (1885) Nouvelle description d'une espèce de Crustacé appartenant au genre *Elamene* provenant de l'île Stewart (Nouvelle-Zélande). *Bulletin de la Société Philomatique de Paris*, 7 (9), 45.
- Gordon, I. (1940) On some species of the genus *Elamena* (s.s.) (Crustacea, Decapoda). *Proceedings of the Linnean Society of London*, 152, 60–78.
<http://dx.doi.org/10.1111/j.1095-8312.1940.tb00248.x>
- Guinot, D. (2011a) Odiomarinae nov. subfam., a new subfamily for two primitive genera of the Hymenosomatidae MacLeay, 1838 (Crustacea, Decapoda, Brachyura). *Zootaxa*, 2732, 20–32.
- Guinot, D. (2011b) The position of the Hymenosomatidae MacLeay, 1838, within the Brachyura (Crustacea, Decapoda). *Zootaxa*, 2890, 40–52.
- Guinot, D., Tavares, M. & Castro, P. (2013) Significance of the sexual openings and supplementary structures on the phylogeny of brachyuran crabs (Crustacea, Decapoda, Brachyura), with new nomina for higher-ranked podotreme taxa. *Zootaxa*, 3665 (1), 1–414.
<http://dx.doi.org/10.11646/zootaxa.3665.1.1>
- Kemp, S. (1917) Notes on Crustacea Decapoda in the Indian Museum. X. Hymenosomatidae. *Records of the Indian Museum*, 13, 243–279.
- Lucas, J.S. (1980) Spider crabs of the Family Hymenosomatidae (Crustacea: Brachyura) with particular reference to Australian species: Systematics and biology. *Records of the Australian Museum*, 33 (4), 148–247.
- MacLeay, W.S. (1838) On the brachyurous decapod Crustacea brought from the Cape by Dr. Smith. In: Smith, A. (Ed.), *Illustrations of the Annulosa of South Africa. Illustrations of the Zoology of South Africa (Invertebrate)*. London, pp. 53–71.
- Manning, R.B. & Holthuis, L.B. (1981) West African brachyuran Crabs (Crustacea: Decapoda). *Smithsonian Contributions to Zoology*, 306, i–xii + 1–379.
<http://dx.doi.org/10.5479/si.00810282.306>
- Melrose, M.J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). *Memoirs of the New Zealand Oceanographic Institute*, 34, 1–123.
- Miers, E.J. (1876) *Catalogue of the stalk- and sessile-eyed Crustacea of New Zealand*. Colonial Museum and Geological Survey Department, London, xii + 136 pp.

<http://dx.doi.org/10.5962/bhl.title.10411>

- Milne Edwards, H. (1837) *Histoire Naturelle des Crustacés Comprenant l'Anatomie, la Physiologie et la Classification de ces Animaux. Vol. 2.* Librairie Encyclopédique de Roret, Paris, 531 pp.
<http://dx.doi.org/10.5962/bhl.title.39738>
- Milne Edwards, H. (1853) Mémoires sur la famille des Ocypodiens. *Annales des Sciences Naturelles*, Série 3 (Zoologie), 20, 163–228, pls. 6–11.
- Monod, T. (1956) Hippidea et Brachyura ouest-africains. *Mémoires de l'Institut français d'Afrique noire*, 45, 1–674.
- Ng, P.K.L. & Chuang, C.T.N. (1996) The Hymenosomatidae (Crustacea: Decapoda: Brachyura) of Southeast Asia, with notes on other species. *Raffles Bulletin of Zoology*, 3 (Supplement), 1–82.
- Ng, P.K.L., Guinot, D. & Davie, P. (2008) An annotated checklist of extant brachyuran crabs of the world. Systema Brachyurorum, Part I. *Raffles Bulletin of Zoology*, 17 (Supplement), 1–286.
- Tavares, M. (2004) On *Halicarcinus planatus* (Fabricius) (Brachyura, Hymenosomatidae) transported from Chile to Brazil along with the exotic oyster *Crassostrea gigas* (Thunberg). *Nauplius*, 11, 45–50.
- Tesch, T.T. (1918) The Decapoda Brachyura of the Siboga Expedition. 1. Hymenosomidae, Retroplumidae, Ocypodidae, Grapsidae and Gecarcinidae. *Siboga-Expeditie*, 39c (82), 1–148, 6 pls.
- White, A. (1846) Notes on four new genera of Crustacea. *The Annals and Magazine of Natural History, including Zoology, Botany, and Geology*, 18 (118), 176–178.
- Yang, S.-L. & Sun, X.-M. (1998) The species of Hymenosomatidae (Crustacea: Brachyura) in the collections of the Beijing Natural History Museum, with description of three new species. *Acta Zootaxonomica Sinica*, 23 (1), 1–5.