



<http://dx.doi.org/10.11646/zootaxa.3920.1.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:58A3F138-7ED7-490C-B3F1-7D7CB9F4E4E2>

## ***Debroyerella* gen. nov. and *Ulladulla* gen. nov., two new lysianassoid genera (Crustacea, Amphipoda, Lysianassoidea)**

J.K. LOWRY & N.M. KILGALLEN

Australian Museum Research Institute, 6 College Street, Sydney, New South Wales, 2010, Australia.

E-mail: [jim.lowry@austmus.gov.au](mailto:jim.lowry@austmus.gov.au), [niamh.kilgallen@austmus.gov.au](mailto:niamh.kilgallen@austmus.gov.au)

### **Abstract**

Two new genera and a new species of lysianassoid amphipods are described. *Debroyerella* gen. nov. is described for three Antarctic species previously assigned to the genus *Cheirimedon*. *Ulladulla* gen. nov. is described to accommodate the new species *U. selje*, from Australian waters. Diagnostic descriptions are given for the genera and all species are described in full.

**Key words:** Australia, Antarctica, Lysianassoidea, new genus, new species, *Debroyerella*, *Ulladulla*

### **Introduction**

During our research on the systematics of the Australian lysianassoid fauna, we discovered that three very similar Antarctic species were incorrectly assigned to the genus *Cheirimedon* Stebbing, 1888. In a subsequent examination of the literature we discovered that De Broyer (1983) had independently come to the same conclusion in his unpublished PhD thesis. In order to address this issue, we describe the new uristid genus *Debroyerella* gen. nov. for *Cheirimedon fougneri* Walker, 1903, *C. similis* Thurston, 1974 and *C. solidus* Andres, 1986, all previously well described in the literature. Another interesting species from Australian waters could not be assigned to any existing lysianassoid genus. Here, we define the new genus *Ulladulla* gen. nov., in the family Lysianassidae, subfamily Tryphosinae for *U. selje* sp. nov. from the Bass Strait.

### **Materials and methods**

The descriptions were generated from a DELTA database (Dallwitz 2010) to the tryphosine (Lysianassidae) genera and species of the world. The ***bold italic*** parts of the descriptions are diagnostic characters that diagnose each taxon in at least two respects from every other taxon. Material is lodged in the Australian Museum, Sydney (AM), the Museum für Naturkunde, Berlin, Germany (ZMB), Museum Victoria, Melbourne (NMV), the Natural History Museum, London (NHM), the Zoological Museum, University of Copenhagen (ZMUC) and the Zoological Museum, Hamburg (ZMH). Setal terminology follows Watling (1989). Standard abbreviations on the plates are: A, antenna; EP, epimeron; G, gnathopod; H, head; LM, labrum, MD, mandible; MX, maxilla; MP, maxilliped; P, pereopod; T, telson; U, uropod; l, left; r, right.

### **Systematics**

#### **Superfamily Lysianassoidea Dana, 1849**

#### **Family Uristidae Hurley, 1963**

## References

- Andres, H.G. (1983) Die Gammaridea (Crustacea: Amphipoda) der Deutschen Antarktis-Expeditionen 1975/76 und 1977/78. 3. Lysianassidae. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 80, 183–220.
- Andres, H.G. (1986) *Atylopsis procerus* sp. n. und *Cheirimedon solidus* sp. n. aus der Weddell See sowie Anmerkungen zu *Orchomenella pinguides* Walker, 1903. (Crustacea: Amphipoda: Gammaridea). *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 83, 117–130.
- Arnaud, P.M. (1974) Contribution a la bionomie marine benthique des régions antarctiques et subantarctiques. *Téthys*, 6, 465–656.
- Barnard, J.L. (1958) Index to the families, genera, and species of the gammaridean Amphipoda (Crustacea). *Allan Hancock Foundation Publications, Occasional Paper*, 19, 1–145.
- Barnard, J.L. (1969) The families and genera of marine gammaridean Amphipoda. *Bulletin of the United States National Museum*, 271, 1–535.  
<http://dx.doi.org/10.5479/si.03629236.258.1>
- Barnard, J.L. & Karaman, G.S. (1991) The families and genera of marine gammaridean Amphipoda (except marine gammaroids). *Records of the Australian Museum, Supplement* 13, 1–866.  
<http://dx.doi.org/10.3853/j.0812-7387.13.1991.91>
- Barnard, K.H. (1930) Crustacea. Part XI. - Amphipoda. *British Antarctic ("Terra Nova") Expedition, 1910, Natural History Reports, Zoology*, 8, 307–454.
- Bellan-Santini, D. (1972) Amphipodes provenant des contenus stomacaux de trois espèces de poissons Nototheniidae récoltés en Terre Adélie (Antarctique). *Téthys*, 4, 683–702.
- Dallwitz, M.J. (2010) Overview of the DELTA system. Available from: <http://www.delta-intkey.com/www/overview.htm> (accessed 25 June 2013)
- Dana, J.D. (1849) Synopsis of the genera of Gammaracea. *American Journal of Science and Arts, Series 2*, 8, 135–140.
- De Broyer, C. (1983) *Recherches sur la systématique et l'évolution des crustacés amphipodes gammarides antarctiques et subantarctiques*. PhD Thesis, Université de Louvain, 468 pp.
- De Broyer, C. (1984) Evolution du complexe *Orchomene* Boeck (Amphipoda Lysianassidae). *Annales de la Société Royale Zoologique de Belgique*, 114, 197–198.
- De Broyer, C. & Jażdżewski, K. (1993) Contribution to the marine biodiversity inventory. A checklist of the Amphipoda (Crustacea) of the Southern Ocean. *Documents de Travail de l'Institut Royal des Sciences Naturelles de Belgique*, 73, 1–154.
- De Broyer, C., Lowry, J., Jażdżewski, K. & Robert, H. (2007) *Catalogue of the Gammaridean and Corophiidean Amphipoda (Crustacea) of the Southern Ocean with distribution and ecological data*. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Biologie*, 11 (Supplement 1), 1–325
- Emison, W.B. (1968) Feeding preferences of the Adélie Penguin at Cape Crozier, Ross Island. *Antarctic Research Series*, 12, 191–212.
- Holmes, S.J. (1908) The Amphipoda collected by the U.S. Bureau of Fisheries steamer "Albatross" off the west coast of North America, in 1903 and 1904, with descriptions of a new family and several new genera and species. *Proceedings of the United States National Museum*, 35, 489–543.  
<http://dx.doi.org/10.5479/si.00963801.35-1654.489>
- Hurley, D.E. (1963) Amphipoda of the family Lysianassidae from the west coast of North and Central America. *Allan Hancock Foundation Publications, Occasional Paper*, 25, 1–160.
- Johnson, W.S., Stevens, M. & Watling, L. (2001) Reproduction and development of marine peracaridans. *Advances in Marine Biology*, 39, 105–260.  
[http://dx.doi.org/10.1016/S0065-2881\(01\)39009-0](http://dx.doi.org/10.1016/S0065-2881(01)39009-0)
- Klages, M. (1991) *Biologische und populationsdynamische Untersuchungen an ausgewählten Gammariden (Crustacea: Amphipoda) des südöstlichen Weddelsmeeres, Antarktis*. PhD Thesis, Naturwissenschaften, Universität Bremen, 240 pp.
- La Mesa, M., Salu, M. & Vacchi, M. (2004) Trophic ecology of the emerald notothen *Trematomus bernacchii* (Pisces, Nototheniidae) from Terra Nova Bay, Ross Sea, Antarctica. *Polar Biology*, 27, 721–728.  
<http://dx.doi.org/10.1007/s00300-004-0645-x>
- Lincoln, R.J. & Hurley, D.E. (1981) The calceolus, a sensory structure of gammaridean amphipods (Amphipoda: Gammaridea). *Bulletin of the British Museum (Natural History), Series Zoology*, 40, 103–116.
- Lowry, J.K. & Bullock, S. (1976) Catalogue of the marine gammaridean Amphipoda of the Southern Ocean. *Royal Society of New Zealand Bulletin*, 16, 1–187.
- Lowry, J.K. & Stoddart, H.E. (1997) Amphipoda Crustacea IV. Families Aristiidae, Cyphocarididae, Endeavouridae, Lysianassidae, Scopelocheiridae, Uristidae. *Memoirs of the Hourglass Cruises*, 10, 1–148.
- Nicholls, G.E. (1938) Amphipoda, Gammaridea. *Australasian Antarctic Expedition 1911-14, Scientific Reports, Series C*, 2, 1–145.
- Schellenberg, A. (1926) Die Gammariden der Deutschen Südpolar-Expedition 1901-1903. *Deutsche Südpolar-Expedition*, 18, 235–414.
- Shoemaker, C.R. (1945) Amphipoda of the United States Antarctic Service Expedition 1939-1941. *Proceedings of the*

*American Philosophical Society*, 89, 289–293.

- Slattery, P.N. & Oliver, J.S. (1986) Scavenging and other feeding habits of lysianassid amphipods (*Orchomene* spp.) from McMurdo Sound, Antarctica. *Polar Biology*, 6, 171–177.  
<http://dx.doi.org/10.1007/BF00274880>
- Stebbing, T.R.R. (1888) Report on the Amphipoda collected by H.M.S. Challenger during the years 1873-1876. *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1873-76*, Zoology, 29, 1–1737, pls. 1731–1210.
- Stebbing, T.R.R. (1906) Amphipoda. I. Gammaridea. *Das Tierreich*, 21, 1–806.
- Thurston, M.H. (1974) Crustacea Amphipoda from Graham Land and the Scotia Arc, collected by Operation Tabarin and the Falkland Islands Dependencies Survey, 1944–59. *British Antarctic Survey Scientific Reports*, 85, 1–89.
- Thurston, M.H. & Allen, E. (1969) Type material of the families Lysianassidae, Stegocephalidae, Ampeliscidae and Haustoriidae (Crustacea: Amphipoda) in the collections of the British Museum (Natural History). *Bulletin of the British Museum (Natural History)*, Series Zoology, 17, 347–388.
- Walker, A.O. (1903) Amphipoda of the 'Southern Cross' Antarctic Expedition. *Journal of the Linnean Society of London, Zoology*, 29, 38–64, pls. 37–11.
- Walker, A.O. (1907) Crustacea III. — Amphipoda. *National Antarctic Expedition 1901–1904, Natural History*, 3, 1–38, pls. 31–13.