



<http://dx.doi.org/10.11646/zootaxa.3768.5.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:FACF814C-3221-44CF-9DED-4B808F186C64>

The *Tryphosa* group (Crustacea: Amphipoda: Lysianassoidea: Lysianassidae: Tryphosinae)

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Abstract

The *Tryphosa* group is established within the tryphosine amphipods. It contains eight genera worldwide (*Bruunosa* Barnard & Karaman, 1987; *Glorieusella* **gen. nov.**; *Gronella* Barnard & Karaman, 1991; *Metambasia* Stephensen, 1923; *Pseudonesimus* Chevreux, 1926; *Schisturella* Norman, 1900; *Thrombasia* J.L. Barnard, 1966; and *Tryphosa* Boeck, 1871). As part of the *Tryphosa* group we describe the new genus *Glorieusella* from Madagascar and four new species (*Schisturella rosa* **sp. nov.**, *Thrombasia evalina* **sp. nov.**, *Thrombasia umina* **sp. nov.**, *Thrombasia saros* **sp. nov.**) from eastern Australia.

Key words: Crustacea, Amphipoda, Lysianassidae, Tryphosinae, taxonomy, new genus, new species, *Bruunosa*, *Glorieusella*, *Gronella*, *Metambasia*, *Pseudonesimus*, *Schisturella*, *Thrombasia*, *Tryphosa*

Introduction

In the course of our work on Australian lysianassoid amphipods an interesting group within the subfamily Tryphosinae materialized, referred to here as the ‘*Tryphosa* group’ and consisting of eight genera: *Bruunosa* Barnard & Karaman, 1987; *Glorieusella* **gen. nov.**, *Gronella* Barnard & Karaman, 1991, *Metambasia* Stephensen, 1923, *Pseudonesimus* Chevreux, 1926, *Schisturella* Norman, 1900, *Thrombasia* J.L. Barnard, 1966 and *Tryphosa* Boeck, 1871. The *Tryphosa* group is categorized, among other things, by two strong synapomorphies, the presence of a cap on the accessory flagellum and a constricted inner ramus on uropod 2. Within the group there are three genera (*Gronella*, *Metambasia* and *Tryphosa*) endemic to the North Atlantic Ocean and the North Polar Sea. The other genera are more widespread, occurring also in the Pacific and South Atlantic Oceans. Much of the work on members of the *Tryphosa* group was done by J.L. Barnard (1961, 1962, 1966, 1967) in his studies of deep-sea amphipods.

Here we present a catalogue of the species and genera within the *Tryphosa* group, provide detailed synonymies and distributions, and list details of the type material for each taxon where known. For some species, holotypes or syntypes were never explicitly designated by the original authors, a situation that is particularly prevalent in the older literature. In accordance with the International Code of Zoological Nomenclature (ICZN 1999), in the absence of holotype, syntype, or subsequent lectotype designation, all specimens on which an author establishes a new species collectively constitute the name-bearing type and as such are considered syntypes (Article 72.1.1).

A new genus, *Glorieusella* **gen. nov.** from Madagascar, and four new species, *Schisturella rosa* **sp. nov.**, *Thrombasia evalina* **sp. nov.**, *Thrombasia umina* **sp. nov.** and *Thrombasia saros* **sp. nov.** from eastern Australia, are described. Finally, the genera *Pseudonesimus* and *Thrombasia* are re-established, resulting in new combinations that change the current concept of *Schisturella*.

Material and methods

The descriptions were generated from a DELTA database (Dallwitz 2010) to the tryphosine genera and species of the world. The **bold italic** parts of the descriptions are diagnostic characters that distinguish each taxon in at least two respects from every other taxon. Material referred to in this study is lodged in the Australian Museum, Sydney (AM); Canadian Museum of Nature, Ottawa, Canada (CMNC); Field Museum of Natural History, Chicago, Illinois, USA (FMNH); Los Angeles County Museum of Natural History, Los Angeles, California, USA (LACM); Muséum National d'Histoire Naturelle, Paris, France (MNHN); Museum Victoria, Melbourne, Australia (NMV); South African Museum, Cape Town, South Africa (SAM); Universitetets Zoologiske Museum, Copenhagen, Denmark (ZMUC); and Zoologisches Museum Universitet Oslo, Norway (ZMUO). Standard abbreviations on the plates are: A, antenna; E, epistome; EP, epimeron; G, gnathopod; H, head; LB, labium; MD, mandible; MX, maxilla; MP, maxilliped; P, pereopod; T, telson; U, uropod; L, left; R, right.

Orchomene nanus.—Barnard & Karaman, 1991: 509.—Conlan, 1994: 520
not *Tryphosa nana*.—Sars, 1891: 76, pl. 27 fig. 1 (= *Tryphosella sarsi*).—Sars, 1895: 684 (= *Tryphosella sarsi*).—Walker, 1895a: 422 (= *Tryphosella sarsi*).—Walker, 1895b: 294 (= *Tryphosella sarsi*).
not *Tryphosa nanus*.—Robertson, 1892: 205 (?= *Tryphosella sarsi*).
not *Orchomene nana*.—Karaman, 1973: 133, figs 14–18 (in part = *Orchomenella crenata* Chevreux & Fage, 1925 according to Kilgallen *et al.* 2006).
not *Orchomenella nana*.—Ledoyer, 1977: 384 (= *Orchomenella crenata* Chevreux & Fage, 1925 according to Kilgallen *et al.* 2006).—Diviacco & Ruffo, 1989: 525, fig. 359 (in part = *Orchomenella crenata* Chevreux & Fage, 1925 according to Kilgallen *et al.* 2006).

Types. According to Dr Jørgen Olesen (ZMUC) there are two sets of material (ZMUC CRU-7476 ?type and ZMUC CRU-7487 syntype) which might be considered as original material.

Material examined. 23 specimens & 1 slide (female, 5.5 mm), SMNH N. Amph. 6904, from Gåsörännan, Sweden, 30–40 m; 8 specimens, AM P.11222, from Plymouth, Devon, United Kingdom (50°24'N 4°7'W), coll. A.A. Cameron.

Type locality. The Kattogat.

Habitat. Sand, mud and shelly debris.

Feeding strategies. Often found 'stripping bait in lobster pots' (O'Riordan 1982) on carcasses of dead crabs (Norman 1900, Moore 1984), also in *Echinocardium* tests (Laverack & Blackler 1974).

Depth range. 0–250 m (Lincoln 1979).

Distribution. *Tryphosa nana* is widely recorded and locally very common along the Atlantic coasts of Europe and the North Sea, from Sweden and southern Norway to Spain (Chevreux & Fage 1925); also reported from Senegal (Schellenberg 1925) and Guinea (Reid 1951). It is also recorded from the Adriatic Sea (Heller 1866, Karaman 1973), Aegean Sea (Bellan-Santini 1985, Christodoulou *et al.* 2013) and Mediterranean Sea (Bellan-Santini & Ledoyer 1973).

Acknowledgements

Thanks to Helen Stoddart for much preliminary work on the taxa in this paper. Thanks to Anne Helene Tandberg, Angelika Brandt, Jörundur Svavarsson, Bente Stransky and the AM Research librarians (Fiona Simpson and Frances Smith) for help with the literature. Thanks to Regina Wetzler and Adam Wall (LACM), Paula Martin-Lefevre (MNHN), Jørgen Olsen & Tom Schiøtte (ZMUC) Åse Wilhelmsen (ZMUO) for updating the type status of species in this paper. Finally, thanks go to Peter Ng and Daphne Fautin for relevant advice on the Code regarding type designations. This study was funded by an ABRS grant.

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