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Family placement of the enigmatic *Otagia neozelanica* (Chilton, 1897) Haustorioidea: Otagiidae fam. nov. (Amphipoda: Crustacea)

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Abstract

A neotype is designated for *Otagia neozelanica* (Chilton, 1897) and the new family Otagiidae is established for the monotypic genus *Otagia*. An assessment of the relationship of Otagiidae **fam. nov.** with the Haustorioidea families is provided. The Otagiidae **fam. nov.** share a close relationship with seven other haustorioid families Cheidae, Condukiidae, Ipanemidae, Platyischnopidae, Phoxocephalopsidae, Sinurothoidae and Zobrachoidae.

Key words: New Zealand, Haustorioidea, Otagiidae, new family

Introduction

The genus *Otagia* was established by Barnard & Karaman, 1991 to account for a single unusual specimen from New Zealand, *Platyischnopus neozelanicus* Chilton, 1897. The limited information from the original description, with no assessment of mouthparts or whole animal illustrations, and the novel combination of characters, *Haustorius* form antennae, rostrum with apical sensory structure and dissimilar fossorial legs, made placement of *Otagia* indeterminable (Barnard & Karaman 1991). The genus was placed as *incertae sedis*, in association with the family Condukiidae by Barnard & Karaman (1991).

Specimens of *Otagia neozelanica* (Chilton, 1897) were recently collected by sediment cores from the South Taranaki Bight, south of Hawera in New Zealand in 20 to 35 meters depth. The species is redescribed in full and the generic placement of the taxon is assessed. Chilton (1897) acknowledged that the type material was already deteriorated at the time that he described the species. A search for Chilton's type material at the Portobello Marine Station and Canterbury Museum was unsuccessful and this material is now presumed lost. A neotype of *Otagia neozelanica* is established to stabilize the species identity. Additional information on the mouthparts and pleonites facilitates placement of this species in the higher family level classification. *Otagia neozelanica* shows affinities with the seven families Cheidae Thurston, 1982; Condukiidae Barnard & Drummond, 1982; Ipanemidae Barnard & Thomas, 1988; Platyischnopidae Barnard & Drummond, 1979; Phoxocephalopsidae Barnard & Clarke, 1984; Sinurothoidae Ren 1999 and Zobrachoidae Barnard & Drummond, 1982. The new family Otagiidae is established to accommodate this enigmatic species within the Haustorioidea Stebbing, 1906.

Materials and methods

Sediment cores of 13 cm diameter were taken in 20–35 m water depth south of Hawera (Figure 1). Samples were sieved through a 0.5 mm mesh. Amphipoda were fixed in 4% formalin for 3 days then transferred to 70% ethanol. Collections of *O. neozelanica* including type material are lodged with New Zealand Institute for Water and Atmospheric Research (NIWA). The SEM preparation of *Uldanamia pillare* Barnard & Drummond, 1978, AM P.88608 (Collingwood Beach, Huskisson, New South Wales, Australia) is lodged with the Australian Museum,

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