



# Article

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## The genus *Caligus* Müller, 1785 (Copepoda: Siphonostomatoida): two new species from reef associated fishes in New Caledonia, and some nomenclatural problems resolved

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### Abstract

*Caligus praecinctorius* **sp. nov.** is described on the basis of females taken from the gills of *Gymnocranius grandoculis* Valenciennes, 1830, *G. euanus* (Günther, 1879) and *Epinephelus fasciatus* (Forsskål, 1775), all caught in New Caledonia. The new species is characterised by having the posteromedian lobe of the cephalothorax completely covering the fourth pedigerous somite in dorsal view, and by the genital complex being 2.7 times wider than long. A second new species, *C. macoloricola* **sp. nov.**, is described based on material from the gills of *Macolor niger* (Forsskål, 1775). It is distinguished by the combination of a 3-segmented leg 4 with 4 spines on the distal segment, a vestigial post-antennal process, and the configuration of the setal elements on the exopod of leg 1. The status of a number of other *Caligus* species is reviewed. It is proposed to treat *C. angustatus* Krøyer, 1863 as a junior subjective synonym of *C. gurnardi* Krøyer, 1863, *C. dactylus* Ho, Lin & Chang, 2007 as a junior subjective synonym of *C. dactylopteni* Uma Devi & Shyamasundari, 1981, and *C. kirtioides* Ho & Lin, 2004 as a junior subjective synonym of *C. jawahari* Hameed & Adamkutty, 1985. *Caligus bifurcatus* Pearse, 1952 is recognised as a junior subjective synonym of *Tuxophorus caligodes* Wilson, 1908. *Caligus cristatus* Gould, 1841 is here treated as a species inquirendum in the pandarid genus *Dinemoura* Latreille, 1829. *Caligus elevatus* Kirtisinghe, 1964 is discovered to be an incorrect subsequent spelling of *C. clavatus* Kirtisinghe, 1964. *Caligus gayi* Nicolet, 1849 is here treated as a species inquirendum. It is proposed to treat *C. oligoplitisi* Carvalho, 1956, *C. validus* Pearse, 1952 and *C. mercatoris* Capart, 1941 as junior subjective synonyms of *C. robustus* Bassett-Smith, 1898 and a list of known hosts of this species is presented. *Caligus pterois* Kurian, 1949 has priority over *Caligus russellii* Kurien, 1950, which is here treated as a junior objective synonym, since the two descriptions were based on the same material. We reject Cressey's (1991) proposal to treat *C. tenax* Heller, 1865 as a synonym of *C. chorinemi* Krøyer, 1863 and we retain *C. tenax* as a valid species. We propose to treat *C. spinosurculus* Pearse, 1951 as a junior subjective synonym of *C. tenax*. We propose to treat *C. multispinosus* Shen, 1957 as a junior subjective synonym of *C. stromatei* Krøyer, 1863. We note that *Caligus trichiuri* Krøyer, 1863 is the oldest available name for the taxon *Metacaligus uruguayensis* Thomsen, 1949. So *Caligus* (*Metacaligus*) *uruguayensis* Thomsen, 1949 becomes a junior subjective synonym and the valid name for this taxon is *Metacaligus trichiuri* (Krøyer, 1863).

**Key words:** Caligidae, parasite, taxonomy, new species, new synonyms

### Introduction

Caligid sea lice are important pests of finfish aquaculture and several species are serious commercial pests (Johnson *et al.*, 2004). The genus *Caligus* Müller, 1785 is the most speciose genus within the family Caligidae Burmeister, 1835 and currently comprises 249 species (Boxshall, 2012) reported from a broad range of host fishes, although the great majority occurs on teleosts (Margolis *et al.*, 1975). Ten species of *Caligus* were listed as known from the marine fauna of New Caledonia in 2007 (Boxshall & Huys, 2007). These were: *C. bonito* Wilson, 1905, *C. confusus* Pillai, 1961, *C. cordyla* Pillai, 1963, *C. coryphaenae* Steenstrup & Lütken, 1861, *C. infestans* Heller, 1868, *C. isonyx* Steenstrup & Lütken, 1861, *Caligus* cf. *mauritanicus* Brian, 1924, *C. lobodes* (Wilson, 1911), *C. novocaledonicus* Kabata, 1968 and *C. productus* Dana, 1852. The species listed as *Caligus* cf. *mauritanicus* Brian,