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Article in *Ocean Science Journal* · December 2013

DOI: 10.1007/s12601-013-0035-9

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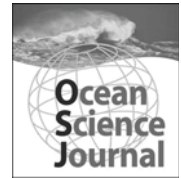
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## Three species of *Agetus* (Copepoda, Cyclopoida, Corycaeidae) New to Korean Taxa

Jin Hee Wi<sup>1</sup>, Dae Hwan Kim<sup>2</sup>, and Ho Young Soh<sup>1\*</sup>

<sup>1</sup>Department of Environmental Oceanography, College of Fisheries and Ocean Sciences, Chonnam National University, Yeosu 550-749, Korea

<sup>2</sup>Department of Oceanography, College of Natural Sciences, Chonnam National University, Gwangju 500-757, Korea

Received 8 September 2013; Revised 10 November 2013; Accepted 30 November 2013

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**Abstract** – The genus *Agetus* (Cyclopoida, Corycaeidae) has so far been identified by insufficient taxonomic information due to lack of morphological details such as mouthparts, spine lengths of each leg, ornamentation on surface of second urosomal somite. These features are considered as important morphological characteristics in classifying small cyclopoid copepods through taxonomic studies. In this study, some distinct and minute morphological characteristics are used to separate each species within *Agetus*, with the first redescription of *A. typicus*, *A. flaccus*, and *A. limbatus* from Korean waters. All three species are carefully well redescribed and comparisons with past records from other localities are provided. The zoogeographical distribution has also been summarized.

**Key words** – Corycaeidae, *Corycaeus*, *Agetus*, taxonomy, Tsushima Warm Current

### 1. Introduction

Dahl (1912) recognized seven subgenera [*Corycaeus* (*Agetus*) Kröyer, 1849, *Corycaeus* (*Corycaeus*) Dana, 1845, *Corycaeus* (*Ditrichocorycaeus*) M. Dahl, 1912, *Corycaeus* (*Monocorycaeus*) M. Dahl, 1912, *Corycaeus* (*Onychocorycaeus*) M. Dahl, 1912, *Corycaeus* (*Urocorycaeus*) M. Dahl, 1912, *Corycaeus* (*Corycella*) Farran, 1911] under only a single genus *Corycaeus* Dana, 1845, although Farran (1911) designated the species characterized by a ventral cephalothoracic process as a new genus *Corycella*. Wilson (1932) replaced *Corycella* with *Farranula*, because the generic name *Corycella* was already preoccupied in the Phylum Protozoa by Légar (1893). Boxshall and Halsey (2004) established all the remaining six subgenera

separately as valid genera based on phylogenetic revision. However, the appropriate morphological criteria for all generic states have not been presented.

The genus *Agetus* Kröyer, 1849 includes three species, *A. typicus* Kröyer, 1849, *A. flaccus* (Giesbrecht, 1891), and *A. limbatus* Brady, 1883, which has been described from the Indo-Pacific (Giesbrecht 1891, 1892 as *alatus*; Farran 1911; Dahl 1912; Wilson 1942), tropical, subtropical and north temperate Atlantic (M. Dahl 1912; Wilson 1942), and North West Pacific (Mori 1937; Tanaka 1957; Motoda 1963; Chen et al. 1974; Zheng et al. 1982; Itoh 1997). Their identifications were mostly carried out based on simple morphological characteristics such as shape of second urosomal somite, proportional lengths of prosome and urosome, and sometimes incomplete illustrations of antenna, maxilliped, and legs (Dahl 1912; Mori 1937; Tanaka 1957; Motoda 1963; Chen et al. 1974; Zheng et al. 1982). However, recent studies have shown that morphometric data and ornamentation of elements in mouthpart appendages are some of the important features used to identify small copepods belonging to Cyclopoida Burmeister, 1835 (e.g. oncaeids and oithonids) (Böttger-Schnack 1999, 2005; Böttger-Schnack and Schnack 2009; Böttger-Schnack and Machida 2010; Wi et al. 2012).

Taxonomic studies on *Agetus* species from the East China Sea has only been carried out for *A. flaccus* (Chen et al. 1974; Zheng et al. 1982), while two other species (*A. typicus* and *A. limbatus*) were listed in the ecological studies in relation to the Kuroshio Warm Current in the Taiwan Strait (Heish et al. 2004), off northeastern Taiwan (Lan et al. 2009; Lee et al. 2009), and at the northeastern margin of the South China Sea (Chang et al. 2010).

\*Corresponding author. E-mail: [hysoh@chonnam.ac.kr](mailto:hysoh@chonnam.ac.kr)