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## Two new species, *Caenanthura koreana* sp. nov. and *Apanthura koreaensis* sp. nov. (Crustacea: Isopoda: Anthuridae) from South Korea

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### Abstract

Two new species of anthuroid isopods, *Caenanthura koreana* sp. nov. and *Apanthura koreaensis* sp. nov. are described from the southern and western coasts of the Korean Peninsula. A key to the species and the type locality of *Caenanthura* are provided. Additionally, we determined the partial sequences of the mitochondrial cytochrome *c* oxidase subunit 1 (*COI*) from two new species.

**Key words:** Crustacea, Isopoda, Anthuridae, *Apanthura*, *Caenanthura*, *COI*, South Korea, new species

### Introduction

The Anthuridae is the largest and oldest family within the Anthuroidea. Including the genus *Leipanthura*, discovered recently by Poore (2009) from the Great Barrier Reef, Australia, in all 25 genera have been recognized (Poore 2009; Chew *et al.* 2014). Anthuridae can be distinguished from other anthuroid isopods by following characteristics: (1) body 10–15 times as long as wide; (2) antenna 2 flagellum with fewer than 10 articles, shorter than peduncles; (3) maxillipedal palp with 5 free articles or with 2 or more articles fused; (4) mouthparts not produced anteriorly; (5) pereopods 4–7 propodus palm with 1 distal robust seta (Poore 2009).

We here describe two new species of Anthuridae from South Korea: *Caenanthura koreana* sp. nov.; *Apanthura koreaensis* sp. nov.

*Caenanthura* Kensley, 1978 comprises five species: *C. siamensis* (Barnard, 1925) (Gulf of Thailand), *C. indica* Negoescu, 1980 (Gulf of Oman), *C. engimatica* (Kensley & Reid, 1984) (Manifa Bay), *C. gutui* (Negoescu, 1997) (Java Sea), and *C. ibex* Bamber, 2008 (Hong Kong) (Poore 2001; Schotte *et al.* 2014). All species have been reported only from tropical or subtropical seas (Barnard 1925; Negoescu 1980; Kensley & Reid 1984; Negoescu 1997; Bamber 2008). *Caenanthura* is diagnosed by: (1) body not darkly pigmented, smooth; (2) mandibular palp with 1 or 2 articles; (3) antennula and antennal flagella shorter than peduncles; (4) pereopod 1 palm with a strong proximal seta (about as long as unguis) (Poore 2001).

*Apanthura* Stebbing, 1900 comprises 42 species (Schotte *et al.* 2014). *Apanthura* is diagnosed by: (1) body not darkly pigmented, smooth; (2) pleonites 1–5 together as long as greatest width; (3) maxillipedal palp articles 1–2 fused, 3 free and 4–5 fused; palp terminal articles (4–5) oblique (Poore 2001).

We provide partial sequences of the mitochondrial cytochrome *c* oxidase subunit 1 (*COI*) from two new species that can be used as molecular diagnostic traits in the future. Additionally, we provide a key to the species of the genus *Caenanthura*.

### Material and methods

**Sample collection.** The specimens of *Caenanthura koreana* sp. nov. and *Apanthura koreaensis* sp. nov. were

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