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A new species and new record of the Kamakidae (Crustacea: Amphipoda) from Korea

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Abstract

Two species of the family Kamakidae collected from tidal flats on the southern west coast of Korea are reported, along with descriptions and illustrations. *Kamaka excavata* Ariyama, 2007 has the following unique character states on gnathopod 2 in the mature male: a wider coxa, a long and acute process of the propodus, and an excavation on inner-distal margin of dactylus. Although the new species, *Kamaka rostra* **sp. nov.** has gnathopod 2 similar to those of *K. biwae* Uéno, 1943, *K. morinoi* Ariyama, 2007, and *K. appendiculata* Ariyama *et al.*, 2010, it can be easily distinguished by the plumose setae on the inner margin of the dactylus and by the spines on the inner lobe of the maxilliped in the mature male. In addition, this new species shows some particular characteristics among the species of *Kamaka*, such as the anterior cephalic lobe is not rounded but produced as a triangular shape, and uneven protuberances ranged along the inner-distal margin of the flagellum from peduncular article 5 to fourth proximal segment on antenna 2 in the mature male. This is the first report of the Kamakidae from Korean waters, and we also provide a key to worldwide *Kamaka* species.

Key words: *Kamaka*, *excavata*, *rostra*, new species, kamakid, amphipod, taxonomy, Korea

Introduction

The Kamakidae was established by Myers & Lowry (2003) with *Kamaka* Dershavin, 1923 as type genus in revision of the higher-level classification for Corophiidea. This family belongs to Photoidea which also includes another two families, Ischyroceridae and Photidae (Myers & Lowry 2003; Lowry & Myers 2013). To date, 11 genera of Kamakidae have been classified and grouped into Aorchinae and Kamakinae (Myers & Lowry 2003; Lowry & Myers 2013; Ren & Sha 2013).

Kamaka, one of the seven genera of Kamakinae (Myers & Lowry 2003), was erected with the type species *K. kuthae* Dershavin, 1923 (Dershavin 1923). This genus can be easily distinguished from others by the following features: urosomites 1 and 2 are coalesced into one urosomite; urosomite 3 is also fused with telson, but there is a jointed margin between them marked only by a suture (Barnard & Karaman 1991; Morino 2012). Presently, there are 15 valid species of *Kamaka* known worldwide (Ren & Sha 2013). They are widely distributed in the Indo-West Pacific from Kamchakatka (Gurjanova 1951) to Australia (Myers 2009), and inhabit a broad range of salinities from freshwater to seawater (Ariyama 2007a, b; Myers 2009). They are generally tube-dwelling amphipods, but very little is known about their way of life (Myers 2009).

In East Asia, the five species *Kamaka*, *K. biwae* Uéno, 1943, *K. corophina* Ren & Sha, 2013, *K. foliacea* Ren & Sha, 2013, *K. littoralis* Ren, 2006, *and K. poppi* Bomber, 2003 have been reported from Chinese waters (Ren 2006*;* Ren & Sha 2013) and the four species *K. biwae* Uéno, 1943*, K. excavata* Ariyama, 2007, *K. kuthae* Derhavin, 1923, and *K. morinoi* Ariyama, 2007 have been found in Japanese waters (Ariyama 2007a, b). However, no reports of Kamakidae have been made in Korean waters.

In the present study, a new and newly recorded species of *Kamaka* collected from tidal flats in the southern west coast of Korea are reported, along with descriptions and illustrations. We also provide a comparison of the characteristic features among worldwide *Kamaka* species with a descriptive key to them.

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References

Ariyama, H. (2007a) Species of the genus *Kamaka* (Crustacea: Amphipoda: Kamakidae) from Japan: *Kamaka biwae* and *K. morinoi* sp. nov. *Species Diversity*, 12, 141–160.

Ariyama, H. (2007b) Species of the genus *Kamaka* (Crustacea: Amphipoda: Kamakidae) from Japan: *Kamaka excavata* sp. nov. and *K. kuthae*. *Species Diversity*, 12, 255–270.

Ariyama, H., Angsupanich, S. & Rodcharoen, E. (2010) Two new species of the genus *Kamaka* (Crustacea: Amphipoda: Kamakidae) from Songkhla Lagoon, Southern Thailand. *Zootaxa*, 2404, 55–68.

Bamber, R.N. (2003) New species of Amphipoda from Hong Kong shores. *In.* Morton, B. (Ed.) *Proceedings of an International Workshop Reunion Conference: Perspectives on Marine Environment Change in Hong Kong and Southern China, 1977–2011*, Hong Kong University Press, Hong Kong, pp. 195–207.

Barnard, J.L. & Karaman, G.S. (1991) The families and genera of marine gammaridean Amphipoda (except marine gammaroids). *Records of the Australian Museum*, Supplement 13, 1–866.

Dang, N.T. (1968) Novye bokoplavy (Amphipoda) presnykh I solonovatykh vod severnogo Vetnama. *Zoologicheskii Zhurnal*, 47, 212–222.

Dershavin, A.N. (1923) Malacostraca der Süßwasser-Gewässer von Kamtschatka. *Russkiĭ Gidrobiologiceski ĭ Zhurnal*, 2, 180–194, 7 pls.

Gurjanova, E.F. (1951) Bokoplavy morej SSSR I sopredel'nykh vod (Amphipoda-Gammaridea). *Akademiia Nauk SSSR, Opredeliteli po Faune SSSR*, 41, 1029 pp.

Lowry, J.K. & Myers, A.A. (2013) A phylogeny and classification of the Senticaudata subord. nov. (Crustacea: Amphipoda). *Zootaxa*, 3610, 1–80.
http://dx.doi.org/10.11646/zootaxa.3610.1.1

Morino, H. (2012) A new species of *Kamaka* (Amphipoda: Kamakidae) from Lake Tonle Sap, Cambodia. *Zootaxa*, 3297, 64–68.

Myers, A.A. (2009) Kamakidae. *In*: Lowry, J.K. & Myers, A.A. (Eds), Benthic Amphipoda (Crustacea: Peracarida) of the Great Barrier reef. Australia. *Zootaxa*, 2260, 487–493.

Myers, A.A. & Lowry, J.K. (2003) A phylogeny and a new classification of the Corophiidea Leach, 1814 (Amphioda). *Journal of Crustacean Biology*, 23, 443–485

Ren, X. (2006) *Fauna Sinica, Invertebrata, Vol 41. Crustacea, Amphipoda, Gammaridea (I).* Science Press, Beijing, 588 pp.

Ren, X. & Sha, Z. (2013) Two new species and one newly recorded species of the genus *Kamaka* (Crustacea: Amphipoda) from the Hainan Province, South China Sea. *Zootaxa*, 3630, 191–399.
http://dx.doi.org/10.11646/zootaxa.3630.2.14

Thomas, J.D. & Barnard, J.L. (1991) *Kamaka taditadi*, a new marine species from Papua New Guinea (Crustacea: Amphipoda: Corophioidea). *Memoirs of the Museum of Victoria*, 52, 311–318.

Uéno, M. (1943) *Kamaka biwae,* a new amphipod of marine derivative found in Lake Biwa. *Bulletin of the Biogeographical Society of Japan,* 13, 139–143.