

A New Record of *Campylaspis fusiformis* (Crustacea: Cumacea: Nannastacidae) from Korea

Chang-Mok Lee¹, Soon-Sang Hong², Kyung-Sook Lee^{2,*}

¹Munsandong Middle School, Paju 413-904, Korea

²Department of Life Sciences, Dankook University, Cheonan 330-714, Korea

ABSTRACT

This study dealt with cumacean specimens collected from the shallow waters of the South Sea and East Sea, Korea. *Campylaspis fusiformis* Gamô, 1960 belonging to the family Nannastacidae is newly recorded to Korean fauna. This species resembles *C. pumila* and *C. striata* in having a similar body form and a pair of narrow lateral sulcuses on the carapace, but it is easily distinguished from them by the dactylus of the pereopod 2 which is more than 3.5 times the length of the propodus and bears many setae (about 20) on the surface. This species mainly occurs in the Korean and Japanese waters.

Keywords: Cumacea, Nannastacidae, *Campylaspis fusiformis*, Korea, new record

INTRODUCTION

The genus *Campylaspis* belonging to the family Nannastacidae, which is composed of 17 genera (Băcescu, 1992), is the largest group. *Campylaspis* contains about 123 species and has a wider horizontal and vertical distribution over the world than other genera (Băcescu, 1992; Watling and McCann, 1997; Petrescu, 1997). Recently, 19 new species from eastern Bass Strait, the south-eastern Australian slope and Antarctica were reported by Petrescu (2006). In Korea, only two species (*Campylaspis orientalis* Calman, 1911 and *C. pumila* Gamô, 1960) of *Campylaspis* have been recorded until now (Calman, 1911; Lee and Lee, 1999). In this paper, *Campylaspis fusiformis* Gamô, 1960 is described and illustrated as new to Korean fauna.

A light-trap was used to collect specimens from the shallow waters of the South sea and East sea of Korea between 1994-2001. Drawings and measurements were performed with the aid of a drawing tube equipped on a light microscope. Body length was measured from the anterior tip of the carapace to the posterior end of the last abdominal segment. Lengths of appendages were measured along the mid-line of each appendage, exclusive of the inflated outer angle.

SYSTEMATIC ACCOUNTS

Order Cumacea Kröyer, 1846
Family Nannastacidae Bate, 1866
Genus *Campylaspis* Sars, 1865

¹**Campylaspis fusiformis* Gamô, 1960 (Figs. 1, 2)

Campylaspis fusiformis Gamô, 1960: 370, figs. 3, 4; 1963: 87; 1967: 257; Băcescu, 1992: 187.

Material examined. Korea: Gangwon-do: 1 ♂, Samcheok-si, Samcheok Port, 6 Aug 1994, Kang BJ; 1 ♂, Donghae-si, Donghae Port, 21 Aug 2001, Lee CM; Jeollanam-do: 1 ♂, Wando-gun, Isl. Cheongsando, 21 Aug 2001, Lee CM.

Male: Body (Fig. 1A) calcified, 3.7 mm in length, excluding uropods, Carapace (Fig. 1A-C) vaulted, slightly longer than 1/3 body length, 1.6 times longer than wide, 2.3 times longer than deep, with 8-10 pairs of pellucid spots on anterodorsal portion, 1 pair of narrow sulcus on lateral portion; surface faintly pitted; antennal notch shallowly concave, anterolateral corner obtuse and smooth; pseudorostral lobes not truncate, subequal to length of ocular lobe; ocular lobe round, with 3 lenses.

Antenna 1 (Fig. 1D). Peduncle 3-articulated; first article

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*To whom correspondence should be addressed
Tel: 82-70-7154-2248, Fax: 82-41-599-7861
E-mail: kslee@dankook.ac.kr

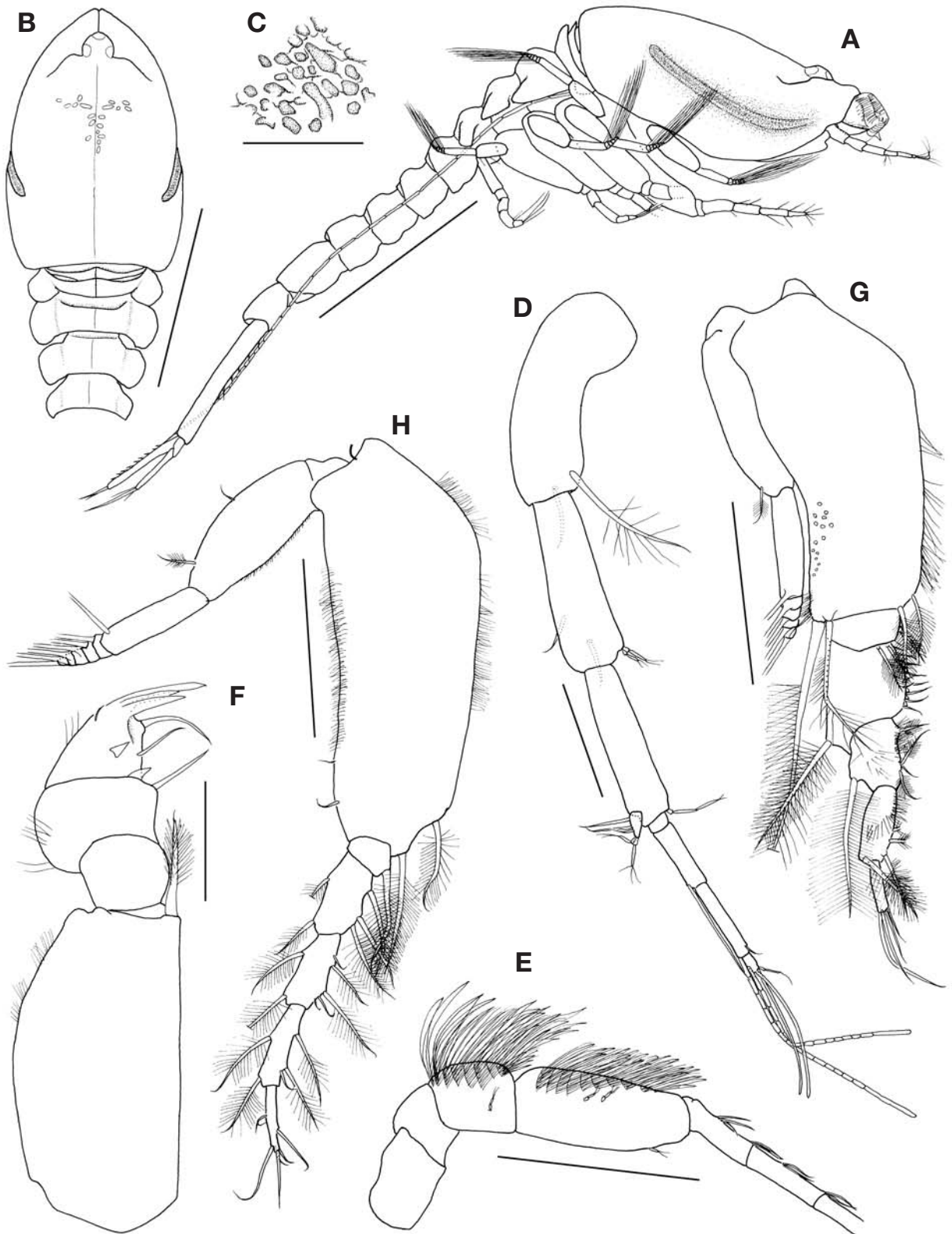


Fig. 1. *Campylaspis fusiformis*, male. A, Habitus, lateral; B, Cephalothorax, dorsal; C, Surface of carapace; D, Antenna 1; E, Antenna 2; F, Maxilliped 2; G, Maxilliped 3; H, Pereopod 1. Scale bars: A, B=1 mm, C, D, F=0.1 mm, E, G, H=0.3 mm.

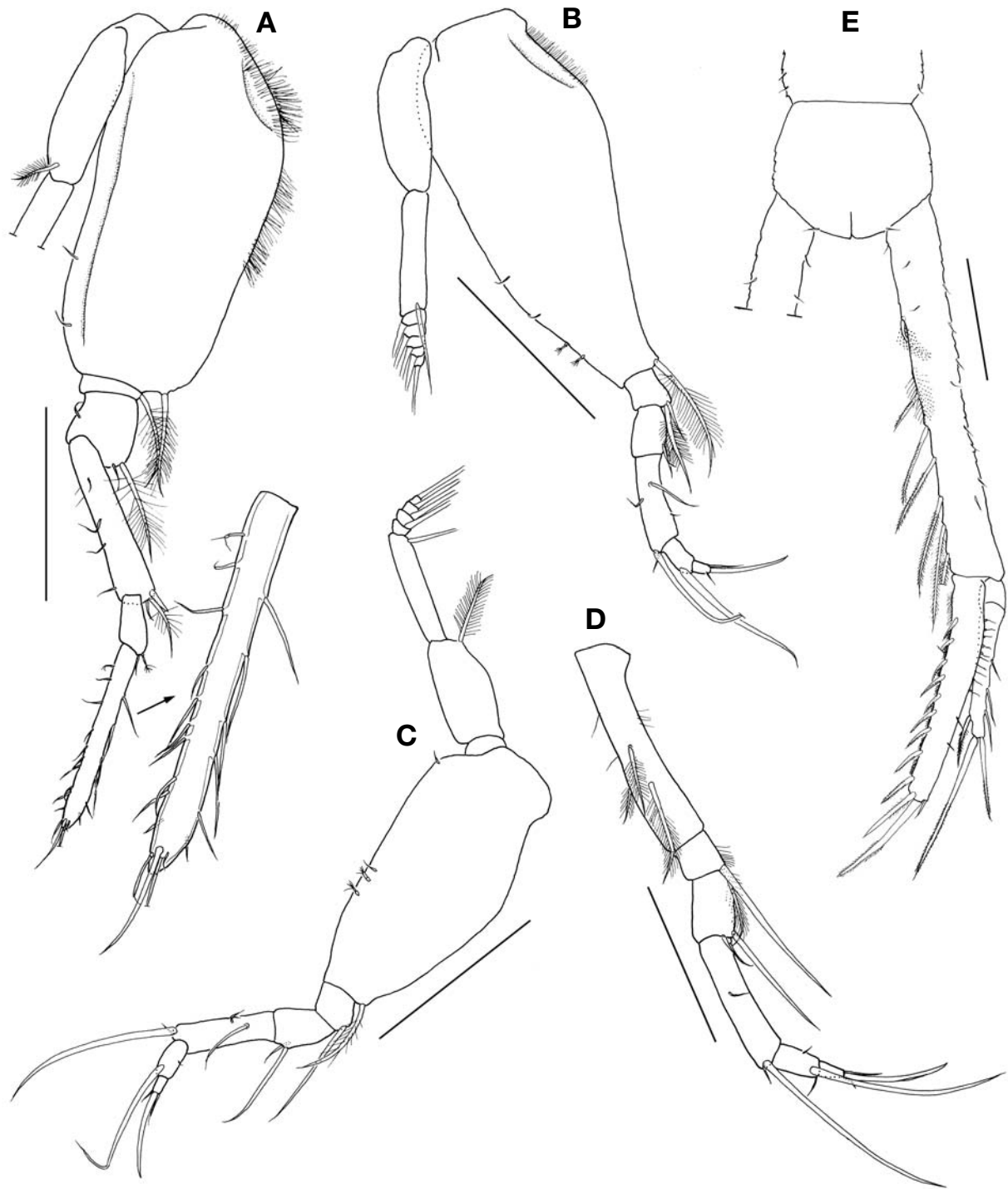


Fig. 2. *Campylaspis fusiformis*, male. A, Pereopod 2; B, Pereopod 3; C, Pereopod 4; D, Pereopod 5; E, Uropod and pleonite 6, dorsal. Scale bars: A-C, E=0.3 mm, D=0.2 mm.

slightly longer than second one, with 1 simple and 1 plumose setae near inner corner; second article with 2 simple and 2 sensory setae near distal margin; third article slightly

shorter than second one, with 1 sensory seta on inner corner. Main flagellum 4-articulated; third article very long, with 1 short seta and 1 aesthetasc near distal margin; fourth arti-

cle subequal to 1/4 length of third one, with 1 aesthetasc, 1 sensory and 2 long simple setae near terminal margin. Accessory flagellum unarticulated, slightly longer than fourth article of main flagellum, with 3 simple and 2 sensory setae.

Antenna 2 (Fig. 1A, E) very long, extending beyond uropodal peduncle. Peduncle 4-articulated; third article with 1 short sensory seta and 9 rows of long sensory setae on surface; last article with 3 short sensory setae and 10 rows of long sensory setae on surface.

Thorax (Fig. 1A) 0.55 times as long as carapace length and slightly longer than 1/5 body length. Abdomen 0.6 times as long as cephalothorax length.

Maxilliped 2 (Fig. 1F). Basis two times longer than wide, with 1 strong pappose seta on inner corner; dactylus with 3 spiniform setae on terminal margin.

Maxilliped 3 (Fig. 1G). Basis slightly longer than remaining articles combined, with numerous hair-like setae on inner margin, 2 plumose setae on inner corner, 2 plumose setae and 1 short simple seta on outer corner; merus with several teeth and 8-9 simple setae on inner margin.

Pereopod 1 (Fig. 1H). Basis 1.12 times as long as remaining articles combined, with 2 plumose setae distally on inner margin, 2 short simple setae distally on outer margin; carpus 0.9 times as long as propodus, with 2 plumose, 3 short simple setae on inner margin, 2 plumose setae on outer margin.

Pereopod 2 (Fig. 2A). Basis 0.75 times as long as remaining articles combined, with 1 plumose seta on inner corner, 2 short simple setae on outer margin distally; dactylus 3.8 times as long as propodus, with 10 simple setae on inner margin, 6 simple setae on outer margin, terminal margin pointed, with 1 short and 3 long simple setae.

Pereopod 3 (Fig. 2B). Basis 1.7 times as long as remaining articles combined.

Pereopod 4 (Fig. 2C). Basis 1.25 times as long as remaining articles combined.

Pereopod 5 (Fig. 2D). Basis 0.7 times as long as remaining articles combined.

Uropod (Fig. 2E). Peduncle 2.7 times as long as pleonite 6, with 2 plumose and 6 pectinated setae on inner margin; endopod unarticulated, 0.6 times as long as peduncle length; inner margin serrated, with numerous hair-like setae, 9 spiniform setae; outer margin with 12 short sensory setae; terminal margin with 1 short simple seta, 2 pectinated setae; exopod biarticulated, 0.7 times as long as endopod, with 1 pectinated seta on inner margin; outer margin with 3 simple setae; terminal margin with 2 pectinated setae.

Remarks. *Campylaspis fusiformis* is similar to *C. pumila* Gamô, 1960 and *C. striata* Gamô, 1960 in having a similar body form and a pair of narrow lateral sulcuses on the carapace. However, *C. fusiformis* can clearly be distinguished

from *C. pumila* and *C. striata* by the length of the dactylus of pereopod 2 and the armature of the uropodal endopod: 1) the dactylus of the pereopod 2 is more than 3.5 times the length of the propodus in *C. fusiformis*, while less than 3 times the length in *C. pumila* and *C. striata*; 2) the uropodal endopod has 9 setae on the inner margin in *C. fusiformis*, but has 7 setae in *C. striata*. Moreover, the dactylus of the pereopod 2 has about 20 setae on the surface in *C. fusiformis*, while it has 11 setae in *C. pumila* and 13 setae in *C. striata*.

Our male specimens agree well with the original description of *Campylaspis fusiformis* by Gamô (1960) from the Japanese waters. However, a few differences are found between ours and the type specimen. The uropodal peduncle has 2 plumose and 6 pectinated setae on the inner margin in our male specimens, while it has 2-3 serrations and 5 plumose setae in the type specimens. Also, the surface of the carapace is faintly pitted in our specimens, while this feature is not mentioned in Gamô's original description.

Distribution. Korea (South Sea, East Sea) and Japan.

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