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**A New Species of the Genus *Cyathura* (Crustacea: Isopoda)  
from the Lake Shinji-ko, Shimane Prefecture, western Japan\***

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**宍道湖産スナウミナナフシ属（甲殻類, 等脚目）の一新種\***

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島根県宍道湖で発見されたウミナナフシを新種, シンジコスナウミナナフシ *Cyathura shinjikoensis* Nunomura として記載した。本新種は福岡県多多良川河口などから知られているキクチスナウミナナフシ *Cyathura kikiuchii* Nunomura, 1977 と, 第2触角内肢の先端付近で二股に分岐している点でもっとも類似するが, (1) 目を持つこと, (2) 第1小顎先端の歯の数が少ないこと, (3) 大顎鬚の剛毛数が多いこと, (4) 顎脚第2節の長い剛毛を欠くこと, (5) 各胸節, 特に底節や座節に剛毛の数が多いこと等で区別される。本種は熊本県緑川から知られているヒゴスナウミナナフシ *Cyathura higoensis* Nunomura, 1977, ならびに福岡県室見川から知られている *Cyathura muromiensis*, Nunomura 1976 ととも類似している。模式標本は富山市科学文化センターで保管され, 副模式標本は富山市科学文化センター, 大阪市立自然史博物館ならびにホシザキグリーン財団で保管される。

キーワード: シンジコスナウミナナフシ, ウミナナフシ亜目, スナウミナナフシ科, 宍道湖, 等脚目, 新種, 分類

Several anthurid specimens were collected from the Lake Shinjiko, Shimane, Japan Sea side of western Japan and handed over to me for identification. At the result of my study, they represented a new species of the genus *Cyathura*. The present new species is most closely allied to *Cyathura kikuchii* Nunomura, 1977, but the former is separated from the latter in the following features: (1) presence of eyes, (2) less numerous teeth on the apical border of maxillula, (3) more setae on maxillipedal palp, (4) absence of longer setae on maxilliped and (5) more numerous setae on pereopods, especially on basis and ischium. The present new species is also allied to *Cyathura higoensis* Nunomura, 1977 and *Cyathura muromiensis* Nunomura, 1976, both reported from rivers of Kyusu, western Japan.

Holotype and several paratypes are deposited at the Toyama Science Museum, other paratypes are deposited at the Osaka Museum of Natural History and Hoshizaki Institute for Wildlife Protection.

Key words: *Cyathura*, *Cyathura shinjikoensis*, Anthuridae, Lake Shinji-ko, Anthuridae, Isopoda, new species, taxonomy.

The anthuridean genus *Cyathura* has been found from not only marine environments but also inland waters of vari-

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ous parts Japan. From the brackish water of Lake Shinjiko, hitherto many specimens have been collected but they have been all female and no male has been collected. But in February 2000, Mr. Kenji Toda, Shimane Environment & Health Public Corporation, who succeed to catch some male individuals from various areas of Shinjiko, Shimane Prefecture, and they were placed at my disposal. As the results of the study of mine, it represents a new species of the geuns *Cyathura*.

***Cyathura shinjikoensis*, sp.nov.**

[Japanese name: Shinjiko-suna-uminanafushi, new]

(Figs. 1-2)

**Description:** *Male*. Body 11.5 times as long as wide. Color white with irregular patterns. Eyes mediocre but not discerned. Telson with a pair of statosysts in the basal half. Antennule (Fig. 1C): 5-segmented. Antenna (Fig. 1E): 5-segmented. Mandible (Fig. 1F): pars incisiva 17~20-toothed; palp 3-segmented; terminal segment with 17~20 setae. Maxillula (Fig. 1G): long with a strong tooth at the tip and 4 teeth near inner distal area. Maxilliped (Fig. 1H): 3-segmented: Segment 1 rectangular; segment 2 rectangular with many setae; terminal segment semicircular, with many setae around margin. Pereopod. 1 (Fig. 2A): basis stout, 1.4 times as long as wide; ischium a little longer than basis, with many fine setae on inner margin; merus 1.5 times wider than long, with many setae on inner margin; carpus 1/3 as long as merus, with many setae on inner margin; carpus short and triangular with 27~30 setae on inner margin; propodus stout with a protuberance on the basal half on inner margin; dactylus reaches the distal end of carpus. Pereopod 2 (Fig. 2B): basis rectangular 2.9 times as long as wide, with 7~10 short setae on inner margin and about 70 relatively long setae on outer margin; ischium a little shorter than basis, with 12~15 longer and several shorter setae on inner margin; merus 3/5 as long as ischium, with 14~17 setae on inner margin and 8~10 setae at outer distal area; carpus triangular with 16~25 short setae around the margin; propodus 4~7 setae on inner margin and 13 setae on outer margin. Pereopod 3. (Fig. 2C): basis rectangular, 2.5 times as long as wide, with about 40 setae on inner margin and several setae on basal half of outer margin; ischium 4/5 as long as basis, with 20~25 setae on inner margin and 4~5 setae on outer margin; merus 3/4 as long as ischium, with about 30 long setae on inner margin and 6~8 long setae on outer distal area; carpus short, with 6~7 stouter setae and several finer setae on inner margin; propodus rectangular, as long as merus with 6~7 setae on inner margin and 12 setae on outer margin. Pereopod 4 (Fig. 2D): basis with a long seta at inner distal angle, about 10 setae on inner margin and 17~21 setae on outer margin; ischium with 8~10 long setae on inner margin and 7~8 setae on outer margin; merus rectangular, with many long setae on inner margin and 3 setae; carpus small and almost square with 6 long setae on inner margin; propodus, with 4~5 relatively short setae on inner margin and 14~15 setae on outer margin. Pereopod 5. (Fig. 2E): basis rectangular, 1.6 times as long as wide, with 11~12 setae on inner margin and a long seta at inner distal angle; ischium a little shorter than basis, with 18~20 setae on inner margin, one of them is longer than the others; carpus 7/10 as long as merus, with 8~10 relatively long setae on inner margin and 2 setae on outer distal area; carpus 3/5 as long as merus; propodus with 3 setae on inner margin and 10 setae on outer margin. Pereopod 6 (Fig. 2F): basis 2.6 times as long as wide, with more than 30 setae on outer margin; ischium 3/5 as long as basis, with 25 setae on inner margin and 4~6 setae on outer margin; merus a little shorter than ischium, with 14~16 long setae on inner margin; carpus rounded triangular, with 15~16 setae around the margin; propodus 1.4 times as long as merus with 3 stout setae and 14~16 setae on outer margin. Pereopod 7 (Fig. 2G): basis 2.5 times as long as wide, with 17~19 setae on inner margin and 12~14 setae on inner margin; ischium as long as basis, with 15~17 setae on inner margin and 7~8 setae on outer margin, merus half the length of ischium, with 13~15 setae on inner margin and 8~10 setae on outer margin; carpus half the length of merus, with 4~5 setae on inner margin and 4~5 setae on outer margin; propodus 1.5 times as long as carpus with 3 longer and many shorter setae on inner margin and 10~13 setae on outer margin. Pleopod 1 (Fig. 1I) ellipse, with many setae around margin. Pleopod 2 (Fig. 1J): basis endopod with stylus whose tip is bi-furcated; exopod lanceolate. Pleopods 3~5; both rami elongated and with sinuate margin. Uropod (Fig. 1K-L): endopod ellipse; exopod ellipse with

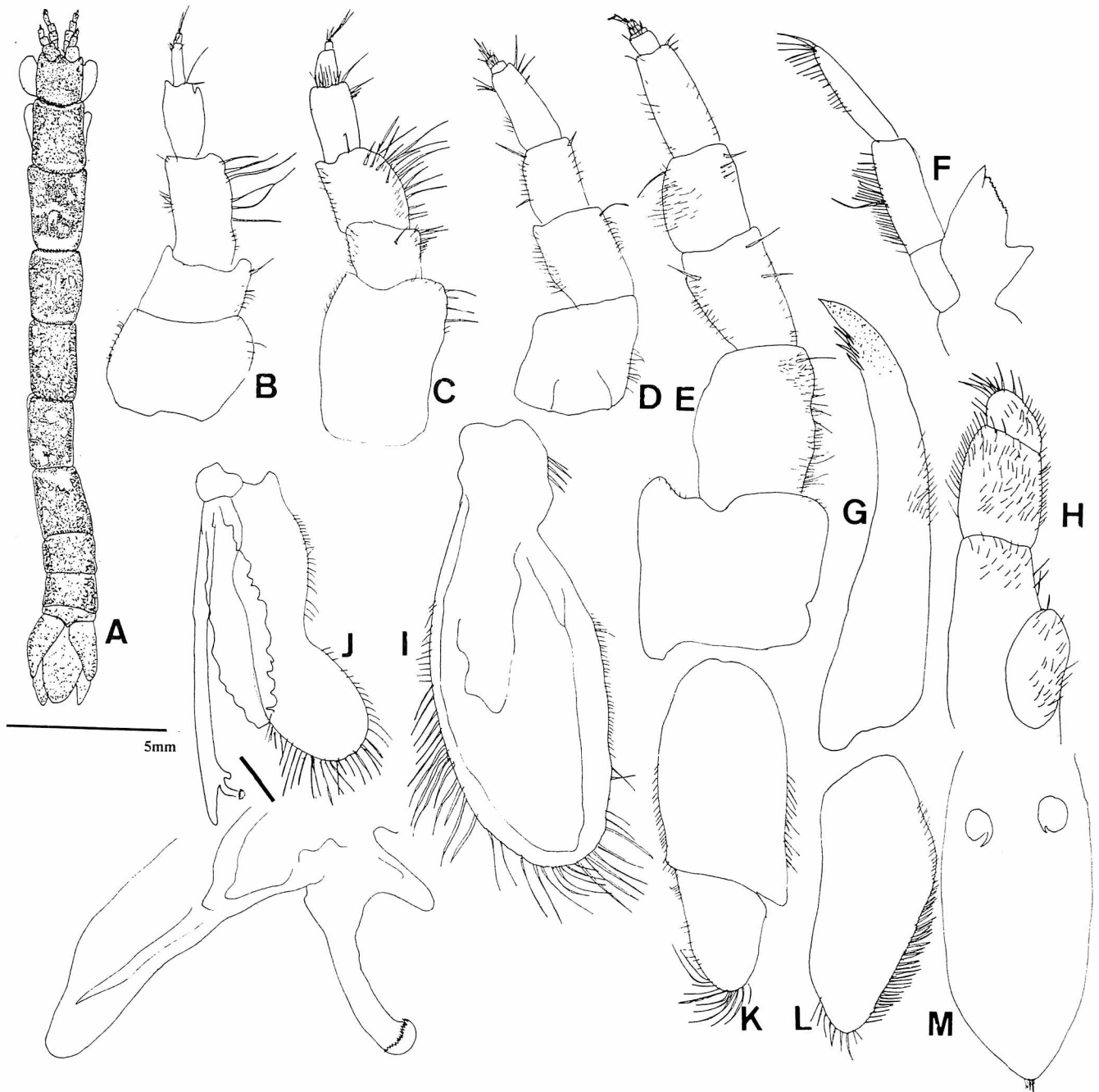


Fig. 1. *Cyathura shinjikoensis* sp. nov.

A: Dorsal view; B: Antennule of female. C: Antennule of male. D: Antenna of female. E: Antenna of male. F: Mandible. G: Maxillula. H: Maxilliped. I: Pleopod 1. J: Pleopod 2 in male. K: Endopod of uropod. L: Exopod of uropod. M: Pleotelson (A, C, E—M: Holotype male, B and D. Allotype female).

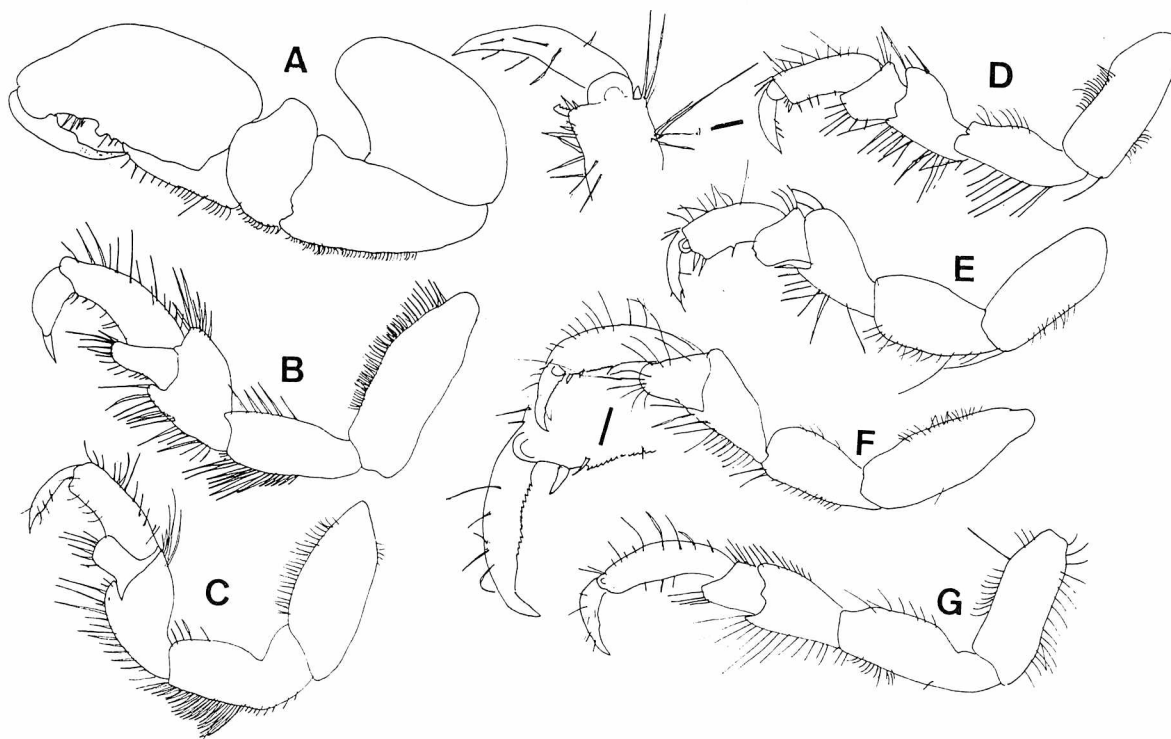


Fig. 2. *Cyathura shinjikoensis* sp.nov.  
A-G: Pereopods 1-7 (All: Holotype male).

setae around the margin. Pleotelson (Fig. 1M) lanceolate, with a pair of statosysts.

Female is almost same except the copulatory organ and less numerous setae on both antennae (Fig. 1B and D).

*Etymology*: The Shinjiko is the name the lake, type locality.

*Material examined* 3♂♂ (1♂, holotype 19.8mm in body length and 2♂♂ paratypes 15.3~15.5mm in body length and 5♀♀ (1♀ allotype, 13.9 mm in body length and 4♀♀, paratypes 10.9~12.8mm in length) off Kimachi, Shinjiko, Shimane Pref. Feb. 29, 2000, coll. Kenji Toda, 2♂♂ (19.0~19.2mm) in body length 4♀♀ (11.1~15.4mm in body length), off Kimachi, Shinjiko, Shimane Pref., Nov. 30, 1999 coll. Kenji Toda, 7♀♀ (11.0~16.1mm in body length) Torigasaki, Shinjiko, Apr. 12, 2000, coll. Kenji Toda.

*Type*. Holotype (TOYA Cr-12855), allotype (TOYA Cr-12856) and 15 paratypes (TOYA Cr-12857~12871) are deposited at the Toyama Science Museum, 9 paratypes (OMNH Ar-4679~4687) at Osaka Museum of Natural History and the Museum of Shimane Environmental Institute and 5 paratypes (HOWP-B0001~0005) at the Hoshizaki Institute for Wildlife Protection.

*Remarks*: The present new species is most closely allied to *Cyathura kikuchii* Nunomura, 1976, but the former is separated from the latter in the following features: (1) presence of eyes, (2) less numerous teeth on the apical border of maxillula, (3) more setae on maxillipedal palp, (4) absence of long seta on maxilliped. (5) more numerous setae on pereopods, especially on basis and ischium. The present new species is also allied to *Cyathura higoensis* Nunomura 1977, reported from the mouth of Midori River, western Kyushu, especially in having similar structure of male second pleopod. But the former is separated from the latter in the following features: (1) stronger processes on anterior margin of cephalon, (2) less numerous teeth on the apical region of maxillula, (3) less numerous teeth of pars incisiva mandible, (4) less numerous setae on mandibular palp and (5) lack of long setae maxilliped. The present new species is

most closely allied to *Cyathura muromiensis*, Nunomura 1974, reported from the Muromi River, Fukuoka Prefecture, and Kyushu, but the former is separated from the latter by the following features: (1) more strongly furcated process on male second pleopod, (2) less numerous teeth on apical area of maxillula, (3) less numerous teeth of pars incisiva of mandible, (4) absence of long setae on maxilliped, (5) less numerous setae of both antennae

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