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A New Species of the Genus *Cyathura* from the Lake Kasumigaura, Ibaraki Prefecture, middle Japan*

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霞ヶ浦から発見されたスナウミナナフシの一新種

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霞ヶ浦で発見されたウミナナフシを新種フタマタスナウミナナフシ*Cyathura furcata*として記載した。本種は熊本県緑川河口から報告されている*Cyathura higoensis* Nunomuraと類似するが（1）雄第２腹肢内肢の交尾針先端の形態，特に二股に分かれ掌状の構造のないこと，（2）目がはっきりした個眼からなること，（3）長節等の胸脚上の剛毛が長いこと，（4）顎脚がより太く，剛毛が少ないこと，（5）第１顎先端の歯が短いこと，（6）第２触角の先端の節が明瞭であることなどによって区別される。本新種は福岡県室見川から報告されスナウミナナフシ*Cyathura muromiensis*とも類似するが，（1）雄の第２触角内肢の先端が二股に分岐し，掌状の構造が無いこと，（2）各胸肢の剛毛が長いこと，特に長節外縁により長い剛毛が生えていること，（3）第１小顎先端の歯が短いこと，（4）顎脚内壁に太い突起のあること，（5）大顎鬚の剛毛が少ないこと，（6）雄第１胸肢腕節内面にかなり大きな突起があること等で区別される。完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ならびに千葉県立中央博物館において保管される。

A new species of the inland-water anthurid isopod, *Cyathura furcata* will be described from the Lake Kasumigaura, middle Japan. This species is most closely allied to *Cyathura higoensis* Nunomura, but the former is separated from the later in the following features: (1) bifurcate apical area and absence of hand-shaped struclure of stylus on endopod of male second pleopod, (2) longer setae on pereopods, especially on outer margin of merus, (3) shorter teeth on maxillula, (4) presence of stouter setae on inner border of maxilliped, (5) less numerous setae on palp of mandible, (6) bigger

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process on inner margin of propodus of male first pereopod. The present new species is also allied to *Cyathura muromiensis* Nunomura. The former is separated from the laterin the following features: (1) bifurcate apical area of stylus on endopod of male second pleopod, (2) longer setae on pereopods, especially on outer margin of merus, (3) shorter teeth on maxillula, (4) presence of stout teeth on inner border of maxilliped, (5) less numerous setae on palp of mandible and (6) bigger process on inner margin of propodus of male first pereopod.

Key words: *Cyathura, Cyathyra furcata*, Anthuridea, Anthuridae, Isopoda, Japan.

Hitherto, 3 species of the anthuridean genus *Cyathua* have been reported from various parts in Japan. From the Lake Kasumigaura, situated at the dowonstream of the River Tonegawa and their water systems, many samples of the genus have been collected, but they were all female and no male specimen has been collected. Therefore, species name has not been determined. The junior author happened to have succeeded to catch 2 male individuals from the lake Kasumigaura. Before going further, the junior author wishes to express his sincere gratitude to Mr. Keigo Nakamura of Public Works Research Institute, Ministry of Construction, for giving him a chance to examine these areas.

Cyathura furcata **Nunomura sp. nov.**

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

(Figs.A-R)

Description: *Male*. Body 10 times as long as wide. Color white with irregular patterns. Eyes mediocre in size, each eye with 15 ommatidia Anterior margin of cephalon with a medial process and a pair of lateral processes protruded equally. Body proportions C<1=2=3<4=5>6>7. All the pleonal somites fused and the suture lines invisible. Telson (Fig.R) lanceolate with a pair of statosysts in the basal half and bears 2 setae at the distal end.

Antennule (Fig.B) with 6 segments; terminal 2 segments are much shorter than the basal four segments,terminal segment with 3 aesthetascs. Antenna (Fig.C), a little longer than antennule, with 7 segments. Mandible (Fig.D); pars incisiva 3-toothed; palp 3-segmented; second segment with a long seta at distal angle; terminal segment with 5 setae on the apical margin; cutting flange indistinct. Maxillula long (Fig.E) 3-segmented; with a strong tooth at the tip and teeth 7 near the inner distal area. Maxilliped(Fig.F) second segment with 4 stout setae on inner border and a long seta. near the outer distal angle.

Pereopod 1 subchelate and pereopods 2-7 normal walking legs. Pereopod 1. (Fig.G); basis stout; ischium a little shorter than basis with 13-14 setae on inner margin; merus rectangular almost twice as long with 5-7 setae on inner margin and 12-14 setae on outer margin; carpus small and triangular with 7-10 setae on inner margin; propodus stout with 2 projections on inner margin, one of them is situated at the basal end and the another one is situated in the middle area; dactylus curves inward. Pereopod 2 (Fig.H); basis rectangular with a seta on outer margin; ischium a little shorter than basis with many setae on inner margin; merus spread towards the distal end; carpus small with 4 setae on inner margin; propodus a little shorter than ischium with 7-8 setae on inner margin and the outermost one is stouter than the others. Pereopod 3 (Fig.I); basis long with 3 setae on inner margin and 3 setae on outer margin; ischium 2/3 as long as basis with more than

12 setae on inner margin;merus with more than 20 setae on inner margin; carpus small with 2 setae at apical area and 2 setae on inner margin; propodus with 4-5 setae on inner margin and the distal one is stout. and 9-10 relatively long setae on outer margin. Pereopod 4 (Fig.J); basis with; ischium with many long setae on inner margin and 2 setae on outer margin; merus round with many long setae on inner margin; carpus small and almost square with 6 long setae on inner margin; propodus with a relatively short seta on inner margin. Pereopod 5 (Fig.K); basis 2.1 times as long as wide with 4 setae on outer margin and 8-10 setae on inner margin; ischium with a dozen or more long setae on inner margin and 3-5 setae on outer margin; merus with a dozen setae on inner margin and 4 setae around the outer distal angle ; carpus square with a seta at inner distal angle and 3 setae on outer margin; propodus rectangular with 8 setae on outer margin. Pereopod 6 (Fig.L); basis fusiform with 5-6 setae on the middle area of inner margin and 4 long setae on distal half of inner margin, and 6 setae on outer margin; ischium 3/5 as long as basis with more than 10 long setae on inner margin and 5 setae on outer margin; merusa little shorter than ischium, with 10 setae on inner margin and 2 long setae on outer margin; carpus almost square with a seta on inner margin and 3 setae on outer margin; propodus rectangular with 2 setae on inner margin 4-5 stout setae at inner distal angle and 10 relatively long setae on outer margin. Pereopod 7 (Fig.M); basis with 2 long setae near the distal area on inner margin; ischium 2/3 as long as wide, with 5 relatively long setae on inner margin; merus 3/5 as long as ischium; carpus short and triangular with 3-4 setae on inner margin; propodus as long as ischium with 2 setae on outer margin.

Pleopod 1(Fig.N); basis rectangular; endopod big and lanceolate with 45-50 setae around the margin; exopod small and slender. Pleopod 2 (Fig.O); basis endopod with stylus whose tip is furcated; exopod. Pleopods 3-5, basis rectangular, both rami rectangular and similar in length. Uropod, exopod (Fig.Q) elliptical with many setae around the margin; endopod (Fig.P) 2-segmented, basal segment rectangular with 2 long setae; terminal segment 7-8 longer and 8-10 shorter setae around the margin.

Female: No distinct difference is found except copulatory apparatus.

Material examined: 2♂♂ (1♂, holotype 10.6mm in body length and 1♂ paratype, 9.3mm in body length) and 4♀♀ (1♀allotype, 13.6mm in body length and 3♀♀paratypes 9.9-14.1mm in body length) in Nishiura of the Lake Kasumigaura, off Shimanami, Asou-chou, Ibaraki Pref. Mar. 2, 1999, coll. Michiaki Hagino. The Present new species was caught from the Lake shore sandy bottom, The male specimens were caught only in spring.

Type. Holotype male (TOYA Cr-12683) , allotype (TOYA Cr-12684) and a paratypes (TOYA Cr-12685) are deposited in the Toyama Science Museum; 3 paratypes (CBM ZC-5227～5229) including 1 male paratype are deposited at Natural History Museum and Institute, Chiba.

Etymology: Latin, *furcus*=fork.

Remarks: The present new species is most closely allied to *Cyathura higoensis* Nunomura reported from the mouth of Midori River, western Kyushu. But the former is separated from the latter in the following features: (1) bifurcate apical area and absence of hand-shaped Structure of stylus on endopod of male second pleopod, (2) longer setae on pereopods, especially on outer margin of merus, (3) shorter teeth on maxillula, (4) presene of stouter setae on inner border of maxilliped, (5) less numerous setae on palp of mandible and (6) bigger process on inner margin of propodus of male first pereopod.

The present new species is also allied to *Cyathura muromiensis* Nunomura, reported from the Muromi River, Fukuoka Prefecture, northern Kyushu. The former is separated from the later in the following features: (1) bifurcate apical area of stylus on endopod of male second pleopod, (2) longer setae on pereopods, especially on outer margin of merus, (3) shorter teeth on maxillula, (4) presene

of stouter setal on innerborder of maxilliped, (5) less numerous setae on palp of mandible and (6) bigger process on inner marginof propodus of male first pereopod.

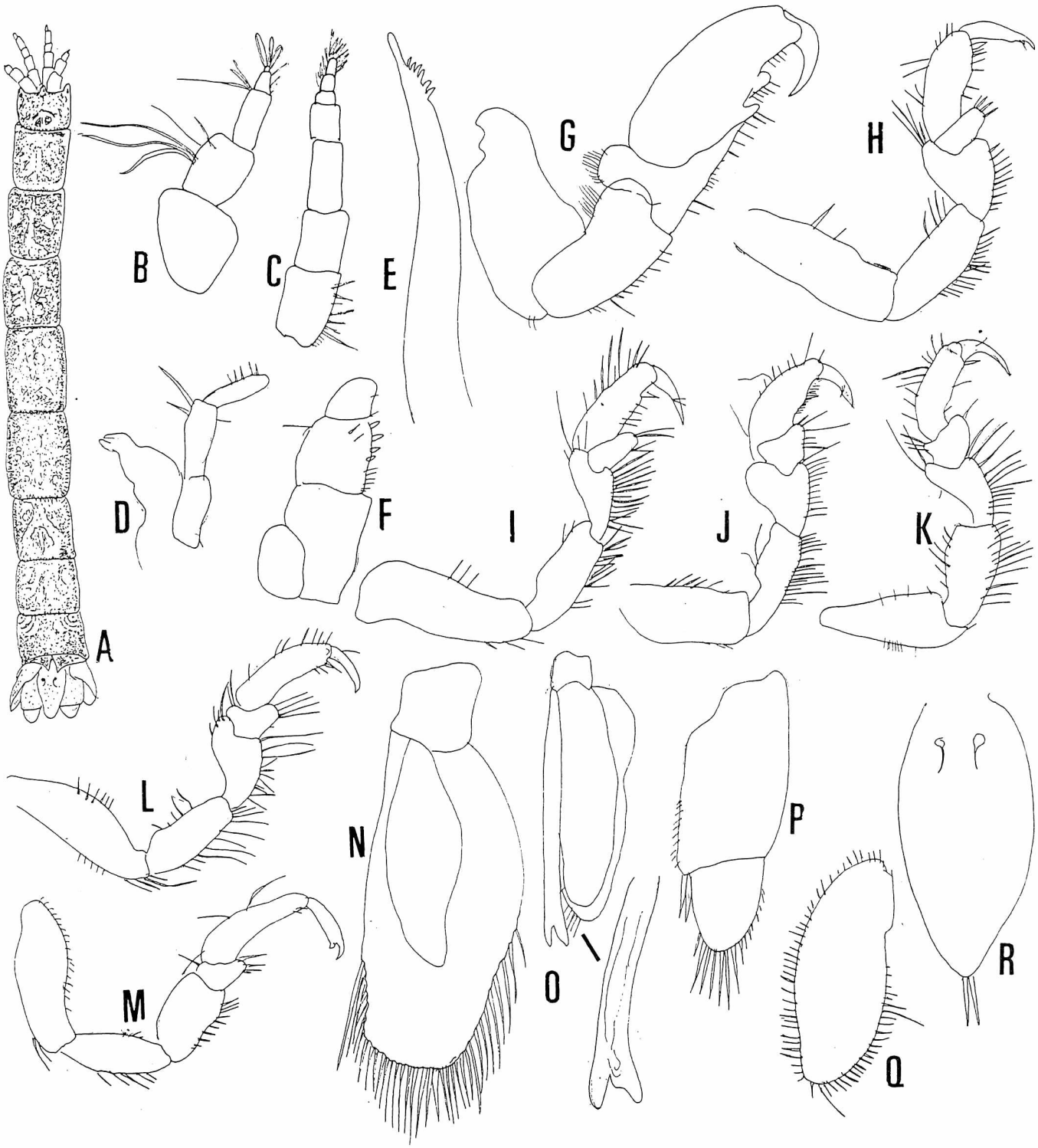

Figure 1 *Cyathura furcata*. n-sp. A.Dorsal view; B.Antennule; C.Antenna; D.Mandible; Emaxillula; F.Maxilliped; G-M. Pereopods1-7; N.Pleopod 1; O.Pleopod 2; P.Endopod of uropod; Q. Exopod of the same; R.Telson. (All: Holotype male.)

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