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**A New Species of the genus *Alcirona* (Isopoda:
Corallanidae) from Hokkaido, northern Japan***

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北海道から発見されたニセウオノエ科等脚目甲殻類の1新種

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北海道広尾の水族館で死亡したイザリウオの体内から発見された等脚目を、新種 *Alcirona grandis* (和名: オオフタゲニセウオノエ, 新称) として記載した。本新種は西インドのSt. Thomasから知られている *Alcirona krebsii* Hansen, 1890と最も類似しており、特に、体背面に多数の剛毛が密生していることで共通しているが、(1) 剛毛の密生が腹尾節に限られていること、(2) 腹部の5体節がすべて明瞭に区別されていること、(3) 第1小顎の2つの鎌状の歯に明瞭な大小差があること、(4) 腹尾節が幾分短く、後端が丸いこと、(5) 第1胸肢腕節が長いこと、(6) 第1胸肢座節ならびに長節内縁に短い突起があること、(7) 胸部基節板が大きく発達することならびに(8) 目が小さいことなどで区別される。

なお、本種は *Alcirona* 属の日本から2番目の種であり、最初の種は福岡県沖の対馬海峡から知られている *Alcirona niponia* Richardson, 1901である。本種は *A. niponia* と類似するが、(1) 体がより大型であること、(2) 濃い色彩を持っていること、(3) 頭部前縁が突出していること、(4) 第2触角が多くの鞭節からできていること、(5) 第1胸脚座節に1個の丸い歯があること、(6) 第1胸脚前節内縁に7個の丸い歯があること、(7) 第1胸脚腕節が長く、ほぼ正方形であること、(8) 第1胸脚長節に5個の丸い歯があることならびに(9) 背面に剛毛が密生することで区別される。なお、完模式標本は富山市科学文化センター(TOYA Cr-13153)で保管される。また、*Alcirona* 属にフタゲニセウオノエ属と和名を提唱する。

Key words : Isopoda, *Alcirona grandis*, new species, Corallanidae, Crustacea

Hitherto, five species of the genus *Alcirola* have been recorded in the world and only a single species of the genus have been reorded in Japan (Hansen,1890; Kensley & Shotte,1989; Kussakin,1979; Richardson,1905; Richardson,1909; Richardson,1910; Thieleman,1910).

In August, 1993, a strange isopod crustacean was found in a dead body of a frog fish, *Antennarius striatus* in Hiroo Aquarium, Hokkaido. The specimen was brought to Mr.Toru Udagawa and then he sent it to me for identification and recently, it proved to be a new species of the genus *Alcirona*.

Before going further, I wish to express my sincere gratitude to Mr.Toru Udagawa, Hokkaido National Fisheries Research Institute, Fisheries for his kindness in giving me a chance to examine such an interesting specimen.

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Order Isopoda

Family Corallanidae

***Alcirona grandis* n. sp.**

(Japanese name : Oo-futatoge-niseuonoe, new)

Figs. A-V

Material examined; 1♂(holotype, 32.6 mm in body length), from a dead frogfish, *Antennarius striatus* in Hiroo Aquarium, Hokkaido, Aug. 19, 1993. Holotype (TOYACr-13153) is deposited at the Toyama Science Museum.

Description: Body slender, 2.5 times as long as wide. Color purplish brown in alcohol, Cephalon with a protruded medial process in anterior margin. Eyes mediocre in size, each eye mediocre in size and composed of about 20 ommatidia. Pereonal somites subequal in length but pereonal somite 5 is slightly longer than other segments. Pleotelson short, with a semicircular posterior end and with many bristles on dorsal surface.

Antennule (Fig. C) 14-segmented; first segment long and stout, twice as long as wide; second segment 2/3 as long as the first; flagellum composed of 12 segments. Antenna (Fig. D) long, reaching the middle area of the third pereonal somites, flagellum 32-segmented.

Frontal lamina (Fig. B) pentagonal. Clypeus (Fig. B) short. Mandible (Fig. E): pars incisiva two-dentate; lacinia mobilis absent; processus molaris absent; palp three-segmented, second segment with more than 23 setae; terminal segment tapering toward the tip, with 36-38 setae including two terminal long ones. Maxillula (Fig. F): outer lobe falcate with two teeth, outer one much longer than inner one. Maxilla (Fig. G) reduced, and single-lobed, with six short setae on distal area. Maxilliped (Fig. H) five-segmented; segment 4 longest; terminal palpal segment round, with 12-13 setae around the margin; endite absent.

First pereopod (Fig. I): basis rectangular, 2.3 times longer than wide; ischium, rectangular and half the length of basis, with a peg-like spine on inner margin; merus square and half the length of ischium, with five peg-like spines on inner margin and a short seta at outer distal angle; carpus square and a little shorter than propodus; propodus with 2 setae on inner margin and a seta on outer margin; dactylus with a relatively big claw.

Second pereopod (Fig. J): basis rectangular, and 1.7 times longer than wide; ischium, 0.7 times longer than basis; merus relatively short, with three setae on inner margin; carpus short, with three peg-like spines on inner margin; propodus with two setae on inner margin; dactylus with relatively big claw.

Third pereopod (Fig. K): basis rectangular, twice longer than wide; ischium about half the length of basis, with a peg-like spine on inner margin; merus about half the length of ischium, with seven peg-like spines on inner margin; carpus a little shorter than merus, with a peg-like spine on inner margin; propodus with a short seta on inner margin and outer margin; dactylus with relatively big claw.

Fourth pereopod (Fig. L): basis rectangular and twice longer than wide; ischium 55% as long as basis, with three spines on inner distal angle and eight setae at outer distal angle; merus 2/3 as long as ischium, with five spines on inner distal angle and eight setae at outer distal angle; carpus, with four spines on inner distal angle and 10 setae on distal margin; propodus with a short seta on inner margin and two setae outer margin.

Fifth pereopod (Fig. M): basis 2.1 times as long as wide; ischium 1/3 of basis, with three spines on inner distal area and 11-12 setae on outer distal area; merus square, a little shorter than ischium, with four spines on inner distal area and 11-12 setae on outer distal area; carpus a little shorter than merus, with 20-22 setae on distal margin; propodus and dactylus as fourth pereopod.

Sixth pereopod (Fig. N): basis twice longer than wide; ischium half the length of basis, with two spines on inner distal area and four setae on outer distal area; merus square and a little shorter than ischium, with three spines on inner distal area and six setae on outer distal area; carpus, with 17-18 setae on distal margin; propodus and dactylus as forth pereopod.

Seventh pereopod (Fig. O): basis rectangular, 2.2 times longer than wide; ischium half the length of basis, with three spines on inner distal area and four setae on outer distal area; merus, a little shorter than ischium, with three

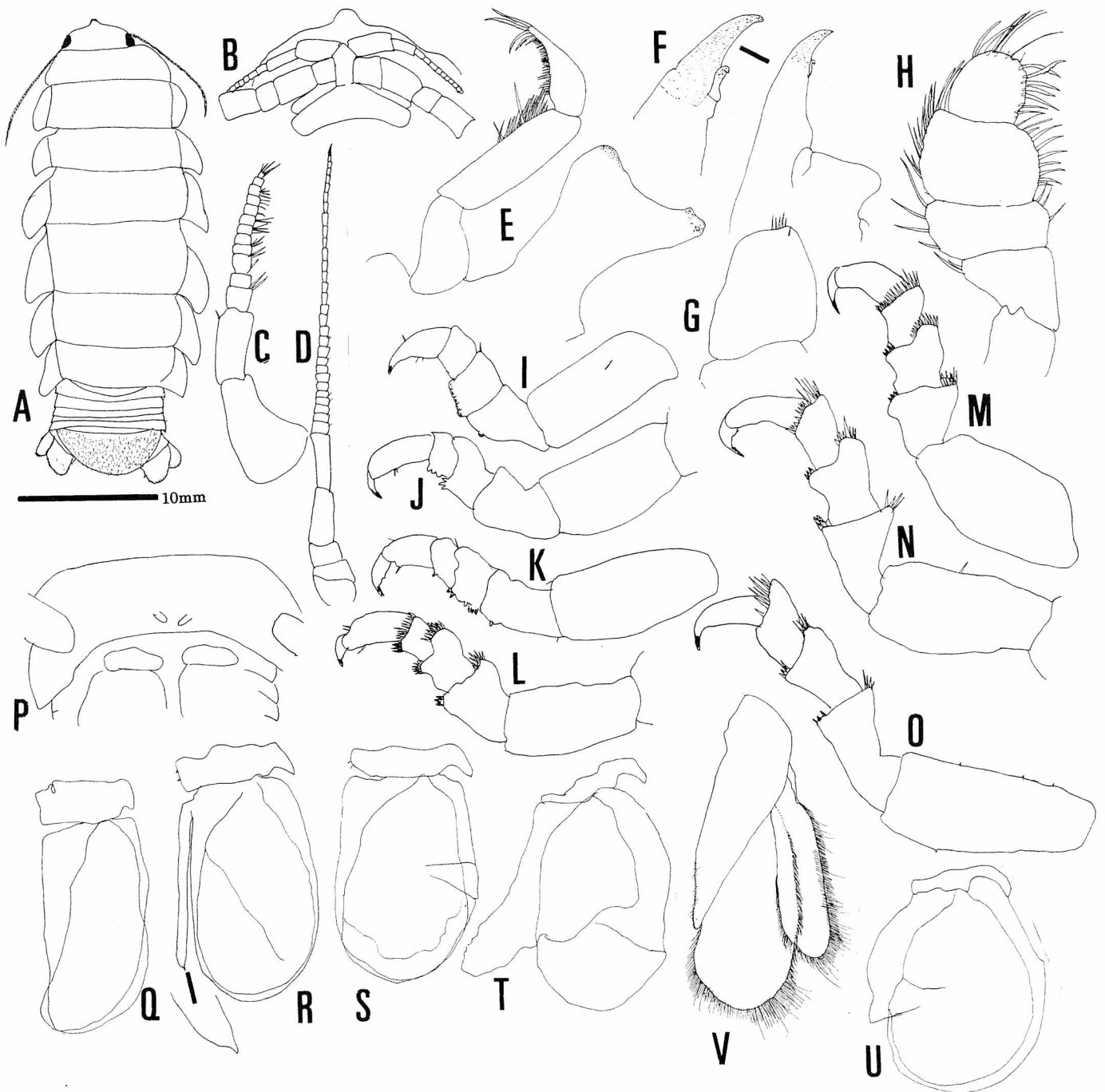
spines on inner distal area and four setae on outer distal area; carpus with more than eight setae on distal margin; propodus and dactylus as fourth pereopod.

Penes (Fig. P) paired but short.

Pleopod 1 (Fig. Q): basis, rectangular; endopod rectangular; exopod a little narrower than endopod.

Pleopod 2 (Fig. R): basis rectangular; endopod triangular; exopod with setae around the margin. Stylus relatively short, it does not exceed the both rami, its apical part pointed.

Pleopod 3 (Fig. S): basis rectangular; endopod triangular; exopod with setae around the margin.



Alcirona grandis n. sp.

A, Dorsal view; B, Clypeus and frontal lamina; C, Antennule; D, Antenna; E, Mandible; F, Maxillula; G, Maxilla; H, Maxilliped; I-O, Pereopods 1-7; P, Penes and pereonite 7 in ventral view; Q-U, Pleopods 1-5; V, Uropod (All: Holotype male).

Pleopod 4 (Fig. T): basis; short; endopod tapering towards the tip; exopod lanceolate.

Pleopod 5 (Fig. U): both rami lanceolate, endopod with 2 bosses.

Uropod (Fig. V): basis rather short; endopod trapezoidal in shape.

Remarks: The present new species is most closely allied to *Alcirona krebsii* Hansen, 1890 from St. Thomas, especially presence of bristles on dorsal view, but the former is separated from the latter in the following features: (1) restricted bristles only on pleotelson, (2) perfectly separated pleonal somites, (3) remarkable difference of size between two claws of maxillula, (4) rounded and shorter pleotelson, (5) longer carpus of pereopod, (6) well developed epimera of pereonal somite, (7) dentate spines on ischium on and (8) smaller eyes.

The present new species is also allied to *Alcirona niponia* Richardson, 1909, only already reported in Japan, collected from the sea off Fukuoka Prefecture, Tsushima Straits, but the former is separable from the latter in the following features: (1) larger body size, (2) darker color, (3) protruded medial area of anterior margin of cephalon, (4) numerous flagellar segments of antenna, (5) presence of a peg-like spines on inner margin of ischium of first pereopod, (6) numerous peg-like spines on inner margin propodus of first pereopod, (7) longer carpus of first pereopod, (8) numerous peg-like spines on inner margin of merus of first pereopod and (9) presence of many bristles on dorsal surface.

The present specimen was found in a dead body of a frogfish, *Antennarius stratus* in Aquarium, I think it might submerged in the dead fish in order to eat the meat of the dead fish.

Etymology: “*grandis*” means large in Latin.

References

- Hansen, H.J., 1890, Cirolanidae et familiae nonnullae propinquae Musei Hauniensis et Bidrag til Kundskaben om nogle Familier af isopode Krebsdyr. *Kongelige Danske Videnskabernes Selskabs Skrifter, 6te Raekke, Naturvidenskabelig og matematisk Afdeling* 3: 239-426(not seen by me).
- Kensley, B and M. Shotte, 1989, Guide to Marine Isopod Crustaceans of the Carribean. *Smithsonian Institution Press*, Washington, 1-308.
- Kussakin, O.G., 1979, Marine and brackish Isopod Crustacea of cold and temperate waters of the Northern Hemisphere Suborder Flabellifera. *Academy of Science. U.S.S.R. Leningrad*. 1-470(in Russian).
- Richardson, H., 1905, A monograph on the isopods of North America. *Bull. U. S. Nat. Mus.*, 54: 1-xxiii+1-727.
- Richardson, H., 1909, Isopods collected in the northwest Pacific by the U.S. Bureau of Fisheries steamer “Albatross” in 1906. *Proc. U. S. Nat. Mus.*, 37(1701): 75-129.
- Richardson, H., 1910, Isopoda collected in the Philippines by the U. S. Fish Commission steamer Albatross, and in 1907-1908. *Bureau of Fisheries, Dept. Comme rce & Lab*: 1-44.
- Thielemann, M., 1910, Beiträge zur Kenntniss der isopoden fauna Ostasiens. *Abhandl. Bayer. Akad. Wiss. Suppl.* Bd. 21-110.