

**A New Species of the Genus *Dynoides* (Isopoda : Sphaeromatidae) from
Shiretoko, Hokkaido, Northern Japan ***

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北海道知床から発見されたシリケンウミセミ属（等脚目:コツブムシ科）の1新種

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北海道知床半島で行われた「環境省による知床半島沿岸域における浅海生物相調査」で五嶋聖二氏らが採取した等脚類の標本を調査した中でコツブムシ科の1種が未記載種であることが判明し、新種 *Dynoides bicolor* [和名:ソメワケウミセミ, 新称] として記載した。本種はシリケンウミセミ *Dynoides dentisunus* Shenと類似するが、(1) 体の前半が黒く、後半が白いこと、(2) 胸部後縁中央部にある突起が短いこと、(3) 腹尾節後端の湾入が浅いこと、(4) 触角が短く、それを構成する鞭数も少ないこと、(5) 目が小さいこと、(6) 第2小顎内肢に鋸状の歯があること、(7) 第1胸脚が太く短いこと、(8) 第一小顎内の剛毛数が少ないことなどで区別される。本種のホロタイプは富山市科学博物館に保管される (TOYA Cr-19971)。

キーワード：等脚類、新種、北海道、知床、ソメワケウミセミ

Key words : Isopod, new species, Hokkaido, Shiretoko, *Dynoides bicolor*

During the survey entitled "Fauna and flora survey project of the shallow sea along the Shiretoko coast", Prof. Goshima and his colleagues collected many isopod crustaceans, together with many groups of animals and plants. They were sent to me for identification and among them, I found strange-looking specimens of the family Sphaeromatidae. At closer examinations of mine, they proved to represent a new species of the genus *Dynoides*. And I described it as a new species, *Dynoides bicolor*. The holotype will be deposited at the Toyama Science Museum (TOYA Cr-19971).

Order Isopoda

Suborder Sphaeromatidea

Family Sphaeromatidae

***Dynoides bicolor* n.sp.**

(Japanese name: Somewake-umisemi, new)

(Figs. 1-2)

Material examined: 1 ♂ (holotype, 4.6 mm in body length and 1 ♀ (allotype, 3.8 mm in body length), Chashikotsu, Shari-cho, Hokkaido, June 16, 2008, coll, Seiji Goshima. Type series is deposited as follows : holotype (TOYA Cr-19971) at the Toyama Science Museum ; allotype(OMNH Ar-7777) at the Osaka Museum of Natural History.

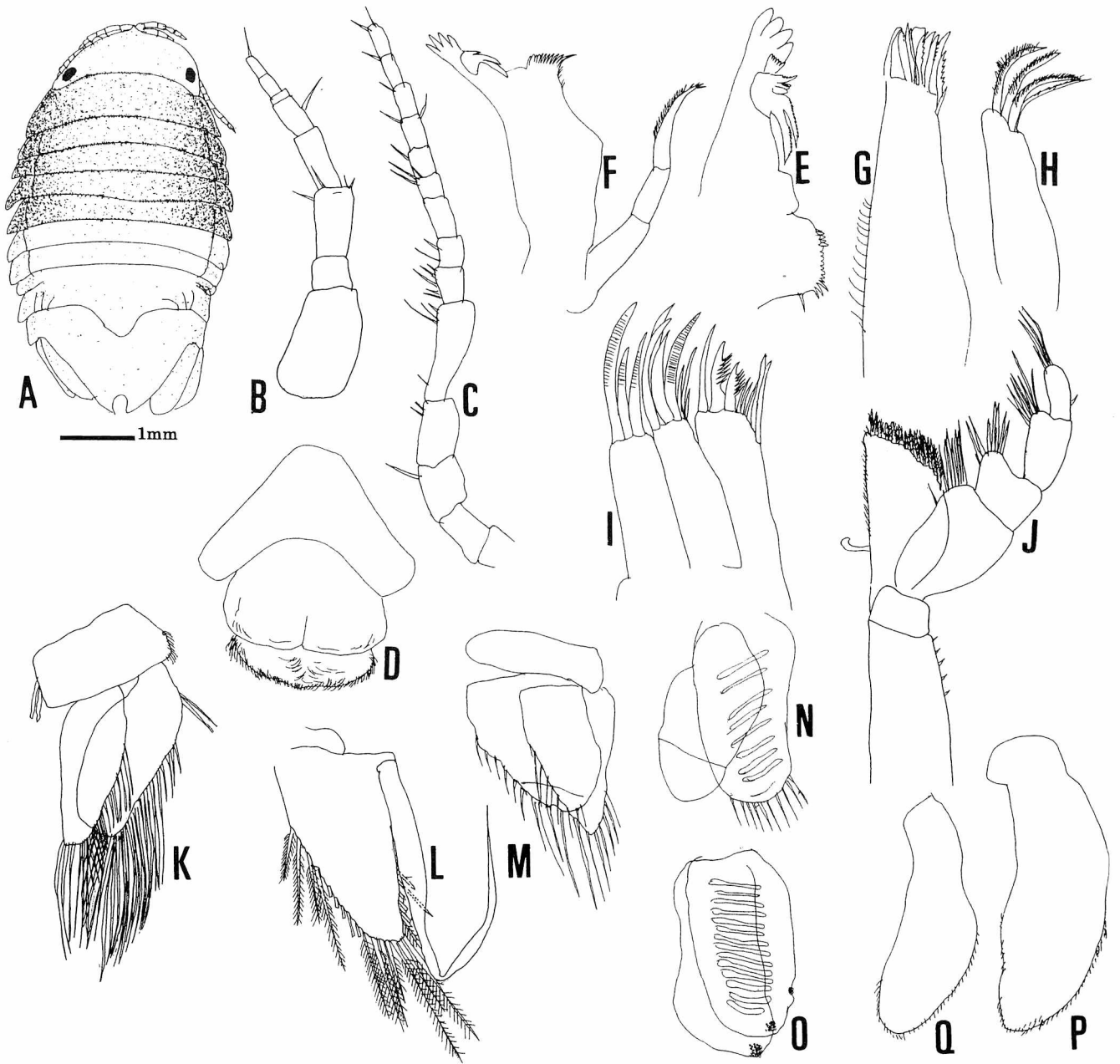


Fig. 1 *Dynoides bicolor* n.sp.

A, Dorsal view; B, Antennule, C, Antenna; D, Frontal lamina and clypeus; E, Right mandible; F, Left mandible; G, Outer lobe of maxillula; H, Inner lobe of the same; I, Maxilla; J, Maxilliped; K-N, Pleopods1-5; O, Endopod of uropod; P, Pleopod of the same (All, Holotype male).

Description: Body (Fig.1A) 1.7 times as long as wide. Color of pereonal somites 1-5 black and the remaining part almost white. Three suture lines. Eyes relatively small, each eye composed of 75 ommatidea. Anterior margin of cephalon slightly protruded; posterior margin rounded. Pereonal somite almost parallel. Posterior margin with a short and rounded projection in a medial part. Posterior end of pleotelson with a small rounded concavity.

Antennule (Fig.1B): peduncle 3-segmented; flagellum 5-segmented. Antenna (Fig.1C): peduncle 5-segmented; flagellum 9-segmented. Frontal lamina (Fig.1D) triangular; clypeus rounded. Right mandible(Fig.1E):pars incisiva 4-headed; lacinia mobilis weakly 6 toothed; processus molaris wide; palp 3-segmented and terminal segment with a series of short setae Left mandible (Fig.1F): pars incisiva 4-headed; lacinia mobilis 3-toothed; processus molaris wide. Maxillula: inner lobe(Fig.1H)with 4 plumose setae; outer lobe(Fig.1G) with 12 teeth. Maxilla (Fig.1I); inner lobe with 8 teeth, 2 of them serrate; inner ramus of outer lobe with 7 setae and outer ramus of the same with 3 setae on distal margin. Maxilliped(Fig. 1J): endite lateral margin straight, with a coupling hook, terminal margin, with 16-17 plumose setae, outer margin rounded; palp 5-segmented; segment 1 relatively short and rectangular; segment 2 big, 3.4 times as long as segment 1, with 7-8 setae on distal half of inner margin; segment 3 0.4 times as long as segment 2, with 7-8 setae on inner distal area; segment 4 slender, 1.3 times longer than segment 3 and 65% as wide as segment 3, with 7 segment with inner distal area; terminal segment slender, 0.8 times as long as and 0.4 times as wide as segment 4, with 4 setae at the tip.

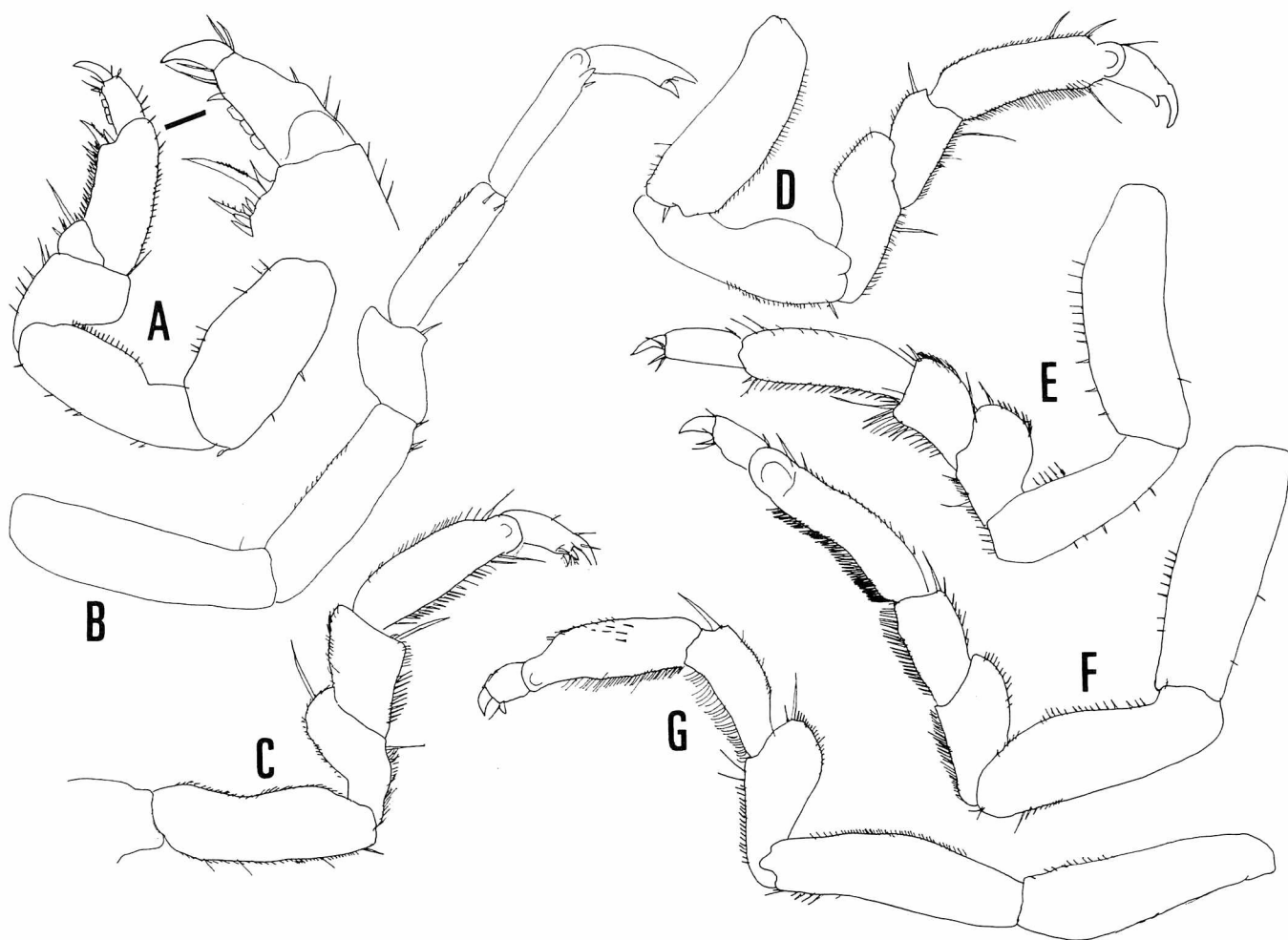


Fig. 2 *Dynoides bicolor* n.sp.

AC-G, Pereopods 1-7 (A, C-G, Holotype male; B, Allotype female).

Pereopod 1 (Fig.2A) relatively short: basis 1.5 times as long as wide, with 2 setae on inner margin and a seta at inner distal angle; ischium almost as long as basis, with 6-7 short setae on inner margin and a series of more than 20 setae on outer margin; merus 0.35 times as long as ischium, with carpus short and triangular; propodus with a strong seta at inner distal angle and many short setae on inner margin: propodus with 3 pegs and some setae on inner margin

Unfortunately pereopod 2 in male lacking. Pereopod 2 (Fig.2B) in females slender: basis 4 times as long as wide; ischium 0.8 times as long as basis, ; merus 0.4 times as long as ischium, with a seta at inner distal angle; carpus twice longer than merus; propodus as long as carpus, with a triangular projection at inner distal angle.

Pereopod 3 (Fig.2C): basis unfortunately missing; ischium 3.1 times as long as wide; merus 0.4 times as long as ischium, with a long seta on inner distal angle and on outer margin; carpus twice longer than merus; propodus a little shorter than carpus, with many setae on both margins.

Pereopod 4 (Fig.2D): basis 2.6 times as long as wide; ischium almost as long as basis, with a seta at inner distal angle; merus 55% as long as ischium, with many setae on inner margin, a long seta near distal angle.; carpus 85 % as long as merus, with a long setae near inner distal angle and outer distal angles near outer distal angle; propodus 1.8 times longer than carpus.

Pereopod 5 (Fig.2E): basis 3.3 times as long as wide; ischium 75 % as long as basis,; merus 0.4 times as long as ischium, with many setae on both margins; carpus as long as merus, with many relatively long setae on inner margin and more than 25 setae on outer margin; propodus 2.2 times longer than merus, with many setae on both margins.

Pereopod 6 (Fig.2F): basis 3.1 times as long as wide, ischium almost as long as basis, merus 0.4 times as long as ischium, with many setae on inner margin; carpus as long as merus, with many setae on inner margin; propodus 1.9 times longer than carpus, with many setae on inner margin.

Pereopod 7 (Fig.2G): basis 4.5 times as long as wide; ischium as long as basis; merus half the length of ischium, with long seta at outer distal angle; carpus as long as carpus, with many setae on inner margin and a long seta at outer distal angle; propodus 1.25 times longer than carpus, with many setae on inner margin.

Penes unfortunately invisible or missing.

Pleopod 1 (Fig.1K): endopod with 21 plumose setae around the margin stylus long, with bending in the middle part, with 15 setae; exopod triangular, with 15 setae.

Pleopod 2 (Fig.1L): endopod rectangular with about 25 setae around the margin; stylus long tapering toward the tip.

Pleopod 3 (Fig.1M): endopod triangular; exopod lanceolate.

Pleopod 4 (Fig.1N): endopod lanceolate , with pleats; exopod lanceolate.

Pleopod 5 (Fig. 11O): endopod with pleats and 2 bosses; exopod with a boss.

Uropod; endopod (Fig.1P): lanceolate Exopod. (Fig.1Q) slightly smaller than endopod.

Etymology: "bi" means " two " in Latin and "color" means "color " in Latin.

Remarks: Hitherto, six species of the genus *Dynoides* from Japan and its neighboring areas (Kim and Kwon, 1985, Kim and Kwon, 1988, Kussakin, 1979, Kwon and Kim, 1986, Shen, 1979). Among them, the present new species is most closely allied to *Dynoides dentisinus* Shen, but the former separated from the latter in the following features: (1) characteristic color patterns, (2) shorter projection on medial area of pereonal somite, (3) shallower concavity on medial part of pleotelson, (4) less numerous setae of both antennae, (5) smaller eyes, (6) presence of serrated setae on maxilla, (7) stouter pereopod 1 and (8) less numerous teeth on inner lobe of maxillula.

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References

- Kim, H. S. & D. H. Kwon, 1985. The systematic study of the family Sphaeromatidae (Crustacea, Isopoda, Flabellifera) from Korea. *Inje Journal*, 1(2): 143-165.
- Kim, H. S. & D. H. Kwon., 1988a. Marine isopod crustaceans from Cheju Island, Korea. *Inje Journal*, 4(1): 195-220.
- Kussakin, O. G., 1979. Marine and brackish Isopoda of cold and temperate waters of the northern hemisphere I, suborder Flabellifera. *Acad. Sci. U.S.S.R., Leningrad*, 1-472. [In Russian].
- Kwon, D. H., 1988. A systematic study on the Korean marine isopod crustaceans I. Flabellifera part 1. Family Cirolanidae. *Inje Journal*, 4(2): 353-370.
- Kwon, D. H. & H. S. Kim., 1986. *Dynoides spinipodus*, a new species of sphaeromatid isopod (Crustacea) from the South coast of Korea. *Korean J. Syst. Zool.*, 2(1): 43-48.
- Nishimura, S., 1976. *Dynoidella conchicola*, gen. et sp. nov. (Isopoda: Sphaeromatidae), from Japan, with a note on its association with intertidal snails. *Publ. Seto Mar. Biol. Lab.*, 23(3/5): 275-282.
- Li Li, 2000. A new species of *Dynoides* (Crustacea: Isopoda: Sphaeromatidae) from the Caped' Aguilar Marine Reserve, Hong Kong (Records of the Austrakian Museum vol 52).
- Nunomura, N. & Nishimura, S., 1976. Marine Isopoda from the rocky shore of Osaka Bay, middle Japan (2). *Bull. Osaka Mus. Nat. Hist.*, 30: 19-26.
- Shen, C. Jy 1929, Description of a new isopod *Dynoides dentisinus* from the coast of North China. *Bull. Fan. Memorial Inst, Peiping*, 1(4): 65-75.
- Japanese Ministry of the Environment, 2009. Fauna and flora survey project of the shallow sea along the Shiretoko coast.