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A New Gnathiid Isopod from Saeki Bay, Western Japan*

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大分県番匠川河口から発見されたウミクワガタ属(甲殻類等脚目)の一新種

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大分県佐伯市番匠川河口から発見されたウミクワガタ(グナチア)属等脚目の一種を新種, *Gnathia bungoensis* (和名: ブンゴウミクワガタ) として記載した。本種は, シヤム湾から知られている *Gnathia permulica* MONOD 1926 と最も類似するが, (1) 頭部前側部の突起がないこと, (2) 頭部前縁湾入部の形態, (3) 尾節板の剛毛の数が少ないこと等によって区別される。

また, わが国の伊勢湾の潮間帯から知られている *Gnathia sugashimaensis* とは, (1) 体がずんぐりしていること, (2) 大顎の形態, (3) 頭節前部の形態など外形から容易に区別される。

なお, 本種の完模式標本は富山市科学文化センター (TOYA-Cr-1455) で保管される。

During a faunal survey of Saeki Bay, eastern Kyushu, in early autumn in 1981, a gnathiid specimen was collected by Mr. Michio Ohtani and was handed over to me for identification. At closer examinations, it proved to represent a new species of the genus *Gnathia*. As far as I am aware, 63 species have hitherto been recorded as valid for the genus from various parts of the world but only two species have been recorded in Japan. The above specimen, preserved in alcohol, was dissected and examined in glycerol. All the figures were drawn by using camera lucida or shadowgraph.

Before going further, I wish to express my sincere gratitude to Mr. Michio Ohtani for his kindness in placing the interesting material at my disposal.

Gnathia bungoensis sp. nov.,
(Jap. name: Bungo-umikuwagata)

Figures 1-2

Material examined: 1 ♂ (holotype, 3.5 mm in body length including mandibles but excluding both antennae), from the estuary of Banshō-River, off Saeki City, Saeki Bay, Ooita Prefecture, eastern Kyushu, coll. Michio Ohtani, Sep. 14, 1981. Holotype specimen is deposited at the Toyama Science Museum (TOYA-Cr-1455). Unfortunately, some appendages of this specimen were lacking. No female specimen has been found.

Habitat: The specimen was found among the muddy colonies of green algae, *Ulva pertusa* KJELLMAN, 2 m in depth, 15 m off shore, near the sandy bottom of estuary of

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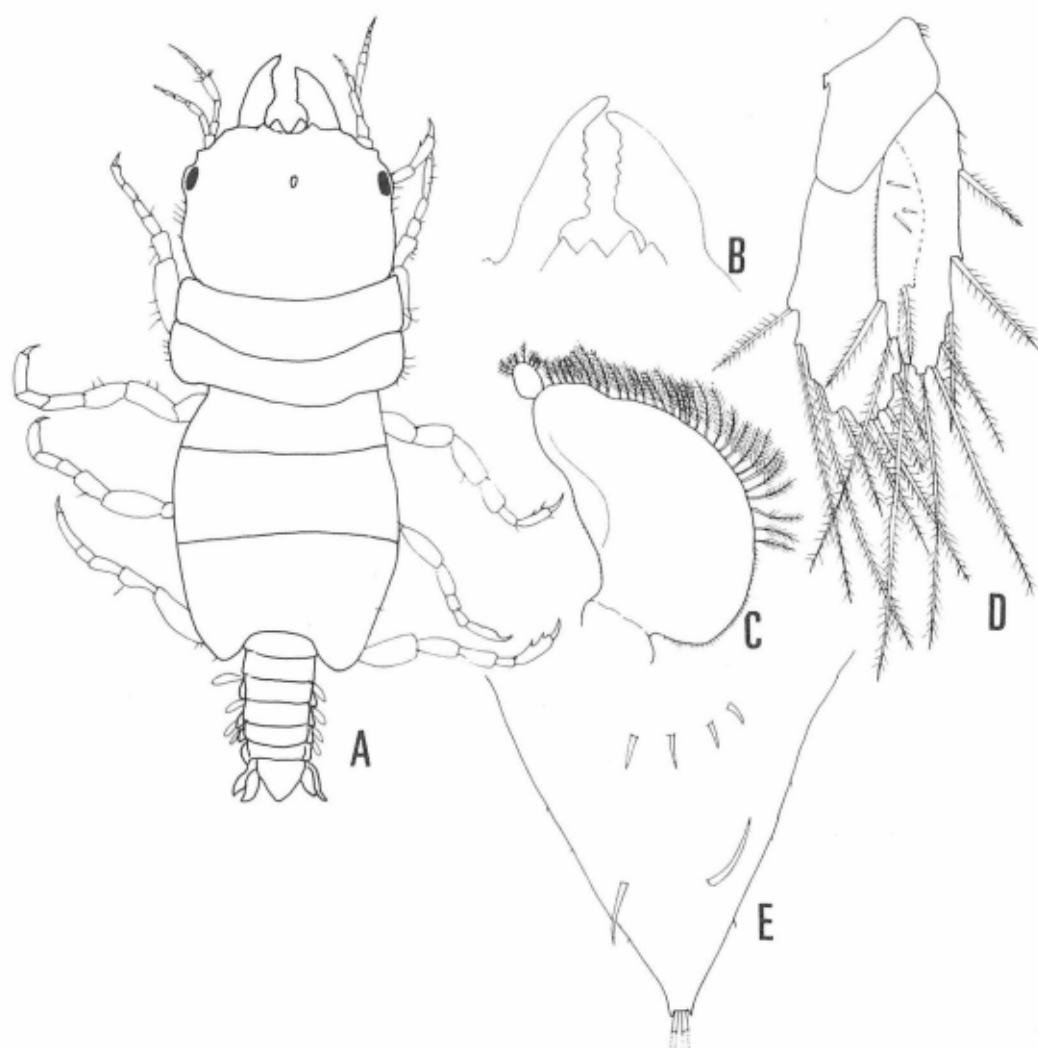


Fig. 1, *Gnathia bungoensis*, sp. nov.

A. Dorsal view; B. Mandible; C. Pylopod; D. Uropod; E. Pleotelson.
(All : holotype male)

Banshō-River. Near the rocky shore, there were colonies of brown algae, *Sargassum pilu-
liferum* (TURNER) C. AGARDH and *S. horneri* (TURNER) C. AGARDH. A specimen of hermit crab,
Pagurus dubius (ORTMANN) were collected together with the present specimen.

Description: Body rather stout, 3.1 times as long as wide. Body color pale yellow
in alcohol. Cephalon about 0.75 time as long as wide with a shallow concavity at anterior
part and with a pair of small projections at antero-lateral corner. Two pairs of small

triangular projections on the baymouth of cephalon. The mandible mediocre in size; apical part dentate. The eyes mediocre in size, each composed of about 60 ocelli. Anterior part of dorsal surface of peraeonal somites rather rough but posterior part of the same is rather smooth. First two peraeonal somites equal in length and third to fifth peraeonal somites longer than the anterior ones. Pleotelson triangular in shape.

First antenna eight-segmented; basal segment ellipsoibal; second segment as long as the first with a plumose seta and a simple seta; third segment about twice longer than the second; fourth segment very short; fifth segment oblong; sixth and seventh segments oblong and similar in length; terminal segment with a tuft of setae at the tip.

Second antenna about 1.4 times as long as the first; first segment small; second segment oblong; third segment also oblong with 4 setae on posterior margin; fourth segment 1.5 times as long as the third with 4 longer plumose setae and several simple setae; fifth to eleventh segments small and almost equal in length to one another.

Pylopod two-segmented; first segment large with many plumose setae on outer margin; second segment small and round with 8 plumose setae. Other appendages of mouth part were unfortunately lacking.

First peraeopod a very little stouter than the other peraeopods; basis oblong with 2 setae on outer margin; ischium rectangular with a long seta on outer margin and 3 short setae on inner margin; merus rectangular with a long seta at outer distal corner and a seta at inner distal corner; carpus rectangular with a long seta at outer distal corner and 2 stout setae on inner margin; propodus oblong with 2 stout setae on inner margin.

Second peraeopod a little shorter than the first; basis oblong with 2 setae on outer margin; ischium rectangular with 2 setae on outer margin; merus rectangular with a long seta at outer distal corner and a few of small setae and 2 pegs on inner margin; carpus short with 2 pegs and 3 setae on inner margin; propodus oblong with 2 stout setae on inner margin.

Third peraeopod as long as the second; basis oblong with 2 tubercles on inner margin; ischium oblong with 2 setae on outer margin, and a tubercle and 2 setae on inner margin; merus rectangular with a seta at outer distal corner; carpus rectangular with 3 setae on inner margin; propodus oblong with 4 small and stout setae on inner margin.

Fourth peraeopod a little shorter than the third; basis oblong with 2 setae on inner margin; ischium rectangular with 3 setae on outer margin and 2 setae on inner margin; merus rectangular with 2 setae on outer margin and 2 short setae on inner margin; carpus rectangular with a seta on outer margin and 3 setae on inner margin; propodus oblong with 2 setae on outer margin and 2 stout setae on inner margin.

Fifth peraeopod slender and longer than the fourth; basis oblong with a seta at inner distal corner; ischium oblong with 2 setae on outer margin and a seta on inner margin; merus rectangular with 2 setae at outer distal corner and 3 setae on inner margin; carpus rectangular with 3 setae on inner margin; propodus oblong with 3 stout setae on

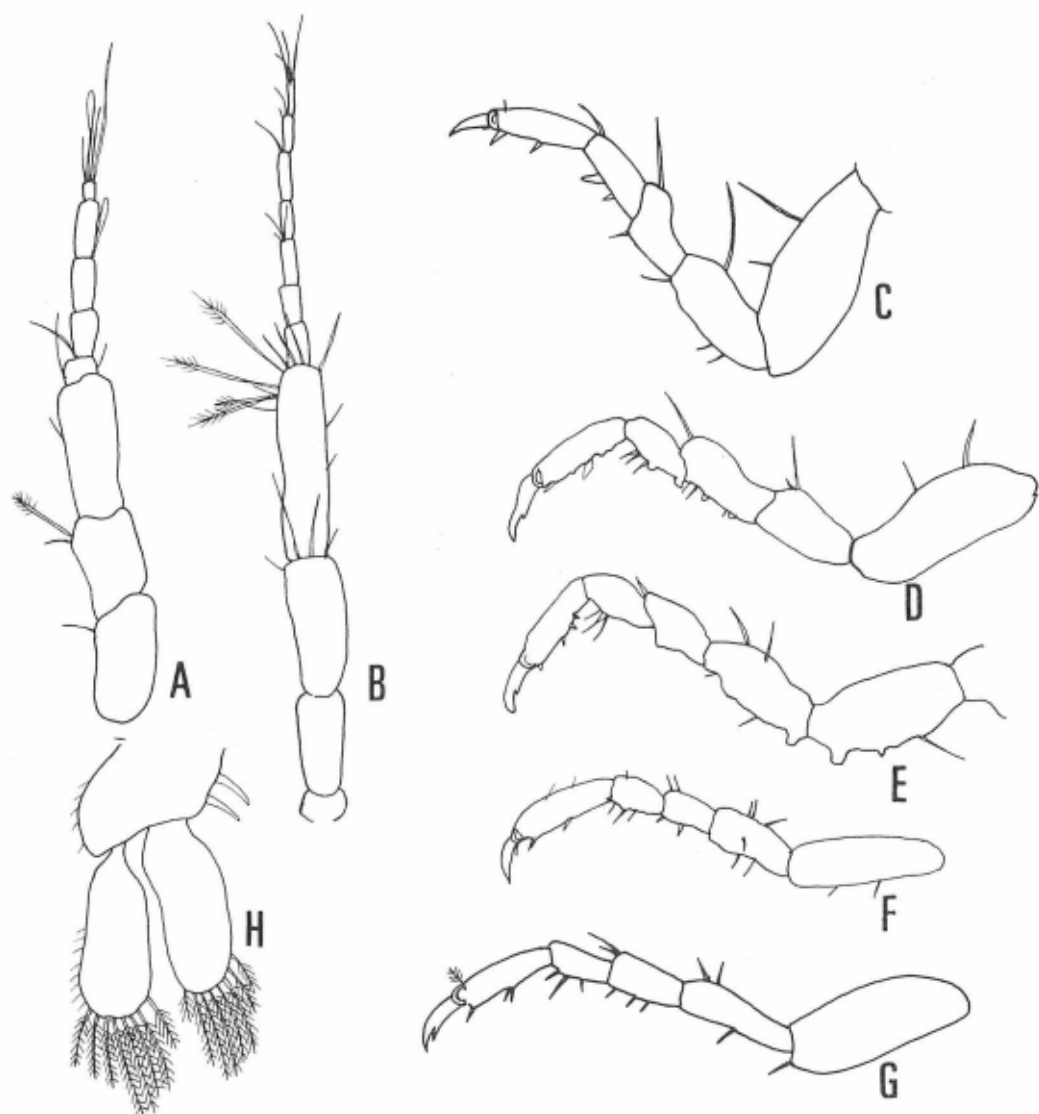


Fig. 2, *Gnathia bungoensis* sp. nov.,

A. First antenna; B. Second antenna; C-G. First to fifth pereopods;
H. Fifth pleopod.

(All : holotype male).

inner margin and a plumose seta at outer distal corner.

Both lami of each pleopod elliptical in shape. Uropod long; propodite trapezoid;
exopod with 9 plumose setae around margin; endopod longer than the exopod, and

with 9 plumose setae around margin.

Pleotelson triangular with 2 (perhaps long) setae at the tip, 2 simple setae on distal part of dorsal surface and 4 shorter setae near the basal part of dorsal surface.

Remarks: The present new species is most closely allied to *Gnathia permulica* MONOD reported from Siam Bay, Thailand, but the former is separated from the latter in the following features: (1) absence of remarkable projection of anterolateral part of cephalon, (2) shape of baymouth of anterior part of cephalon and (3) less numerous setae of telson.

The present new species is readily distinguished from *Gnathia sugashimaensis* NUNOMURA collected from the sea shore of Ise Bay, Central Japan in the following features: (1) shape of mandible, (2) stouter body shape, and (3) shape of anterior part of cephalon and so on.

References

- CALS, P. 1972. Gnathiid de l'Atlantique Nord, 1. Problème liés a l'anatomie et dimorphisme sexuel des Gnathiides (Crustacea, Isopoda). Description d'une forme bathyale du Golfe de Gascogne: *Gnathia teissieri* n. sp. Cah. Biol. Mar., 13: 511-540.
- MONOD, TH. 1926. Les Gnathiidae. Essai monographique (morphologie, biologie, systematique). Mem. Soc. Sci. Maroc. 13: 1-668. 1 col. pl.
- NUNOMURA, N. 1981. *Gnathia sugashimaensis*, a New Gnathiid Isopod from Sugashima, Ise Bay, Central Japan. Bull. Toyama Sci. Mus. 3: 19-24.