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**Three species of flabelliferan isopods (Crustacea) from the East China Sea,
including the description of a new species of *Syscenus****

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東シナ海から採集された有扇亜目等脚類 3 種について

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1978年1月から3月にかけて水産庁が東シナ海で行った底曳きによる採集物のうち大型等脚目について報告する。

Family Cirolanidae スナホリムシ科

Bathynomus doederleni Ortmann, オオグソクムシ

Family Aegidae グソクムシ科

Syscenus pacificus, sp. nov., オニグソクムシ (新称)

Family Cymothoidae ウオノエ科

Meinertia sp.,

なお、新種 *Syscenus pacificus* (和名：オニグソクムシ) は本属の日本近海からの最初の発見であり、本属の他の一種 *Syscenus infelix* (HARGER) とは次の点で区別される。すなわち、(1) 頭部中央の突起が大きいこと、(2) 第四及び第五腹節の背部後縁中央部に鋭い突起があること、(3) 腹尾節後縁が丸いこと、(4) 腹肢各節の剛毛が少ないこと、(5) 両触角の節数が少ないこと、(6) 顎脚の中央には棘が2本しかないことなどである。

Recently, through the courtesy of Prof. Taiji Kikuchi of the Amakusa Marine Biological Laboratory, Kyushu University, I had an opportunity to examine some interesting isopod samples collected from the bottom of the East China Sea. At closer examinations, they prove to represent three species belonging to the suborder Flabellifera including a new species.

Before going further, I wish to express my sincere gratitude to Dr. Saburo Nishimura of the Kyoto University for reading the manuscript, to Prof. Taiji Kikuchi of the Amakusa Marine Biological Laboratory, Kyushu University, for giving me a chance to examine the samples, and Dr. Shuzo Kishida, of the Seikai Regional Fisheries Research Laboratory for collecting and sorting the samples and offering me the collection data.

Family Cirolanidae
***Bathynomus doederleni* Ortmann, 1894.**
(Japanese name: Oogusokumushi)

* Contributions from the Toyama Science Museum No.12.

Occurrence:

- Net 3, 5 ♂♂ (79.4 ~ 100.3 mm in body length) and 3 ♀♀ (70.0 ~ 85.0 mm in body length), Jan. 14, 1978. From 25°37.67'N, 122°53.58'E to 25°39.06'N, 122°53.11'E, 560 ~ 692 m in depth.
- Net 10, 1 ♂ (77.8 mm in body length), Jan. 23, 1978. From 26°27.84'N, 124°50.93'E to 26°27.36'N, 124°50.23'E, 680 ~ 770 m in depth.
- Net 18, 1 ♀ (80.0 mm in body length), Feb. 4, 1978. From 29°38.92'N 127°55.95'E to 29°39.67'N, 127°57.75'E, 750 m in depth.
- Net 21, 6 ♂♂ (70.6 ~ 106.9 mm in body length) and 9 ♀♀ (62.3 ~ 103.4 mm in body length), Feb. 5, 1978. From 29°23.01'N 127°30.92'E to 29°24.47'N, 127°31.99'E 642 ~ 650 m in depth.
- Net 22, 3 ♀♀ (55.5 ~ 85.4 mm in body length), Feb. 5, 1978. From 29°26.00'N, 127°31.03'E to 29°27.99'N 127°30.88'E in depth.
- Net 25, 3 ♀♀ (74 ~ 111 mm in body length), Feb. 6, 1978. From 28°48.24'N, 127°03.70'E to 28°49.78'N, 127°05.45'E, 425 ~ 440 m in depth.
- Net 36, 1 ♀ (104.8 mm in body length), Mar. 2, 1978. From 26°47'.N, 125°37'.E to 26°43'.N, 125°36'.E, 330 ~ 365 m in depth.
- Net 47, 2 ♂♂ (106 ~ 111 mm in body length) and 2 ♀♀ (60 ~ 85 mm in body length), Mar. 11, 1978. From 28°36'.N, 127°12'.E to 28°34'.N, 127°09'.E. 800 ~ 910 m in depth.
- Net 48, 2 ♂♂ (102 ~ 103 mm in body length), Mar. 11, 1978. From 28°43'.N, 127°14'.E to 28°40'.N, 127°12'.E, 750 ~ 755 m in depth.
- Net 49, 1 ♂ (128 mm in body length), Mar. 11, 1978. From 28°44'.N, 127°01'.E to 26°46'.N, 127°05'.E, 610 ~ 640 m in depth.
- Net 50, 2 ♂♂ (82.0 ~ 94.0 mm in body length) and 5 ♀♀ (73.7 ~ 95.3 mm in body length), Mar. 11, 1978. From 28°42'.N, 127°09'.E to 28°46'.N, 127°10'.E. 500 ~ 535 m in depth.
- Net 52, 4 ♂♂ (103.2 ~ 144.9 mm in body length), Mar. 12, 1978. From 28°26'.N, 127°11'.E, to 28°25'.N, 127°12'.E. 300 ~ 355 mm in depth.
- Net 57, 3 ♂♂ (71.6 ~ 110.8 mm in body length) and 2 ♀♀ (63.1 ~ 112.1 mm in body length), Mar. 16, 1978. From 28°35'.N, 127°10'.E to 28°36'.N, 127°11'.E, 600 m in depth.
- Net 58, 1 ♂ (101.9 mm in body length) and 2 ♀♀ (68.0 ~ 112.1 mm in body length), Mar. 16, 1978. From 28°45'.N, 127°07'.E to 28°47'.N, 127°08'.E. 530 ~ 542 m in depth.
- Net 59, 3 ♀♀ (69 ~ 119 mm in body length), Mar. 16, 1978. From 28°50'.N, 127°14'.E to 28°51'.N, 127°16'.E, 700 ~ 740 m in depth.
- Net 60, 2 ♂♂ (91.6 ~ 111.0 mm in body length), Mar. 16, 1978. From 28°53'.N, 127°18'.E to 28°55'.N, 127°19'.E. 820 ~ 830 m in depth.
- Net 65, 1 ♂ (123 mm in body length), Mar. 18, 1978. From 29°18'.N, 127°20'.E to 29°19'.N, 127°23'.E. 410 ~ 415 m in depth.
- Net 72, 2 ♀♀ (91 ~ 108 mm in body length), Mar. 19, 1978. From 29°44'.N, 127°48'.E to 29°42'.N, 127°49'.E. 495 ~ 510 m in depth.

Family Aegidae

***Syscenus pacificus* sp. nov.,**

(Japanese name: Oni-gusokumushi)

(Figure 1)

Material examined:

Net 8, 1 ♀ (46.1 mm in body length), Jan. 22, 1978. From 26°17.14'N, 124°46.77'E to 26°15.74'N, 124°47.14'E, 910 ~ 990 m in depth.

Net 10, 1 ♀ (37.9 mm in body length) Jan. 23, 1978. From 26°27.84'N, 124°50.93'E to 26°27.36'N, 124°50.23'E. 680 ~ 770 m in depth.

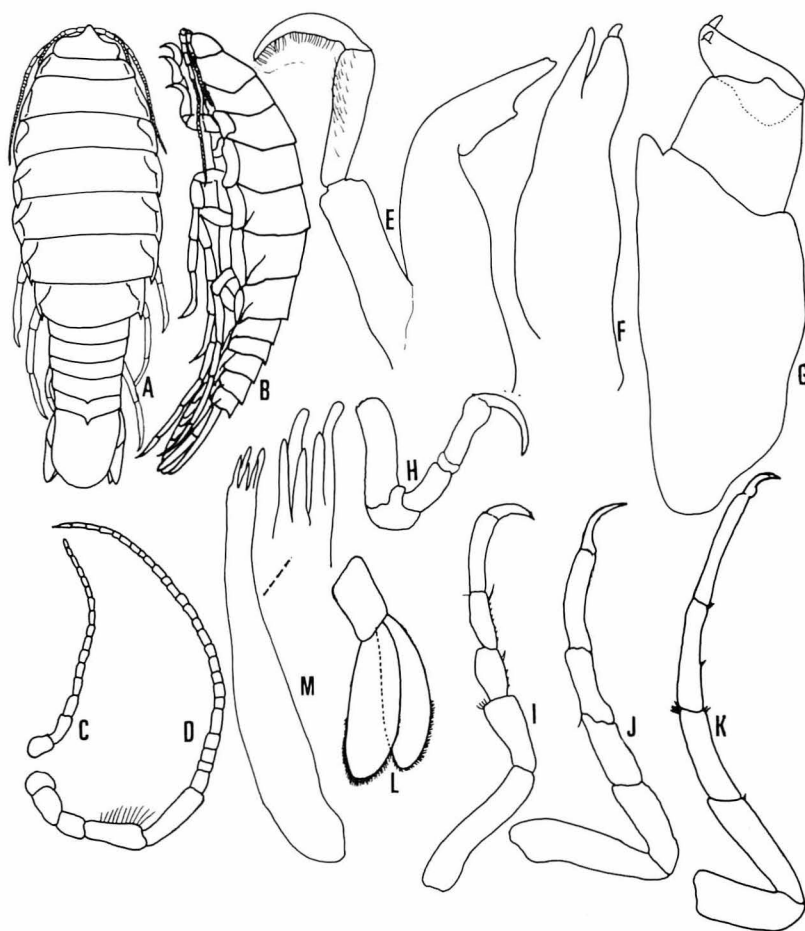


Fig. 1. *Syscenus pacificus* sp. nov.,

A. Dorsal view; B. Lateral view; C. First antenna; D. Second antenna; E. Mandible; F. Second maxilla; G. Maxilliped; H. First pereopod; I. Fourth pereopod; J. Sixth pereopod; K. Seventh pereopod; L. Uropod; M. First maxilla. (All: holotype female).

Net 16, 1♀ (44.0 mm in body length), Feb. 3, 1978. From 30°01.77'N, 128°21.94'E to 29°59.43'N, 128°21.39'E. 940 ~ 959 m in depth. (holotype).

Net 74, 1♀ (39.6 mm in body length) Mar. 20, 1978. At 29°44'N, 128°03'E. 815 m in depth.

Type specimens are deposited as follows: holotype (Cr-161), adult female 44.0 mm long and 1 paratype (Cr-162), adult female 46.1 mm long at the Toyama Science Museum; 1 paratype (OMNH-Ar-2508) adult female 39.6 mm long at the Osaka Museum of Natural History; 1 paratype (NSMT-Cr-7296) at the National Science Museum, Tokyo.

Description: Body elongated, nearly four times as long as wide. Body color dull yellow in formalin. Eyes lacking. Cephalon wide and with a rather big rostral projection. Epimera of peraeonal somites remarkable and increasing posteriorly in size. Pleon abruptly narrower than the peraeon. Fourth and fifth pleonal somites each bears an acute process at posterior medial part. Pleotelson elliptical in shape without any process on dorsal margin.

First antenna composed of 16 segments; flagellum is not distinguishable from peduncular segments. Second antenna about 2.5 times as long as the first; peduncle composed of five segments and flagellum of 26 segments.

Mandible slender but bears relatively big three-segmented palp; second and third segments with many setae. First maxilla long with five long teeth at the tip. Second maxilla with two lobes; outer lobe with a tooth at the tip. Maxilliped with palp composed of two segments; first segments square in shape; terminal segment triangular and armed with two hooks at the tip.

First to third peraeopods directed forwards and short; basis oblong; ischium triangular; merus rectangular; carpus very short; propodus oblong; dactylus big. Fourth to seventh peraeopods directed backwards and longer than the preceding three peraeopods, especially last two peraeopods are long; basis to propodus long but dactylus short.

Pleopods not characteristic in female. Uropod long; basis rectangular; both laminae lanceolate with many short setae on the margin.

Remarks: As far as I know, the genus *Syscenus* has hitherto been represented by a single species, *S. infelix* (HARGER) in the world. The present species is separated from the known species in the following features: (1) protruded rostral projection, (2) acute projection of the posterior medial parts of fourth and fifth pleonal somites, (3) round posterior margin of pleotelson, (4) less numerous segmentation of both antennae, (5) less numerous setae on each segment of peraeopods, and (6) only two spines at the tip of maxilliped and so on.

Family Cymothoidae

***Meinertia* sp.**

(Figure 2)

Material examined:

Net 56, 1 ♀ (25.7 mm in body length) Mar. 13, 1978. From 27°42'.N, 126°06'.E to 27°45'.N, 126°08'.E. 125 m in depth. This specimen is deposited at the Toyama Science Museum (Cr-163).

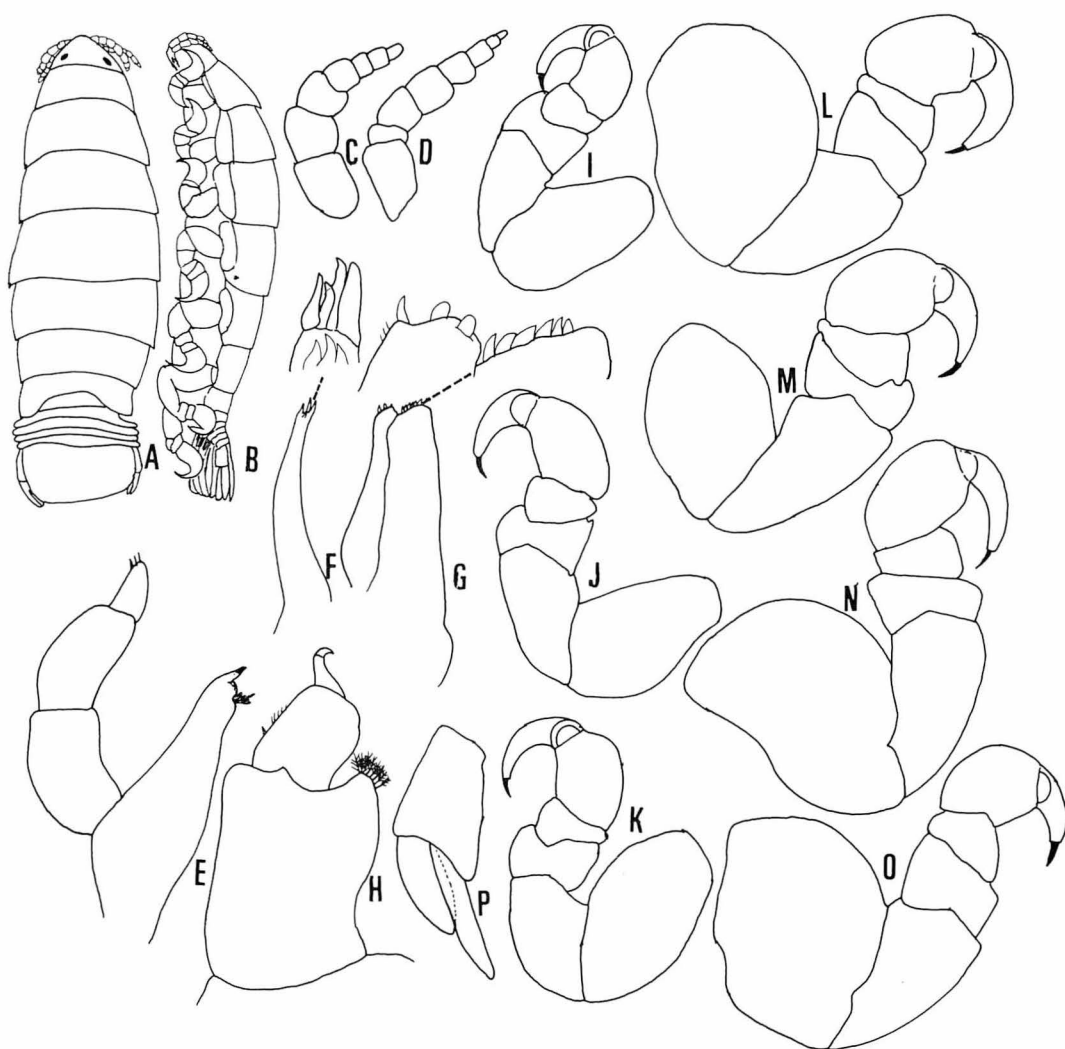


Fig. 2. *Meinertia* sp.

A. Dorsal view; B. Lateral view; C. First antenna; D. Second antenna; E. Mandible; F. First maxilla; G. Second maxilla; H. Maxilliped; I-O. First to seventh pereopods; P. Uropod.

Description: Body, almost symmetrical bilaterally, about three times as long as wide except both antennae. Body color dull yellow in formalin. Body surface smooth. Cephalon triangular, and not immersed in the first peraeonal somite. Eyes small, each with about 30 ocelli. Border between cephalon and first peraeonal somite broadly rounded.

First antenna composed of seven segments. Second antenna, a little longer than the first, composed of eight segments.

Mandible slender; pars incisiva stout with about four setae at the tip; terminal segment of palp with three spines at the tip. First maxilla slender, apex with four stout teeth. Second maxilla with two lobes; one lobe with three teeth at the tip, another lobe with six teeth at the tip. Maxilliped rather stout and three-segmented; first segment big and square in shape with seven plumose setae at inner distal corner; second segment rectangular; third segment small with a hook at the tip.

First to third peraeopods directed forwards; basis stout; ischium rectangular; merus and carpus short; propods rectangular; dactylus pretty long. Fourth to seventh peraeopods directed backward and bigger than the preceding three peraeopods. Pleopods not characteristic in female. Uropod a little extended beyond the telson; basis stout; exopod lanceolate; endopod longer than the exopod by its half length.

Remarks: The present specimen of the genus *Meinertia* relatively resembles *M. trigonocephala* (LEACH), but the former is separated from the latter in the following features: (1) cephalon not immersed in the first peraeonal somite, (2) shape of maxilliped, (3) shape of second maxilla, and (4) presence of setae on mandibular palp.

References

- GRIFFIN, D. J. G. 1975. A New giant deep-water isopod of the genus *Bathynomus* (Flabellifera: Cirolanidae) from Eastern Australia. Proc. Linn. Soc. New South Wales, 100 (2): 103-109. pl. xv.
- HARGER, O. 1878. Report on the Marine Isopoda of New England and adjacent waters. Rep. U. S. Comm. 1878. 297-462. Tab. 1-13.
- ORTMANN, 1894. A new species of the isopod genus *Bathynomus*. Proc. Acad. nat. Sci. Phila., 46: 191-193.
- RICHARDSON, H. 1901. Key to the Isopod of Atlantic Coast of North America with description new and little known species. Proc. U. S. Nat. Mus. 23: 493-579.
- , 1905. A monograph of the isopod of North America. Bull. U. S. Natn. Mus., 54: 1-727.
- , 1910. Marine isopods collected in the Phillippines by the U. S. Fisheries Steamer "Alba-tross" in 1907-1908. Doc. Bur. Fish. Wash. D. C. 736: 1-44. 39 figs.
- SHIH, C. T. 1972. Note on the giant isopod genus *Bathynomus* MILNE-EDWARDS 1879 with description of a new species. Publ. Seto Mar. Biol. Lab., 21: 31-42, 11 figs, pls 4-5.
- SCHULTZ, G. 1968. How to know marine Isopoda. Hampton. 1-359.