

Studies on the Pelagic Copepoda from the Japan Sea—I.

On the Genus of *Pontellopsis* BRADY 1883

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Introduction

In the neighbouring water of Japan, *Pontellopsis armata*, *P. perspicax*, *P. yamadae*, *P. tenuicauda* were reported by T. Mori 1937. Reserching the planktons in the Japan Sea, I have discovered the new species, *Pontellopsis pacifica* sp. nov.

Pontellopsis pacifica sp. nov.

Occurrence. 7 females and 4 males were caught on 10 May and 13 June 1951. lat. 34° 24' N. Long. 131°, 10' E.

Description. Female (Fig. 1), length 2.58—3.15 mm. This new species resembles to *Pontellopsis laminata*, *P. yamadae*, but is different on the following points. Its head round and broad in front, with a small projection over the base of rostrum. The lateral angles of the last thoracic segment are produced into bluntly rounded process. The proportional length of the cephalothorax and the abdomen is as 150 to 65, so the length of the cephalothorax is 2.72 times in that of the abdomen. The abdomen consists of 2 segments. The abdominal segments and the furca have the following proportional length;

$$\text{Segment } \frac{1 \quad 2 \quad f}{65 \quad 20 \quad 15} = 100$$

The anterior antennae are 16 segmented, reaching only to the 4th thoracic segment. The proportional length of the various segment have the following length:

$$\frac{1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 15 \quad 16}{.34 \quad 100 \quad 34 \quad 82 \quad 57 \quad 34 \quad 24 \quad 55 \quad 57 \quad 74 \quad 90 \quad 65 \quad 65 \quad 82 \quad 65 \quad 82} = 1000$$

The exopodite of the 2nd antenna is only one-fourth as long as the endopodite and have 5 terminal setae. The exopodite of the first pairs of feet are 3-segmented, and the endopods of the first legs are 3 segmented, and the other 2-segmented. Genital segment with 2 short processes at the posterior of the ventral surface curves backward.

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Laminae attaches to the dorsal surface of the segment at the posterior corner. These laminae are chitinous and perfectly transparent, but of course they are very brittle and likely to be broken off. But this laminae remains unbroken. This new species, as *Pontellopsis yamadae* have not a pair of small spines on the proximal and also have not a flap on the distal position of the dorsal surface of the genital segment. The anal segment is short and inverginate posteriorly. The furca and the 5th pair of feet are nearly symmetrical. The endopodite are 1-segmented, and terminal segment ends into the bifurcate. The exopodite have outer marginal spines. The right exopodite has 2 stout inner marginal spines. The exopodite is about 3 times as long as the endopodite and its distal half is bifurcated, and the branch is blunt.

Male (Fig. 2) length 2.16—2.34 mm. On the left corner is a short and blunt process while on the right is a long sickle-shaped spine reaching to the middle 4th abdominal segment but the latter dont reaches to the end of the anal segment. The endspine of the right process ends in acuminate point. The proportional length of the cephalothorax and the abdomen is as 140 to 40, so the length of the cephalothorax is 3.5 times in that of the abdomen. The abdomen consists of 5 serments. The 3rd segment have a knob on the right side. The abdomen segments and the furca have the following proportional length :

$$\text{Segment} \begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 & f \\ 16 & 11 & 11 & 16 & 18 & 28 \end{array} = 100$$

The right anterior antenna almost consists of 13 segments and modified into the grasping organ. As can be seen in Figure 2, the basal segment is considerably wide and the ones next to the swollen knob are narrowed. The knob is abruptly widened, and its distal segment is toothed on the inner margin. The segment next to the hinge has a row of small teeth along its inner margin. The terminal section consists of 2 segments. The left antenna consists of 17 segments. The various segments of the left antenna have following length :

$$\begin{array}{cccccccccccccccccc} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 \\ 31 & 116 & 77 & 92 & 23 & 31 & 38 & 46 & 56 & 62 & 62 & 62 & 62 & 62 & 80 & 62 & 62 \end{array} = 1000$$

The terminal setae of the exopodite of the 2nd antenna has 6+7 long hairees. The 5th pairs of feet is asymmetrical. The right foot consists of a forceps. The thumb reaches to the end of the terminal claw.

The left foot has 2 segment. Exopodite ends in 2 short and endopodite has a short haired spine. The length of the endopodite of the left foot is as half as that of the exopodite. The furca is almost symmetrical and has many hairees at inner margin. Two endospines among the furcal setae are longer than the other and are as long as the abdomen.

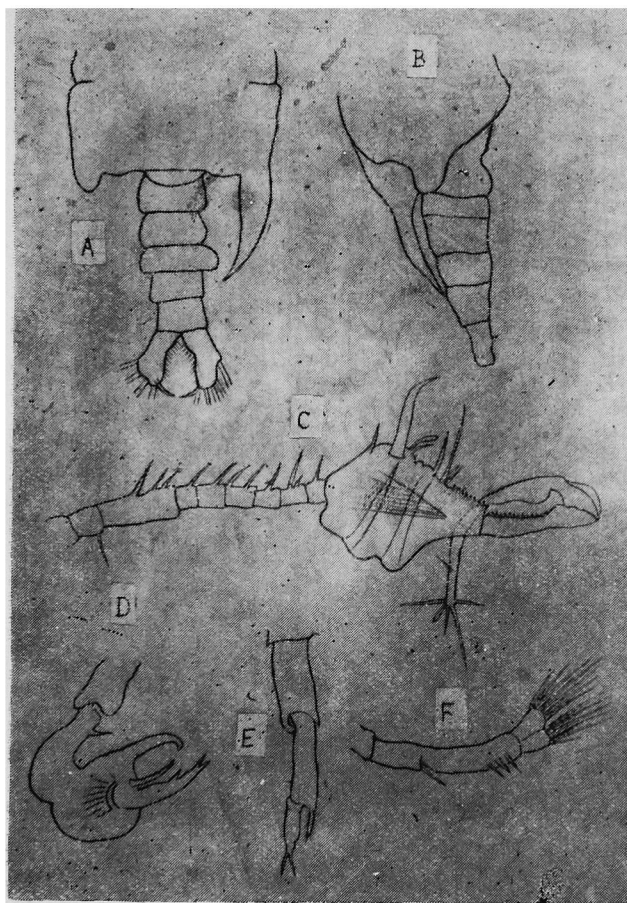


Fig. 1 *Pontellopsis pacifica* sp. nov.

female. A. head, lateral view, $\times 70$, B. head, ventral view, $\times 90$, C. abdomen, dorsal view, $\times 70$, D. abdomen, ventral view, $\times 70$, E. 5th pair of feet, $\times 40$, F. left 5th foot, lateral view, $\times 40$, G. 4th foot, $\times 50$.

References

- 1) T. MORI, 1937. The pelagic copepoda from the neighbouring waters of Japan. p. p. 97—99. pl. 45, 46, 47.

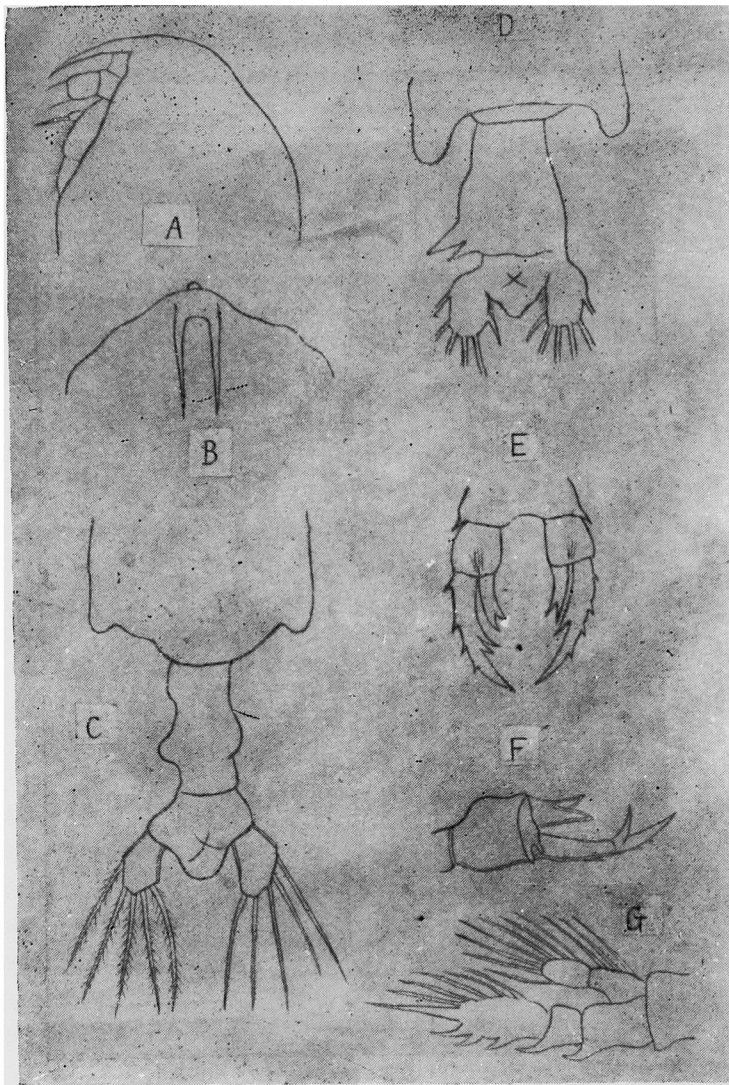


Fig. 2

male. A. abdomen, dorsal view, $\times 50$, B. abdomen, lateral view, $\times 50$, C. right 1st antenna $\times 60$ D. 5th right foot, $\times 50$, E. 5th left foot, $\times 50$, F. exopodite of 2nd antenna $\times 40$.

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- 2) W. GIESBRECHT and O. SCHMEL, 1898. Das Tierreich, Lief. 6. Copepoda, 1, Gymnoplea, pp. 100—101.
- 3) C. B. WILSON, 1951. Contributions to the Biology of the Philippine Archipelago and Adjacent regions. pp. 302—314, pl. 30, fig. 445 462.