

日本海(新潟)沿岸から発見されたカラノイド橈脚類 Pseudodiaptomusの一新種

誌名	日本プランクトン学会報
ISSN	03878961
著者	平川, 和正
巻/号	30巻1号
掲載ページ	p. 65-69
発行年月	1983年7月

A New Species of *Pseudodiaptomus* (Copepoda: Calanoida) from the Coast of Niigata, the Japan Sea^{1), 2)}

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Abstract

During the course of an analysis of the zooplankton samples from the coast of Niigata, the Japan Sea, I found a new *Pseudodiaptomus* species, which I describe herewith.

Copepods of the genus *Pseudodiaptomus* occur commonly in brackish water environment such as lower reaches of river, coastal lagoons, and neritic waters in the tropical and temperate regions. More than fifty species and subspecies have been described, and only three species, i.e. *P. cornutus* NICHOLLS, 1944, *P. inopinus* BURCKHARDT, 1913 (syn. *P. japonicus* ITO, 1928) and *P. marinus* SATO, 1913 are known from Japanese waters.

During the course of an analysis of the zooplankton samples collected from Izumozaki Harbour, Niigata Prefecture, Japan, I found some females and males referable to *Pseudodiaptomus*. The female specimens are identical with the specimens reported from the northwestern coast of Kyushu by TANAKA (1966) under the name *Pseudodiaptomus cornutus* NICHOLLS. I was convinced, however, that they are not true *P. cornutus* described from South Australia. I compared the present specimens with the type specimens of *P. cornutus* deposited in the South Australian Museum.

Pseudodiaptomus nihonkaiensis n. sp.

(Figs. 1-3)

Pseudodiaptomus cornutus: TANAKA, 1966, p. 40, fig. 2. (non NICHOLLS 1944)

Type-series. The type specimens are deposited in the National Science Museum, Tokyo. Holotype: Male (NSMT-Cr 8918), Allotype: Female (NSMT-Cr 8919), Paratypes: 6 females and 8 males (NSMT-Cr 8920).

All specimens were collected at night (20:15-20:45) on the 28th September 1980 by the vertical haul from near the bottom to the surface with a Norpac net, 0.33 mm mesh openings, in Izumozaki Harbour, Niigata Prefecture.

Description

Female: Total length 1.08-1.26 mm (allotype, 1.21 mm), mean 1.17 mm. Head completely

¹⁾ Accepted 12 May 1983

²⁾ 日本海(新潟)沿岸から発見されたカラノイド橈脚類 *Pseudodiaptomus* の一新種

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separated from 1st thoracic somite. Fourth and 5th thoracic somites fused, their posterior corners produced into triangular processes and extend to middle of genital somite. A pair of small, round knobs on dorsal side of posterior margin of 1st thoracic somite. Prosome about 2.5 times length of urosome which consists of 4 somites. Genital somite symmetrical and globular in shape; dorso-lateral sides bear patches of minute spinules. Serrations on posterior margins of 1st (genital), 2nd, and 3rd somites. Both furcae nearly equal in length and about twice as long as broad, beset with fine hairs on inner margins. Urosome somites and furca with proportional lengths as 30:14:16:17:23=100. Antennule consists of 22 segments and extends to middle of 3rd somite of urosome. Antenna and oral appendages regular for genus. First to 4th pairs of legs with 3-segmented exopod and endopod. Fifth pair of legs symmetrical, without endopod, and with only 2-segmented exopod; 1st segment of exopod bears an oblique row of short setae on outer region; 2nd short, having terminal 2 strong spines and a small spine.

Male: Total length 0.85–1.05 mm (holotype, 1.05 mm), mean 1.01 mm. Prosome consists of 5 somites as in female; urosome 5 somites. Dorsal knobs on 1st somite less pronounced than

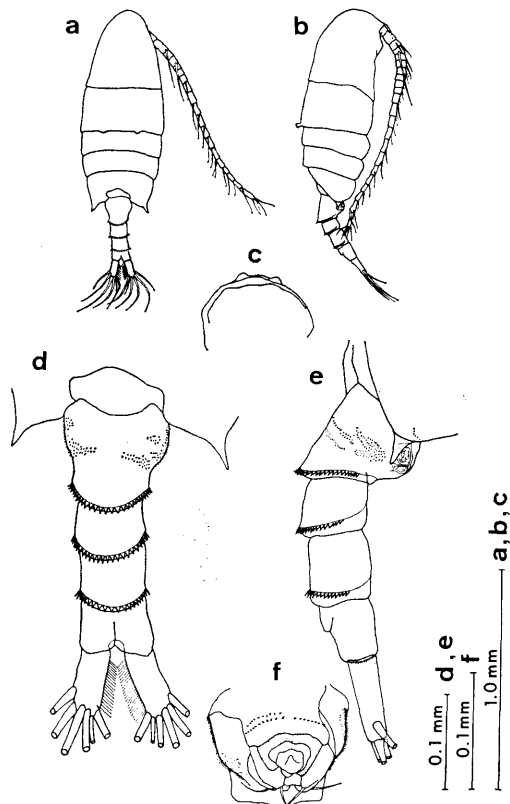


Fig. 1. *Pseudodiaptomus nihonkaiensis* n. sp. Female: a, dorsal view; b, lateral view; c, cross section of 2nd thoracic somite; d, urosome, dorsal view; e, urosome, lateral view; f, genital somite, ventral view.

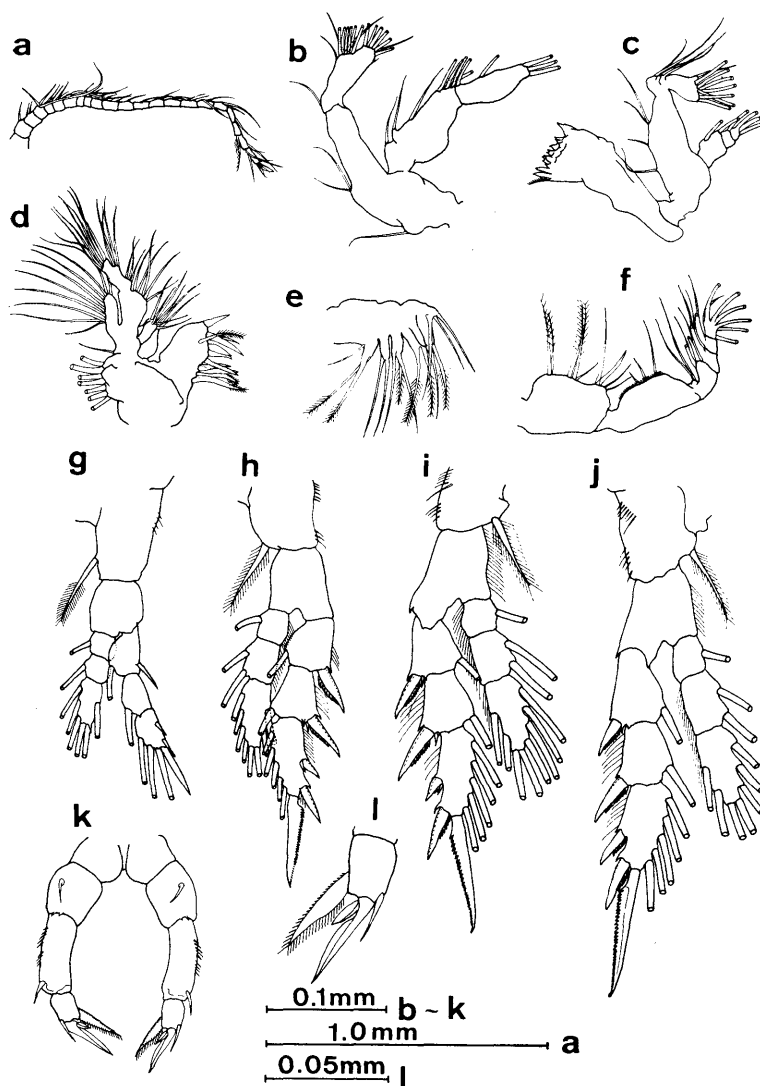


Fig. 2. *Pseudodiptomus nihonkaiensis* n. sp. Female: a, antennule; b, antenna; c, mandible; d, maxillula; e, maxilla; f, maxilliped; g, 1st leg; h, 2nd leg, i, 3rd leg; j, 4th leg; k, 5th leg; l, terminal segment of 5th leg.

in female, or absent. Serrations on posterior margins of 2nd, 3rd, and 4th somites of urosome. Right (clasping) antennule composed of 21 segments and reached to posterior margin of 3rd somite of urosome; 10th to 13th segments each with strong spines. Antenna and oral appendages nearly as those of female. Right endopod of 5th leg consists of outer lamelliform plate with spinules on distal end and inner bifurcate process; a patch of fine setae at base of this endopod. First exopod segment of right 5th leg covered with a patch of short setae on inner posterior corner and has a large spine at outer posterior corner, extending to about half-way along outer edge of 2nd exopod segment. Third exopod segment of this leg modified into a

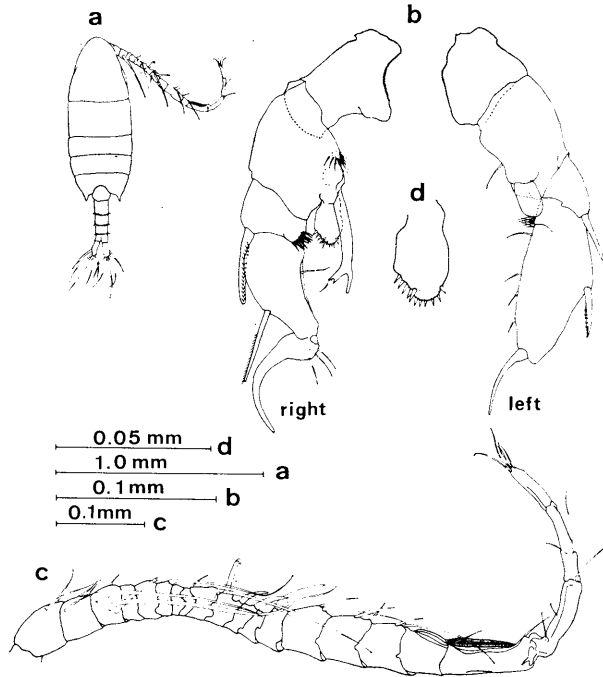


Fig. 3. *Pseudodiaptomus nihonkaiensis* n. sp. Male: a, dorsal view; b, 5th leg; c, antennule; d, outer lamelliform plate of right endopod of 5th leg.

TABLE 1. COMPARISON OF THE MORPHOLOGICAL CHARACTERS IN *Pseudodiaptomus nihonkaiensis* N. SP. AND *P. cornutus* NICHOLLS.

Characters	<i>P. nihonkaiensis</i>	<i>P. cornutus</i>
Female		
Genital somite		
several patches of strong spines on the right lateral side	absent	present
5th leg		
an oblique row of setae on the outer region of the 2nd exopod segment	present	absent
Male		
5th leg		
right: spines on small prominence at the middle of inner margin of the 1st basal segment	absent	present
left: endopod	short (not reach the middle of the left 2nd exopod segment)	long (extending beyond the middle of the left 2nd exopod segment)
: a round extension directed towards the base of the 5th leg at inner base of the 2nd exopod segment	absent	present

long curved claw, extending beyond end of left 5th leg. Left 5th leg has a small endopod like lamelliform plate; 2nd exopod segment has a strong spine at middle of outer margin and posterior corner, respectively.

Remarks

The original description of *P. cornutus* by NICHOLLS (1944) is incomplete in some details. From the examination of the type specimens of *P. cornutus*, I propose to correct the original description of the species as follows:

- Female 1) The inner distal corner of the 1st exopod segment of the 5th leg is not triangular form, but round.
- 2) The genital somite bears several patches of strong spines on the right lateral side.
- Male 1) The outer lamelliform plate in the right endopod of the 5th leg bears spinules on its distal margin.

Table 1 shows the result of comparison of the specimens from Izumozaki Harbour and the type specimens of *P. cornutus*. The most striking differences are the presence or absence of several patches of strong spines on the right side of the genital somite in the female, and the length of the left endopod of the 5th leg in the male. Although both species are very closely related to each other, some remarkable differences indicated in Table 1 vindicated their present stand as two distinct species.

The specific name is derived from the type locality of this species; the Japan Sea (Nihonkai in Japanese).

Acknowledgements

I am grateful to Dr. I. A. E. BAYLY, Monash University, Australia and Mr. W. ZEIDLER, South Australian Museum, for loaning the type specimens of *Pseudodiaptomus cornutus*, and to Dr. J. R. GRINDLEY, University of Cape Town, South Africa for his authoritative opinions with regard to the identification and helpful comments. Thanks are also due to Dr. M. OMORI, Tokyo University of Fisheries, and Dr. M. TAKEDA, National Science Museum, Tokyo for their valuable advices and critically reviewing the manuscript.

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