



Title	CEININA JAPONICA (N. GEN., N. SP.), A NEW ABERRANT SPECIES OF THE AMPHIPODAN FAMILY TALITRIDAE FROM JAPAN
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Citation	札幌博物学会会報, 13(2), 63-68
Issue Date	1933-12-15
Doc URL	http://hdl.handle.net/2115/64058
Type	article
File Information	Vol.13No.2_001.pdf



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CEININA JAPONICA (N. GEN., N. SP.),
A NEW ABERRANT SPECIES OF THE AMPHIPODAN
FAMILY TALITRIDAE FROM JAPAN

BY

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(With four text-figures)

The Amphipods which form the subject of this paper were sent for examination by my colleague Dr. MASUZO UÉNO of the Ôtsu Hydrobiological Station, Ôtsu, Shigaken, Japan; they turned out to be types of a new rather aberrant genus of the family Talitridae.

* * *

Locality. Yoichi, Hokkaidô (the coast of the Sea of Japan), penetrating into the stem of the brown alga *Undaria pinnatifida*. A few ♀ ovig., collected by T. KINOSHITA, June 1933. There were no ♂ in the material.

For diagnosis of the genus, see below.

Description of ♀ ovig. Length up to 7 mm.

The body has the back evenly vaulted and is not compressed as usually in the Amphipods; it is more Isopod-like.

The head is rather broad and Isopod-like, anteriorly somewhat narrowing, and with small but marked subantennal corners. There is no rostrum, The eyes are oval, medium-sized, black (in spiritus). The antennae are short, not longer than the head. Antenna 1 has in all 7 joints, decreasing in length and breadth from no. 1 to no. 6; the apical (7.) joint is very minute. Antenna 2 is about as long as antenna 1; (1.+) 2. joints are very thick, globose; of the following 3 joints of the peduncle, the ultimate joint is much longer than the others; the flagellum has only two, very short joints.

The upper lip is small, with the under margin straight; the lower lip has the ordinary shape, without inner lobes, but with some setae on the lateral angles. The mandibles are stout, with a rather straight but somewhat dentate cutting edge, but without any trace of molar tubercle. There is a small process on the outer side, but no palp. Each mandible has a lacinia mobilis with 4 sharp teeth, but no spines behind this, and there does not seem to be any difference between the lacinia of the left and of the right mandible. Maxilla

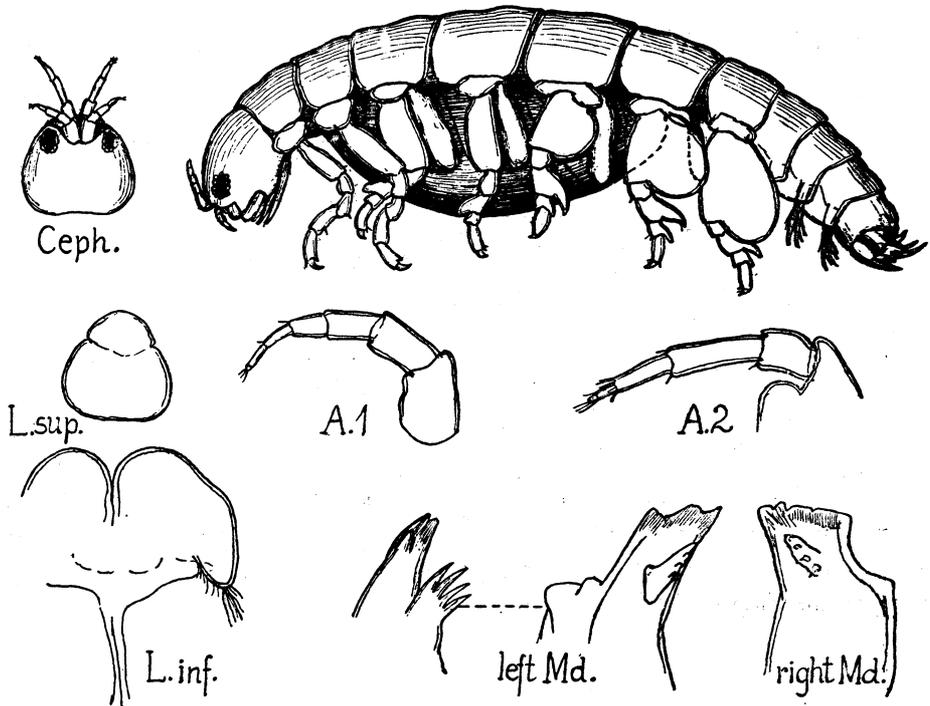


Fig. 1. *Ceinina japonica* n. gen., n. sp. ♀

Antenna 1-2 (A. 1-2), the head (Ceph.), upper and lower lip (L. sup., L. inf.), and the two mandibles (Md.). The left mandible is drawn seen both from the upper (dorsal) side and from the inner side.

1 has the outer lobe very strong, terminating in 8 strong, more or less denticulated spines; the inner lobe is somewhat shorter, rather narrow, terminating in a single seta. There is no palp. Maxilla 2 in normal, with the lobes equally broad and nearly of equal length; the outer lobe terminates in 5 stronger and 5 shorter and slender spines; the inner lobe has 6 (2 or 3 strong, 4 or 3 more slender) spines; the median spine is more or less kneed and not alike in the maxillae, rather short and extremely heavy or very long and acute. The maxillipeds are rather normal, with the outer and inner lobes of nearly the same length and breadth; the inner lobes are truncate, each terminating in (reckoned from the lateral to the median edge) 1 or 2 very short and blunt teeth, a few (3-5) spines, and 2 triangular teeth; the outer lobe has a few setae or spines. The palp has the usual 5 joints, decreasing in breadth from no. 1 to no. 5; nos. 1-3 are of nearly equal length, no. 4 somewhat shorter, no. 5 (the finger) rather short; none of the joints has any process or the like.

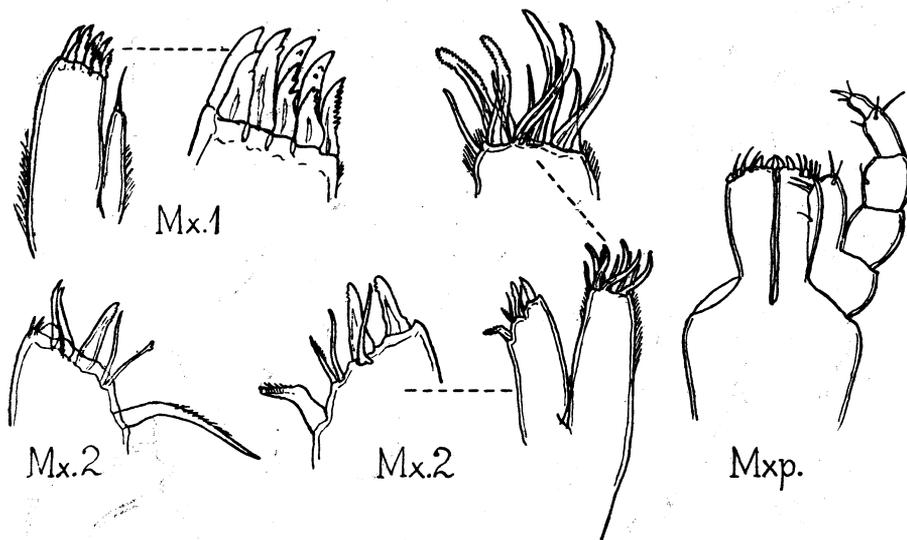


Fig. 2. *Ceinina japonica* n. gen., n. sp. ♀
Maxilla 1-2 (Max. 1-2) and maxillipeds (Mxp.).

All the pereiopods are rather short, and all the side plates are small, short, and not in continuity. Pereiopod 1 has all the joints of nearly the same breadth (except the finger); 2. joint is rather long, longer than 3.+4. joints combined. 5. joint is about as long as the 2 preceding joints combined and as long as the 6. joint, which has the margins almost parallel, with the hinder apical corner triangular and a little protruding, with a very short palm; thus the limb is not really subchelate. The finger is much longer than the breadth of the 6. joint, with the apex partly covering a rather strong spine. Pereiopod 2 is quite like per. 1, but somewhat longer. Pereiopods 3-4 have rather short 2. and 3. joints; 4. joint is somewhat longer, with the lower fore-corner somewhat protruding; 5. joint is very short, 6. joint longer, the finger rather short and very strong. Pereiopods 5-7 increase in length from no. 5 to no. 7; this is due to the different length of the broad 2. joint. The side plates of these legs are equally as deep as those of per. 1-14; that of per. 5 is bilobate, but the hind-lobe not deeper than the fore-lobe. In pereopod 5, 2. joint is almost circular in outline (but with the fore-margin straight); 3. joint is very short, 4. joint somewhat longer, with the lower hind corner very elongate; 6. joint is very broad; the finger very short and stout. Pereiopod 7 has nearly the same shape as per. 5, apart from 2. joint which is rather elongate, with the hind-lobe nearly as long as the two next joints combined.

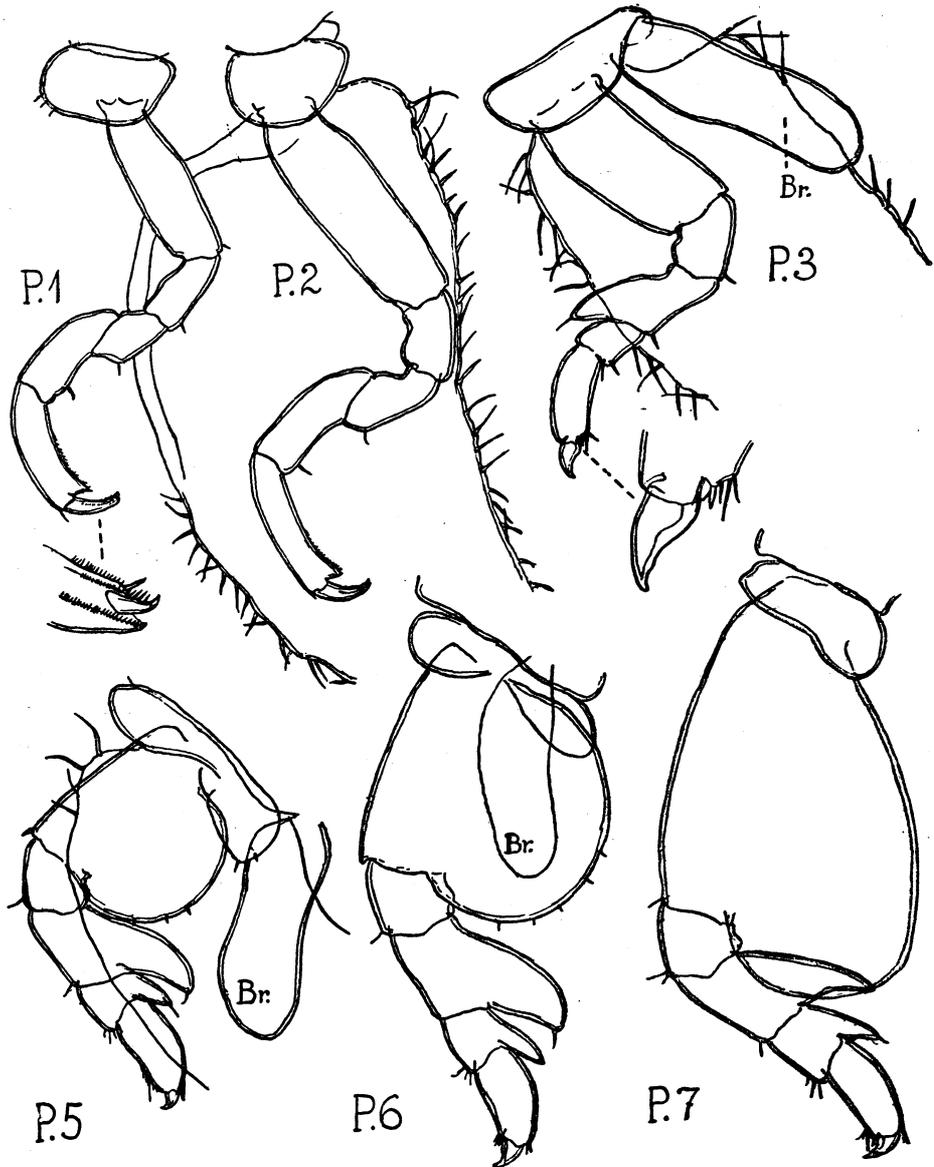


Fig. 3. *Ccinina japonica* n. gen., n. sp. ♀
Pereopods 1-3 and 5-7 (P. 1-3, 5-7) Br.=the branchiae.

There are 4 pairs of simple and rather short gills on pereopods 3-6. The brood-pouch has 4 pairs of long marsupial plates, on per. 2-5, with very short setae on the margins.

The epimeral parts of the metasome segments have the lower hind corners almost rectangular. The pleopods have the peduncles almost quadratè in outline, very broad; the outer rami are normal, with few articulations; the inner rami are rather contorted and somewhat broader.

1. urosome segment is as long as the metasome segments and dorsally covers the two next segments and the telson. 2. and 3. urosome segments are rather short and probably coalesced. Uropod 1 has a short, broad peduncle and two simple rami, of which the outer ramus is a trifle longer than inner. Uropod 2 is not different from urop. 1. Each uropod 3 is reduced to a single more or less circular lobe with a single or very few setae.

The telson consists of two somewhat circular or rectangular thick lobe; it is totally covered with the dorsal process of 1. urosome segment.

No trace of colour was kept, except in the black eyes.

The genus *Ceinina* may be characterized as follows (but unfortunately the male is not known). The body somewhat cylindrical, Isopod-like, not compressed. The side plates very small and shallow, not contiguous. Antenna 1-2 (in ♀) very short, consisting of only

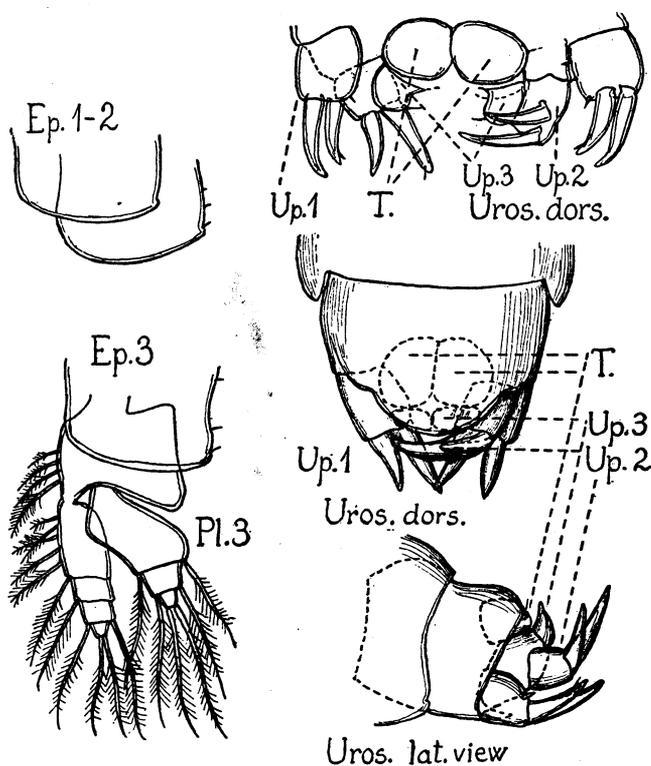


Fig. 4. *Ceinina japonica* n. gen., n. sp. ♀

Epimeral parts of 1.-3. metasome segments (Ep. 1-3), pleopod (Pl. 3), and urosome in dorsal and lateral view (Uros.). In the upper fig. of the urosome in dorsal view the dorsal part of 1. urosome segment is omitted; in the lower fig. of the same, the left uropod is omitted (T.=the two lobes of the telson; Up. 1-3=uropod 1-3).

very few joints. The upper lip is distally straight; the lower lip has a tuft of setae on the lateral angles. The mandibles have no molar process. Maxilla 1 has no palp; the inner lobe is not very short, with 1 apical seta. Maxilla 2 is normal. The maxilleipeds have the inner and outer lobes of equal length; the palp is normally with 5 joints, none of them with apical process. Pereiopods 1-2 (in ♀) quite alike, somewhat subchelate, but with the palm very short (the finger much longer); pereiopods 3-7 have 4. joint rather expanded and apically projecting; pereiopods 5-7 have 2. joint very expanded. Simple gills on pereiopods 3-6, marsupial plates on pereiopods 3-6, marsupial plates on pereiopods 2-5. The pleopods have the peduncles very broad. Uropod 1-2 normal; uropod 3 each reduced to a small lobe. Urosome segments 2-3 coalesced (?); telson bilobate, cleft to the base.

Affinities of the genus, etc. This new genus is most closely allied to the genus *Ceina* DELLA VALLE, with a single species. *C. egregia* (CHILTON), living at the roots of kelp and on various sea-weeds near low tide-mark off New Zealand; for description etc., see especially CHILTON 1919a, with 25 figs. (and STEBBING 1906, p. 554).

The two genera are different as to several characters: in *Ceina*, for instance, the back is carinate, the side plates are deep and contiguous, pereiopods 1-2 are distinctly subchelate in ♀ (per. 1 in ♂ is chelate); pereiopod 2 in ♀ has both gill and brood plate. But they agree in the want of molar process in the mandibles, in the want of palp in maxilla 1, and in the very reduced uropod 3 consisting only of a single joint.

The very shallow side plates of the pereiopods are a character found in several other Amphipods living in cylindrical tubes, for instance *Siphonoecetes*, *Corophium* and *Chelura*.

The habitat of the new genus is very interesting, for previously only one boring Amphipod is known, viz. *Chelura* (see CALMAN 1921, p. 219 and CHILTON 1919b, p. 6).

The generic name *Ceinina* was chosen in allusion to the similarity with *Ceina*.

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