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I. Kubo



**A Description of a New Alpheoid Shrimp from
Japan (Pl. XIII)**

**Two New Littoral Macrurous Crustaceans from
Japan. (Pls. XIV, XV)**

**On Japanese Penaeid Crustaceans belonging to
the Genus *Parapenaeopsis*, with a Descrip-
tion of one New Species (Pl. XVI)**

A New Homoloid Crab from Japan. (Pl. XVII)

Ituo KUBO.

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**Two New Littoral Macrurous Crustaceans
from Japan.***

Ituo KUBO

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In this paper are given the descriptions of two new species, viz., *Periclimenes* (*Ancylocaris*) *akiensis*, and *Betaeus yokoyai*. The specimens of the former were sent to the present author for identification in the spring of 1935 by Mr. T. Nakagawa who obtained them in Inland Sea of Japan, and those of the latter were collected at Kominato, Prov. Bōsyū by Mr. S. Nakamura in the same season.

It is my pleasant duty to return herewith my hearty thanks to Professor Arata Terao for his kind supervision during the course of this study, and to Dr. Y. Yokoya for a loan of the valuable literatures. No less gratitude is due to Mr. S. Nakamura and to Mr. T. Nakagawa for the collection of the material.

***Periclimenes* (*Ancylocaris*) *akiensis*, sp. nov.**

New Japanese name: Aki-ebi.

Carapace provided with an antennal, and a hepatic spine; supra-orbital one absent. Pterigostomian angle rounded without spine.

Rostrum (Pl. XIV, fig. A) almost straight, laterally compressed, moderately long and deep, 0.8~1.0 mm. in the deepest region and 1.3 times as long as the length of carapace; distal tip reaches somewhat beyond the end of antennal scale; dorsal border armed with 8~9 teeth, hindmost two of which are situated on slight carina which extends to the middle of carapace; ventral border with 3~4 teeth; tip of rostrum slightly extends beyond both the dorsal and ventral teeth.

Eyes (Pl. XIV, fig. B) rather slender, three times as long as wide. Cornea hemispherical, traversed obliquely by two parallel wavy dark blue bands. Ocular spot large, touching the cornea.

Basal segment of antennular peduncle with lateral process reaching to its middle, and with terminal spine well developed.

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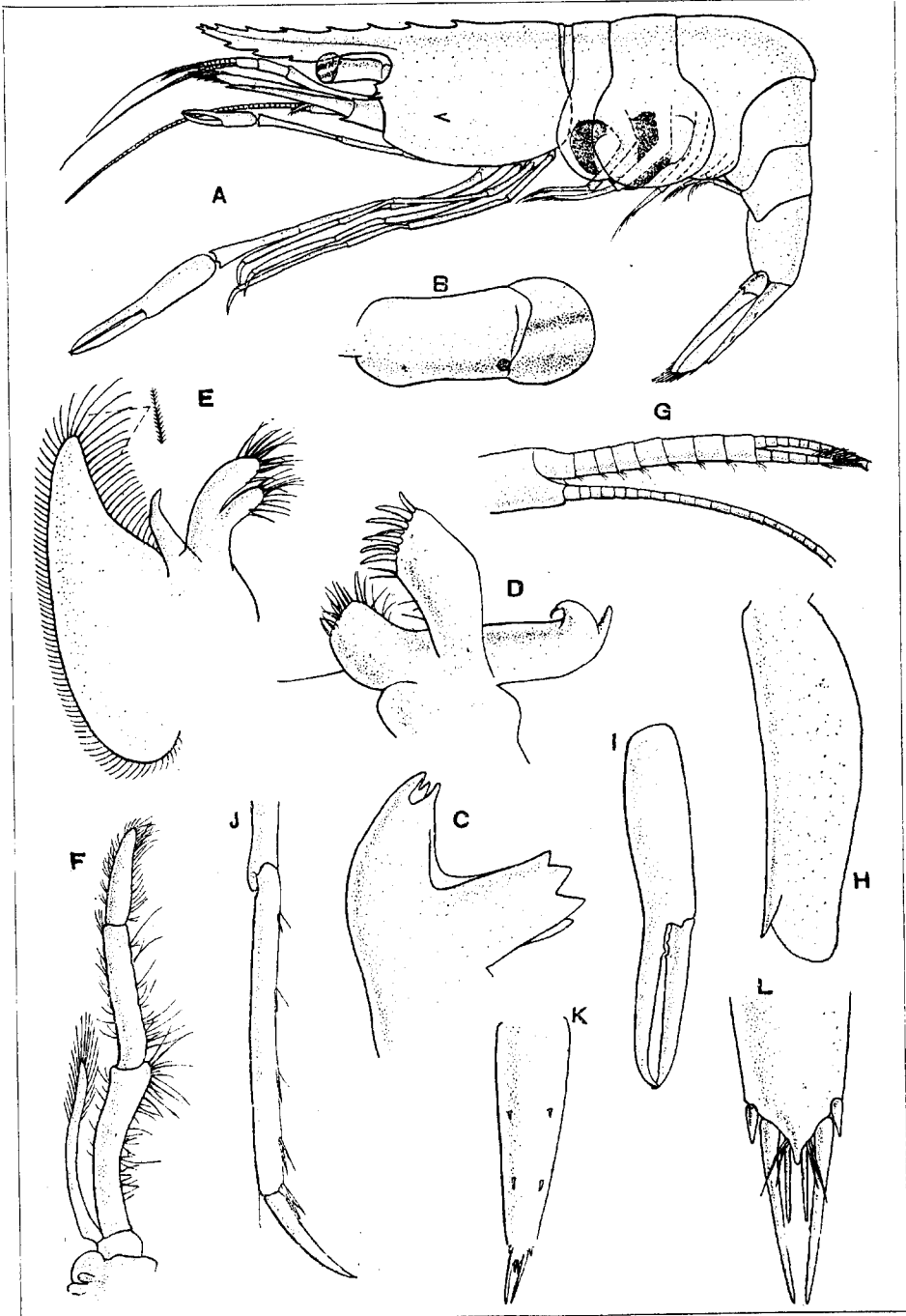


Plate XIV

Explanation of Plate.

Plate XIV.

- A. *Periclimenes (Ancylocaris) akiensis*, sp. nov. ♂, bearing a Bopirid isopoda in the abdomen. (×6). B. Eye in lateral view (×25). C. Mandible (×50). D. Maxillule (×50). E. Maxilla (×35). F. Third maxilliped (×15). G. Antennule with flagella (×25). H. Antennal scale (×15). I. Chela of second pereopod (×15). J. Last two segments of third pereopod (×25). K. Telson (×15). L. Tip of telson (×50).

Shorter ramus of outer antennular flagellum (Pl. XIV, fig. G), with proximal portion comprising 7 or more joints, and distal portion bifid, shorter branch consisting of about five joints.

Antennal scale (Pl. XIV, fig. H) 3 times as long as wide, not tapering. Outer margin slightly concave and terminated in an acute spine which does not stretch beyond the end of lamella.

Mandible (Pl. XIV, fig. C) simple, without palp. Maxillule (Pl. XIV, fig. D) cross-shaped, distal margin of outer lacinia provided with a series of strong setae, endopodite carrying a thumb-like apical process.

First maxilliped bears epipodite; exopodite long, whip-shaped and armed with six or more pairs of long feathered setae in distal region.

Third maxilliped (Pl. XIV, fig. F) consists of five articulations. Penultimate segment 1.32 times in female and 1.46 times in male as long as ultimate one.

First pereopod reaches slightly beyond the tip of rostrum; chela, carpus and merus sub-equal in length. Fingers unarmed, 1.21 times as long as palm.

Second pereopods more robust and much longer than the first one, reaching beyond antennal scale by the entire chela. Fingers (Pl. XIV, fig. I) have inturned tips and straight cutting edges, with one distinct tooth and several small incipient teeth in the proximal one-fifth. Finger and palm sub-equal; carpus a little longer than merus, and both the two have no spine on the distal border.

Third, fourth and fifth legs very similar in many respects, but the fifth a little longer than the preceding two legs. Dactylus moderately curved, horn-shaped and simple; propodus much longer than carpus, armed with a series of slender spines frequently arranged in

pairs on its posterior border (Pl. XIV, fig. J).

Sixth abdominal somite 1.8 times the length of the fifth one in male, but 2.1 times in female.

Telson tapering, rounded above, provided with two pairs of dorsal spines which are situated so as to divide equally its length into three, with three pairs of spinules on the terminal border, the middle pair the longest.

Type locality: Simokamogari-mura, Province Aki. Specimens were captured by trawl net in weedy shallow water.

Measurements: Total length from terminal tip of rostrum to distal end of telson 15 mm in female, 23.5 mm, 22.5 mm and 19.0 mm in males.

Notes: The female was found carrying eggs which are 0.5 mm in diameter. Each of these three male specimens was found bearing a couple of Bopyrid isopods under their abdomen.

Difference: *Periclimenes* (*Ancyrocaris*) *akiensis* is closely related to *P.* (*Ancyrocaris*) *americanus* (Kingsley), but differs from it in the following points:—(1) Rostrum not shallow. (2) First pereopods reaching beyond antennal scale by the half length of chela. (3) Second pereopods reach beyond the antennal scale just by the length of chela. (4) Finger and palm of second pereopods are sub-equal in length. (5) Third pereopods reach to or slightly beyond the tip of antennal scale.

Betaeus yokoyai, sp. nov.*

New Japanese name: Yokoya-ebi.

Body somewhat laterally compressed, dorsally rounded. Carapace smooth, carrying no tooth. Upper frontal margin not projecting into rostrum, but with a notch which is followed by a shallow groove. Orbital hoods slightly projecting and forming both sides of the notch.

Eyes small, entirely covered by carapace, measuring 1.0~1.3 mm in diameter.

First antennal peduncle composed of three sub-equal articulations; the basal segment has proximally a large spine reaching to a little beyond the middle of second joint.

* The specific name is given in honour of Dr. Y. Yokoya who first described a species of this genus from Japan.

Second antennal peduncle extends slightly beyond the terminal tip of first antennal peduncle. Flagella thick and tapering, almost as long as first thoracic leg.

Table (1)

Speci. No.	B.	B'.	L.	S.	L./B.	S/B'	F.	F'.	P.	P'.	P/F	P'/F'
1.	42.5	36.5	38.0	25.0	0.89	0.68	8.0	6.8	13.5	6.4	1.68	0.94
2.	37.0	30.5	26.5	19.0	0.71	0.62	6.1	4.7	9.0	5.3	1.47	1.12
3.	45.4	38.5	37.5	28.0	0.82	0.72	7.9	7.0	13.3	7.1	1.68	1.01
4.	45.2	39.0	30.0	18.9	0.66	0.58	7.0	4.5	8.0	4.3	1.15	0.95
5.	45.0	39.0	35.0	26.0	0.77	0.66	7.5	6.2	12.0	6.9	1.60	1.11
6.	42.0	36.5	34.5	25.5	0.82	0.69	7.5	6.0	12.5	7.0	1.66	1.16
7.	32.0	27.5	22.5	17.0	0.70	0.61	5.0	4.0	8.0	4.5	1.60	1.12

B. Total body length including telson. B'. Body length without telson. L. Length of larger leg in the first pair of pereopods. S. L. of smaller leg of the same pair. F. L. of movable finger of the larger leg. F'. L. of movable finger of the smaller leg. P. L. of the palm of the larger leg. P'. L. of palm of the smaller leg.

Mandible (Pl. XV, fig. C) with two-jointed palp. Maxillule (Pl. XV, fig. D) representing φ shape, with its inner lacinia cylindrical and distally tapering. Endopodite terminated into one strong seta and with an apical lobe bearing many long bristles on its distal border. Third maxilliped consists of five segments, its ischio-meropodite and basipodite are granulated on their outer margin.

First pereopods very robust, granulated except two basal segments, asymmetrical; right one usually massive and with chela of inverted type. The larger chela not longer than total length of body including telson as shown in table 1. Its movable finger somewhat exceeds fixed one in length. A circular space formed between these two fingers when closed since each has a semicircular notch near the middle of each incisor edge. Ratio of the movable finger to palm is 1:1.15~1.68. Palm cylindrical, more or less laterally compressed. The other chela longer than the half of body length without telson (Table 1); cutting edges of both fingers straight and remaining no gap between them.

Second thoracic legs slender, symmetrical and also chelate in

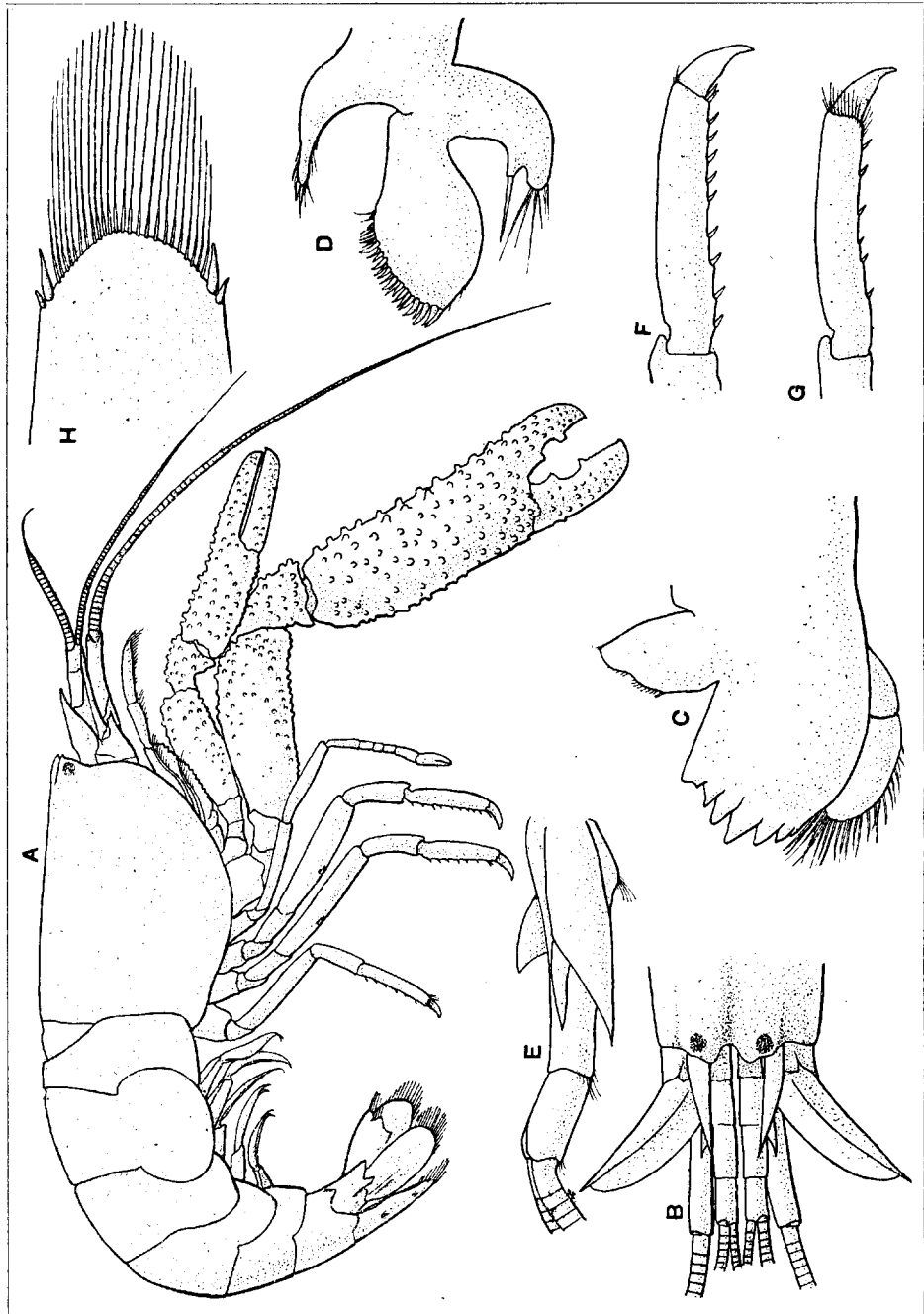


Plate XV.

Explanation of Plate.

Plate XV.

A. *Betaeus Yokoyai*, sp. nov. ($\times 2\frac{1}{2}$). B. Frontal region of the same animal, dorsal aspect. ($\times 3\frac{1}{2}$). C. Mandible ($\times 7\frac{1}{2}$). D. Maxillule ($\times 10\frac{1}{2}$). E. Antennular peduncle, inner view ($\times 7\frac{1}{2}$). F. Last two segment of third pereiopod ($\times 7\frac{1}{2}$). G. Last two segment fifth pereiopod ($7\frac{1}{2}$). H. Tip of Telson ($\times 15$).

normal type, carpus divided into five segments, the proximal being the the longest.

Third (Pl. XV, fig. H) and fourth legs alike. Their merus carries a spine on outer border near its middle. Posterior margin of propodus provided with 7~9 spines and the distal one usually paired. Dactylus simple and short, about one third as long as propodus.

Fifth legs (Pl. XV, fig. G) entirely similar to the preceding one, but merus without spine and the terminal region of propodus is fringed with setae.

Telson (Pl. XV, H) wedge-shaped, with dorsally planted two pairs of spines. Both angles of posterior end occupied by two pairs of spines, its inner one longer and stronger than the other one. Intermediate margin between these spines gently rounded and carrying about 25~27 long plumose bristles.

Branchial system is as follows:—

	<i>h</i>	<i>i</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	<i>o</i>
Pleurob.	—	1	1	1	1	1	—
Arthro.	—	1	—	—	—	—	—
Podob.	—	—	—	—	—	—	—
Mastigob.	1	r	r	r	r	r	—

Colour and habitat: This animal is coloured brownish green or brownish blue in life, and occurs commonly under stones near low tide-mark at Kominato and is abundantly found in spring.

Difference: *Betaeus yokoyai* closely resembles *B. granulimanus* Yokoya, but it may be separated from it by the following points:—
 (1) Three segments forming first antennal peduncle sub-equal in length.
 (2) Length of larger leg in the first pair of pereiopod not longer than total body length; its length 0.66~0.89 times as long as total body

length. (3) Length of the another one in the same pair is shorter than body length without telson. (4) In the same leg, the fingers do not arch not to leave a wide gap between them when closed.

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