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Citation	長崎大学教養部紀要. 自然科学篇. 1983, 23(2), p.17-21
Issue Date	1983-01
URL	http://hdl.handle.net/10069/16553
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Alpheopsis aequalis COUTIÈRE, 1896, a Species
new to Japan, with Remarks on its Mouthparts
(Crustacea, Decapoda, Alpheidae)

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(Received October 30, 1982)

Abstract

Alpheopsis aequalis COUTIÈRE, 1896 is recorded as the first species of the genus from Japan, and a description of its mouthparts is provided.

Introduction

A single damaged specimen of *Alpheopsis aequalis* from Sagami Bay, Pacific coast of Central Japan was found in the course of examining alpeid shrimps in the collections of the Zoological Laboratory, Kyushu University (Fukuoka, Japan) about ten years ago. Subsequently, efforts to obtain more material from Japan have repeated, but no further material still appeared.

In the present paper the mouthparts of the species are fully described because of the details of those of *Alpheopsis* species are poorly known. Its general structure appears to be more closely allied to those of *Alpheopsis labis* CHACE, 1972 rather than of *Alpheopsis stygicola* HOBBS, 1973.

Alpheopsis aequalis COUTIÈRE, 1896

(Fig. 1)

Restricted synonymy.

Alpheopsis aequalis COUTIÈRE, 1896: 382. ARMSTRONG, 1941: 5 [part], figs. 1A-C, E-I, K-V", Y-Z'.

Alpheopsis equalis: BANNER, 1953: 15, fig. 4. BANNER and BANNER, 1973: 342, fig. 16.

Alpheopsis equalis var. *truncatus* COUTIÈRE, 1903: 89, figs. 37, 38.

Alpheopsis consobrinus DE MAN, 1910: 305.

Nec. *Alpheopsis aequalis*: ARMSTRONG, 1941: 5 [part], figs. 1D, J, W-W", X-X"
[=*Alpheopsis labis* CHACE, 1972. See CHACE (1972: 55)].

Material. One female (Zool. Lab. Kyushu Univ.), Sagami Bay, Manazuru, April 1960, coll. K. Sakai.

Descriptive notes. This is the first record of *Alpheopsis* species from Japanese waters, but unfortunately this female specimen of 10.5 mm long (carapace length 3.7 mm) lacks all the pereopods but the left fifth.

By the absence of orbital teeth (Fig. 1A), the presence of sharply pointed pterygostomial margin (Fig. 1B), and the presence of simple dactylus of the fifth pereopod (Fig. 1D), the specimen approaches to *A. aequalis* widely distributed in the Indo-West Pacific region, *Alpheopsis idiocarpus* COUTIÈRE, 1908 from Providence Island, *Alpheopsis tetrarthri* BANNER, 1956 from Saipan, and *Alpheopsis yaldwyni* BANNER and BANNER, 1974 from N. E. Australia. No information on the first and second pereopods naturally arouses doubts on the identification of the specimen. In other characters, however, the present specimen agrees well with the species account of *A. aequalis* provided by BANNER and BANNER (1973 : 342). Further, a comparison of the present specimen with the Hawaiians of *A. aequalis* (2 males and 2 ovigerous females of 9.5-11.5 mm long) showed no significant difference between them.

Information on the mouthparts of the *Alpheopsis* species are not sufficient, for which its details shown by the main point of them found in the present material are here given. The general structure of mouthparts of *A. aequalis* is more like that of *A. labis* rather than of *A. stygicola* HOBBS, 1973, as shown in Table 1. Mandible with slender molar process, 8- to 10-toothed incisor process, and 3-segmented palp (Fig. 1E, F). Palp of maxillula bilobed, distal lobe bearing 1 to 3 apical plumose hairs and proximal lobe with an apical plumose hair; distal endite provided with rows of spinules; proximal endite curved inward, with many plumose hairs distally (Fig. 1G, H). Maxilla with subtriangular proximal endite fringed with simple hairs; distal endite deeply bifurcated and densely fringed with plumose hairs; palp unsegmented, hairless and slender; scaphognathite slender, ear-shaped (Fig. 1I). Proximal endite of 1st maxilliped rounded with tuft of plumose hairs; distal endite oval; palp composed of 1 or 2 segments (Fig. 1J, K), slender, with plumose hairs; caridean lobe very narrow, fringed with plumose hairs; epipod rather narrow. Second maxilliped with 5-segmented endopod of normal size; 1st segment (basio-ischium) rather broad, a dull projection bluntly produced at distomesial corner; 2nd segment (merus) more than half as long as 1st; epipod shrunken as in *A. labis* (CHACE, 1972: Fig. 15k). Third maxilliped normal, slender, reaching as far forward as distal end of caropocrite; hook-like epipod present and arthrobranch absent (Fig. 1M).

(Explanation of Fig. 1, continued from the next page) : — mandible; F, inner face of right mandible, ovigerous female (c.l. 3.5mm) from Hawaii; G, inner face of left maxillula; H, inner face of left maxillula, male (c.l. 3.5mm) from Hawaii; I, inner face of left maxilla; J, inner face of left first maxilliped; K, inner face of left first maxilliped, male (c.l. 3.5 mm) from Hawaii; L, inner face of left second maxilliped; M, outer face of left third maxilliped.

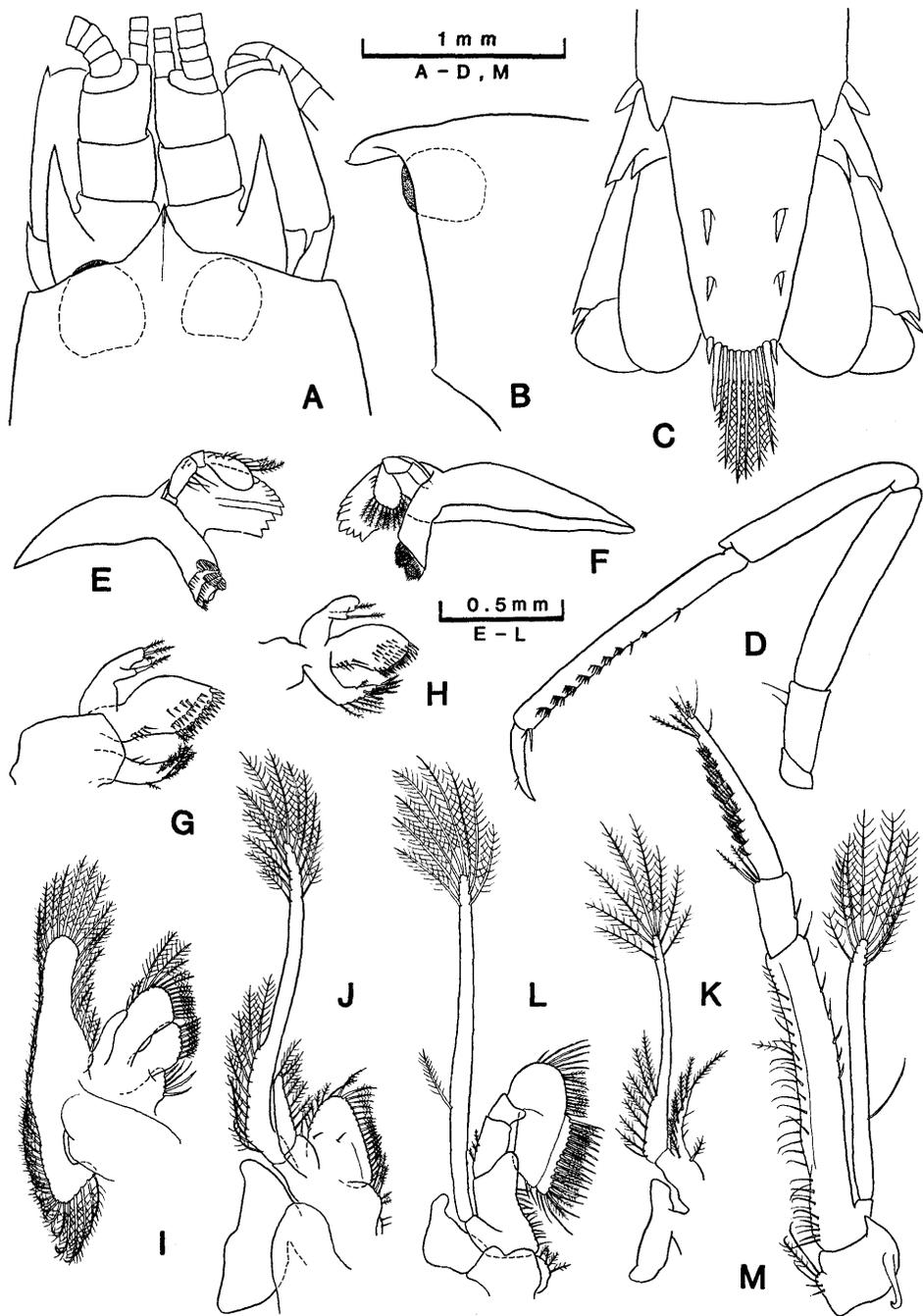


Fig. 1. *Alpheopsis aequalis* COUTIÈRE, 1896. All figures, except F, H and K, prepared from the female (3.7 mm in carapace length) from Sagami Bay. A, Frontal part of body, dorsal view; B, anterior part of carapace, lateral view; C, tail fan, dorsal view; D, left fifth pereopod; E, inner face of left

Table 1. Some characters of mouthparts of three species of *Alpheopsis*.

	<i>Alpheopsis stygicola</i> HOBBS, 1973 ¹⁾	<i>Alpheopsis aequalis</i> COUTIÈRE, 1896 ^{2,3)}	<i>Alpheopsis labis</i> CHACE, 1972 ⁴⁾
Mandible, palp	2-segmented	3-segmented	3-segmented
Maxillula, palp	Bilobed	Bilobed	Bilobed
Maxilla, distal endite	Bilobed	Bilobed	Bilobed
scaphognathite	Broad	Slender	Slender
1st maxilliped, palp	Unsegmented	Unsegmented ³⁾ or 2-segmented ²⁾	2-segmented
caridean lobe	Broad	Narrow	Narrow
2nd maxilliped, endopod	Not elongated	Not elongated	Not elongated
epipod	Markedly enlarged	Shrunken	Shrunken
3rd maxilliped	1 arthrobranch + 1 hook-like epipod	0 arthrb. + 1 ep.	Unknown

1) HOBBS, 1973: 76, Figs. 1f, g, 2b-f; 2) 1 female from Japan, and 3) 2 males, 2 ovig. females from Hawaii described herein; 4) CHACE, 1972: 56, Fig. 15g-1.

The branchial formula is represented by 5 pleurobranches + 0 arthrobranch + 6 epipods + 4 setobranchs; that of *Alpheopsis* is summarized as 5 plbs + 0-1 arthrb. + 5-7 eps. + 3-5 stbs by BANNER and BANNER (1973: 336).

Distribution. Known from the Indo-West Pacific region from the Red Sea to the Hawaiian Archipelago. The Atlantic specimens from Bermudas, Cuba and Dominican Republic referred to *A. aequalis* by ARMSTRONG (1941: 7) are included in *A. labis* (CHACE, 1972: 56).

Acknowledgements

I wish to thank Mrs. Dora May BANNER of the Hawaii Institute of Marine Biology, University of Hawaii for sending me the comparative material of the Hawaiian *Alpheopsis aequalis*, and Dr. Keiji BABA of the Kumamoto University for reading the manuscript.

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