

First Record of Snapping Shrimp, *Prionalpheus sulu* (Decapoda: Caridea: Alpheidae) in Korea

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ABSTRACT

The alpheid shrimps collected from Jeju Island turned out to be a species belonging to the genus *Prionalpheus* which is an unreported genus from Korean waters. In this paper, *Prionalpheus sulu* is reported for the first time from Korean waters with description and illustration.

Key words: Alpheidae, *Prionalpheus sulu*, Korea

INTRODUCTION

The genus *Prionalpheus* is characterized by the highly modified mouthparts: mandible without palp and molar process, and with incisor process asymmetrically developed into long, sharp teeth-like processes on one side, and either somewhat similar teeth or with rounded processes on the other (Banner and Banner, 1960, 1971). It is a rare genus only containing seven species from the Indo-Pacific and the Caribbean (Banner and Banner, 1971, 1982; Bruce, 1986; Chace, 1988; Martinez and Carvacho 1991; Alvarez et al., 1996; Hayashi, 1996). The continuous taxonomic study on shrimps collected from Korean waters revealed that one alpheid species belongs to the genus *Prionalpheus* previously unreported from Korean waters. The specimens were collected by scuba diving at depth of 5-30 m. The abbreviation "cl" refers to carapace length from the tip of rostrum to the posterior dorsal margin. Drawings were made with the aid of a camera lucida. The specimens used in this study were deposited in the Marine Arthropod Depository Bank of Korea (MADBK), Seoul National University.

SYSTEMATIC ACCOUNTS

Family Alpheidae Rafinesque, 1815

Genus ¹**Prionalpheus* Banner and Banner, 1960

²**Prionalpheus sulu* Banner and Banner, 1971 (Fig. 1)

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Prionalpheus sulu Banner and Banner, 1971: 268, fig. 3; Hayashi, 1996: 491, figs. 315a-c, 317a-c; Chace, 1988: 70.

Material examined. 1 ovig. female (cl 5.4 mm), Beomseom (Jeju island), 22 October, 1991; 1 juv., Munseom (Jeju island), 30 June, 1993.

Description. Body very small. Rostrum (Fig. 1A, B) triangular with base relatively broad, almost reaching to distal margin of first antennular segment in dorsal view.

Antennules (Fig. 1B) short and stout. First antennular segment with deep, triangular carina extending from ventral inner margin: ventral part of carina ending in acute spine directing forward. Second antennular segment almost as long as broad and almost as long as third segment. Stylocerite narrowing to long sharp point, almost reaching to distal margin of second segment.

Scaphocerite (Fig. 1B, C) with distal spine reaching to distal end of antennular peduncle. Inner blade far short of distal spine. Cleft absent between inner blade and distal spine.

Carpocerite reaching to distal end of antennular peduncle. Basicerite with sharp lateral spine.

Third maxilliped (Fig. 1A) rather broad. Ultimate segment tapering distally with long dense setae on distal margin. Antepenultimate segment with longitudinal ridge on outer face along superior margin and long setae inferiorly. Exopod fairly overreaching distal end of antepenultimate segment.

Major first pereopod (Fig. 1D, E) overreaching distal end of carpocerite by most part of chela. Major chela slightly tapering distally with fingers occupying distal 0.3. Movable finger shallowly arched along proximal 2/3 of superior margin and then regularly arched distally, bearing very blunt pro-

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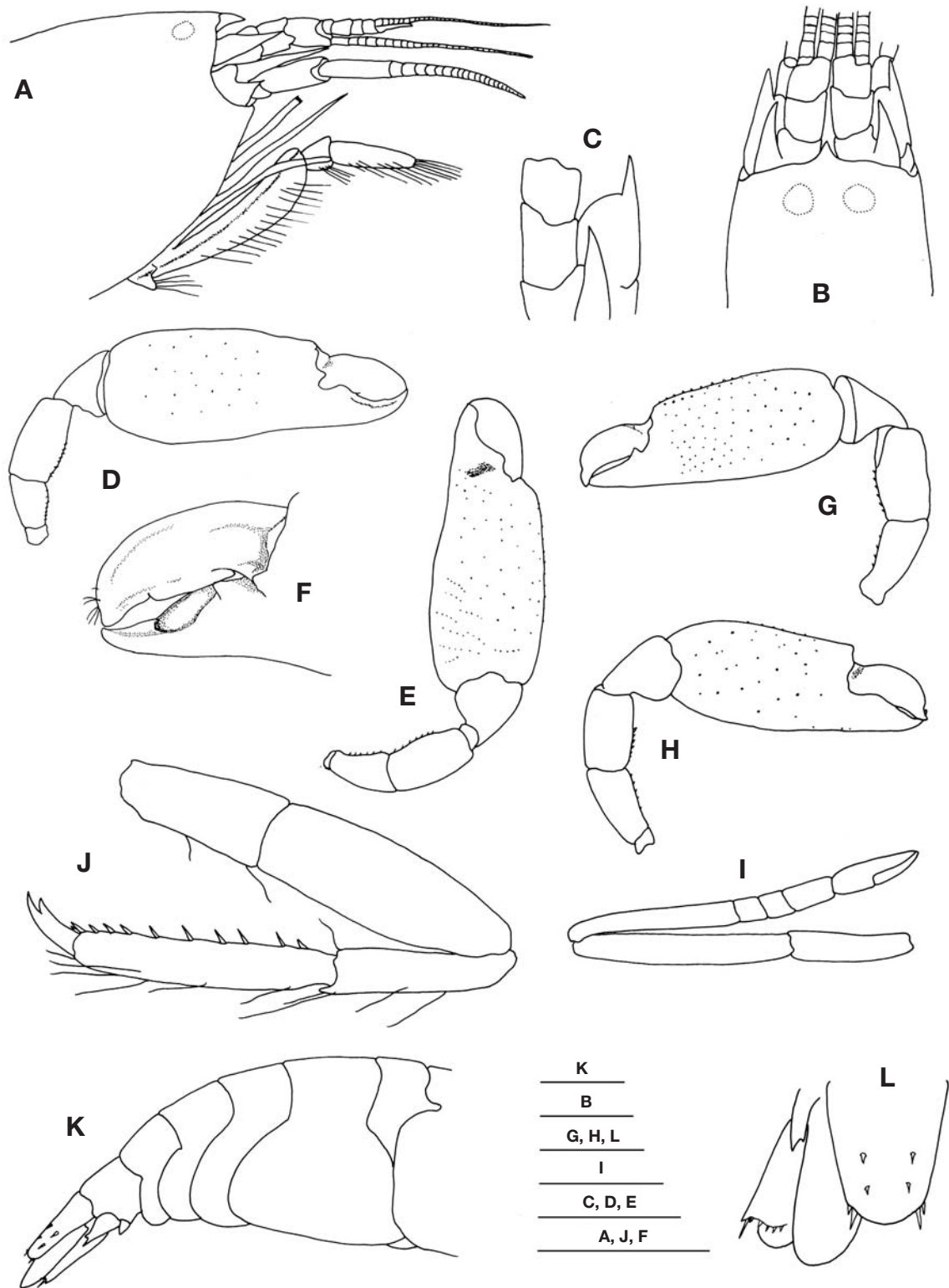


Fig. 1. *Prionalpheus sulu*, ovigerous female, cl 5.4 mm: A, anterior region, lateral view; B, same, dorsal view; C, right stylocerite and scaphocerite; D, major (right) first pereopod, outer face; E, same, inner face; F, same, fingers of chela; G, minor (left) first pereopod, outer face; H, same, inner face; I, right second pereopod; J, right third pereopod; K, abdomen; L, telson and part of uropods (Scale a=1.5 mm: K; scale b=1 mm: B; scale c=1 mm: G, H, L; scale d=1 mm: I; scale e=1 mm: C-E; scale f=1 mm: J, F; 2 mm: A).

cess on inferior margin. Immovable finger (Fig. 1F) with cavity on superior margin. Palm without any sculptures, bearing scattered tiny tubercles on both inner and outer faces. Merus with inferior inner margin bearing 8 to 10 small spinelike tubercles and with no spine at distal end. Ischium bearing 6 to 7 small spinelike tubercles inferior inner margin.

Minor first pereopod (Fig. 1G, H) with fingers occupying less than distal 1/3. Palm without any sculpture, bearing scattered tiny tubercles on both inner and outer faces like as major palm. Merus with inferior inner margin bearing 6 to 7 immovable spinelike tubercles and with no spine at distal end. Ischium bearing 5 to 6 immovable spinelike tubercles on inferior inner margin.

Fingers of chela of second pereopod (Fig. 1I) almost as long as palm. Carpus with four segments; first segment about 2 times as long as second; second segment almost as long as third; fourth segment slightly longer than combined length of preceding three segments.

Third pereopod (Fig. 1J) rather broad. Dactylus biunguiculated. Propodus with 9 movable spines on inferior margin and one pair at distal end, bearing a few long setae on superior margin. Carpus with superior margin bearing a few long setae. Merus about 3.3 times as long as broad. Ischium with no spine on inferior margin.

Fourth pereopod almost same as third pereopod. Ischium with no spine.

Ischium of fifth pereopod with no spine.

Pleuron (Fig. 1K) of second abdominal somite quite broad. Sixth abdominal somite with triangular articulated plate on posterior end.

Telson (Fig. 1L) with two pairs of dorsal spines located at posterior half. Posterior margin round and armed with one pair of movable spines at each lateral end; inner spine about 2 times as long as outer one.

Uropodal exopod with bearing about five slender movable spines on transverse suture and one long movable spine flanked laterally by acute immovable tooth.

Distribution. Madagascar, Seychelles, Sulu Archipelago region of Philippines and Kyushu, Japan; 2-4 meters (Chace, 1988). Jejudo island, Korea.

Remarks. The major chela of the present ovigerous specimen shows the very shallow blunt process on the inferior margin of movable finger and the cavity on the superior margin of immovable finger. These characteristics were not noted in the previous literatures.

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