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On *Callianassa ranongensis* (Thalassinidea: Decapoda: Crustacea) from Halmahera, Indonesia

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Abstract: Thailand callianassid species, *Callianassa ranongensis* was collected from Sosobok, Kao, Halmahera, Indonesia. This is the first record from the Indonesian waters. The Lager cheliped of *C. ranongensis* has a variation in the form of the cutting edge.

Key words: Systematics; Zoogeographical record; Decapoda; Crustacea; Thalassinidea; *Callianassa ranongensis*

Thailand callianassid species, *Callianassa ranongensis* was collected from Sosobok, Kao, Halmahera, Indonesia by Dr. K. Wada, the Seto Marine Biological Station, Kyoto University. This is the first record from the Indonesian waters. The larger cheliped of *ranongensis* has a variation in the form of the cutting edge.

The following abbreviations are used in this paper, BLT=Biological Laboratory of Shikoku Women's University, Tokushima; CL=Carapace length; MP Th=Muséum national d'Histoire naturelle, Paris; RMNH=Rijksmuseum Natuurhistorie, Leiden; TL=total body length of specimen from rostrum to telson; SMF=Senckenbergishes Museum, Frankfurt am Main; and USNM=U.S. National Museum, Washington D.C.

Callianassa ranongensis Sakai, 1983

(Figs 1-2)

1983 *Callianassa ranongensis* Sakai, Res. Crust. 12:111-115.

Material. Holotype- ♂, USNM 233628 (BLT 1704); ♀, Paratype- SMF (BLT 1710); Paratype- 1♂, RMNH 36612 (BLT 1705); Paratype- 1♂, MP Th 913 (BLT 1706), Hatsaikhao, Ranong Province, Thailand, muddy area of mangrove swamp, 7 December 1982, coll K. Wada. — ♂, TL 59 mm, CL 12 mm, BLT 4654; ♀, TL 65 mm, CL 15 mm, BLT 4655; ♀ CL 14 mm, damaged, BLT 4656; 1♂, TL 50 mm, CL 10 mm; 1♂ damaged, BLT 4657-4658, Sosobok, Kao, Halmahera, Indonesia, muddy place of middle intertidal zone at the brim of mangrove forest, *Sonneratia alba*, (*fide* K. Wada), 5 September 1986, coll. K. Wada.

Description. Rostrum (Figs 1A-C) short, anteriorly-directed acute spine, and lateral projections obtuse, Cervical groove situated at posterior third of carapce, including rostrum, Pereiopod 3 sternite (Fig. 1D) narrowly convex with Y-shaped suture.

Eyestalks reaching just before end of antennal segment 1; pigmented area largely rounded, subterminal. Antennular peduncle reaching to distal third of antennal terminal segment; terminal segment about twice length of penultimate. Antennal terminal segment distinctly longer than penultimate;

*This paper is dedicated to Professor Dr. Kō Yatsuzuka in honor of his retirement from Kochi University.

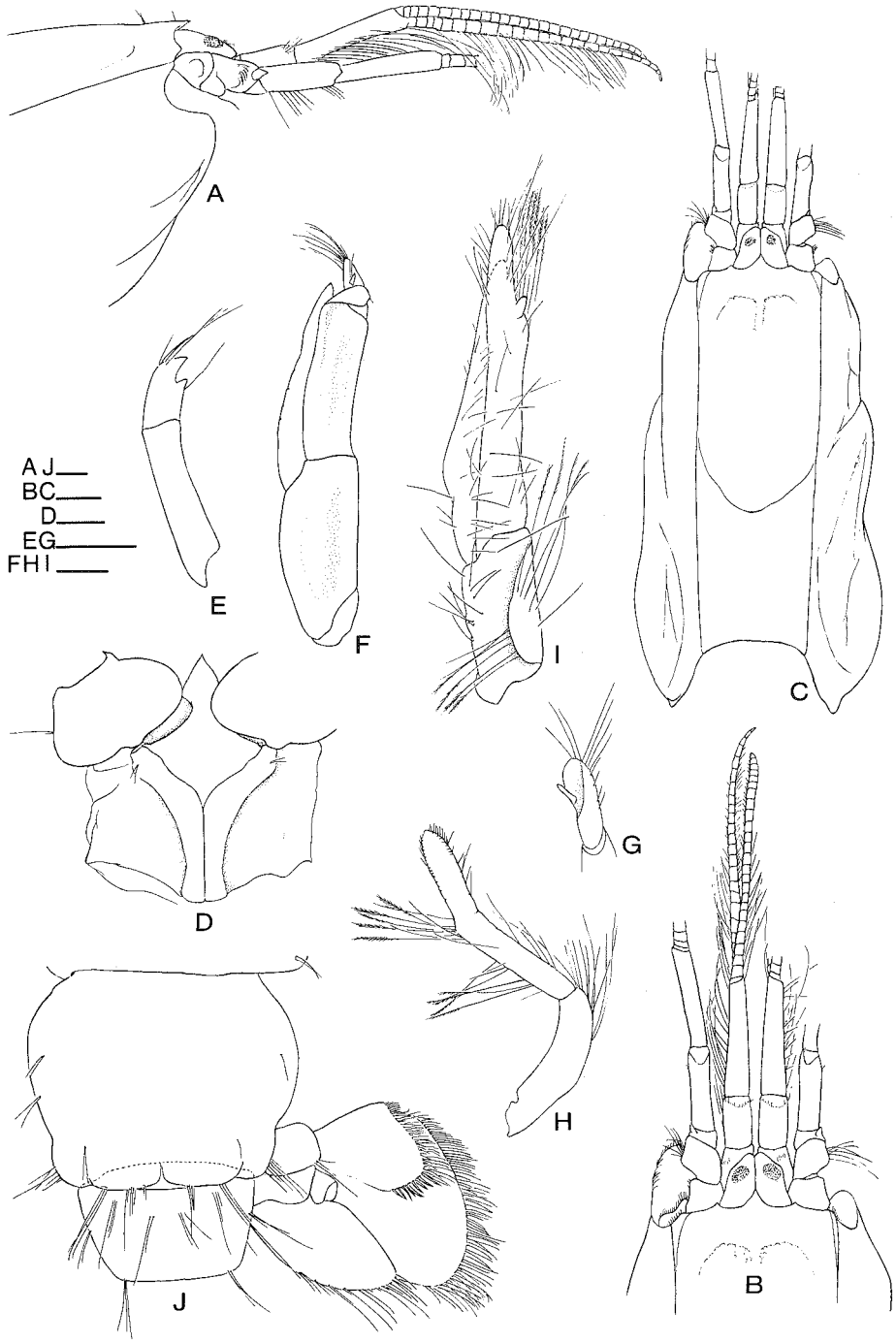

Fig. 1. *Callianassa ranongensis*: A, carapace and antennae, dorsal aspect; B, anterior carapace and antennae, dorsal aspect; C, same, lateral aspect; D, third sternite, ventral aspect; E, first pleopod in male; F, second pleopod in male; G. appendix interna and appendix masculina of second pleopod in male; H, first pleopod in female; I, second pleopod in female; J, sixth abdominal segment and tail-fan, dorsal aspect (A-G, J, male BLT 4654; H, I, female BLT 4656).

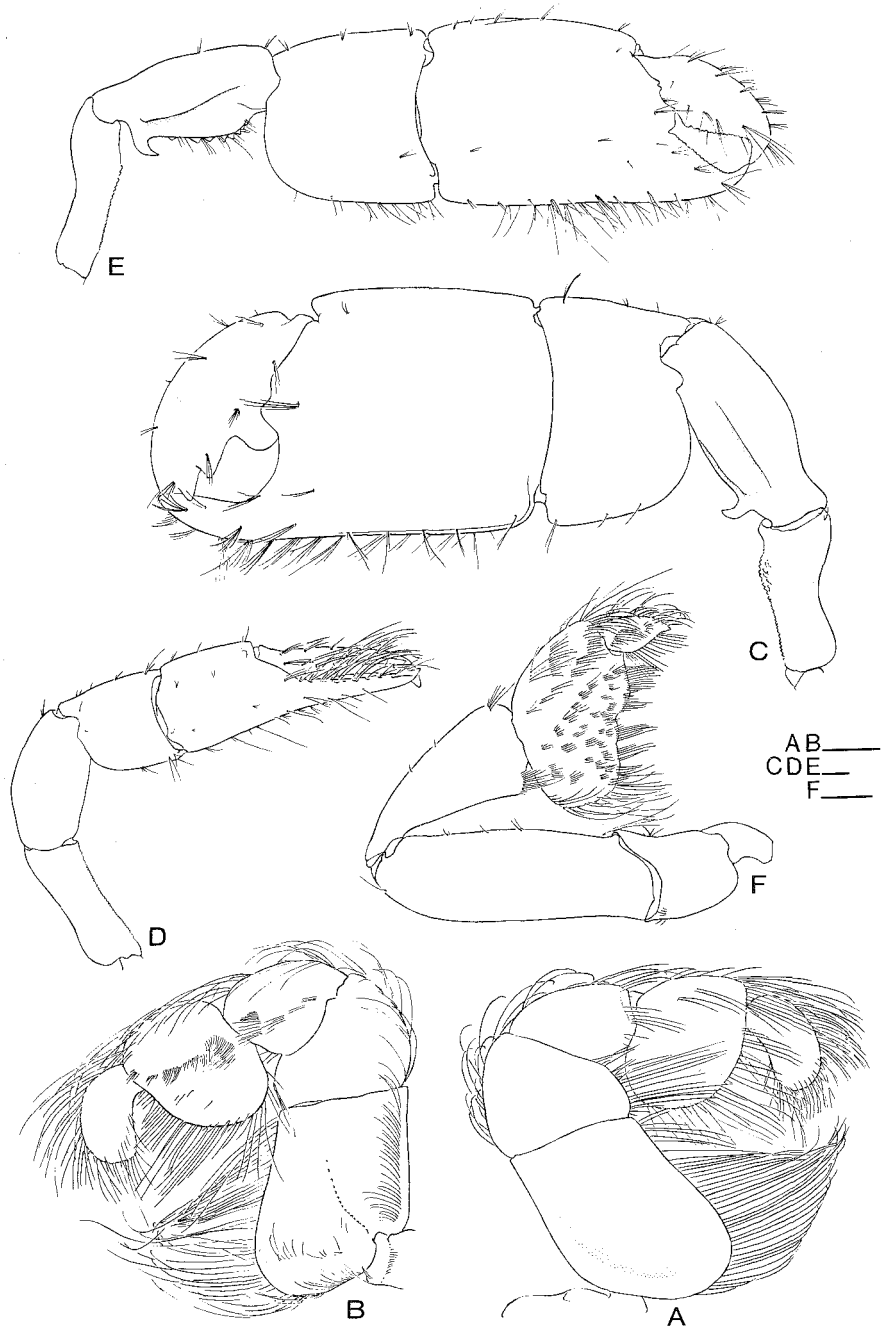

Fig. 2. *Callianassa ranongensis*: A, third maxilliped, outer aspect; B, same, inner aspect; C, larger cheliped in male, outer aspect; D, smaller cheliped in male, outer aspect; E, larger cheliped in female, outer aspect; F, third pereiopod, outer aspect (A-D, F, male BLT 4654; E, female BLT 4656).

scaphocerite small.

Maxilliped 3 (Figs 2A,B) merus width about half length of ischium and merus combined; merus about 2/3 length of ischium along midline; ischium largely porotruded on proximal medial angle, with indistinct row of 17 spines on inner surface; carpus broadened distally; propodus broader than long, medial margin evenly curved; dactylus ovate, slightly shorter than propodus.

Pereiopod 1 unequal.

Larger cheliped in male (Fig. 2C) stout. Ischium sinuous, smooth on dorsal margin and evenly crenulate on ventral margin. Merus about 1.5 length of ischium; dorsal margin smooth, proximally sinuous; ventral margin smooth, with strong proximal tooth; outer surface with median and ventral carinae. Carpus and chela forming broad platform; carpus 2/3 length of merus, width as long as length of merus; propodus broad, about twice length of merus along midline and with two obtuse swellings on distal margin, continuous by large concavity to fixed finger. Fixed finger less than half length of propodus, largely gaped proximally with dactylus. Dactylus broad, about as long as propodus and with two stout teeth on cutting edge.

Smaller cheliped (Fig. 2D) small in size. Ischium minutely crenulate on ventral margin; merus about as long as ischium and unarmed. Carpus and chela broadened; carpus about 2/3 length of merus and about as long as broad; propodus about as long as broad, distal margin obliquely descending distally to cutting edge; fixed finger slender and unarmed on cutting edge; outer surface with row of long hairs along cutting edge. Dactylus slender and less than twice length of propodus, cutting edge also with row of obtuse yellow-transparent dentcicles in distal third.

Larger cheliped in female (Fig. 2E) slender than in male. Ischium minutely crenulate on ventral margin. Merus with row of 8-9 triangular teeth on ventral margin. Propodus with two rounded and one truncate teeth on distal margin, obliquely decending distally to fixed finger. Fixed finger proximally notched and minutely denticulate on cutting edge, and distally incurved. Dactylus about 2/3 length of propodus, broad, gaped with fixed finger, evenly crenulate on cutting edge and distally incurved;.

Pereiopod 3 (Fig. 2F) merus about three times as long as broad; carpus triangularly broadened distally; propodus 1.5 times as long as broad, oval on posterior margin and largely concave midway on ventral margin.

Pleopod 1 in male (Fig. 1E) two-segmented; distal segment about half length of proximal segment and unevenly notched distally. Pleopod 2 (Figs 1F, G) biramous, foliaceous; endopod broader and longer than exopod and with appendix interna and appendix maxculina.

Pleopod 1 in female (Fig. 1H) uniramous, two-segmented; distal segment reflexed in distal half. Pleopod 2 (Fig. 1I) biramous, slender than in male, endopod longer than exopod and with appendix interna.

Telson (Fig. 1J) 1.5 times broader than long at proximal part, slightly converging distally with straight or slightly convex lateral margins; distal margin straight in dorsal view or medially convex dorsally in posterior view. Uropodal endopod lanceolate, exceeding telson, less than twice length of width; exopod longer than endopod, 1.3 length of width.

Remarks. Morphological variations of the larger cheliped in *ranongensis* is observed as in *Callianassa japonica* Ortmann and *C. petalura* Stimpson (Sakai, 1969) and in *Callichirus major* (Say, 1818) (Rodrigues, 1985). The cutting edge of the larger male cheliped is variable, which may not depend upon local variations but upon specific characteristics. In the male specimens from Ranong Province, Thailand, the dactylus of the larger cheliped is evely denticulate on the cutting edge and incurved distally, while in the single male from Halmahera it is provided with two distinct teeth.

Concerning relationships among other callianassid species, *Callianassa ranongensis* is similar to *C. mucronata* Strahl, 1862 in the rostrum, eyestalks and pigmented areas, antennular and antennal

peduncles, 3rd maxillipeds and tail-fan, however is different in the 1st and 3rd pereiopods. In *mucronata* the merus of the larger cheliped bears no proximal tooth on its ventral margin, but is simply convex with denticulation, and the propodus of the 3rd pereiopod is crenulate on its ventral margin. In the present species as well as *Callianassa joculatrix* De Man, 1905, *C. tridentata* Von Martens, 1868 and *C. rosae* Nobili, 1904, the merus of the larger cheliped is provided with a sharp proximal tooth on the ventral margin, and the propodus of the 3rd pereiopod is midway notched on the ventral margin. *Callianassa pugnatrix* De Man, 1905 is also related to the present species in the shape of the merus of the larger cheliped, however differs in the shape of the propodus of the 3rd pereiopod as it is curved without a middle notch on the ventral margin.

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