



FIRST RECORD OF THE HAIRY SQUAT LOBSTER GENUS LAURIEA BABA, 1971 (CRUSTACEA: DECAPODA: ANOMURA: GALATHEIDAE) FROM KENTING, SOUTHERN TAIWAN

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FIRST RECORD OF THE HAIRY SQUAT LOBSTER GENUS *Lauriea* BABA, 1971 (CRUSTACEA: DECAPODA: ANOMURA: GALATHEIDAE) FROM KENTING, SOUTHERN TAIWAN

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Key words: Crustacea, Galatheidae, new record, Taiwan.

ABSTRACT

The shallow water squat lobster genus *Lauriea* Baba, 1971 is reported for the first time from Taiwan. The three specimens collected from Kenting, southern Taiwan belong to *Lauriea siagiani* Baba, 1994. *Lauriea siagiani* is very distinctive by its striking coloration and having dense long plumose setae on the body. Its report in Taiwan fills the gap of geographical distribution of this species from Indonesia to Japan.

I. INTRODUCTION

There were only two species known for the squat lobster genus *Lauriea* Baba, 1971 before the last decade, namely *L. gardineri* (Laurie, 1926) and *L. siagiani* Baba, 1994. Recently a large number of *Lauriea* materials had been collected from various localities and showed different color patterns with minor morphological differences [4]. A recently published work revealed that a total of eight species in *Lauriea*, with a distribution from intertidal to 200m depth [8]. In Taiwan, 112 species of squat lobsters had been recorded [3] but relatively few were from shallow water and *Lauriea* was unknown in Taiwan before. During a survey of the coral reef in Kenting, several specimens of *Lauriea* associated with sponge were collected. Careful examination showed that they all belong to *L. siagiani*. The present work reports this finding. The specimens are deposited at the National Museum of Marine

Biology and Aquarium, Checheng. The measurement (CL) is the carapace length excluding rostrum. The synonymy provided only lists taxonomic reports, as photographs of this species have appeared in many underwater guide books and magazines sometimes even without a proper name.

II. TAXONOMIC ACCOUNT

Family Galatheidae Samouelle, 1819

Genus *Lauriea* Baba, 1971

Lauriea siagiani Baba, 1994

(Figs. 1, 2)

Galathea sp. — Steene, 1990: 82, 314

Lauriea siagiani Baba, 1994: 40, Fig. 1 [type locality: Bali, Indonesia]. — Osawa & Okuno, 2004: 57, Figs. 1, 2A, B.

Material. Kenting, Pingtung County, SCUBA diving, 19 m, 25 April 2011, 1 ovigerous female 4.0 mm CL.; 18 m, 08 July 2013, 1 male 2.9 mm CL., 1 female 2.5 mm CL.

Diagnosis. Carapace as long as wide, dorsal surface covered with long and short setae both arising from numerous short transverse ridges; 7 small dorsal spines scattered on anterior portion, 2 largest spines on epigastric region. Cervical groove indistinct. Lateral margins convex, with 7–8 small but distinct spines on each side; first much smaller, immediately lateral to lateral limit of orbit, others more or less widely separated from one another. Rostrum sharply triangular, with 4 moderately incised teeth, dorsal surface flattish, with long setae, length (measured from tip to level of orbital margin) 0.4–0.6 times carapace length; rostral spine and distalmost lateral tooth with convex margins.

Abdominal somites with thick long coarse uniramous setae, but somite 1 nearly glabrous. Somites 2–4 each with 2 transverse setiferous ridges each preceded by groove.

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Fig. 1. *Lauriea siagiani* Baba, 1994, in situ photograph, inhabiting among folds on the extensor base of a sponge *Xestospongia* sp.

Third thoracic sternite with anterior margin moderately produced and medially notched; 2.6 times wider than long; fourth thoracic sternite nearly twice as wide as third, and 3.5 times wider than long.

Orbit not laterally produced, unarmed. Eyestalks elongate, 1.8–2 times longer than wide, distally with long setae immediately proximal to cornea; cornea not swollen, length distinctly less than half that of remaining eyestalk.

Antennular basal segment with 2 distal spines, dorsolateral larger than distolateral; 2 slender terminal segments, ultimate segment without tuft of pronounced setae on extensor distal margin. Antennal basal segment with lobe-like ventromesial process, second segment with subequal distolateral and distomesial spines; third segment with distomesial spine.

Ischium of third maxilliped shorter than merus, flexor margin with well-developed distal spine, mesial ridge with 22–28 denticles. Merus with 2 subequal spines on flexor distal margin.

Chelipeds about 2.1–2.6 times carapace length; very setose and spinose dorsally, scarcely setose or nearly glabrous ventrally; long setae mostly plumose, partly coarse. Fingers slightly longer than propodus, not gaping, tips crossing when closed; terminating in sharp curved spine, with subterminal spines; both fingers with small dorsal spines along opposable margin. Palm 1.6 times as long as wide; dorsal surface with very small spines. Carpus about as long as wide, equally wide as propodus, more than half length of merus; some small spines on dorsal side, 2 strong spines along mesial margin. Merus with spines along lateral, dorsal and mesial sides, mesial spines larger, distal ones prominent.

Walking legs very setose on margins, setae long and coarse, often plumose on extensor margin; mesial side less setose. Meri posteriorly diminishing in size, extensor margin with row of proximally diminishing spines, few on flexor margin, and 2 extra spines on terminal margin close to distal flexor marginal spine. Carpi with 6 small spines on extensor margin. Propodi with line of very small spines along extensor margin



Fig. 2. *Lauriea siagiani* Baba, 1994, male 2.9 mm CL. fresh specimen, dorsal view.

and a few movable slender spines on flexor margin. Dactyli sharply biunguiculate, terminal claw strongest.

Coloration. Cornea bright orange, dorsal setae reddish. Background color of body and appendages pale orange or white, with purplish red markings along lateral margins of carapace continuous anteriorly onto margins of eyestalks and crossing base of rostrum, and posteriorly along lateral margins of abdominal tergites. Chelipeds and walking legs purplish red along mesial and lateral margins. Setae on body and appendages white, some on carapace and abdominal tergites reddish.

Distribution. Known from Indonesia, the Philippines, Taiwan and Japan, at depths of 12 to 46 m.

Remarks. *Lauriea* differs from the other genera of Galatheidae in lacking continuous transverse ridge on the carapace, the lateral margin of the endopod of uropod becoming posterior in position, the dactyli of walking legs biunguiculate, and the absence of gonopods at the first abdominal segment in males [1]. Recently many species of *Lauriea* were described and species of this genus are mainly separated by genetic data and coloration [8]. *Lauriea siagiani* can be readily distinguishing from congeners by having the most attractive coloration and the color pattern of materials from different localities are almost the same (see Figs. 1, 2, [5, 6, 9]). Baba

(1994) mentioned that the basal antennular segment of this species lacks mesiodistal spine. Of the three Taiwanese specimens examined, the male has this mesiodistal spine but the two females lack it. The chelipeds of the Taiwanese specimens are relatively shorter than the type series from Indonesia (2.1–2.6 vs. 3 times as long as carapace) but similar to that reported for the Japanese material (see [9]). On the other hand, the relative length of the palm of the cheliped in the Taiwanese material is similar to those of the Indonesian (1.6–1.8 times longer than wide) rather than the Japanese specimens (2.2 times longer than wide). *Lauriea siagiani* is reported to be associated with cup-shaped sponge *Callyspongia elegans* and barrel sponge *Xestospongia* sp. in Japan [6]. The Taiwanese specimens were all collected from barrel sponges. There are some photographs from local divers showing *L. siagiani* on corals but it is highly likely that the specimens were removed from its host during photography.

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