

SHORT COMMUNICATION

Males of *Gambaquezonina itimana* (Araneae, Salticidae), with notes on females

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Abstract. Fourteen specimens of the jumping spider *Gambaquezonina itimana* Barrion & Litsinger 1995 were collected in the vicinity of Mt. Makiling and Los Banos, Luzon Island, Philippines. The species was described only from the holotype female. Males are described for the first time, and additional females are documented.

Keywords: Description, new records, Philippines, jumping spider

Barrion & Litsinger (1995) described in some detail *Gambaquezonina itimana* from the female holotype, the only specimen known to them at the time. Murphy and Murphy (2000) redescribed the general appearance. The holotype female was collected in the Philippines on Luzon Island, Quezon Province. Several morphological features of this specimen are unusual, including a large number of ventral macrosetae on legs I and II, prominent sparse rows of elongate setae on the dorsum, a multi-cusped retromarginal tooth, and an epigynum which superficially looks like an euophryine, but structurally is quite different. Knowledge of the male may help clarify the relationships of this species.

Multiple research visits to the Philippines were made by Robert R. Jackson from 1993 to 2000. I accompanied Simon Pollard and him on a salticid survey for three weeks in 1993. In 2002, I undertook to identify the many Philippine salticids collected by Jackson and colleagues, myself included. This is the first of several planned papers that will document taxonomic changes or additions to the Philippine salticid fauna as a result of those collections. Surveys from Luzon Island, Laguna Province, Los Banos (and nearby Mt. Makiling) found 3 males, 8 females, and 3 subadult females of *G. itimana*. Males are described for the first time. The additional females are documented and morphological variation is recorded.

The abbreviations BL = body length [excluding anterior median eyes, anal tubercle, spinnerets, and pedicel (if visible)], CL = carapace length, CW = carapace width, PLV = prolateroventral (followed by number of macrosetae), RLV = retrolateroventral (as in PLV), and RTA = retrolateral tibial apophysis are used in the descriptions. Range of measurements (in mm) is indicated in the format: min (mean) max. Literature citations follow Platnick (2008). Digital photographic figures were made with an Automontage system (Synchroscopy, Cambridge, UK).

Gambaquezonina Barrion & Litsinger 1995

Diagnosis.—The genus is monotypic and defined by the following combination of characters: Dual longitudinal rows of graduated elongate setae on the dorsum of carapace and abdomen; 5 or more macrosetae on venter of tibia I and metatarsus I on each of the prolateral and retrolateral edges; cheliceral promargin with two teeth (fused basally in male), retromarginal tooth with 4–5 cusps (possibly multiple teeth fused basally); male chelicerae excavate medially with spine at top of excavation; color pattern distinctive, with X-shaped anterior abdominal striping, and two pairs posterior abdominal spots of which the more anterior pair may be fused into a transverse band; anal tubercle pigmented with posterior pointed tip; embolus a retrolateral spiral from a disc; epigynal openings medial, set in oval depressions below atrial rims (not all on same plane as in many euophryines).

Gambaquezonina itimana Barrion & Litsinger 1995 Figs. 1–13

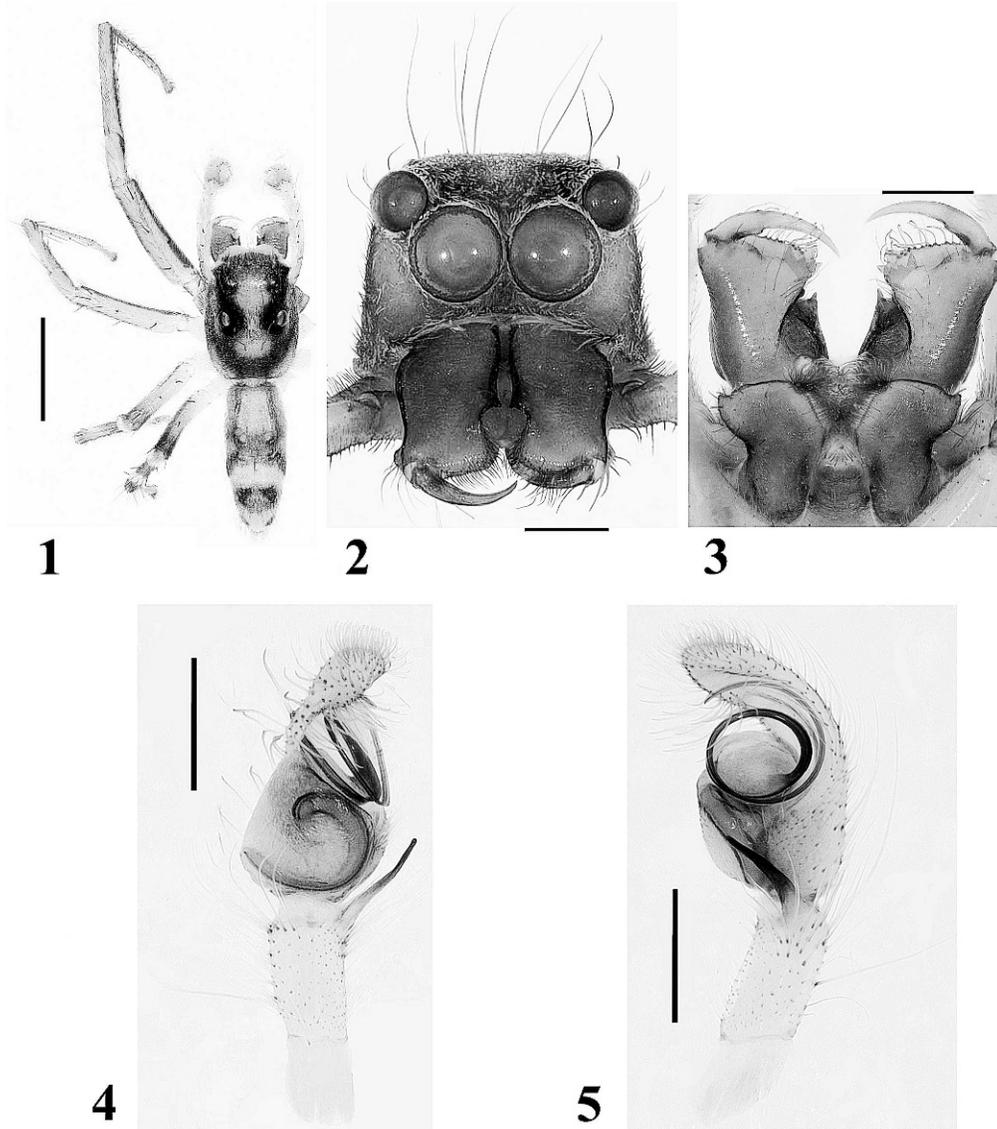
G. i. Barrion & Litsinger 1995:95, f. 49°–e (Df).

Type data.—Philippines: Luzon Island: Quezon Province, Real, Llavac village [14°39'N, 121°36'E], 26 August 1985, holotype female (M. Perez, IRR1).

Material examined.—Philippines: Luzon Island: *Laguna Province*: Los Banos, IRR1 station [14°10'N, 121°13'E]: Feb 1993, 1m (R.R. Jackson, Ph237/93); Jan 1994, 1f (R.R. Jackson, Ph1733/93); Dec 1996, 1f (R.R. Jackson, Ph219/96); Jan 1997, 1f (R.R. Jackson, Ph884/96); Mt. Makiling Forest Reserve [14°08'N, 121°11'E]: Mar 1993, 1f (R.R. Jackson, Ph388/93); 30 Nov–17 Dec 1993, 1m 1f 1juv (G.B. Edwards); Dec 1993, 1 juv (R.R. Jackson, Ph1240/93); Dec 1996, 1f (R.R. Jackson, Ph256/96); Jan 1997, 2f (R.R. Jackson, Ph532/96); Jan 1997, 1m (R.R. Jackson, Ph716/96); Jan 1997, 1 juv (R.R. Jackson, Ph742/96). All specimens (except the holotype) are deposited at the FSCA.

Description.—This medium-sized, rather delicate salticid is unusual in having a wide multi-cusped (4–5 cusps) retromarginal cheliceral tooth (Figs. 3, 12), an unusually large number of leg macrosetae (Fig. 13), and two sparse paramedial rows of graduated elongate setae that look like an antennal array on the dorsum of the body, especially on the carapace (Fig. 8), with a few similar setae also occurring on the legs dorsally. The setal arrangement suggests that this species might have interesting and unusual behavior or sensitivity to an as yet unknown stimulus. For example, the graduated array of dorsal setae may be attuned to a set of airborne vibrations which might be used in a sexual context, either by detecting sound or by detecting pheromone emissions, similar to moth antennae. Alternatively, these setae may similarly be used in prey detection, which, along with the unusual leg macrosetae and cheliceral teeth, might indicate a specialization for a particular prey type.

Females ($n = 8$): CL = 2.16 (2.32) 2.41, CW = 1.54 (1.66) 1.73, BL = 4.94 (5.64) 6.30. Females vary in the amount of pigmentation of the dorsal markings (Figs. 6, 7 show extremes) and as indicated below. Interestingly, the anal tubercle is darkly pigmented (and has a pointed tip); however, the spinnerets lack this pigmentation. The ventral leg macrosetae do not strictly occur in pairs and are better described as a row of prolateroventral and a row of retrolateroventral macrosetae. From zero to three are considerably smaller than the others in a row. All femora have 3 dorsal macrosetae in a longitudinal row (typical for salticids), with a dorsoprolateral macroseta and a dorsoretrolateral macroseta near the most distal of the dorsal macrosetae. Also, femur II has a retrolateral macroseta in the middle of the segment, and femur III has a prolateral macroseta in the middle of the segment. These are uncommon placements for femoral macrosetae in salticids. Other total leg I macrosetae numbers: tibiae PLV row 5–7, RLV row 5–10, plus 1 prolateral about ¼ to 1/3 length



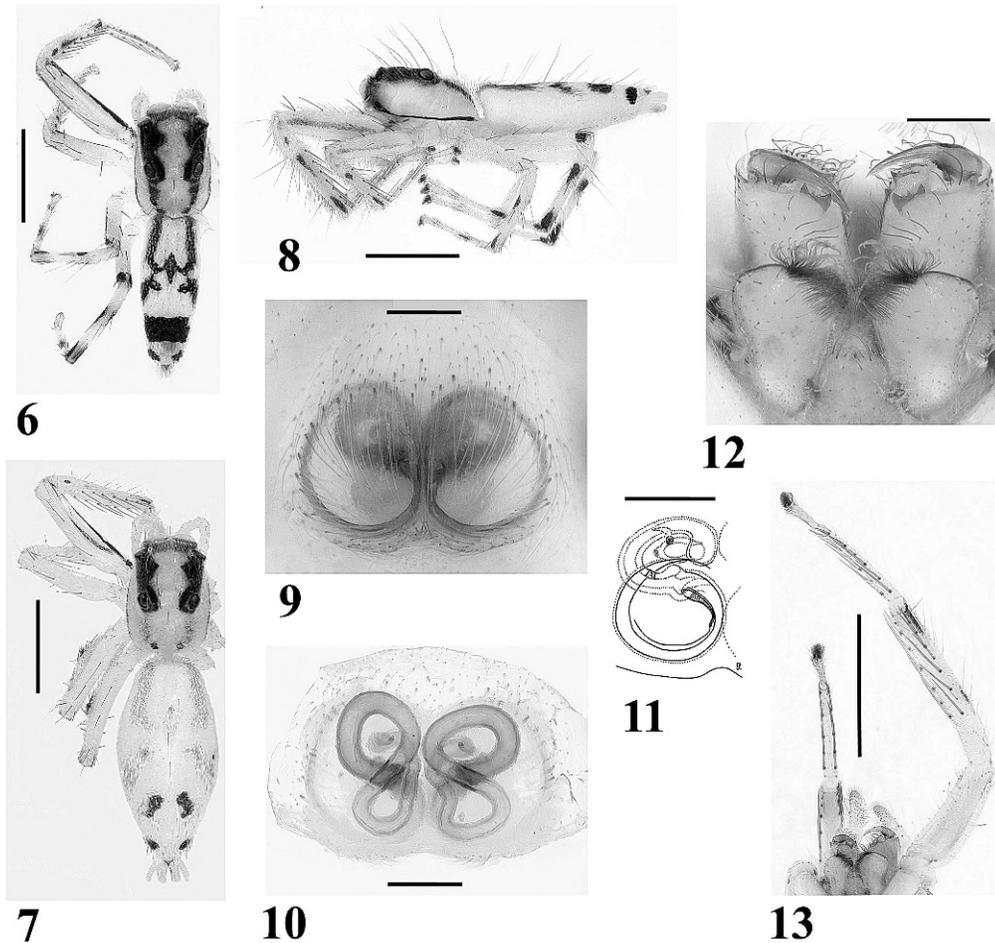
Figures 1–5.—*Gambaquezonia itimana* Barrion & Litsinger, male. 1. Dorsal habitus; 2. Face; 3. Chelicerae ventral view; 4. Left palp ventral view; 5. Left palp retrolateral view. Scale line for Fig. 1 = 2 mm; scale lines for Figs. 2, 3, 4, 5 = 0.5 mm.

from distal end; metatarsi PLV row 6–8, RLV row 6–7, plus 1 distal retrolateral and/or 1 proximal retrolateral (or both absent). Often the macrosetae numbers on the legs are asymmetrical. The lighter, more central parts of the epigynum (Figs. 9–11) are depressed below the sclerotized atrial rims. The copulatory openings are placed at mid-length, next to the septum formed by the rims.

Males ($n = 3$): CL = 2.35 (2.40) 2.47, CW = 1.73 (1.77) 1.85, BL = 5.31 (5.48) 5.62. Males (Fig. 1) are essentially like females in appearance, except there is a broad dark band on the back and sides of the carapace, abdominal markings are more obscure, and the dorsum is more noticeably covered in iridescent scales (some females also have dorsal iridescent scales). The chelicerae (Fig. 2) are excavate medially, with an integumental projection (essentially a true spine, neither a tooth nor a typical mastidion) at the top of the excavation. The endites each have an anterolateral cusp. Femoral macrosetae are like the female. Other leg I macrosetae: tibiae PLV row 5–7, RLV row 5–8, plus 1 prolateral about $\frac{1}{4}$ to $\frac{1}{3}$ length from distal end; metatarsi PLV row 6–8, RLV row 5–8, plus 1 proximal retrolateral (prolateral in one specimen). The palp (Figs. 4, 5) has a RTA that is elongate, flattened, slightly curved, blunt tipped, and angled toward the venter. The embolus faces retrolaterally, and during mating seems like

it would fit underneath (from a ventral position) an atrial rim, which would act as a guide to the copulatory opening. The embolus has a basal embolar disc reminiscent of a euophryine, but the bulb sperm duct lacks the S-shaped extra bend characteristic of that subfamily. The embolus is otherwise similar to several genera in the Ballinae, but the other characters used to diagnose that subfamily (Benjamin 2004) do not fit *G. itimana*. It seems likely that the closest relative will be found among those salticids related to the Astieae, the main salticoid group in the region with relatives retaining the plesiomorphic condition of pluridentate retromarginal cheliceral teeth, from whence the multi-cusped retromarginal tooth of *G. itimana* might be derived.

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Figures 6–13.—*Gambaquezonia itimana* Barrion & Litsinger, female. 6. Heavily pigmented dorsal habitus; 7. Lightly pigmented dorsal gravid habitus; 8. Habitus lateral view; 9. Epigynum ventral view; 10. Epigynum dorsal view cleared; 11. Holotype epigynum ventral view cleared; 12. Chelicerae ventral view; 13. Left leg I retrolateroventral view, also showing distal end of right leg I ventral view. Scale lines for Figs. 6, 7, 8, 13 = 2 mm; scale lines for Figs. 9, 10, 11 = 0.25 mm; scale line for Fig. 12 = 0.5 mm.

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