

**LATHROMEROMYIA BALTAZARAE SP. N.  
(HYMENOPTERA: TRICHOGRAMMATIDAE)  
PARASITIC ON THE EGGS OF NISIA CAROLINENSIS  
FENNAH (HEMIPTERA: MEENOPLIDAE)  
IN THE PHILIPPINES<sup>1</sup>**

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**ABSTRACT**

*Lathromeromyia baltazarae* sp. n. is described and illustrated. It is the first species of the genus to be described from the Philippines where it has been reared as a solitary egg parasitoid of a meenoplid hopper, *Nisia carolinensis* Fennah, infesting *Cyperus compactus* Retzius, *C. iria* Linnaeus, and *Scirpus grossus* Linnaeus f.

**Key words:** *Lathromeromyia baltazarae*, Trichogrammatidae, egg- parasitoid, *Nisia carolinensis*

**INTRODUCTION**

The genus *Lathromeromyia* was established by Girault in 1914 based on the type-species *L. perminuta* Girault from Java, Indonesia. It is characterized by the 4-segmented antennal club; scape, pedicel, and 2 anelli (ring segments) present; funicle absent; mandibles with inner tooth; marginal vein straight and longer than the stigmal on the premarginal vein; r-m and Cu vein tracts present but indistinct; prominent setae on pronotum, lateral and midlobes of mesoscutum, scutellum, and dorsal surfaces of abdominal tergites (Doutt and Viggiani, 1968). *Lathromeromyia* belongs to the subfamily Lathromerinae in the family Trichogrammatidae (Peck et al, 1964). Only three species are currently known -- *L. perminuta* from Indonesia reared on *Cicada* sp. eggs, *L. dimorpha* Hayat from India, and *L. cercopicida* (Risbec) from Africa (Doutt and Viggiani, 1968; Subba Rao & Hayat, 1986).

The trichogrammatid genus *Lathromeromyia* has not been recorded in the Philippines (Baltazar, 1966). However, recently we reared it on one-day-old eggs of the meenoplid hopper, *Nisia carolinensis* Fennah, laid in field-exposed *Cyperus compactus* Retzius, *C. iria* Linnaeus, and *Scirpus grossus* Linnaeus f. plants. This represents the fourth species in the genus and is herewith illustrated and described new to science to make its name available for use by biological control workers and taxonomists.

Type materials consisting of the male holotype and 37 paratypes (30♀♀, 7♂♂) are deposited in the Entomology Department, International Rice Research Institute (IRRI), and materials consisting of six paratypes (4♀♀, 2♂♂) will be deposited in the University of the Philippines at Los Baños Museum of Natural History (UPLBMNH).

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*Lathromeromyia* Girault

*Lathromeromyia* Girault, 1914: 308. Type species: *Lathromeromyia perminuta* Girault, 1914.

*Lathromeromyia baltazarae* Barrion & Litsinger, n. sp. (Figs. 1-20)

**Male.** Length: Body, 0.60-0.62 mm; head, 0.10-0.12 mm; thorax, 0.12-0.13 mm; gaster, 0.37-0.38 mm; fore wing, 0.07-0.09 mm.

Body brown to pale grayish brown except yellow head, mandibles, and ovipositor; gena and legs dark grayish brown; ocelli and compound eyes purplish red; trochanter pale yellow; brachypterous fore wings light reddish brown and knoblike hind wings yellowish brown.

Head moderately transverse, slightly wider than thorax (20:18) and its height one-fourth narrower than width (15:20) (Fig. 1); circularly striate, transversely on occiput, longitudinally on vertex almost parallel with margins of compound eyes and transversely but interrupted in front of median ocellus; circular striae encircle the smooth, obtuse ocellar triangle with a pair of prominent setae inside, each seta much closer to the posterior ocellus than to the median, and 4 pairs of setae, each arranged in a longitudinal row of 4, parallel with orbital striae (Fig. 2); post ocellar distance (POL) about twice the distance between median and the posterior ocelli; ocellus-ocular distance (OOL) 0.8 times the POL (22:28); facets of compound eyes with a network of moderately irregular hexagonal structures (Fig. 3), eye height almost twice the eye width (0.09:0.05); malar space finely reticulated, one-third the eye-height (0.03:0.09); frons smooth, laterals with a pair of prominent and 2 pairs of weak setae; scrobe slightly striated and darker than frons; toruli in line with lower margins of compound eyes, one diameter apart from each other, 1.5 times toruli diameter away from compound eyes; lower face transversely reticulate with 9 setae, 4 on left side and 5 on right side above the clypeus; clypeus with 4 transversely arranged setae on apical margin; gena moderately reticulate with 3 setae; mandible (Fig. 4) tridentate, teeth decreasing in sharpness toward the inside; antennae 6-segmented with 2 anelli, 4-segmented club and without funicle; scape short (0.06 mm), below the median ocellus, twice broader basally than the apex; pedicel (0.035 mm) subglobular and broadest apically; ring segments (0.005 mm) strongly transverse; club (0.075 mm) 2.72 times as long as wide, segments I to III subequal (0.017 mm each) and transverse, segment IV as long as wide and the longest (0.022 mm), basal club segments I and II without sensoria except III and IV with 1 and 3 sensoriae, respectively; a peglike seta present on segment II and 2-3 setae on segment IV (Fig. 5).

Thorax (Fig. 1) wider than long (65:58), about one-third the length of the gaster; pronotum, metanotum, and propodeum narrow and strongly transverse; mesoscutum finely reticulate, inner reticulations much lighter than the marginals, midlobe wider than long (29:37), broadest in apical one-third and bears 2 pairs of prominent setae, first pair near the broadest part and distally separated, second pair relatively near each other and above the basal one-third; scapula small with one strong seta; scutellum strongly transverse, with reticulations similar to those on midlobe, and bears 2 pairs of unequally long submarginal setae at the middle (Fig. 6); postphragma strongly concave, apically rounded in dorsal view and extended to first abdominal segment. Brachypterous fore wing veinless and lobelike, 4 times longer than wide, apically rounded and bears 2 long setae in the

inside (Fig. 7). Hind wing minutely lobelike, 4 times longer than broad, and with 3 minute hairs subapically (Fig. 8). Legs reticulate except tarsal segments, coxae I and II subglobular, coxa III elongate with a large circular opening on inner side reaching the broad midhalf; trochanters uniformly longer than wide; femora I to III slender, slightly broaden medially and are uniformly narrowed apically, dorsal surfaces with a longitudinal row of 5-6 small setae; apices of all tibiae with a ventral spine, tibia I constricted in apical one-third and with 3 dorsal setae, II moderately slender with 12 dorsal setae in 2 longitudinal rows, III broadest at midhalf with 12 dorsal setae; tarsi 2-clawed, basal tarsus of legs I to III shortest, I with a diagonal row of 3-4 setae.

Leg measurements (mm).

Leg	Coxa	Trochanter	Femur	Tibia	Tarsus			Total
					1	2	3	
I	0.080	0.040	0.135	0.133	0.027	0.036	0.046	0.497
II	0.072	0.040	0.135	0.133	0.040	0.053	0.052	0.547
III	0.115	0.057	0.152	0.163	0.041	0.059	0.052	0.639

Gaster sessile, elongate to subglobular and widest medially, more than twice longer than thorax (145:65); abdominal tergites and sternites setaceous, tergite I with 2 prominent setae, 6 in II, 4 each in III, V and VI, and 5 in IV; sternite IV with 2, 4 in V, 7 in VI and 12 in terminal segment (Fig. 1). Aedeagus bottle-like, nearly flat basally, constricted before bifurcate apex, apodemes equally long (Fig. 9).

**Female.** Length: body, 0.53-0.57 mm; head, 0.10-0.11 mm; thorax, 0.15-0.16 mm; forewing, 0.47-0.50 mm; gaster, 0.28-0.30 mm; ovipositor, 0.22-0.24 mm.

Generally similar to male in coloration, body sculpture, and reticulation. Head (Fig. 10) broader than thorax (20:15), its height nearly as long as wide (18:19); POL more than twice the distance between the median and the posterior ocelli, 3.2 times longer than OOL (0.065:0.020); eye height and width subequal; malar space height 0.5 times eye height; lower face very finely reticulate with 3 transverse rows of fine setae arranged in 6-2-2 pattern from apex to bases; mandibles tridentate; facets of compound eyes more uniformly set than in male (Fig. 11); toruli distance and position in relation to compound eyes similar to male; antenna 6-segmented with 2 ring segments, 4-segmented compact club, and without funicle; scape relatively short (0.06 mm), enlarged towards basal one-half and not-reaching the median ocellus; pedicel (0.035 mm) globular apically and narrowed basally; anelli (0.005 mm) both strongly transverse; club (0.09 mm) setaceous and broadest at midhalf, segment I with 5 peglike setae and no sensoria, II with 6 and 0, III with 3 and 1, and IV with 2 and 5 (Fig. 12).

Thorax about half the length of the gaster, one-third longer than the head, and finely reticulated dorsally; pronotum narrow (Fig. 13); mesoscutum with prominent, equally long setae, midlobe wider than long (40:32) with 4 setae, apical pair of setae one-third wider than basal pair (30:20) and 3 times longer than the distance between pairs (30:10); scapula relatively small compared with the midlobe, bears 1 long seta; axilla prominently striated; scutellum transverse, 2.35 times wider than long, reticulated as in midlobe, median submarginal portion with a pair

inside (Fig. 7). Hind wing minutely lobelike, 4 times longer than broad, and with 3 minute hairs subapically (Fig. 8). Legs reticulate except tarsal segments, coxae I and II subglobular, coxa III elongate with a large circular opening on inner side reaching the broad midhalf; trochanters uniformly longer than wide; femora I to III slender, slightly broaden medially and are uniformly narrowed apically, dorsal surfaces with a longitudinal row of 5-6 small setae; apices of all tibiae with a ventral spine, tibia I constricted in apical one-third and with 3 dorsal setae, II moderately slender with 12 dorsal setae in 2 longitudinal rows, III broadest at midhalf with 12 dorsal setae; tarsi 2-clawed, basal tarsus of legs I to III shortest, I with a diagonal row of 3-4 setae.

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of short anterior and a pair of long posterior setae, apical pair almost as long as the posterior pair (20:19) and separated by a distance 4 times the distance between pairs (Fig. 14); metanotum and propodeum strongly transverse, metanotum roughly one-fourth of scutellum diameter and nearly as wide as the propodeum (4:5); postphragma extended to second abdominal segment, narrows apically and cleft at midapex. Fore wing (Fig. 15) hyaline except dusky basal one-half, pubescent towards outer one-half, moderately long, beyond abdominal tip by one-sixth of its length, ratio of wing length to breadth 4.7:1.7; discal cilia evenly distributed beyond speculum in 11-13 rows; submarginal vein one-fourth longer than marginal vein, 4 times longer than stigmal vein, and 2.7 times that of the prestigma; marginal vein with 3 dorsal setae, thrice as long as stigmal vein, twice that of the prestigma; (= premarginal) with one dorsal seta, and with a pair of proximal sensillae; stigmal vein with 3 sensillae at tip; apex of fore wing rounded; marginal fringe prominent, longest cillium about 2.3 times wing width; hind wing very narrow, uniformly dusky from base to tip, about one-seventh as broad as fore wing, discal hairs absent. Legs (Fig. 16-18) as in the male except in measurements and shape of tibia I; femora I to III slender to moderately swollen at midhalf; all tibiae slender, each with a long spine apically, tibia III with 7 brushlike setae subapically (Fig. 18); tarsi I to III each with a pair of claws.

Leg measurements (mm).

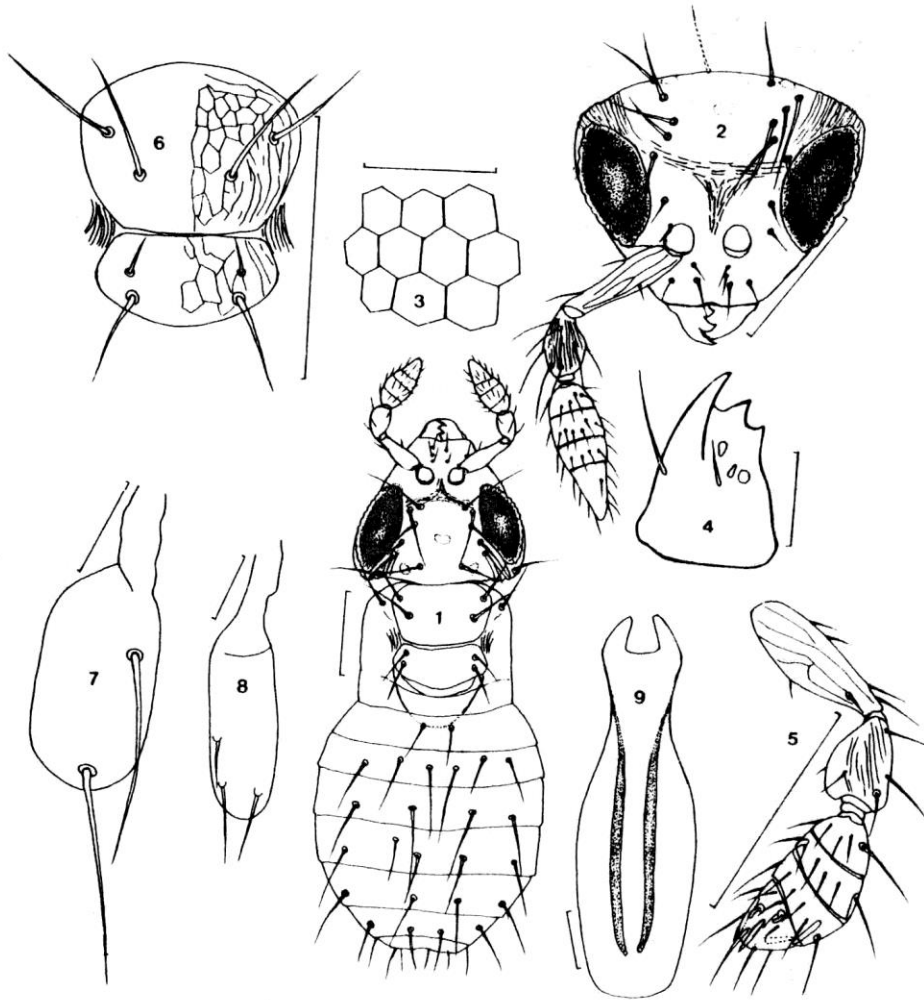
Leg	Coxa	Trochanter	Femur	Tibia	Tarsus			Total
					1	2	3	
I	0.075	0.034	0.125	0.122	0.027	0.042	0.043	0.468
II	0.052	0.035	0.125	0.155	0.040	0.052	0.046	0.505
III	0.112	0.058	0.133	0.165	0.041	0.055	0.047	0.611

Gaster sessile, about twice as long as wide, subglobular, very finely reticulate dorsally and with incomplete reticulations laterally, tergites V and VI each with 2 dorsal (Fig. 13) and 2 sublateral setae, and IV with only 2 sublateral setae; genital apparatus partially exerted (Fig. 19); first valvulae ( $V_1$ ) with a roundish tip; second valvulae ( $V_2$ ) serrated apically, apical pair small and close to each other, large basal tooth distantly separated from the former (Fig. 20).

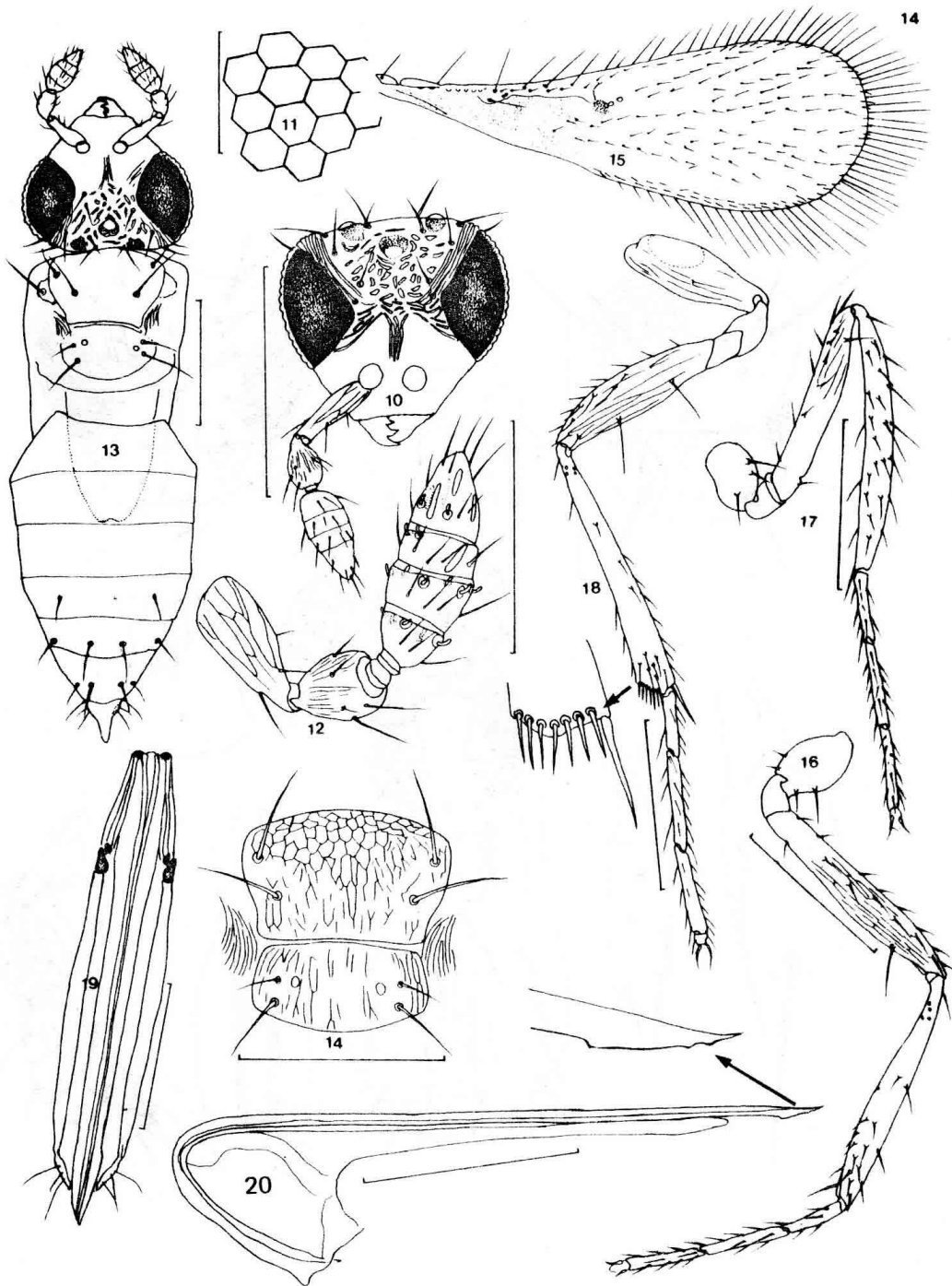
**Material Examined:** Holotype ♂ and 13 ♀♀, 3 ♂♂ paratypes all mounted on slides, Philippines: Luzon Island, Laguna Province, Los Baños, IRRI Experimental Farm, from eggs of *Nisia carolinensis* on *Cyperus compactus* Retz. and *Scirpus grossus* Linnaeus f., emerged 23-25 Oct 1989, IRRI taxonomy Laboratory; 17 ♀♀ and 4 ♂♂ paratypes mounted on cardpoints, same data as holotype. All are deposited in the IRRI Reference Collection except 4 ♀♀ and 2 ♂♂ paratypes mounted on a cardpoint which will be deposited in the University of the Philippines at Los Baños Museum of Natural History (UPLBMNH).

**Etymology:** This species is named after Dr. Clare R. Baltazar in recognition of her monumental contributions in the study of the Philippine Hymenoptera.





Figs. 1-9 - *Lathromeromyia baltazarae* sp. n. (male). 1, body without legs and wings, dorsal aspect; 2, pattern of compound eyes; 3, head, frontal aspect; 4, left mandible; 5, left antenna, dorsal aspect; 6, midlobe of mesoscutum and scutellum, dorsal aspect; 7, brachypterous fore wing; 8, hind wing; 9, aedeagus, dorsal aspect. Scale line 1, 3, 5, and 6 = 0.1 mm; 2, 4, and 7 = 0.025 mm; 8 and 9 = 0.01 mm.



Figs. 10-20.- *Lathromeromyia baltazarae* sp. n. (female). 10, head, frontal aspect; 11, pattern of compound eyes; 12, left antenna, dorsal aspect; 13, body without legs and wings; 14, midlobe of mesoscutum and scutellum, dorsal aspect; 15, fore wing; 16, leg I; 17, leg II; 18, leg III showing the tibial comb and the circular opening in the inner basal part of coxa; 19, ovipositor, ventral view; 20, same, side view showing serrated tip of ovipositor. Scale lines = 0.10 mm, except 11 = 0.025 mm.

**Remarks:** *L. baltazaræ* sp. n. is closest to *L. perminuta* Girault from Java, Indonesia, in terms of similarly compact antenna, fore wings of female longer than body length, dorsal sclerites of thorax with long setae, and straight marginal vein longer than stigmal and premarginal veins. Unlike *L. perminuta*, however, *L. baltazaræ* has dusky fore wing, striated head, and bifurcated apex of aedeagus.

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