

A NEW SPECIES OF *MESENE* FROM COLOMBIA (LEPIDOPTERA: RIODINIDAE)

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ABSTRACT.—The symmachiine riodinid *Mesene ingrumaensis* Callaghan & Salazar, n. sp., is described from central Colombia, and notes are given on its habitat, habits and distribution.

KEY WORDS: behavior, Caldas, *Edule*, Geometridae, hilltopping, *Mesene ingrumaensis* n. sp., mimicry, Neotropical, South America, taxonomy.

The mountains in the Departamento de Caldas, Colombia continue to yield interesting riodinids. In December, 1993, one of us (JSE) captured 4 specimens of a small riodinid while collecting on the summit of Cerro Ingrumá, near the town of Río Súcio, Colombia. The close superficial resemblance of these to *Mesene margaretta* (White) led him to refer to these as "*Mesene* sp." in a subsequent article (Salazar, 1996). Examination of these specimens indicated that they belong to an undescribed species of the genus *Mesene*.

Mesene ingrumaensis Callaghan & Salazar, new sp.

Male (Fig. 1-2). Forewing length of holotype 19mm (paratypes 18.4-19mm). Head, thorax and abdomen dark brown, appendages pubescent with mixed white and dark brown scaling; head with antennae brown with white lines on each segment, antennae 60% forewing length, club flat with many small barbs; orbit white, frontoclypeus dorsally brown, basad white; palpi (Fig. 8) dark brown, short, with long scales on first section, last segment up to a fifth of second, not protruding beyond face when viewed dorsally; thorax with two rosettes of white scales on T1, tegula orange; long white hairs on T3; forelegs white, with coxa wedge-shaped, trochanter branching off about half way to the tip, with long scales, and two tarsal segments, (Fig. 7); abdomen with light orange scaling at caudal edge of segments A2-A6, rosette of long, black and white scent hairs around genitalic area; segments A4 to A6 with concealed androconia forming continuous dorsal bands on anterior margins of abdominal tergites. Forewing with 4 radial veins, R1 and R2 branching before, and R3 at discal cell, with Cu1 branching before the cell. Hindwing Cu1 branching before discal cell; long white scales in cell Cu2-2A on both dorsal and ventral surfaces. **Dorsal surface:** Wing ground colour orange with black borders. Forewing with apical and submarginal areas dark brown and a white streak in each cell between veins, base dark brown; hindwing with 3mm-wide dark brown border, white streaks in cells between veins; costa, inner margin white, long hairs in cell Cu2-2A. **Ventral surface:** Same pattern as dorsal; forewing costa black, bordered below with white, anal cell white; hind wing white streaks in brown border more prominent than dorsally, anal margin brown except for a small gap of orange scaling near base. **Male genitalia** (Fig. 5-6): Uncus broad, slightly lobed with a slight medial prominence; posterior margin of tegumen straight, unnotched; vinculum narrow, widening slightly medial, flat, broad at base; valvae truncated, bifurcated, lower part being a thin projection, transtilla broad; aedeagus broad, blunt, with row of small cornuti, pedicel with an incurved tube-like process, slightly bifurcate at tip.

Female. Forewing length 13mm. Pattern similar to male, but with lighter orange colour in discal areas of both wings, light gray limbal areas with the white streaks pale or lacking.

Types.—*Holotype:* Male, Colombia, Cerro Ingrumá, Caldas, 2270m, Dec 1991, leg. Salazar (deposited in the museum of the Universidad Nacional,

Bogotá, Colombia). *Paratypes:* 3 males, same data as holotype, leg Salazar (in coll. JSE and CJC); 1 male same locality, Jul 1994, leg Salazar (in coll. JSE); 1 male, same locality, 23 Mar 1997, leg Salazar (in coll. JSE); 1 male same locality, 22 Mar 1997 leg. Callaghan (in coll. CJC); 1 female "Ecuador" (BMNH); 1 female, Rio San Francisco, 1900m, Loja-Zamora rd. Zamora-Chinchipe Prov., S. Ecuador, in coll. Stephan Attal (Paris).

Etymology.—The species is named after the type locality.

Diagnosis.—The presence of concealed androconia on the anterior margins of abdominal tergites place the species in the tribe Symmachiini (sensu Harvey, 1987). Comparison with *Mesene phareus* Cramer, the generic type-species, suggests placement in *Mesene*. Both taxa have similar notched pedicels, palpa with a short third section, have identical venation and abdominal androconia in transverse dorsal bands on segments 4-6. Although *M. grumaensis* superficially resembles *Mesene margaretta*, this species has an additional transverse androconal band on segment 7 (stated erroneously in Harvey (1987) and Hall and Willmott (1996) as being found on only 4-5) and lacks the projection of the pedicel. *Mesene oriens* Butler and *Mesene eupteryx* H. W. Bates are also superficially similar, but likewise lack the projection of the pedicel. *M. ingrumaensis* is the only *Mesene* with orange scales between the abdominal segments.

Range and habits.—*Mesene ingrumaensis* is known from the Cerro de Ingrumá (2270m) in western Departamento de Caldas, Cauca River drainage, Colombia, which is part of the Cordillera Occidental (western cordillera), and has been observed at El Aguila, near Manizales, Manizales municipality (1700m) in the Cordillera Central (JSE). It is also recorded from western Ecuador (J. Hall, pers. comm.) The Cerro Ingrumá habitat (Fig. 3-4) is a wooded hill west of the town of Río Súcio. The vegetation from 1700-2200m can be classified as Low Mountain Very Humid Forest with a temperature ranging from 12-18°C, the annual precipitation recorded is 2000-4000mm (Espial and Montenegro, 1977). The natural vegetation is very diverse, particularly in orchids, bromeliads, giant ferns (*Dicsonia* sp., Cyatheaceae) and oaks (*Quercus* sp., Fagaceae). This formation, lying between the coffee crop zone and the paramos, is common in the upper Cauca and Magdalena river drainages, which suggests that *M. ingrumaensis* may be more widely distributed. This habitat is quite different from that of "*Calydna*" *volcanicus* Callaghan & Salazar, from Cerro Clavijo and Cerro Aguacatal, which lie in the coffee zone east of Río Súcio. (Callaghan and Salazar, 1997). The Cerro de Ingrumá is currently a municipal park, and is being upgraded to a biological reserve, which should ensure its preservation.

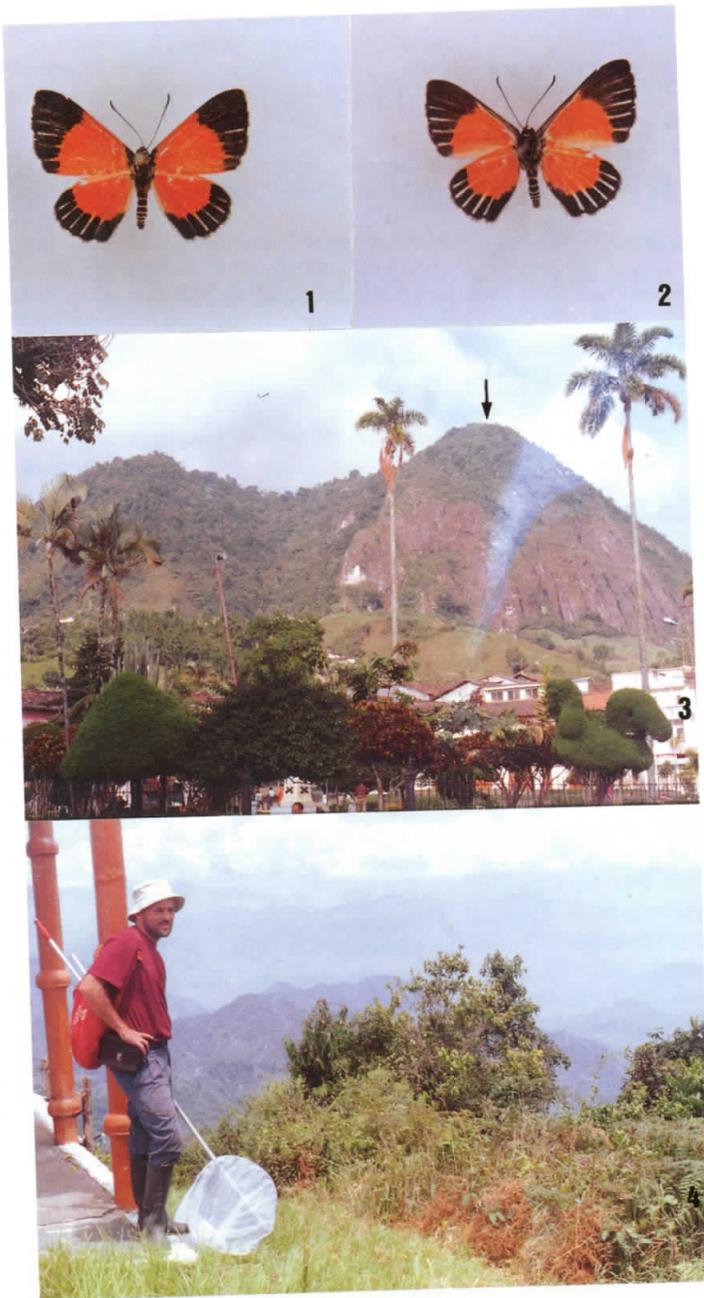


Fig. 1-4. *Mesene ingrumaensis* in Colombia: 1) Male, dorsal. 2) Male, ventral. 3) Cerro de Ingrumá, Caldas, Colombia, showing type locality. 4) Summit of Cerro de Ingrumá with *M. ingrumaensis* perching site.

Mesene ingrumaensis males hilltop from 1200-1330h, resting 2-5m above the ground beneath leaves with their wings outspread. They leave the perches to chase other passing butterflies. The flight is fast and erratic. *Mesene ingrumaensis* appears to mimic some moths of the genus *Edule* (Geometridae) which are common on the same hilltop.

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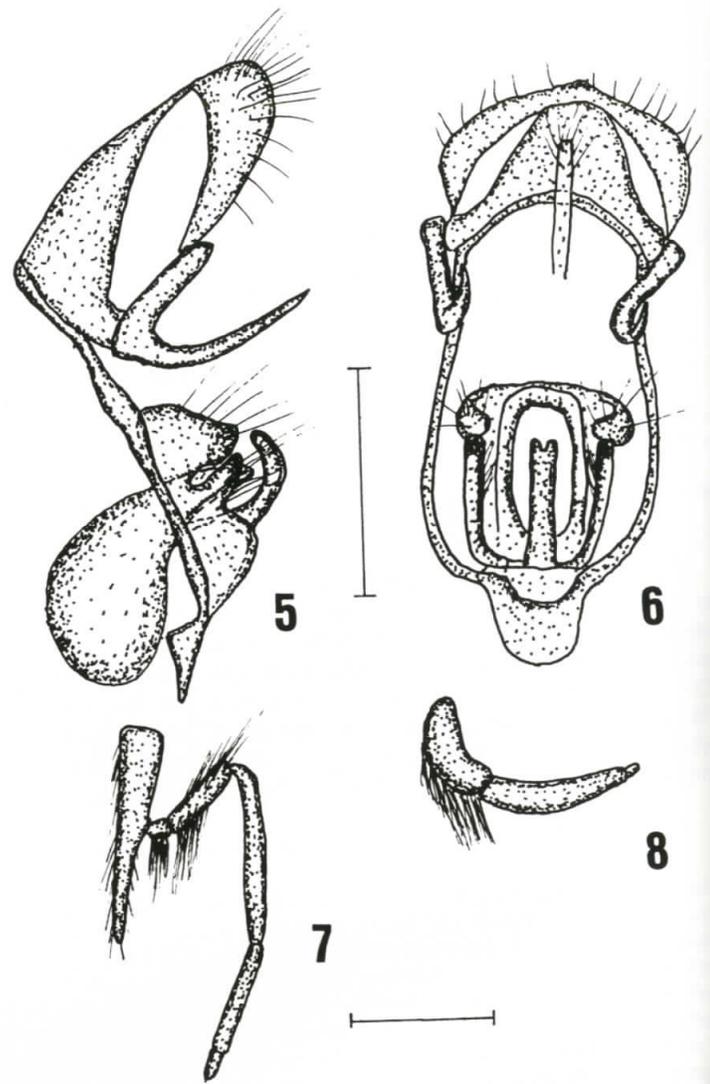


Fig. 5-8. *Mesene ingrumaensis* morphology: 5) male genitalia, lateral view (scale = 0.5mm). 6) Male genitalia, frontal view (aedeagus removed). 7) Male foreleg (scale = 0.5mm). 8) Male palpus.

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