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A REMARKABLE NEW COLEOPTEROID LYGAEID FROM COLOMBIA (HEMIPTERA: HETEROPTERA)[1]

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Abstract. *Icaracoris montanus*, a new genus and species of lygaeid from 3658 m in the mountains of Colombia, is described. A discussion of the coleopteroid modification of the fore wings is included. The hind wings are reduced to small lobes. The systematic position of *I. montanus* is discussed, and it is assigned to the tribe Ozophorini of the Rhyparochrominae. Illustrations of the entire insect, the abdomen, paramere, and spermatheca are included.

Through the kindness of Dr R.T. Schuh I have been able to study a series of unusual lygaeid specimens from the mountains of Colombia.

Coleoptery (Slater 1975) occurs in many different taxa of Lygaeidae but only rarely reaches the degree of modification found in the specimens discussed below.

The new taxon described below is a small, brown, hemispherical bug that superficially has the appearance of a small beetle. Each hemelytron is not only fused into an undifferentiated coriaceous shell, but each is also strongly convex and the 2 meet evenly along the midline of the body for their entire lengths. The 2 fore wings thus form a convex shell over the abdomen. The hind wing is reduced to a tiny flap, and the anterior segments of the abdominal tergum are not sclerotized. This extreme wing modification is similar to that in the genera of Psamminae (*Psammium* Breddin, *Saxicoris* Slater, *Sympeplus* Bergroth) (Slater & Sweet 1965, Slater 1970) and the Australian lethaeine genus *Coleocoris* Gross (Slater 1975). In species of these genera the anterior abdominal terga are also not sclerotized.

Coleoptery of this degree and type has hitherto been known to occur chiefly in species inhabiting xeric areas. Coleoptery, however, does occur frequently in montane species, although usually without such marked convexity of the hemelytra and without loss of sclerotization of the abdominal tergum [in *Microlugenocoris* Scudder from the Uluguru Mountains of Tanzania the hemelytra appear to be modified to a similar degree as in the genera noted above (see Scudder 1962)].

Other coleopteroid lygaeids occur in the mountains of Colombia. I have examined a specimen of an unknown species of Antillocorini related to *Botocudo* Kirkaldy (from "Cundinamarca Road, Facatativa-Anolaima, 2,800 meters") that has completely undifferentiated hemelytra meeting along the midline for their entire length. The hemelytra in this species are not strongly convex. Discussion of this species' systematic position will await the results of a study of the genus *Botocudo*.

All measurements are in millimetres.

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Icaracoris Slater, **new genus**

Type-species: *Icaracoris montanus,* n. sp.

Body short, stout, elliptical. Head moderately declivent anteriorly; vertex strongly convex. Eyes large, sessile. No ocelli present. Bucculae terminating posteriorly in a broad "U." Pronotum extremely short and broad, width more than 2 × median length; laterally broadly explanate, margins acute. Scutellum lacking a conspicuous median elevation. Hemelytron consisting of strongly convex, evenly and coarsely punctate undifferentiated coriaceous beetlelike structures. Each hemelytron meeting evenly along midline for entire length; reaching posteriorly to 7th abdominal tergum. Posterior hemelytral margin very slightly angled anteriorly from caudolateral corner. An extremely small "rim" of membrane present. Hind wings reduced to minute pads. Metathoracic scent gland auricle short, broad, almost circular. Evaporative area barely extending laterally beyond auricle, not present on metepimeron. Fore femora mutic. Second tarsal segment of each leg much smaller than segments 1 and 3. Dorsal abdominal scent gland scars present between terga 3–4, 4–5, and 5–6. Scar between terga 3–4 much broader than those between 4–5 and 5–6 (Fig. 2). No inner laterotergites present. Abdomen nonsclerotized anteriorly. Membranal terga on segments 2 and 3 and laterally on terga 4 and 5 very thin (Fig. 2). All spiracles ventral, those on sterna 2, 3, and 5 located below "sternal shelf"; spiracle of sterna 4 located on edge of poorly defined shelf margin. Only a single posterior trichobothrium present on sterna 5 and 6 (Fig. 5). Paramere with well-developed inner projection and a blunt, short blade (Fig. 3). Spermatheca without a differentiated pump; bulb small and nonflanged; duct with 5–6 tight coils (Fig. 4).

The systematic position of *Icaracoris* is complicated by the modification of various morphological features associated with coleoptery.

Despite its appearance, *Icaracoris* must, on the basis of our present classification system, belong to the tribe Ozophorini. This placement is based chiefly upon the ventral spiracles, lack of inner laterotergites, lack of a differentiated spermathecal pump and flanged bulb, and the strongly developed inner projection on the paramere.

As has previously been mentioned (Slater & Woodward 1982), the tribe Ozophorini is defined primarily on a loss character: the lack of inner laterotergites. This is disturbing when dealing with an insect with a partially nonsclerotized abdomen and where one of the posterior trichobothria on sternum 5 is absent (Fig. 5).

There is supplementary evidence to support the placement of *Icaracoris* in the Ozophorini. Of the tribes with ventral spiracles, only Ozophorini, Stygnocorini, Drymini, and Targaremini have a nymphal "Y-suture" between abdominal terga 3–4 (Slater & Woodward 1982). In adults this suture is obliterated but the abdominal scent gland scars are present. Frequently in species with a "Y-suture" the anterior scar is considerably broader than are scars between terga 4–5 and 5–6. This is the case with *Icaracoris* (Fig. 2). In addition, Targaremini, Stygnocorini, and Drymini are not known to occur in the Neotropics, but several ozophorine taxa are abundant and have radiated there. Drymini and Targaremini have apomorphies that would seem to remove them from consideration.

The other tribe that *Icaracoris* could possibly be related to is Antillocorini. It is true that if *Icaracoris* has lost the inner laterotergites as the result of loss of tergal

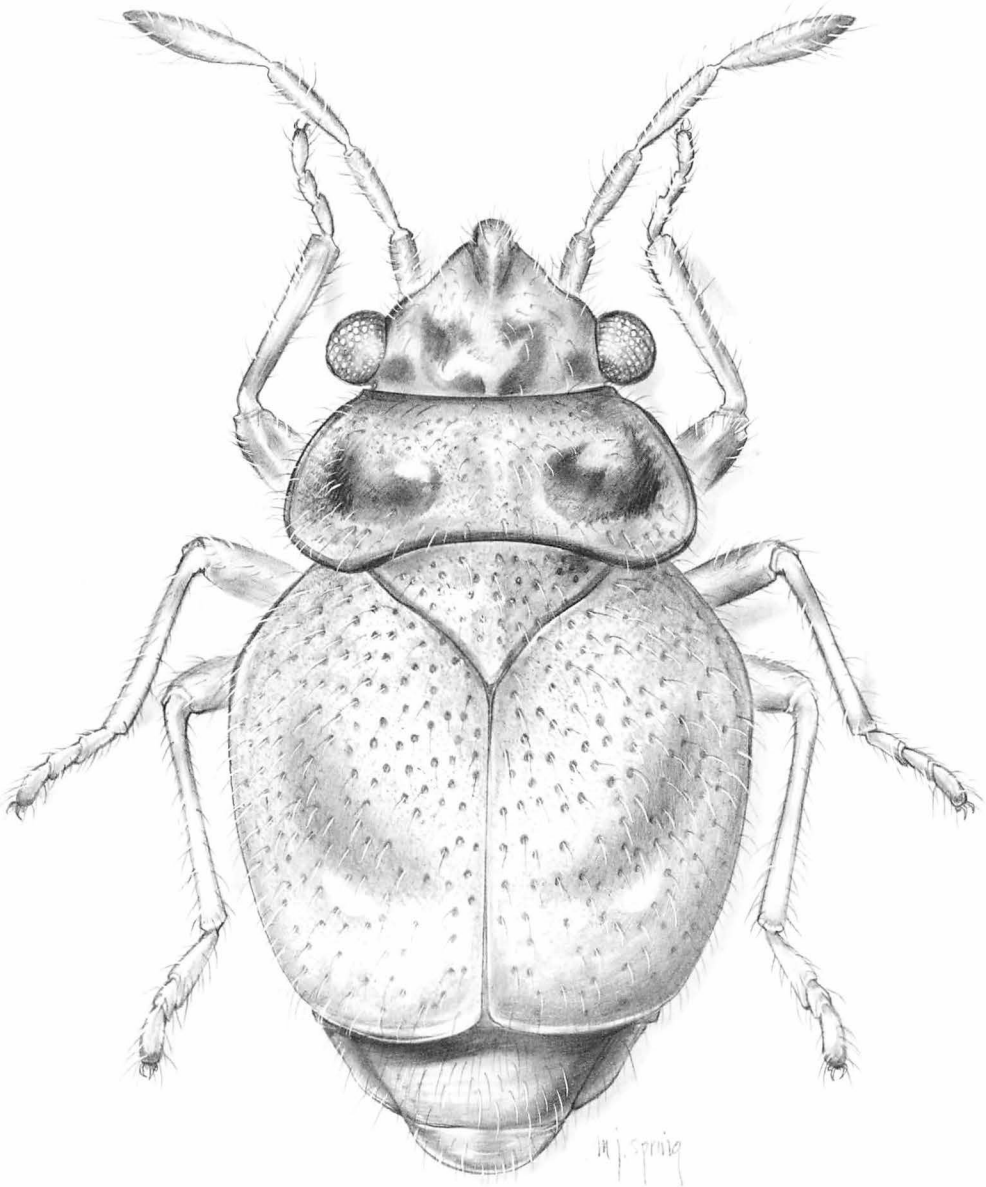

FIG. 1. *Icaracoris montanus,* dorsal view.

sclerotization, the possibility of Antillocorini relationships exists. However, in all antillocorines of which I am aware the anterior scent gland scar on the abdominal tergum is equal to or reduced in size relative to the succeeding, never larger, and most antillocorines have a paramere with a short blade and with the inner projection reduced or absent. The type of paramere possessed by *Icaracoris* may well be plesiomorphic for the Rhyparochrominae, but it is of a type found in most species of Ozophorini.

Independent loss of the inner laterotergites seems unlikely, for while the anterior terga are in part or completely nonsclerotized, the posterior segments are heavily sclerotized and there seems no reason to suppose that the inner laterotergites would be lost without any indication of reduction of the surrounding sclerites.

This genus will not run to any known genus in the key to Western Hemisphere ozophorines of Ashlock & Slater (1982). The only genus in that key without fore femoral spines is *Pamozophora,* and even in that genus a patch of spicules is present (which is most evident in the male). The only Western Hemisphere ozophorine with mutic fore femora is the recently described *Allotrophora* Slater & Brailovsky (1983). This genus is also coleopteroid and has carinate lateral pronotal margins. However, the 2 genera do not appear to be closely related. In *Allotrophora* the hemelytra are flattened rather than convexly rounded. The spiracle of sternum 2 is on the "sternal shelf," the spermatheca has an elongate, slender, irregular duct rather than the series of tight coils of *Icaracoris* (Fig. 4), and the fore femora are incrassate. The 2 insects do not resemble one another at all in general habitus. The resemblances all appear to be homoplasies resulting from loss of flight ability and the subsequent modifications associated with such loss.

While *Allotrophora* can be derived conceivably from a *Balboa*-like ancestor as Slater & Brailovsky (1983) suggest, *Icaracoris* is so highly modified that at present it is not possible to support relationships to any sister group.

Icaracoris montanus Slater, **new species** Fig. 1–5

General coloration bright reddish brown. Entire dorsal surface polished, shining. Head with a longitudinal dark brown stripe on either side of midline extending from level of posterior margin of eye to anterior margin of head and an oblique dark brown stripe running cephalolaterad between meson and compound eye from base of head to antenniferous tubercle. A large dark brown macula present in area of pronotal calli. Hemelytra becoming distinctly paler posteriorly, with a definite pale yellow spot present in middle of distal ⅓. Appendages sordid brown to dull yellow. Fourth antennal segment with apical ¾ contrastingly black. Pronotum, scutellum, and hemelytron evenly and coarsely punctate. Dorsal surface clothed with conspicuous, elongate upstanding hairs. Hairs on antennal segments as long as or longer than diameter of segment.

Tylus attaining or slightly exceeding distal end of antennal segment I. Length head 0.50, width across eyes 0.76, interocular space 0.44. Pronotum strongly convex, lateral margins flangelike, flattened, and arcuate. Humeral angles evenly rounded. Maximum width occurring across posterior ⅓ of pronotum. Both anterior and posterior pronotal margins deeply and evenly concave. No anterior pronotal collar nor transverse impression present. Length prono-

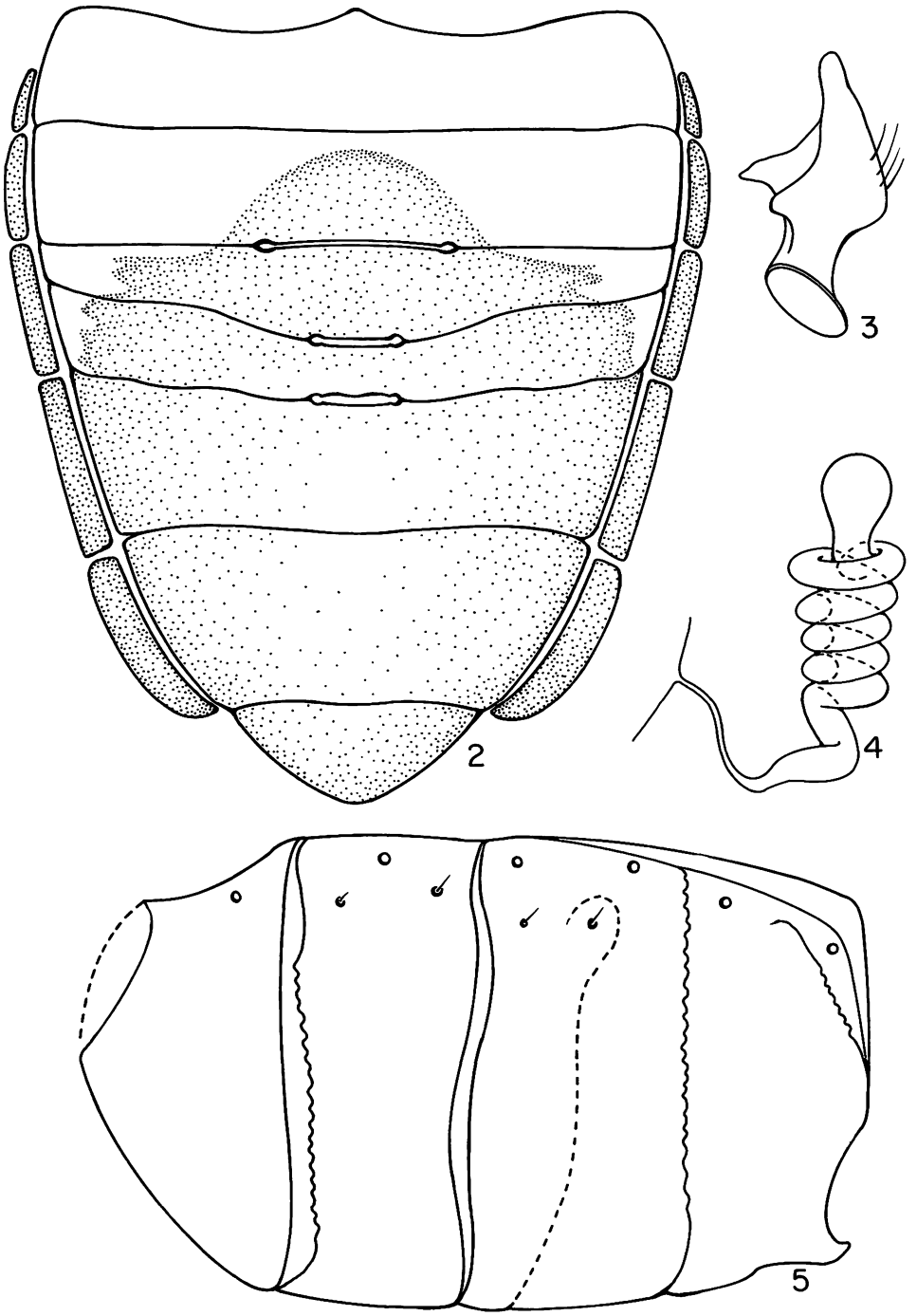

FIG. 2–5. *Icaracoris montanus:* **2,** abdomen, dorsal view; **3,** paramere; **4,** spermatheca; **5,** abdomen, lateral view.

tum 0.32, width 0.96. Length scutellum 0.32, width 0.66. Lateral hemelytral margins sharply carinate, but not explanate, laterally broadly arcuate, with maximum width at level of end of scutellum and strongly narrowing caudally. Hemelytra extending posteriorly to anterior margin of tergum 7. Maximum length hemelytron 1.10. Midline length hemelytron 0.82. Fore femora not incrassate, similar in width to succeeding femora. Labium extending well between metacoxae, segment I about attaining base of head. Length labial segments: I 0.38; II 0.32; III 0.20; IV 0.22. First 3 antennal segments terete, segment 4 strongly fusiform. Length antennal segments: I 0.20; II 0.24; III 0.24; IV 0.36. Total body length 2.22.

Holotype ♂, COLOMBIA: 25 km E of Silvia, Cauca, 12,000 ft [3659 m], 16.VII.1970 (J.M. Campbell). In Canadian National Museum collection. Paratypes: 1♂,3♀, same data as holotype. In Canadian National Museum and J.A. Slater collections.

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