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Leptostellana parva gen. nov. et spec. nov. from Costa Rica (Insecta: Heteroptera: Coreidae: Leptoscelidini)

With 4 Figures

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Abstract. *Leptostellana parva* gen. nov. et spec. nov. collected in Costa Rica are described, a key to the known Leptoscelidini (Coreidae) from Costa Rica is provided, and *Malvana serrulata* STÅL is recorded for the first time.

Introduction

The tribe Leptoscelidini (Coreidae) contains 10 genera and about 44 species (BRAILOVSKY, 1996). Members of the tribe are distributed primarily in the tropical and subtropical region of the Western Hemisphere. The species are usually medium-sized, elongate, with head porrect and produced forward between bases of antennae, antenniferous tubercles lateral and widely separated, tylus slightly surpassing the juga, and postocular tubercles indistinct, nearly smooth; femora usually armed, and tibiae simple, sulcate, cylindrical, and lacking of foliaceous dilations.

Only two genera and three species of Leptoscelidini have been described from Costa Rica: *Sephinoides ugaldei* BRAILOVSKY, *Phthia lunata* (FABRICIUS), and *Phthia picta* (DRURY).

The present paper adds one new genus and one new species, and *Malvana serrulata* STÅL is recorded from Costa Rica for the first time. With the inclusion of this taxa, the tribe Leptoscelidini is now represented in Costa Rica by four genera and five species.

Leptostellana gen. nov.

Head wider than long, pentagonal, porrect, and produced forward between bases of antennae; tylus blunt, forming a rounded elevated ridge, and slightly projecting beyond juga; juga unarmed and thickened; antenniferous tubercle unarmed; antennal segment I much longer than head, thicker than succeeding segments and slightly curving; segments II and III cylindrical; segment IV mutilated; segment II longest, segment III shorter than I; preocellar pit circular and deep; ocelli elevated; eyes hemispherical and prominent; postocular tubercle absent; bucculae short, not extending beyond antenniferous tubercle, and without teeth; rostrum reaching posterior border of metasternum; rostral segment IV the longest, III the shortest, and I slightly longer than II; neck short. Thorax. Pronotum wider than long, trapeziform, and gradually declivent; collar wide; anterolateral border obliquely straight, with few extremely small teeth; humeral angles subacute; posterolateral border sinuate and entire; posterior border almost straight and entire; calli barely elevated, raised area between calli with two small tubercles; disc posteriorly with low median longitudinal carina. Prosternum with deep excavation;

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mesosternum with shallow, longitudinal groove; anterior lobe of metathoracic peritreme elevated and reniform; posterior lobe small, acute. Legs. Fore and middle femora with one to three small subapical spines; hind femora not strongly incrassate, ventrally armed with two rows of long and robust spines, the external row with five, and the internal row with three spines; tibiae unarmed or with very small tubercles, cylindrical and sulcate; hind tibiae shorter than hind femora. Scutellum. Triangular, flat, and longer than wide; apex subacute. Hemelytra. Macropterous, extending far from the apex of the last abdominal segment; costal margin emarginate, and apical margin weakly sinuate. Abdomen. Connexival segments slightly higher than margin of hemelytron at rest; posterior angle of each connexival segment complete, not extending on a short spine; abdominal spiracle close to anterior border. Male genitalia. Genital capsule. Posterior margin with median notch deep and rounded, lateral margin of notch sinuate and forming a wide angle; no dorsal prongs (Fig. 2). Female genitalia. Abdominal sternite VII with plica and fissura; plica narrow, rectangular, and transversely sinuate; gonocoxae I squarish, medium-sized and in caudal view opened; paratergite VIII almost square, with visible spiracle; paratergite IX squarish, longer than former paratergite (Figs. 3–4). Integument. Body surface shining, and mostly glabrous; pronotum, clavus, corium, and posterior margin of prothorax, mesothorax, and metathorax strongly punctate; scutellum transversely striate and punctate; head dorsally minutely punctate; head ventrally, thorax (except the posterior margin), abdominal sterna, and exposed parts of genital segments of both sexes smooth; antennal segments and legs densely covered with long and erect bristle-like hairs; thorax with sternal region, abdominal sterna, and exposed parts of genital segments of both sexes with short decumbent setae.

Remarks: *Leptostellana* gen. nov., like *Kalinckascelis* BRAILOVSKY (1990), has the abdominal spiracle closer to the anterior margin than to the posterior margin of the supporting segment, with the body slender and elongate, the scutellum longer than wide, antennal segment I longer than head, rostral segment III the shorter, and humeral angles subacute and barely exposed. In *Kalinckascelis* the mandibular plate is conspicuously developed, the antennal segment III is longer than I, rostral segment II the longest, fore, middle and hind femora armed with two large subapical spines, hind tibiae longer than hind femora, and pronotal disc densely pubescent, with long and erect bristle-like hairs. In *Leptostellana* the mandibular plate is absent, antennal segment III shorter than I, rostral segment IV the longest, fore and middle femora with one to three small subapical spines, hind femora with two rows of long and robust spines, hind tibiae slightly shorter than hind femora, and pronotal disc mostly glabrous.

Etymology. From the Greek *leptos*, thin, delicate, describing the shape of the body.

Type species. *Leptostellana parva* spec. nov.

***Leptostellana parva* spec. nov. (Figs. 1–4)**

Male. Dorsal coloration. Head bright orange with basal third of antenniferous tubercle, a short spot near the preocellar pit, and a great portion of the ocellar tubercle black; antennal segment I with the external face bright orange red and the internal face bright orange; segments II and III bright orange (IV mutilated); pronotum bright orange red; scutellum pale orange with apex creamy yellow; clavus and corium dull orange red with costal border yellow; hemelytral membrane smoky with basal angle darker; connexival segments I to VI pale yellow, with posterior angle of segments V and VI brown; connexival segment VII black, with anterior third yellow; dorsal abdominal segments I to V bright orange, and VI and VII black. Ventral coloration. Head bright orange; rostral segments pale yellow with apex of IV black; thorax and abdominal sterna bright orange red with inner border of each acetabulae, anterior and posterior lobe of metathoracic peritreme and pleural margins of abdominal sterna III to VI, and anterior third of VII pale yellow; genital capsule and pleural margin of abdominal sternite VII bright black to red brown; fore and middle coxae bright orange yellow; hind coxae bright orange red with bright yellow marks; trochanters, tibiae, tarsi, and fore and middle femora yellow; hind femora bright orange red with basal third yellow.

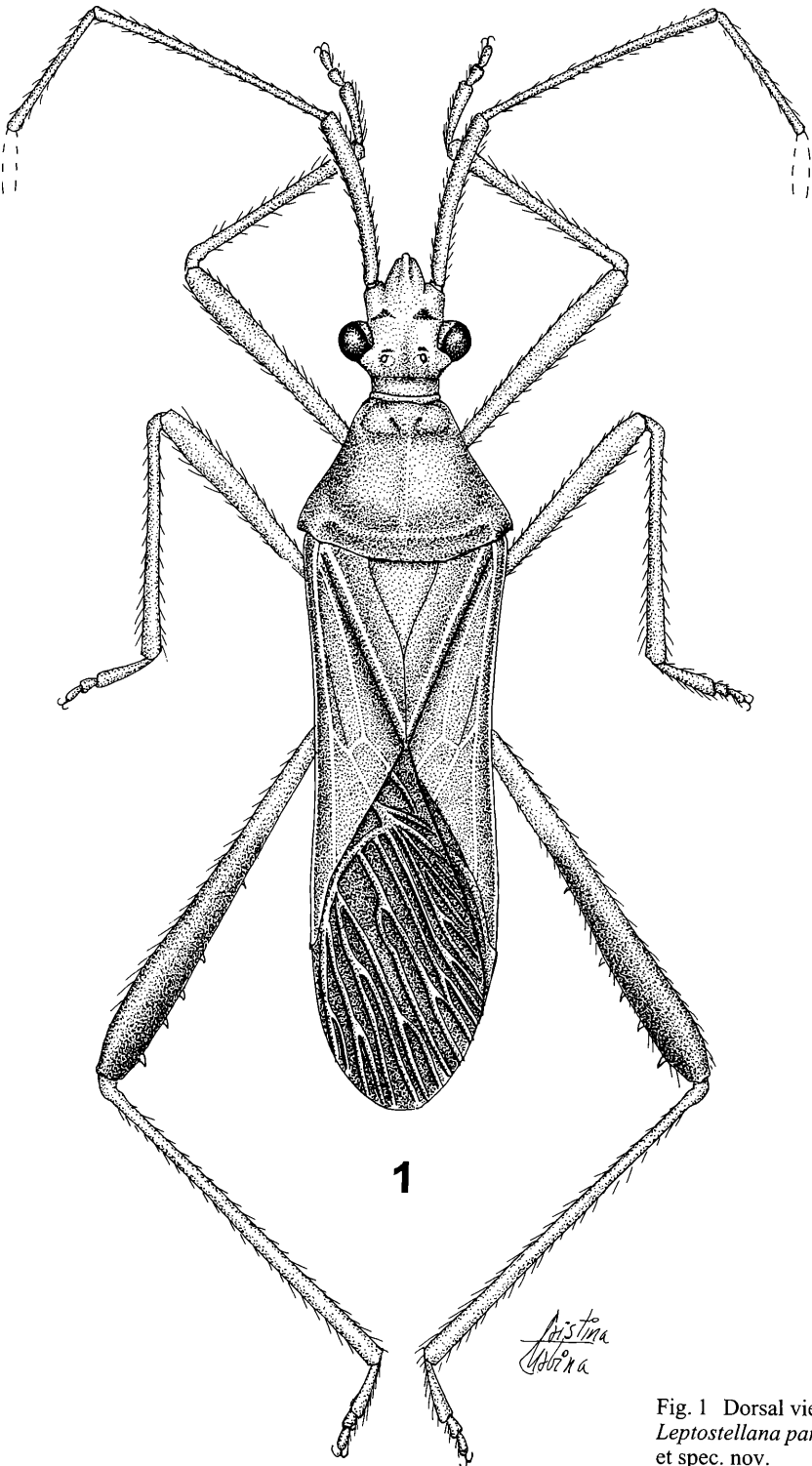
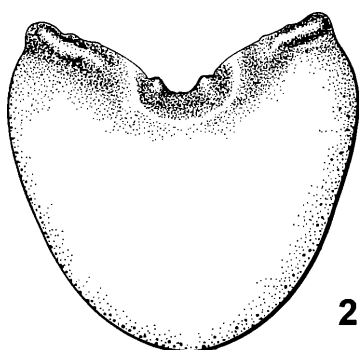
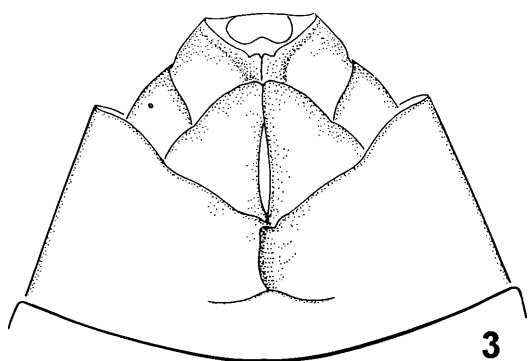


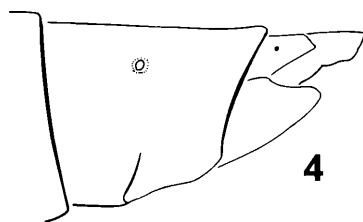
Fig. 1 Dorsal view of *Leptostellana parva* gen. nov. et spec. nov.



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Figs. 2–4: *Leptostellana parva* gen. nov. et spec. nov.: 2 – male genital capsule in caudal view; 3–4 – female genital plates: 3 – caudal view, 4 – lateral view.

Female. Coloration. Similar to male. Connexival segment VII, pleural margin of abdominal sternite VII, and abdominal segments VIII and IX black; genital plates bright orange yellow, with inner margin of gonocoxae I and upper third of paratergite IX black. **Structure.** Similar to male. Tylus slightly projecting in front of juga, upturned to form a median subacute horn at apex.

Measurements. (Female first, then male). Head length: 2.24 mm, 2.12 mm; width across eyes: 2.44 mm, 2.28 mm; interocular space: 1.24 mm, 1.12 mm; interocellar space: 0.70 mm, 0.58 mm; praecocular distance: 1.36 mm, 1.24 mm; length of antennal segments: I, 2.76 mm, 2.88 mm; II, 3.96 mm, 4.24 mm; III, 2.36 mm, 2.48 mm; IV, mutilated; length rostral segments: I, 1.76 mm, 1.68 mm; II, 1.73 mm, 1.64 mm; III, 1.12 mm, 1.04 mm; IV, 1.80 mm, 1.73 mm. Pronotum: Total length: 2.96 mm, 2.60 mm; width across frontal angles: 1.96 mm, 1.80 mm; width across humeral angles: 4.12 mm, 3.48 mm. Scutellar length: 1.96 mm, 1.80 mm; width: 1.60 mm, 1.36 mm. Body length: 16.30 mm, 14.35 mm.

Material. Holotype ♂: Costa Rica, Prov. Guanacaste, Playas del Coco, 31. VIII. 1965, D.W. ALSOP. Type specimen in California Academy of Sciences, San Francisco, California, USA. Paratype ♀: Costa Rica, Puerto Viejo, 10. VIII. 1965, I.S. Orvos. Paratype specimen in Instituto de Biología, Universidad Nacional Autónoma de México.

Etymology. Named for its small size; from the Latin *parva*, rather small.

Malvana serrulata STÅL

Malvana serrulata STÅL, 1865; Ann. Soc. Ent. Fr.: 183.

Largely orange yellow with the anterolateral border of the pronotum, the callar tubercles, and upper margin of connexival segments black; antennal segment I orange yellow, II black with medial orange yellow ring, and III and IV black with basal third orange yellow; mesopleura and metapleura with single black spot medially; abdominal sterna III to VII with single black spot; femora armed with two subdistal spines (spines of fore femora indistinct); tibiae unarmed, slender, sulcate and straight; antennal segment IV the longest, I the shortest and III subequal to II; humeral angles of the pronotum acute, slightly raised and extended laterally; collar present; pronotal disc flat, declivent.

Distribution. This species was described from Brasil without definite locality (STÅL, 1865) and later cited from Mapiri in Bolivia (BLÖTE, 1936). It is here recorded from Costa Rica for the first time.

Material examined. 4 ♂♂: Costa Rica: Provincia Puntarenas: Peninsula Osa, Rancho Quemado, 200m, VIII-X. 1991, F. QUESADA. 1 ♂: Costa Rica: Provincia Puntarenas: Estación Sirena, 1–100 m, V 1993, G. FONSECA. 1 ♀: Costa Rica: Provincia Guanacaste: Parque Nacional Guanacaste, Bahía Santa Elena, 100 m, 11. VI. 1994, C. CANO. 1 ♀: Costa Rica: Provincia Guanacaste, Estación Santa Rosa, 300m, VI. 1989. 1 ♂: Costa Rica: Provincia San José, Santa Ana, IX. 1980, R. CESPEDES. (In Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica, and in Instituto de Biología, Universidad Nacional Autónoma de México).

Key to the known species of tribe Leptoscelidini from Costa Rica

- 1 Abdominal spiracle closer to the posterior border than to the anterior. 2
- 1' Abdominal spiracle closer to the anterior border than to the posterior. 3
- 2 Body with blue-green iridescence; acetabulae with creamy yellow spot; anterolateral border of the pronotum without spines; male genital capsule with lateral angles entire. *Phthia lunata* (FABRICIUS)
- 2' Body without metallic iridescence; acetabulae black to red brown; anterolateral border of the pronotum with spines; male genital capsule with lateral angles projected in a long and acute spine. *Phthia picta* (DRURY)
- 3 Humeral angles of the pronotum subacute and never projected on a long spine. *Leptostellana parva* gen. nov. et spec. nov.
- 3 Humeral angles of the pronotum acutely produced lateral into an elongate spine. 4
- 4 Pronotal disc broadly convex and anteriorly cleft; femora unarmed. *Sephinioides ugaldei* BRAILOVSKY
- 4 Pronotal disc flat, declivent; femora armed. *Malvana serrulata* STÅL

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