To the knowledge of Mexican Clytrini (Chrysomelidae, Cryptocephalinae), with description of two new species of the genus Coscinoptera Lacordaire, 1848

К познанию мексиканских Clytrini (Chrysomelidae, Cryptocephalinae) с описанием двух новых видов рода Coscinoptera Lacordaire, 1848

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INTRODUCTION

The Clytrini of North America are rather well studied, especially in the United States and Mexico (Moldenke 1970, 1981). Currently, 69 species and 49 subspecies are recorded from Mexico (Moldenke, 1970). However, a few Mexican regions, especially Tamaulipas, are poorly studied; besides, the monograph presented by Moldenke (1970) includes many taxa treated as subspecies that are supported by minor morphological differences and problematic distribution. For example, Anomoea rufifrons (Lacordaire, 1848) includes nine subspecies, Coscinoptera axillaris LeConte, 1868 and
**Urodera crucifera** Lacordaire, 1848 including six subspecies each, *Megalostomis dimidiata* Lacordaire, 1848 five subspecies in Mexico alone. In our opinion, at least some of these “subspecies” are either distinct species or nothing more than color aberrations because distribution areas of these subspecies often overlap. *Anomoea rufifrons rufifrons* and *A. r. hoegei* (Jacoby, 1888) are among such doubtful taxa. They have almost coinciding geographical ranges, differing in coloration of the dorsum, “orange” in the former and “flavous” in the latter, and this is the only difference between them. This problem needs special investigations in future on the basis of examination of aedeagi in all taxa. According to current concepts, structure of aedeagus is an essential character for discrimination of related species in Clytrini, which was, unfortunately, omitted in Moldenke’s monograph (1970).

The purpose of this paper is to describe two new species of the genus *Coscinoptera* Lacordaire, 1848, both from Tamaulipas, and provide additional data on the distribution of some other Clytrini in Mexico.

**MATERIAL AND METHODS**

This paper is based on examination of 113 specimens of Clytrini, which have been collected by S. Niño Maldonado and some other collectors in various, mainly the Northeastern (Tamaulipas and Nuevo Leon), Central (San Luis Potosi, Hidalgo and Queretaro) and some other states of Mexico, during the last two decades. The examined specimens belong to 19 species and subspecies; two species are described as new to science.

The following abbreviations are used for the depositories of the specimens examined: LM – collection of L.N. Medvedev, Moscow, Russia; SNM – Collection of S. Niño Maldonado, Ciudad Victoria, Tamaulipas, Mexico; USNM – United States Natural History Museum, Smithsonian Institution, Washington DC, USA; ZIN – Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia.

Measurements have been taken as follows: length of the body as the sum of pronotum and elytra lengths; width of the body as the sum of width of elytra in basal third; length of pronotum measured along midline, and width of pronotum in widest point.

In this article we accepted the classification of Chrysomelidae used by most contemporary authors (Riley et al., 2002; Löbl & Smetana, 2010) considering Clytrini as a tribe within the subfamily Cryptocephalinae and all tribes of the former subfamily Clytrinae as subtribes of the tribe Clytrini.

**TAXONOMY**

**Order** COLEOPTERA

**Family** CHRYSMOELIDAE

**Subfamily** CRYPTOCEPHALINAE

**Tribe** CLYTRINI

**Subtribe** ISCHIOPACHYNA

Genus *Ischiopachys* Chevrolat, 1837

*Ischiopachys bicolor proteus* Lacordaire, 1848


Remarks. The subspecies is distributed from Mexico to Colombia. Nominative subspecies is distributed in Guiana and Brazil.

**Subtribe** CLYTRINA

Genus *Smaragdina* Chevrolat 1837

*Smaragdina quadripartita quadripartita* (Lacordaire, 1848)


Remarks. The nominate subspecies of *S. quadripartita* is distributed from Northern to Southern Mexico, but it is more common in the southern regions of Mexico. Two other subspecies occur in Central America.
**Smaragdina agilis** (Lacordaire, 1848)

**Material.** *Mexico,* Tamaulipas: between Tula and Ocampo, village of Praxedis Gó, 30 July 2007, 2 specs (SNM); Tula de Ocampo, 1 July 2007, 2 specs (SNM); *Hidalgo*: Tlamamala, 24 July 2010, coll. S. Niño Maldonado and others, 1 spec. (SNM); San Felipe Orizatlan, 26 July 2010, coll. S. Niño Maldonado and others, 1 spec. (ZIN); *Chiapas:,* near Tsiscao Lake, 1463 m, 21 Apr. 2011, coll. S. Niño Maldonado and others, 1 spec. (SNM).

**Remarks.** This species was known from several states of Central and Southeastern Mexico, from San Luis Potosi to Chiapas. Here is the first record of this species from Northeastern Mexico (Tamaulipas).

**Genus Anomoea** Agassiz, 1846

**Anomoea flavokansiensis** Moldenke, 1970


**Remarks.** This species was known only from the United States. The two male specimens from San Luis Potosi represent the first record of this species from Mexico.

**Anomoea rufifrons mutabilis** (Lacordaire, 1848)


**Remarks.** This subspecies was known from Arizona (USA) and Western Mexico from Sonora to Jalisco. It is recorded here from the Northeastern (Tamaulipas) and Central (Hidalgo) Mexico for the first time. This taxon might be united with the nominate subspecies in future because it differs only in more shining elytra.

Subtribe **MEGALOSTOMINA**

**Genus Megalostomis** Chevrolat, 1837

**Megalostomis dimidiata picturata** (Achard, 1888)

**Material.** *Mexico,* Tamaulipas: Ciudad Victoria, Red de Golpeo, 12 July 1995 coll. S. Niño Maldonado and others, 1 spec. (SNM); Queretaro-
Remarks. This subspecies was previously known from Central and Southern Mexico. Here is the first record of this subspecies from Northeastern Mexico (Tamaulipas).

**Megalostomis subfasciata majorubrofasciata** Moldenke, 1970


Remarks. This subspecies was known only from Sonora. New collection records from Central (Queretaro) and Northeastern (Tamaulipas) Mexico represent significant range extensions.

**Genus Proctophana** Lacordaire, 1848

**Proctophana basalis** Lacordaire, 1848

**Material.** Mexico, Chiapas: Municipio Cintalapa, 7 km N Rizo de Oro, 21 June 1995, coll. R. Jones, 1 spec. (SNM); Campeche: 1 km Carmen Cardenas, 26 March 1997, coll. S. Niño Maldonado and others, 1 spec. (SNM).

Remarks. This species was known from Mexico, El Salvador and Nicaragua. In Mexico it was previously found in Chiapas only. It is recorded here from another southern state, Campeche.

**Genus Coscinoptera** Lacordaire, 1848


**Coscinoptera scapularis scapularis** (Lacordaire, 1848)


Remarks. This nominative subspecies is widely distributed in Southern Mexico. It is recorded here from Northeastern Mexico (Tamaulipas) for the first time.

**Coscinoptera fulvilabris fulvilabris** (Jacoby, 1888)

**Material.** Mexico, Queretaro: Municipio Peñamiller, La Olla, 1800 m., 30 July 1999, coll. R. Jones, 1 spec. (SNM).

Remarks. This nominative subspecies is widely distributed over the southwestern United States and Mexico.

**Coscinoptera aeneipennis** (LeConte, 1858)


Remarks. It is a common species widely distributed over the southern United States, Northern and Central Mexico.

**Coscinoptera victoriana** L. Medvedev sp. nov. (Figs 1, 3, 5)

**Holotype.** Mexico, Tamaulipas: Ciudad Victoria, Cañon de la Libertad, 20 July 2010, coll. S. Niño, D. Sanchez and I. de Leon, male (USNM).

**Description.** Black, labrum and labial palpi fulvous, antennal segments 2–11 piceous to dark piceous, pubescence white. Body (Fig. 1) subcylindrical, rather robust, 1.8 times as long as wide. Head dull, finely, densely punctuate, with microsculptured interspaces and dense, long hairs (the longest between eyes); vertex with hairs more sparse, evenly convex, without raised mesal tubercles; mandibles of male robust, exceeding slightly interocular space, covered with short, sparse pubescence (Fig. 3); eyes not emarginate, short ovate, al-
most circular. Antennae reaching middle of prothorax, segments 2 and 3 small, rounded, segment 4 distinctly triangular, segments 5–10 strongly transverse, with elongate processes, each about 1.5 times as wide as long. Prothorax 1.5 times as long as wide, broadest near base, distinctly tapering anteriad; sides feebly rounded, about 0.6 length along midline; hind angles broadly rounded, densely punctuate except glabrous, microsculptured midline; pubescence dense, long at sides, almost absent at mid-third. Scutellum triangular, strongly, sparsely punctuate and very sparsely pubescent. Elytra 1.2 times as

Fig. 1. *Coscinoptera victoriana* L. Medvedev sp. nov., general view.
long as wide, almost parallel-sided, narrowed at apical third; surface feebly shining, strongly densely punctuate, with sparse, short, suberect pubescence. Pygidium triangular, with rounded apex, densely punctuate and sparsely pubescent. Venter with very dense pubescence except at middle of apical abdominal sternite, which is glabrous, flat and punctuate. Aedeagus (Fig. 5) elongate, distinctly incised before apex, with longitudinal impression on underside before apex.

Body length 4.6 mm.

**Etymology.** The name of this new species is derived from Ciudad Victoria, the name of the city where the holotype was collected.

**Discussion.** Belongs to the *C. dominicana* group because of having the black hairy elytra without reddish humeral spot. Most similar to *C. dominicana* (Fabricius, 1801), which is widely distributed in the United States and Canada, and to *C. aenescens* Crotch, 1873, the species from the Southeastern United States. It differs from *C. dominicana* in the absence of tubercle on vertex, the quite different pubescence of dorsum and pygidium, and the form of the aedeagus. It can be distinguished from *C. aenescens* by the fulvous labrum, much more sparse elytral pubescence and an almost bare middle of prothorax.

**Coscinoptera tamaulipasi** L. Medvedev sp. nov.

(Figs 2, 4, 6)

**Holotype.** Mexico, Tamaulipas: Ciudad Victoria, Parque Recreative Siglo XXI, submoun-


**Paratypes.** Mexico, Tamaulipas: same data as holotype, but site 1 (preserved vegetation), 1 spec. (SNM); same data as holotype, but site 1, 24 Jan. 2009, coll. Lucas Hernandez, 1 spec. (LM); same data as holotype, but site 3 (disturbed vegetation), 13 Sept. 2008, coll. Lucas Hernandez, 1 spec. (LM); same data as holotype,

Description. Dorsum, including pygidium, metallic bronze to dark bronze, with reddish humeral spot prolonged to corresponding part of epipleurae (Fig. 4); labrum, mandibles, antennae (except reddish segments 2 and 3), venter and legs black; elytral pubescence white. Body (Fig. 2) almost subcylindrical, broadest in shoulders and feebly, narrowed anteriorly and posteriorly. Head shining, densely punctuate, almost entirely covered with dense appressed hairs, center of vertex without glabrous midline; eyes not emarginate, short ovate, mandibles not enlarged, their length is about 0.8 of width of interocular area. Antennae reaching basal third of prothorax, segments 2–4 small, segments 5–10 almost quadrangular, about twice as wide as

Fig. 3. Coscinoptera victoriana L. Medvedev sp. nov., mandibles of male.
Fig. 4. Coscinoptera tamaulipasi L. Medvedev sp. nov., elytral pattern.
Figs 5–8. Clytrini, aedeagus from underside. 5, Coscinoptera victoriana sp. nov.; 6, Coscinoptera tamaulipasi sp. nov.; 7, Babia quadriguttata; 8, Babia tetraspilota texana.
long, strongly serrate. Prothorax 1.3 times as wide as long, broadest in basal third, with slightly “s”-shaped lateral margin, with a distinct, acute hind angle; length of lateral margin about 2/3 length of midline; surface strongly convex, strongly, densely punctuate, with glabrous midline, which is narrow and sometimes disappearing anteriorly; pubescence dense and appressed, not entirely covering main surface. Scutellum triangular, with very dense pubescence and punctuate surface. Elytra 1.4 times as long as wide, shining, with coarse, very dense irregular punctures; interspaces very narrow and convex, without rugosities; pubescence moderately dense and directed backwards. Pygidium triangular, rounded at apex, with extremely dense pubescence, punctuate, not transparent through pubescence. Venter with very dense pubescence throughout, except at middle of apical abdominal sternites, punctuate, obscured by pubescence; bore egg-groove very shallow, not impressed in male. Aedeagus (Fig. 6) elongate, with very broad basal part; apex broadly rounded, with short protuberance on each side; underside with a groove at midline before widened basal part.

Length of body 3.0–4.4 mm.

Etymology. The name of the species is derived from Tamaulipas, the name of the state of distribution.

Discussion. This species is near C. purpurea Jacoby, 1888 and C. soricina Lacordaire, 1848, both of which are distributed from Costa Rica to Colombia. It easily differs in having a fulvous humeral spot on the elytra and black legs.

Key to the Mexican species of Coscinoptera

1(6) Dorsum with distinct metallic reflection. 2(3) Dorsum with distinct, white pubescence. Head and upperside metallic bronze. Antennae except basal segments reddish, underside and legs black, elytra with reddish humeral spot prolonged to epipleurae. Length 3.0–4.4 mm. ……………………….. C. tamaulipasi L. Medvedev sp. nov.

3(2) Dorsum glabrous.

4(5) Elytral punctures confused, but subserrate in part, at least laterally. Elytra metallic green, occasionally blue or bronze. Length 5.7–8.0 mm. ……………………….. C. aeneipennis LeConte, 1858

5(4) Elytral punctures extremely confused and often confluent. Elytra brilliant metallic bronze. Length 3.8–7.5 mm. ……………………….. C. mucida (Say, 1837)

6(1) Dorsum without metallic reflection, usually black, not shining, with dense pubescence.

7(2) Elytra pubescent.

8(11) Elytra entirely black with white pubescence.

9(10) Hind angles of prothorax distinctly angulate. Elytra densely clothed with thick pubescence rendering a gray colour to the whole dorsum. Length 4.5–6.5 mm. ……………………….. C. mucorea inopinata Fall, 1927

10(9) Hind angles of prothorax broadly rounded. Black, labrum and palpi fulvous, antennae piceous to dark piceous. Length 4.6 mm. ……………………….. C. victoriana L. Medvedev sp. nov.

11(8) Elytra all black with white pubescence.

12(15) Hind angles of prothorax rounded. Pubescence never so dense as to obscure black colour of upperside.

13(14) Tibiae red. Elytra with fulvous stripe from humeral tubercle to apex and with pubescence arranged in distinct rows. Length 5.5–6.0 mm. ……………………….. C. vittigera durangensis Moldenke, 1970

14(13) Tibiae black. Elytra with elongate humeral spot and pubescence not arranged in rows. Length 4.3–5.8 mm. ……………………….. C. vittigera arizonensis Horn, 1892


16(21) Body large and robust, length 4.5–7.5 mm. Dorsum densely covered with pubescence and appearing gray.

17(18) Body long and cylindrical. Humeral spot large, oblique, extending 1/3 length and 2/3 width of elytron. Length 5.5–7.5 mm. ……………………….. C. villosa (Jacoby, 1888)

18(17) Body robust, very distinctly tapering anteriorly and posteriorly. Humeral spot small, not oblique, confined to shoulder region.

19(20) Tibiae black. Humeral tubercle occupying all of the shoulder angle. Length 4.7–7.0 mm. ……………………….. C. mucorea mucorea (LeConte, 1858)
20(19) Tibiae reddish. Humeral tubercle occupying only part of shoulder angle. Length 5.5–7.5 mm. 

\[\ldots\] C. mucorea schaefferi Clavareau, 1907

21(16) Body small and cylindrical, 2.2–5.0 mm. Pubescence not so close. 

\[\ldots\] C. axillaris Leconte, 1868

22(7) Elytra glabrous.

23(24) Elytra with fulvous parallel-sided humeral spot, reaching basal margin of elytra from epipleuron to base of 6th row of punctures. Femora and tibiae black. Length 3.5–6.0 mm. 

\[\ldots\] C. fulvilabris fulvilabris (Jacoby, 1888)

24(23) Elytra with fulvous oblique spot, reaching basal margin of elytra only between epipleuron and humeral callus. Femora black, tibiae fulvous or with at least apices fulvous. Length 4.0–6.0 mm. 

\[\ldots\] C. scapularis scapularis (Lacordaire, 1848)

Subtribe BABINA

Genus Babia Chevrolat, 1836

Babia quadriguttata quadriguttata (Olivier, 1791) 

(Fig. 7)


Remarks. The nominate subspecies is widely distributed over the United States reaching Southern Canada. Based on the material presented here, it occurs also in Mexico including its southern part (Chiapas). In addition to the rather distinct external characters, the examined specs have a very distinct form of the aedeagus with a triangular apex ending with an acute tip and with feeble impressions on the underside before the apex (Fig. 7). Two other subspecies were described from the United States. Their status is obscure.

Babia tetraspilota tetraspilota LeConte, 1858


Remarks. The nomotypical subspecies of B. tetraspilota is known from the Southern United States and Mexico (Sonora). This is the first record of this taxon from Oaxaca.

Babia tetraspilota texana Schaeffer, 1933 (Fig. 8)


Remarks. This subspecies was previously recorded from the Southern United States and from Mexico (Chihuahua and Nuevo Leon). Here it is recorded from Tamaulipas.
The subspecies is very common in the region in question. The aedeagus of the examined specs (Fig. 8) has an almost truncate apical margin with a tiny central tip; the underside has no impressions.

Genus *Urodera* Lacordaire, 1848

*Urodera (Boreurodera) crucifera texana* Schaeffer, 1919


*Remarks.* This subspecies was known from Texas (USA) and a few localities in Mexico (Hidalgo, Nuevo Leon). It is recorded here from the state of Tamaulipas for the first time.

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