New taxa and combinations in Neotropical Issidae (Hemiptera: Fulgoroidea)

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Abstract. Six new genera are erected as follows: in the Issini, Argepara gen. n. (type species: Hysteropterum semipellucidum Melichar, 1906), Aztecus gen. n. (type species: Hysteropterum montezuma Kirkaldy, 1913), Incasa gen. n. (type species: Hysteropterum riobambae Schmidt, 1910), Bumaya gen. n. (type species: Bumaya knorozovi sp. n.) and in the Colpopterini, Caudibeccus, gen. n. (type species: Colpoptera carlota Myers, 1928) and Jama ha gen. n. (type species: Poeciloptera elevans Walker, 1858).

Four new generic synomymies are proposed: Prothona Caldwell, 1945 and Plummerana Caldwell, 1945 are placed in synonymy under Proteinissus Fowler, 1904. Thionissa Metcalf, 1938 is placed in synonymy under Dracela Signoret, 1861. Hesperophara Kirkaldy, 1904 is placed in synonymy under Colpoptera Burmeister, 1835.

Twenty-three new combinations resulting from generic synonymies or transfer of species into new genera are: Argepara lyra (Berg, 1883), Argepara semipellucida (Melichar, 1906), Aztecus auroriferus (Caldwell, 1945), Aztecus erratus (Caldwell, 1945), Aztecus mexicanus (Kirkaldy, 1909), Aztecus montezuma (Kirkaldy, 1913), Aztecus sierrae (Fowler, 1904), Aztecus viridatus (Caldwell, 1945), Caudibeccus carlota (Myers, 1928), Caudibeccus lucaris (Fennah, 1955), Caudibeccus meleagris (Fennah, 1955), Caudibeccus punctatus (Metcalf, 1954), Colpoptera rustica (Fabricius, 1803), Dracela acuta (Metcalf, 1938), Incasa riobambae (Schmidt, 1910), Jama ha chrysops (Fennah, 1955), Jama ha elevans (Walker 1858), Paralixes fowleri (Metcalf, 1906), Proteinissus isolatus (Caldwell, 1945), Proteinissus punctatus (Caldwell, 1945), Proteinissus reticulatus (Caldwell, 1945), Proteinissus viridus (Caldwell, 1945).

Three new species are described: Bumaya knorozovi sp. n. from Belize and Mexico, Traxus kasparyani sp. n. from Mexico, and Caudibeccus emelianowi sp. n. from Cuba. The description of T. kasparyani represents the first Mexican country record for the genus Traxus Metcalf.

The species Hysteropterum acanthum Caldwell, 1945 is placed in synonymy under Aztecus montezuma (Kirkaldy, 1913). Colpoptera sinuata Burmeister, 1835 is redescribed. New country records are presented for A. semipellucida from Argentina, A. lyra from Paraguay and Uruguay, D. acuta from Ecuador, and D. annulipes Signoret, 1861 from Brazil, Peru, and Ecuador. Keys to the species of the genera Aztecus gen. n., Argepara gen. n., Traxus Metcalf, and Dracela Signoret are given. An ant association is recorded for the first time for A. lyra.

Key words. Issidae, Issini, Thioniini, Colpopterini, planthoppers, new genera, new species, new combinations, keys, ant association.

Introduction

The purpose of this series of papers is to redescribe New World Issidae in a framework that facilitates description of new species from the Americas by other workers. Because in Fulgoromorpha some external characters are plastic, some species with female types may not be included in this project until males of the species can be found; male genitalia provide some of the best characters for identification. Because of this, a key to genera will be delayed.

The most recent monograph of Issidae of the world is by Melichar (1906), which includes many species now assigned to Caliscelidae, Nogodinidae, and Tropiduchidae. Contributions to the study of Central and South American issids have been made by Fowler (1904), Metcalf (1938), Caldwell (1945), and Fennah
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Metcalf (1938) included keys for Panama, Central America, and northern South America, many of them translations of Melichar, with species from other than the Americas removed. Melichar did not see types from Britain, and Metcalf did not study types, relying only on the written descriptions. Both Melichar and Metcalf made several errors. Metcalf (1958) supplied a world catalog of 206 genera and 981 species of Issidae which at that time included Caliscelidae and some Nogodinidae and Tropiduchidae, with at least 118 species from the Nearctic, 103 from the Caribbean, and 87 from the neotropical regions. Recently, taxonomic revisions of U.S. Hysteropterus Amyot and Serville sensu lato were published (Gnezdilov 2004; Gnezdilov and O'Brien 2006a, b), placing U.S. species in New World genera. During the present study, specimens from Central and South America, including types, were examined.

In the Americas south of the U.S., we have approximately 175 species in three tribes, Issini (with short hind wings), Thioniini (with long folded hind wings), and Colpopterini (with elongate fore wings). Issini include the non-native subtribe Agalmatiina, with the species Agamatium bilobum (Fieber) introduced into California from the Mediterranean, and the native subtribe Hysteropterina with Aztecus gen. n., Delongana Caldwell, Bumaya gen. n., Paralixes Caldwell, Traxanellus Caldwell, Traxus Metcalf, Ulrixes Stal and Ulixoides Haupt from Central America; Amphiscopa Germar, Argepara gen. n., Incasa gen. n., and Sarnus Stal from South America; and Abollioptera Gnezdilov and O'Brien, Balduza Gnezdilov and O'Brien, Kathleenum Gnezdilov, and Stilbometopius Gnezdilov and O'Brien, from the U.S. and northern Mexico. Thioniini comprise Cheiloceps Uhler from the West Indies; Amnisa Stal, Dracula Signoret (including Thionissa Metcalf), Duroides Melichar, Heremon Kirkaldy, Oronqua Fennah, and Paranipeus Melichar from South America; Picumna Stal, Proteinissus Fowler (including Prothona Caldwell and Plummerana Caldwell), Thoniella Metcalf, and Thioniamorpha Metcalf from Central America, and Thiona Stal from both continents and the West Indies. Colpopterini have five genera, Caudibeccus gen. n., Colpoptera Burmeister (including Hesperophara Kirkaldy), Jamaha gen. n., Neocolpoptera Dozier, and Ugoa Fennah, primarily from the West Indies and Central America.

Figure 1-6. Issidae. 1) Aztecus mexicanus (Kirkaldy), syntype, head in ventral view. 2) Argepara semipellucida (Melichar), syntype, female, lateral view. 3) A. semipellucida (Melichar), syntype, male, head in ventral view. 4) Argepara lyra (Berg), female, lateral view (Argentina). 5) Same, head in ventral view. 6) Same, melanistic form, dorsal view (Paraguay).
This paper places New World species from two genera now restricted to the Old World, *Hysteropterum* Amyot and Serville and *Falcidius* Stal, in new genera; describes a new species which places *Traxus* in Mexico; describes a new genus, *Bumaya*, from Belize and Mexico; and addresses some new combinations in Thionini and some new genera in Colpopterini.

**Material and methods**

Morphological nomenclature and systematics of the family follow Gnezdilov (2003 a, b) and for wing venation also follow Anufriev and Emelyanov (1988). The genital segments of the examined specimens were macerated in 10% KOH and figured in glycerine jelly using a light microscope. Pictures of specimens were made using Leica MZ8 with JVC video camera KY F7OB and Leica MZ95 with camera CANON A620; images were produced using the software Synoptics Automontage. The material studied is deposited in the following collections:

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Figure 13-18. *Aztecus montezuma* (Kirkaldy), syntype, male genitalia. 13) Aedeagus, ventral view. 14) Aedeagus, lateral view. 15) Pygofer and anal tube, lateral view. 16) Style, lateral view. 17) Capitulum of style, dorsal view. 18) Anal tube, dorsal view.
Three new genera, Aztecus, Incasa, and Argepara are erected in the tribe Issini for the remaining American “Hysteropterum” species. All described genera clearly differ from Hysteropterum Amyot et Serville in external morphology and the structure of male and female genitalia. Also a new genus and a new species related to Ulixes Stal, Bumaya knorozovi gen. et sp. n., is described from Belize and Mexico and Traxus kasparyani sp. n. is described from Mexico, which is the first record of the genus for this country.

GENUS Aztecus gen. n.
Type species: Hysteropterum montezuma Kirkaldy 1913, here designated.

Diagnosis: Metope vertical, flat, slightly elongate, with lateral carinae parallel, strong median carina, and very weak or indistinct sublateral carinae (Fig. 1). Upper margin of metope usually deeply angularly concave. Postclypeus sharply angled in lateral view, with median carina. Coryphee wide and short (4-5 times as wide as long). Pronotum sometimes with carinae. Scutellum sometimes with weak median carina and with distinct lateral carinae. Fore wings weakly elongate, with widely rounded apices, with wide hypocostal plate or without it. Radius and cubitus anterior bifurcate, median bi- or trifurcate (R 2 M 2-3 CuA 2), often with many transverse veins. Hind wings rudimentary. Hind tibiae with 2 lateral teeth. Metatarsomere I with 1-2 intermediate socle setae.

Male (Fig. 13-25). Pygofer with weakly or angularly convex hind margin. Anal tube long. Anal column short. Dorsolateral phallobase lobes fused into long broad dorsal process which is directed forward and downward (Fig. 14, 20). Each lobe with long narrow and bifurcate subapical process. Ventral phallobase lobe relatively long and wide, narrowing apically. Ventral aedeagal hooks long, bifurcate. Apical aedeagal processes wide, with rounded apical projections. Style with concave hind margin, caudodorsal angle rounded. Capitulum on long neck, with subapical projection. Apical tooth pointed, lateral tooth in shape of narrow plate.


Etymology: The generic name is derived from the ancient Mesoamerican nation - Aztecs. The gender is masculine.

Composition: The genus comprises 6 species known from Mexico.

Comparison: The genus differs from Hysteropterum s. str. and from all American genera of the tribe Issini by the dorsolateral phallobase lobes fused in the shape of a long wide dorsal process directed downward and forward (Fig. 14, 20.) The genus is close to Traxus according to the presence of a bifurcate subapical process on each phallobase lobe and the long neck of the capitulum of the style.
Figure 19-25. *Aztecus mexicanus* (Kirkaldy), male genitalia. 19) Aedeagus, caudo-dorsal view. 20) Aedeagus, lateral view. 21) Ventral phallobase lobe. 22) Pygofer and anal tube, lateral view. 23) Style, lateral view. 24) Capitulum of style, dorsal view. 25) Anal tube, dorsal view.
Aztecus montezuma (Kirkaldy 1913), comb. n. (Fig. 13-18)
  Hysteropterum montezuma Kirkaldy 1913: 27
  Hysteropterum acanthum Caldwell 1945: 104, pl. II, fig.4; pl. III, fig.12, syn. n.


Note: Paratypes of both species were examined. Caldwell missed the bifurcation of the subapical process of the phallobase in his figure of the aedeagus of H. acanthum (Caldwell 1945, plate II, fig. 4). To try to understand this discrepancy, a dissection was allowed to dry out and be rehydrated several times. A process did break off and was noticed only because the stub was seen in the spot plate.

Aztecus auroriferus (Caldwell 1945), comb. n.
  Hysteropterum auroriferum Caldwell 1945: 101, pl. II, fig.2; pl. III, figs 10, 10a.


Aztecus erratus (Caldwell 1945), comb. n.
  Hysteropterum erratum Caldwell 1945: 102, pl. II, fig. 3; pl. III, figs. 11, 11a.


Aztecus mexicanus (Kirkaldy 1909), comb. n. (Fig. 19-25)
  Hysteropterum mexicanum Kirkaldy 1909: 391, nom. nov. pro H. angulare Fowler
  Hysteropterum angulare Fowler 1904: 120, pl.12, figs.11, 11a , nec Fieber 1872


Aztecus sierrae (Fowler 1904), comb. n.
  Hysteropterum sierrae Fowler 1904: 119, pl. 12, figs 10, 10a.


Aztecus viridatus (Caldwell 1945), comb. n.
  Hysteropterum viridatum Caldwell 1945: 104

Note: The species was described from a female (Caldwell 1945) and the validity of the name is unclear. It has been placed in the key provisionally.

Key to species of Aztecus

1. Fore wing with wide hypocostal plate ................................................................................. 2
— Fore wing without hypocostal plate ................................................................................. **A. sierrae** (Fowler)
Figure 26-32. *Incasa riobambae* (Schmidt), male genitalia. 26) Aedeagus, ventral view. 27) Aedeagus, lateral view. 28) Anal tube, dorsal view. 29) Anal tube, lateral view. 30) Style, lateral view. 31) Capitulum of style, dorsal view. 32) Pygofer, lateral view.
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2(1). Small: males - 3.7 mm, females - 4.0-4.2 mm; metope with weak sublateral carinae ..................
   ................................................................. A. mexicanus (Kirkaldy)
   — Larger: males - 4.4-4.8 mm, females - 5.0-5.1 mm; sublateral carinae of metope indistinct .... 3

3(2). General coloration light yellowish brown or light yellow ...................................................... 4
   — General coloration light greenish brown ................................................. A. viridatus (Caldwell)

4(3). Fore wing with elevated longitudinal and transverse veins; metatarsomere I with single
   intermediate socle seta; apex of dorsal phallobase process rounded ............................. 5
   — Fore wing with weakly visible transverse veins; metatarsomere I with 2 intermediate socle setae;
   apex of dorsal phallobase process blunt ........................................ A. auroriferus (Caldwell)

5(4). Ventral branch of subapical process of the phallobase long .................... A. erratus (Caldwell)
   — Ventral branch of subapical process of the phallobase short .......... A. montezuma (Kirkaldy)

GENUS Incasa gen. n.
Type species: Hysteropterum riobambae Schmidt 1910, here designated.

Diagnosis: Metope longer than wide, with strong median carina, sublateral carinae indistinct. Coryphe
transverse, short, depressed medially, anterior margin straight. Pronotum without carinae. Scutellum
with distinct lateral carinae and sometimes with weak median carina. Fore wings nearly oval, widely
rounded apically, with narrow hypocostal plate. Radius and median bifurcate, cubitus anterior simple (R
intermediate socle setae.

Male (Fig. 26-32). Anal tube long and narrow, truncated apically. Anal column short. Pygofer with
nearly straight hind margin. Phallobase curved at right angle (in lateral view). Each dorsolateral phallobase
lobe with narrow short subapical process and triangular long process above aedeagal hooks. Ventral
phallobase lobe long and wide, narrowing to notched rounded apex. Ventral aedeagal hooks long, bifur-
cate. Style with straight hind margin, caudo-dorsal angle nearly straight. Capitulum of style on long
neck, narrow (in dorsal view), with additional tooth, lateral tooth wide, apical tooth large.

Female. Sternum VII with widely concave hind margin. Anal tube elongate, parallel sided, with
truncated apex. Anal column short. Gonoplacs without carinae. Distal parts of posterior connective lamina
gonapophysis IX turned at nearly right angle. Median field of the lamina convex, with deep incision
between lobes. Lateral fields of the lamina weakly convex. Anterior connective lamina of gonapophysis
VIII with 3 teeth in apical group and 5 teeth (including 3 keeled teeth) in lateral group. Hind margin of
gonoxia VIII not protruding. Endogonocoxal process bifurcate apically (with two finger-shaped apical
processes). Gonospermulum bridge laterally flattened.

Etymology: The generic name is derived from the ancient South American nation - Incas. It is feminine
in gender.

Comparison: The genus differs from Hysteropterum s. str. as follows: metope with strong median
carina, sublateral carinae indistinct; ventral aedeagal hooks bifurcate. The genus differs from other
American genera by the structure of the phallobase which is curved at a right angle and each of its
dorsolateral lobes has a narrow short subapical process. Also the structure of the style which has a wide
plate with straight hind margin and an elongate capitulum on a long neck, with an additional tooth.

Incasa riobambae (Schmidt 1910), comb. n. (Fig. 26-32)
Hysteropterum riobambae Schmidt 1910: 161

Material examined: Ecuador: 3 M, 1 F, 18 km NW Cayambe (Hwy 35), 3.V.1978, C.W. & L.B. O’Brien
& Marshall leg. (LBOB, ZIN); 6 M, 1 F, 25 km. SW. Cayambe, same date and collectors (LBOB); 3 M, 2
F, 5 km. SW Peâleo, 26.IV.1978, same collectors (LBOB); 8 M, 3 F, Cuenca, 1905, Dr G. Rivet leg.
Figure 33-37. *Argepara semipellucida* (Melichar), syntype, male genitalia. 33) Pygofer, anal tube, and aedeagus, lateral view. 34) Aedeagus, ventral view. 35) Style, lateral view. 36) Capitulum of style, dorsal view. 37) Anal tube, dorsal view.
GENUS Argepara gen. n.
Type species: Hysteropterum semipellucidum Melichar 1906

Diagnosis: Metope wide, convex, with weak median carina or without carina (Fig. 3, 5), pustules along lateral margins. Postclypeus small, flat or strongly convex (Fig. 4). Coryphe broad and short (Fig. 6). Fore wing narrowing apically, without hypocostal plate (Fig. 2, 4). Radius bifurcate, median bi- or trifurcate, cubitus anterior simple or bifurcate (R 2 M 2-3 CuA 1-2), longitudinal veins weak, transverse veins indistinct. Costal portion of fore wing rounded under at 45-degree angle from horizontal. Hind wings rudimentary. Pronotum short, sometimes with median carina. Scutellum without carinae. Hind tibiae with 2 lateral teeth distally and with 8 apical teeth. Metatarsomere I with 4-5 (3-4 + 1) intermediate socle setae.

Male (Fig. 33-42). Anal tube wide, apex weakly truncate. Anal column short. Pygofer with convex hind margin, enlarged basally (in lateral view). Phallobase enlarged basally (in ventral view). Each dorsolateral phallobase lobe with supporting process under aedeagal hook. Ventral phallobase lobe strongly enlarged apically. Aedeagus with a pair of long bifurcate acuminate ventral hooks (one branch twice longer than the other). Style massive, with convex hind margin, caudodorsal angle nearly right or rounded. Capitulum of style without neck, narrowing apically (in dorsal view), with subapical tooth or without it, lateral tooth wide.


Etymology: The generic name is a combination of letters derived from the combination of words Argentina and Paraguay. It is feminine in gender.

Ant association: Ants of the genus Camponotus Mayr were attending the specimens of A. lyra collected in Argentina at 3 km N. Laguna del Morne, and similar ants, presumably the same genus, were also observed with them at other localities.

Comparison: The genus differs from all other genera of Issini by the following combination of features: metope wide, convex, with weak median carina or without it; longitudinal veins of fore wing weak, transverse veins indistinct; ventral phallobase lobe strongly enlarged apically; ventral hooks of aedeagus bifurcate; median field of posterior connective lamina of gonapophyses IX with deep incision, without lobes; endogonocoxal process trilobed.

Argepara semipellucida (Melichar 1906), comb. n. (Fig. 2, 3, 33-37)
Hysteropterum semipellucidum Melichar 1906: 147

Figure 38-42. *Argepara lyra* (Berg), male genitalia. 38) Pygofer, anal tube, and aedeagus, lateral view. 39) Aedeagus, ventral view. 40) Style, lateral view. 41) Capitulum of style, dorsal view. 42) Anal tube, dorsal view.
Argepara lyra (Berg 1883), **comb. n.** (Fig. 4-6, 38-42)

Falcidius lyra Berg 1883: 238.


**Note:** The genus Falcidius was redefined as being only Mediterranean (Gnezdilov and Wilson, 2007).

**Key to the species of Argepara**

1. Postclypeus flat, fastigium at nearly right angle (in lateral view) (Fig. 2); head and dorsum brown or dark brown excluding pale costal margins of fore wings (Fig. 2, 3); hind margin of pygofer without apical process (Fig. 33); capitulum of style without subapical tooth (in dorsal view) (Fig. 36) ............................................................................................ **A. semipellucida** (Melichar)

   — Postclypeus strongly convex, forming a cone-shaped projection, fastigium at obtuse angle (in lateral view) (Fig. 4); head and dorsum from dark brown to black with median yellow vitta thru metope to wing tip (reduced in melanistic specimens) (Fig. 5, 6), with costal and median stripes joining at wing apex (Fig. 4); hind margin of pygofer with large apical process (Fig. 38); capitulum of style with large subapical tooth (in dorsal view) (Fig. 41) ................................. **A. lyra** (Berg)

**GENUS Traxus Metcalf**

**Type species:** Traxus fulvus Metcalf 1923: 189, pls. 42, 52, 62, 65.

**Traxus kasparyani**, sp. n. (Fig. 7, 43-49)


**Diagnosis:** Metope twice longer than wide, with strongly carinate margins and fine median and sublateral carinae. Sublateral carinae of metope joined apically and basally. Surface of clypeus obtusely angled in lateral view, anterior portion below plane of metope, with median carina. Coryphe transverse, wide and short (3.5 times as wide as long). Pronotum without carinae. Scutellum longer than pronotum, with distinct lateral carinae lying on bosses. Fore wings narrowing to rounded apices, without hypocostal plate. Radius, median, and cubitus anterior bifurcate (R 2 M 2 CuA 2), with many additional branches. Hind wings rudimentary. Hind tibiae with 2 lateral teeth. Metatarsomere I with single intermediate solce setae.

**Coloration.** General coloration from light grayish brown to dark brown with dark dots. Genae light (Fig. 7). Legs dark.
Figure 43-49. *Traxus kasparyani* sp. n., holotype, male genitalia. 43) Aedeagus, lateral view. 44) Aedeagus, ventral view. 45) Style, lateral view. 46) Capitulum of style, dorsal view. 47) Anal tube, lateral view. 48) Anal tube, dorsal view. 49) Pygofer, lateral view.

Female. Anal tube long and narrow.

Body length. Males - 4.8-5.0 mm. Females - 5.5-5.8 mm.

Etymology: The species name is derived from the surname of the well-known Russian hymenopterist Prof. Dmitry R. Kasparyan, the collector of the holotype.

**Traxus fulvus** Metcalf 1923 (Fig. 8)


Key to the species of *Traxus*

1. Fastigium with obtuse angle, genae wide (in lateral view) (Fig. 7); lateral carinae of scutellum on weak bosses; general coloration of dorsum light grayish brown ............... *T. kasparyani* sp. n.
   — Fastigium with nearly right or acute angle, genae narrow (in lateral view) (Fig. 8); lateral carinae of scutellum on strong bosses; general coloration of dorsum light yellowish brown ................
   ......................................................................................................................

**Paralixes** Caldwell

Type species: *Issus scutatus* Walker 1858

*Paralixes fowleri* (Melichar 1906), comb. n.

*Hysterocerus fowleri* Melichar 1906: 149, nom. nov. pro *H. montanum* Fowler, nec Becker 1865.

*Hysterocerus montanum* Fowler 1904: 120, pl.12, fig. 12, 12a.


Supplementary diagnosis: Metope flat with distinct median carina. Clypeus with median carina. Coryphe transverse (2.3 times as wide as long). Scutellum with distinct median and lateral carinae. Fore wings elongate, without hypocostal plate. Radius, median, and cubitus anterior bifurcate (R 2 M 2 CuA 2). Hind wings rudimentary. Hind tibia with 2-3 lateral teeth (1 small tooth proximally and 2 large teeth distally). Metatarsomere I with 2 intermediate scle setae.


Body length. 5.8 mm.

Note: The species is placed in the genus provisionally.

**Bumaya** gen. n.

Type species: *Bumaya knorozovi* sp. n., here designated.
Diagnosis: Metope wide and long (1.2 times as long as wide), with very weak traces of median and sublateral carinae. Fastigium obtusely angled (metope completely visible in dorsal view) (Fig. 9, 10). Apex of metope with deep notch, lateral margins with weak middle ledge. Clypeus large, with median carina. Coryphe transverse, wide and short (3.5 times as wide as long), anterior margin straight. Pronotum short, without carinae. Scutellum large, longer than pronotum, with lateral carinae lying on bosses. Fore wings wide, strongly angled at shoulders, without hypocostal plate. Radius and cubitus anterior bifur-
cate, median trifurcate (R 2 M 3 CuA 2), with densely reticulate veins. Clavus medially bulbous, with apical concavity near the fusion of Pcu and A1. Hind wings well developed, reaching the apex of abdomen. Hind tibiae with 2 lateral teeth. Metatarsomere I with 2 intermediate solce setae.

**Female.** Sternum VII with widely concave hind margin. Anal tube elongate. Gonoplscs rounded.

**Etymology:** The generic name is derived from the ancient Mesoamerican nation - Maya, preceded by the prefix Bu-, meaning large, because of the large size of the specimens. The gender is feminine.

**Comparison:** The genus is closely related to *Ulixes* Stal by the fore wings strongly angled at the shoulders. It is distinguished by the wide and an obtuse angle and wholly visible from above, with a deep notch apically and lateral margins with a weak middle ledge, and with densely reticulate venation of the fore wings.

**Bumaya knorozovi** sp. n. (Fig. 9, 10)


**Diagnosis:** General coloration dark yellowish brown. Metope, most of pronotum and scutellum excluding lateral parts brownish yellow. Fore and middle coxae black. Femora and tibiae with dark brown spots. Teeth and solce setae with black apices. Claws brown or dark brown. Gonoplscs black.

**Body length.** 9.3 mm.

**Etymology:** The species name is derived from the surname of the Russian scientist Dr. Yuriy Knorozov whose research played a pivotal role in the decipherment of Mayan script.

**TRIBE Thioniini Melichar**

In the tribe Thioniini, *Prothona* Caldwell and *Plummerana* Caldwell are placed in synonymy under *Proteinissus* Fowler, and *Thionissa* Metcalf is placed in synonymy under *Dracela* Signoret based on external morphological features of the type-species of the genera.

**GENUS Proteinissus Fowler**

*Proteinissus* Fowler 1904: 121. Type species: *Proteinissus bilimeki* Fowler 1904.

*Prothona* Caldwell 1945: 111, syn. n. Type species: *Prothona punctata* Caldwell 1945.

*Plummerana* Caldwell 1945: 110, syn. n. Type species: *Plummerana isolata* Caldwell 1945.

**Diagnosis:** Metope elongate, with only median or with median and sublateral carinae joined before its upper margin. Coryphe with median carina. Subbrachypterous, fore wings with very narrow hypocostal plate. Radius and median bifurcate, cubitus anterior simple (R 2 M 2 CuA 1). Hind wings with rudimentary or reduced vannus. Hind tibia with 3 lateral teeth. Metatarsomere I with 4-6 intermediate solce setae. Each dorsolateral phallobase lobe with narrow curved subapical process. Style without neck.

**Note:** The synonymy was based on the external morphological features above, and the male and female genitalia of the type species of the genera.

*Proteinissus bilimeki* Fowler 1904

*Proteinissus bilimeki* Fowler 1904: 121, pl.12, figs. 13, 13a-b.
Figure 57-62. Colpoptera sinuata Burmeister, syntype, female genitalia. 57) Anal tube, dorsal view. 58) Anterior connective lamina of gonapophysis VIII, lateral view. 59) Sternum VII. 60) Posterior connective lamina of gonapophyses IX, dorsal view. 61) Same, lateral view. 62) Gonoplat, lateral view.

Proteinissus pentagonatus (Caldwell 1945), comb. n.
Prothona pentagonata Caldwell 1945: 112, pl. III, fig. 8.

Proteinissus punctatus (Caldwell 1945), comb. n.
Prothona punctata Caldwell 1945: 111, pl. II, fig. 8, pl. III, fig. 5.


Proteinissus reticulatus (Caldwell 1945), comb. n.
Prothona reticulata Caldwell 1945: 112, pl. III, fig. 7

Proteinissus viridus (Caldwell 1945), comb. n.
Prothona virida Caldwell 1945: 112, pl. II, fig. 9, pl. III, fig. 6

Proteinissus isolatus (Caldwell 1945), comb. n.
Plummerana isolata Caldwell 1945: 111, pl. II, fig. 7, pl. III, fig. 1


GENUS Dracela Signoret
Dracela Signoret 1861: 501. Type species: Dracela annulipes Signoret 1861.
Thionissa Metcalf 1938: 412, syn. n. Type species: Thionissa acuta Metcalf 1938.

Diagnosis: Metope long and narrow, with only median keel, its upper margin angulately concave. Postclypeus with strong median carina. Coryphe long and narrow, with keel-shaped lateral margins (trench-shaped). Fore wings with very narrow hypocostal plate. Radius bifurcate, median tetra-or pentafurcate, cubitus anterior simple (R 2 M 4-5 CuA 1). Hind wings well developed, 3-lobed. Hind tibia with 2 lateral teeth. Metatarsomere I with 6-8 intermediate socle setae.

Note: Type species of both genera were examined.

Dracela annulipes Signoret 1861 (Fig. 11)
Dracela Signoret 1861: 501, pl. 10, figs. 2, 2a (or see also illustration in Melichar 1906: 226, fig. 53)


Dracela acuta (Metcalf 1938), comb. n. (Fig. 12)
Thionissa acuta Metcalf 1938: 413, pl. 14, 15, 19

Figure 63-69. Caudibecus emeljanovi sp. n., holotype, male genitalia. 63) Aedeagus, lateral view. 64) Aedeagus, ventral view. 65) Pygofer, lateral view. 66) Style, lateral view. 67) Capitulum of style, dorsal view. 68) Anal tube, lateral view. 69) Anal tube, dorsal view.

**Comparison:** The species differs from *D. annulipes* in the shape of the anterior margin of the coryphe (Fig. 11, 12).

*Dracela pehlkei* Schmidt 1923

*Dracela pehlkei* Schmidt 1923: 20.

**Examined material:** Colombia: 2 F, Bogota, Lindig (NHRS).

**Comparison:** This species differs from the others by having the coryphe as long as the pronotum and mesonotum combined.

**Key to species of Dracela**

1. Coryphe with anterior margin straight or v-shaped, depending upon angle (Fig. 11) ............ 2
   — Coryphe with anterior margin projecting triangularly medially in dorsal view (Fig. 12) ............
   ................................................................................................................
   ........................................................................................................ D. acuta (Metcalf)

2(1). Coryphe shorter than pro- and mesonotum combined ......................... *D. annulipes* Signoret
   — Coryphe as long as pro- and mesonotum combined ......................... *D. pehlkei* Schmidt

**TRIBE Colpopterini Gnezdilov**

In the tribe Colpopterini, *Hesperophara* Kirkaldy is placed in synonymy under *Colpoptera* Burmeister. *Caudibeccus* gen. n. and *Jamaha* gen.n. are erected in the tribe based on the structure of male and female genitalia of the included species. A new species of the genus *Caudibeccus* gen. n. is described from Cuba which is a second species of the tribe known from the island.

**GENUS Colpoptera Burmeister**


*Hesperophara* Kirkaldy 1904: 279 (nom. nov. pro *Leptophara* Stal 1869), nec Billberg 1820, syn.n.

**Note:** Type specimens of *Colpoptera sinuata* and photos of the type specimen of *Flata rustica* were examined.

*Colpoptera rustica* (Fabricius 1803), comb. n.

*Flata rustica* Fabricius 1803: 53

*Leptophara rustica* Stal 1869: 103

*Hesperophara rustica* Metcalf 1958: 463 [catalogued]

**Note:** According to Zimsen’s (1964) book on the Fabricius collections in Copenhagen, one specimen of *Flata rustica* was deposited in Copenhagen and two in Kiel. We have examined photos of these three specimens kindly sent by Prof. Niels P. Kristensen, who writes: “The specimen in the “Copenhagen Collection” (i.e., the one from the Tender Lund collection to which reference is made in the original description) belongs to one family, the two in the “Kiel Collection” to another.” The female specimen in the Copenhagen collection fits the description of *Flata rustica* Fabricius, which has been correctly placed in the Issidae since Stal (1869). The two specimens in the Kiel collection do not fit the description. They are Cenchrini, Derbidae, with lateral carinae on the pronotum partially encircling the antennae. Since no number of specimens is given in the description, and the single specimen in the Copenhagen collection has the correct data (a green square designating the Fabrician collection, a red “Type” label, and “Amer.
merid. Schmidt/ Mus. Seh et L./Rustica F.”), we assume it is a holotype, not a syntype, and no lectotype designation is necessary. We cannot explain the presence of the other two specimens.

**Colpoptera sinuata** Burmeister 1835 (Fig. 50-62)

*Colpoptera sinuata* Burmeister 1835: 155


**Coloration.** General coloration light brown. Fore wings with wide dark brown sinuate stripe. Females with abdominal segments including genital ones dark brown with light brown spots.

**Male** (Fig. 50-56). Anal tube long, narrowing basally and to acuminate apex, lateral margins and apex directed downward (in lateral view). Anal column long. Pygofer with straight hind margin. Each dorsolateral phallobase lobe with long subapical bifurcate process (branches are equal in length). Ventral phallobase lobe reduced to short process. Aedeagus with a pair of short hooks distally. Connective large. Style with weakly convex hind margin, caudodorsal angle rounded. Neck of style with large lobe-shaped lateral process. Capitulum of style depressed dorsoventrally, broad, narrowing apically (in dorsal view), lateral tooth in shape of wide lobe.

**Female** (Fig. 57-62). Hind margin of VII sternum with tooth-shaped median process. Anal tube long and narrow, distinctly longer than gonoplac. Anal column long. Gonoplace nearly triangular, fused medially. Proximal part of posterior connective lamina of gonapophysis IX convex. Distal parts of the lamina weakly convex. Median field of the lamina convex, with a pair of short apical lobes. Lateral fields of the lamina flat. Gonocoxa VIII with straight hind margin. Endogonocoxal process narrowing to apex. Anterior connective lamina of gonapophysis VIII with large process basally, with 4 (3 + 1) teeth in apical group and 4 teeth without carinae in lateral group.

**Body length.** Males - 5.5 mm. Females - 6.3 mm.

**GENUS Caudibeccus** gen. n.

**Type species:** *Colpoptera carlota* Myers 1928, here designated.

**Diagnosis:** Metope enlarged before the clypeus, with only median carina running through clypeus. Coryphe transverse, with keel-shaped lateral margins, anterior margin straight, posterior margin concave. Pronotum narrow, with acutely angulate anterior margin, posterior margin concave. Scutellum long, with strong median carina and sometimes with sublateral carinae. Fore wing with wide hypocostal plate. Radius and median bifurcate, cubitus anterior simple or bifurcate (R 2 M 2 CuA 1-2); longitudinal veins with numerous branches distally. Hind tibia with single lateral tooth. Metatarsomere I with 5-6 intermediate solc setae.

**Male** (Fig. 63-69). Anal tube elongate, strongly convex. Pygofer with convex hind margin. Each dorsolateral phallobase lobe with a bifurcate process. Aedeagus with a pair of long ventral hooks. Stylus with rounded caudo-dorsal angle. Capitulum of the style rudimentary, with only lateral tooth in shape of quadrate plate.
Female. Anal tube long and narrow, narrowing to apex (in dorsal view) and curved (in lateral view). Anal column narrow and long. Gonoplacs convex, more or less triangular, strongly narrowing apically, fused medially almost along entire length. Posterior connective lamina of gonapophyses IX more or less horseshoe-shaped. Proximal part of the lamina short. Distal parts of the lamina almost parallel to each other. Median field of the lamina in shape of a pair of large lobes proximally. Lateral fields of the lamina flat. Gonospiculum bridge in shape of broad tube, fused with proximal part of posterior connective lamina. Gonocoxa VIII with straight hind margin. Endogonocoxal process narrow and pointed, flattened laterally, with comb of setae on dorsal margin, lateral sides with more short setae, its ventral margin without setae, except for apical part. (See Gnezdilov 2003b, figs. 2-4). Anterior connective lamina of gonapophysis VIII narrow, flattened laterally, without teeth, entirely covered with setae.

Etymology: The generic name is derived from the Latin words - cauda (tail) and beccus (beak), referring to the unusual long and narrow ovipositor. The gender is masculine.

Composition: In addition to the type species C. carlota, Colpoptera punctata Metcalf, 1954, C. meleagris Fennah, 1955, C. lucaris Fennah, 1955 and Caudibeccus emeljanovi sp. n. also belong to the genus.

Distribution: Cuba, South Bimini Island, Bahamas Islands, and Dominica.

Comparison: Similar to Colpoptera Burmeister externally and in the structure of male genitalia, but distinguished by the narrow and elongated parts of the ovipositor which probably represents a different manner of oviposition - the elongated and fused gonoplacs are probably used as a directing case for the narrow and pointed endogonocoxal processes and anterior connective laminae in oviposition (Gnezdilov 2003b). The lateral margins of the coryphe are keel-shaped in Caudibeccus and not in Colpoptera examined to date; however, all Colpoptera species have not yet been examined for comparison.

Caudibeccus carlota (Myers 1928), comb. n.
Colpoptera carlota Myers 1928: 25.


Diagnosis. Male. The lower branch of the bifurcate process of dorsolateral phallobase lobe is additionally bifurcate. Ventral phallobase lobe long and narrow. Ventral aedeagal hooks without processes. Style with concave hind margin. Anal tube with two pairs of processes laterally: one pair of short basal processes and one pair of long subapical processes. Anal column narrow, about ¼ as long as anal tube.

Etymology: This species was described from specimens from Mina Carlota. Thus the name is considered a noun in apposition, and is not changed when moved to a genus masculine in gender.

Caudibeccus punctatus (Metcalf 1954), comb. n.
Colpoptera punctata Metcalf 1954: 15, figs 20, 21.
**Caudibeccus meleagris** (Fennah 1955), comb. n.
*Colpoptera meleagris* Fennah 1955: 27, fig. 1, p-v.

**Caudibeccus lucaris** (Fennah 1955), comb. n.
*Colpoptera lucaris* Fennah 1955: 28, fig. 2, m, n.

**Caudibeccus emeljanovi** sp. n. (Fig. 63-69)


**Diagnosis:** Metope wide. Fore wings long, narrow, widely rounded apically, with wide hypocostal plate. Radius and median bifurcate, cubitus anterior simple or bifurcate (R 2 M 2 CuA 1-2). Metatarsomere I with 5 intermediate socle setae.

**Coloration.** Head and pronotum from light greenish brown to brown. Anteclypeus and upper part of postclypeus dark brown. Scutellum and fore wings brown; fore wings of male with large yellowish brown areas proximally and indistinct dark brown spots throughout whole wing. Legs and abdominal sternites light yellowish brown.

**Male** (Fig 63-69). Pygofer with convex hind margin. Anal tube long, narrow, narrowing to pointed apex, which is turned down. Anal column half as long as anal tube. Phallobase curved at nearly right angle (in lateral view). Suspensorium with projection. Each dorsolateral phallobase lobe with a bifurcate process (branches joined at acute angle, upper longer branch directed apically and lower shorter branch directed nearly horizontally). Ventral phallobase lobe short. Each ventral aedeagal hook with a pair of spine-shaped processes. Style with straight hind margin.

**Female.** Hind margin of sternum VII with wide and long rounded apically tongue-like process.

**Body length.** Male and female - 5.5 mm.

**Comparison:** It differs from the closely related *C. carlota* in the structure of male genitalia: anal tube without processes laterally, lower branch of the bifurcate process of dorsolateral phallobase lobe without additional bifurcation, ventral phallobase lobe short, ventral aedeagal hooks with spine-shaped processes, style with straight hind margin.

**GENUS Jamaha gen. n.**

**Type species:** *Poeciloptera elevans* Walker 1858, here designated.

**Diagnosis:** Metope elongate, enlarged before clypeus, with median carina running through the postclypeus only. Fore wings widely rounded apically. Radius, median, and cubitus anterior bifurcate (R 2 M 2 CuA 2). Hind tibia with single tooth distally.

**Male.** Hind margin of pygofer with long process medially. Aedeagus without ventral hooks.

**Female** (Fig. 70-71). Anal tube long and narrow. Anal column very long (about 0.7 as long as anal tube). Gonoplace rounded, not fused medially. Median field of posterior connective lamina of gonapophyses IX with two areas bearing small denticles inside and large teeth marginally. Lateral fields of the laminae without processes. Gonocoxa VIII with weakly convex hind margin. Endogonocoxal process narrowing apically. Anterior connective lamina of gonapophysis VIII with 3 teeth in apical group and 3 keeled teeth in lateral group.

**Etymology:** The generic name is a combination of letters derived from the words Jamaica and Haiti. It is feminine in gender.

**Composition:** According to the structure of the male genitalia, *Colpoptera chrysops* Fennah, 1955 also belongs to the genus.

**Distribution:** Jamaica and Haiti.
Comparison: The new genus differs from the closely related genus *Colpoptera* Burmeister by the following features: aedeagus without ventral hooks, hind margin of pygofer with long process, gonoplacs not fused medially, median field of posterior connective lamina of gonapophyses IX in shape of two fillets bearing denticles and teeth.

*Jamaha elevans* (Walker 1858), comb. n. (Fig. 70-71)

*Poeciloptera elevans* Walker 1858: 335.

*Colpoptera elevans* Distant 1910: 315.

*Colpoptera elevans* Fennah 1955: 33, pl. 2, figs. o-s.


*Jamaha chrysops* (Fennah 1955), comb. n.

*Colpoptera chrysops* Fennah 1955: 33, pl. 1, figs. k-o.

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