Revalidation of *Ilithucia* Stål and descriptions of new species 
(Homoptera, Membracidae, Smiliinae)  

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Stål (1867) described *Antonae, Ilithucia, and Melusina*, distinguishing each other by the following characters:  

**Antonae** – anterior tumid part of posterior process with dorsum sinuate; tegmina with three discoidal cells. Species included: *Ceresa incrassata* Fairmaire, *Ceresa tigrina* Fairmaire, and *Ceresa flaccida* Fairmaire.  

**Ilithucia** – anterior tumid part of posterior process with dorsum not sinuate; tegmina with four discoidal cells. Only one species included: *Ceresa morio* Fairmaire.  

**Melusina** – Posterior process gradually tapering, apical half suddenly slender; lateral semicircular impression weakly marked or obsolete. Species included: *Ceresa ciliata* Fairmaire, *Ceresa nasuta* Stål, and *Ceresa nervosa* Fairmaire.  

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STÅL (1869a) presented a key in which the genera related to Ceresa Amyot & Serville were briefly characterized; in this key he maintained Antonae and Ilithucia as defined before but, in Melusina, only Ceresa nervosa was retained; for Ceresa ciliata Fairmaire, Ceresa nasuta Stål and Ceresa unguicularis Stål, he created a genus named Centrogonia. All these genera, Antonae, Ilithucia, Centrogonia, and Melusina (= Melusinella Metcalf), were considered distincts by METCALF & WADE (1965).

STÅL (1869b) described three new species in Antonae (A. inflata, A. picina, and A. conspersa), and in regard to Ilithucia morio Fairmaire he stated that the transverse vein of tegmina, present in the type specimen, was missing in the specimen examined.

GODING (1929), in the key to the species of Ilithuca (sic), considered Electrophina Buckton its junior synonym and distinguished three species: I. morio, I. terminata, and I. pacificata.

RICHTER (1943) commented that Centrogonia Stål, Melusina Stål, and Antonae Stål form a group of great affinity, distinguishing each other only by small characteristics of the pronotum. In describing the genus Penichrophorus, he compared it with Centrogonia Stål and Antonae Stål, giving the following distinctive characters:

1. Species of the cold level of Andes. Dorsum of pronotum not undulate or the undulation just indicated. Supra-humeral horns thick, obtuse, which may be short or completely absent. Living only on Compositae ................................................................. Penichrophorus Richter

2. Species of the temperate level of Andes. Dorsum of pronotum strongly undulate, the base of posterior pronotal process less wider than the anterior nodule (between supra-humeral horns); (...) Males and females with different coloration, rarely with the same color. Host plants: Compositae; rarely on Solanaceae ................................................................. Centrogonia Stål

3. Species of the hot or sub-andean level. The base of posterior pronotal process much wider than the anterior nodule. Living, without exception, on Solanaceae ................................................................. Antonae Stål

The description of Penichrophorus given by RICHTER (1943) is as follows:

“Pronotum convex gradually tapering and ending into a point; anterior part more inflated than the base of posterior process; the dorsal line not undulate or with only a feebly undulation; supra-humeral horns thick, obtuse, or very short or completely absent. Tegmina: with 3 discoidal cells, 5 apical the distal one petiolate. There are no other peculiar characters in other parts of the insects of this genus.”

METCALF & WADE (1965) considered Antonae, Centrogonia, and Penichrophorus as distinct genera. In Ilithucia, they repeated the species listed by GODING (1929).

FONSECA & DIRINGSHOFEN (1974) described the genus Achantomodes and said that it belongs to Acutalini, standing near Thrasymedes Kirkaldy, 1904 and Euritea Stål, 1867. They based on a specimen with anomalous wing venation, presenting four discoidal cells.
Kopp & Yonke (1979) revised the tribe Ceresini and, together with other genera of the group, they redefined Penichrophorus Richter and Antonae Stål, distinguishing them by the form of lateral plates of the pygofer: in Antonae the upper margin of the lateral plates is rounded, the middle region bearing a slight bulge, or in some species with distinct blunt and rounded tooth; in Penichrophorus the lateral plates are rounded to elongate and unarmed. Based on these characters they considered Centrogonia Stål and Ilithucia Stål as junior synonyms of Antonae Stål. I believe that Kopp & Yonke (1979), and also Richter (1943), did have a wrong concept of Centrogonia Stål because the species they interpreted as Ceresa ciliata Fairmaire was actually another species (see Kopp & Yonke’s figs 550-557 and Richter’s fig. 10332). Richter (1943) elected Penichrophorus brevicornis to be the type species of Penichrophorus. Now, comparing Penichrophorus brevicornis Richter, 1943 with Ceresa ciliata Fairmaire, 1846, the conclusion is that they are congenerics; both presenting the dorsum of the posterior process not undulated. Being so, the both genera, Centrogonia Stål and Penichrophorus Richter, are considered herein as new junior synonyms of Ilithucia Stål, together with Electrophina Buckton and Achantomedes Fonseca & Diringshofen.

The material examined belongs to: (CCBM) Colección Carlos Bordón, Maracay, Venezuela; (DZUP) Departamento de Zoología, Universidade Federal do Paraná, Curitiba, Paraná, Brazil; (LUND) Lund University, Lund, Sweden.

**Ilithucia Stål, 1867 nom. rev.**


*Achantomedes* Fonseca & Diringshofen, 1974: 151 (type species: Achantomedes flavocephala Fonseca & Diringshofen, 1974, by original desig.). **Syn. n.**

Stål (1867) differentiated *Ilithucia* from Antonae by having the dorsum of posterior process not sinuate and, especially because of four discoidal cells present in the tegmina. In *Ilithucia* he included only one species, *Ceresa morio* Fairmaire. One knows that this character, four discoidal cells, is anomalous, due to an extra transverse vein, not always present. The posterior process with dorsum not sinuate is found in two species described by Fairmaire (1846): *Ceresa ciliata* and *C. terminata*. This kind of pronotum is observed also in *Penichrophorus brevicornis* Richter and in *Achantomedes flavocephala* Fonseca & Diringshofen. By coincidence, *Achantomedes flavocephala* presents the same extra transverse vein in the tegmina as in *Ceresa morio* Fairmaire. These are the reasons why *Centrogonia*, *Penichrophorus*, and *Achantomedes* are considered here as synonyms of *Ilithucia*.

The species considered by Kopp & Yonke (1979) as belonging to *Penichrophorus* Richter, and some to Antonae Stål as well, are transferred to *Ilithucia* Stål;
Figs 1-6. Species of *Ilithucia* Stål: (1) *I. centrotoides*; (2) *I. ciliata*; (3) *I. impressa*; (4) *I. nasuta*; (5) *I. richteri*; 6, *I. terminata*.

new combinations and new synonymies are also established; for some names that the combinations were changed by subsequent authors, are now restored to their original or already used combinations (*combinatio restauratum* = comb. rest.).

The following species are included in this genus.

*Ilithucia brevicornis* (Richter, 1941) **comb. n.**

*Centrogonia brevicornis* Richter, 1941: 71, figs 8-9, (type loc.: Colombia, Páramo Guerrero de Zipaquira).


Richter (1943) elected this species to be the type species of *Penichrophorus*, here considered as synonym of *Ilithucia*. It is very similar to *I. ciliata* (Fairmaire) differing in the form of the supra-humeral processes; in *I. brevicornis* the supra-humeral processes are short and gradually tapering to the apex, instead of basally thick and abruptly acute as in *I. ciliata*.

Ilithicia centrotoideis (Walker, 1858) comb. n.

Fig. 1

Thelia centrotoideis Walker, 1858a: 138 (type loc.: S. America, Napo River); Broomfield, 1971: 339. (A photograph of the holotype was seen).
Centrogonia centrotoideis; Metcalf & Wade, 1965: 828.
Antonae centrotoideis; Kopp & Yonke, 1979: 36.
Stictocephala nigriventris Funkhouser, 1919: 272 (type loc.: Ecuador). (A photograph of the holotype was seen). Syn. n.
Melusinella nigriventris; Metcalf & Wade, 1965: 827.
Penichrophorus nigriventris; Kopp & Yonke, 1979: 38.
Centrogonia flavolimbata; Metcalf & Wade, 1965: 829.
Penichrophorus flavolimbatus; Kopp & Yonke, 1979: 38, figs 609-616.
Ceresa luteimaculata Funkhouser, 1940: 282 (type loc.: Peru, Shishmay); Metcalf & Wade, 1965: 864. (A photograph of the holotype was seen). Syn. n.
Penichrophorus luteimaculatus; Kopp & Yonke, 1979: 38.

Material examined. ECUADOR, 4 females, 2 males (CCBM; DZUP).

Very different from other species in having the pronotum, in dorsal view, a triangular shape; supra-humeral processes short and almost conic; relatively small size. The coloration of pronotum varies from yellowish to almost black, with contrasting yellow stripe laterally; the thorax below and abdomen black. These color variations resulted in different names, given by authors, here considered synonyms.

Ilithicia ciliata (Fairmaire, 1846) comb. n.

Fig. 2

Ceresa ciliata Fairmaire, 1846: 287 (type loc.: Nouvelle Grenade [Colombia]).
Centrogonia ciliata; Stål, 1869a: 24; Metcalf & Wade, 1965: 828.
Antonae ciliata; Kopp & Yonke, 1979: 36.
Ceresa extensa Walker, 1858a: 68 (type loc.: Colombia); Metcalf & Wade, 1965: 862; Broomfield, 1971: 349. (A photograph of the lectotype was seen). Syn. n.
Centrogonia lutea Funkhouser, 1919: 269 (type loc.: Colombia, Bogota). (A photograph of the holotype was seen). Syn. n.


Material examined. VENEZUELA, 3 females, 1 male. COLOMBIA, 2 males. (CCBM; DZUP).

FAIRMAIRE (1846) described C. ciliata as having pale gray color, with supra-humeral processes thick. The specimen here interpreted as such presents these characters. In the male specimen the supra-humeral processes are slender and acute.

The examination of a photograph of the lectotype of Ceresa extensa Walker, as well as of the holotype of Centrogonia lutea Funkhouser, allowed to consider both synonyms of I. ciliata. RICHTER (1943) presented a figure (10332) of a specimen that he interpreted as C. ciliata; it is very different from the description given by Fairmaire; it is otherwise, clearly an Antonae.
**Ilithucia dilatata** (Richter, 1943) **comb. n.**

*Penichrophorus dilatatus* Richter, 1943: 92, fig. 10578, (type loc.: Colombia, Cundinamarca); Metcalf & Wade, 1965: 832.

*Antonae dilatata*; Kopp & Yonke, 1979: 36.

*Antonae morio*; Kopp & Yonke, 1979: 88, figs 591-597 (misidentif.).

This species is somewhat similar to *I. terminata* (Fairmaire) concerning to the presence of a dark spot occupying the apical limbus of tegmina. The distal portion of the posterior pronotal process is very slender, more or less cilindrical. **KOPP & YONKE** (1979) illustrated a specimen identified by Stål as *Ceresa morio* Fairmaire.

Material examined. **COLOMBIA**, 1 male (CCBM).

**Ilithucia elegans** (Fowler, 1895) **comb. n.**

*Centrogonia elegans* Fowler, 1895: 107, fig. 16, (type loc.: Panamá, Volcan de Chiriquí); Metcalf & Wade, 1965: 829; Broomfield, 1971: 347. (A photograph of the holotype was seen).

*Antonae elegans*; Kopp & Yonke, 1979: 36.

It is quite different from a typical *Ilithucia*, or *Antonae* as well, remembering besides, species of *Paraceresa* Kopp & Yonke. A detailed examination of the type specimen is needed to confirm its actual taxonomic position.

**Ilithucia grisescens** (Funkhouser, 1940) **comb. n.**

*Ceresa grisescens* Funkhouser, 1940: 283 (type loc.: Peru, Limon); Metcalf & Wade, 1965: 863. (A photograph of the holotype was seen).

*Penichrophorus grisescens*; Kopp & Yonke, 1979: 38, figs 617-624.

In overall aspect this species resemble those of *Ceresa* Amyot & Serville. **KOPP & YONKE** (1979) studied the genitalia and, based on it, included in *Penichrophorus* Richter. An accurate examination of the type specimen is necessary.

**Ilithucia impressa** (Richter, 1943) **comb. n.**


This species is very close to *I. terminata* (Fairmaire) in the form of pronotum and the tegmina with darkened apical limbus. It is of a smaller size and presents the metepidium somewhat warty; the body beneath is black, including part of head and legs.

Material examined. **COLOMBIA**, 1 male (CCBM).

**Ilithucia incornigera** (Richter, 1942) **comb. n.**

*Centrogonia incornigera* Richter, 1942a: 41, figs 1-4, (type loc.: Colombia, Boyaca, Paramo de Arcabuco).

*Penichrophorus incornigera* [sic]; Richter, 1943: 86.

*Penichrophorus incornigera*; Metcalf & Wade, 1965: 832.

*Antonae incornigera*; Kopp & Yonke, 1979: 36, figs 575-582.

This species is characterized by the absence of the supra-humeral horns. In
general appearance, it is very similar to *I. ciliata* (Fairmaire), as shown in the
illustration given by RICHTER (1942a: 42, Figs 1-4), and also to *I. brevicornis*
(RICHTER 1941: 72, Figs 8-9).

*I lithucia nasuta* (Stål, 1859) **comb. n.**

Fig. 4

*Ceresa nasuta* Stål, 1859: 283 (type loc.: Insula Taiti [incorrect] [South America]).

*Centrogonia nasuta*; Stål, 1869a: 24


*Penichrophorus sericatus* Richter, 1943: 86, fig. 9195, (type loc.: Colombia, Bogota); Metcalf & Wade, 1965: 834; Kopp & Yonke, 1979: 39. **Syn. n.**

Material examined. COLOMBIA, 1 female. ECUADOR, 2 females, 2 males. (CCBM; DZUP).

KOPP & YONKE (1979) examined the holotype of *Ceresa nasuta* Stål, and
gave figures of the specimen, including also of genitalia. In the description of C.
*nasuta*, Stål called attention to the shape of clypeus saying that it is well protruded
and obtusely conic. This character is found in *Penichrophorus sericatus* Richter;
the genitalia is also identical. RICHTER (1943) redescribed the species and in regard
to the tegmina he said that limbus, in males, is infuscated apically (Fig. 10468).

*I lithucia pinguicornis* (Funkhouser, 1919) **comb. n.**

*Centrogonia pinguicornis* Funkhouser, 1919: 270 (type loc.: Peru, Chosica); Metcalf & Wade, 1965: 830. (A photograph of the holotype was seen).

*Penichrophorus pinguicornis*; Kopp & Yonke, 1979: 38, figs 633-640.

The shape of pronotum, in this species, is like that of *I. centrotoides* (Walker),
but with the supra-humeral processes stronger, more or less conical.

*I lithucia reducta* (Richter, 1955) **comb. n.**

*Penichrophorus reductus* Richter, 1955: 328, fig. 39, (type loc.: Colombia, Paramo de Siberia between
Calera and Guasca); Metcalf & Wade, 1965: 833; Kopp & Yonke, 1979: 38.

This species is distinguished by its reduced pronotum, with the apex of the
posterior process only reaching about the middle of tegmina (RICHTER 1955: 327,
fig. 39).

*I lithucia richteri* (Kopp & Yonke, 1979) **comb. n.**

Fig. 5

*Centrogonia nigriventris* Richter, 1942b: 41, figs 1-6, (type loc.: Colombia, Páramo de Tamá, Santander
del Norte); (praecoc.).

*Penichrophorus richteri* Kopp & Yonke, 1979: 38 (nom. n.).

Material examined. PERU, Junin, 1 male. (LUND).

The specimen examined is entirely black. The head is convex between ocelli.
The pronotum, in side view, is slightly undulated above scutellum.
Ilithucia terminata (Fairmaire, 1846) comb. rest.

Fig. 6

Ceresa terminata Fairmaire, 1846: 287 (type loc.: Colombia).
Ceresa morio Fairmaire, 1846: 287 (type loc: Colombia, Bogota). Syn. n.
Ilithucia terminata; Metcalf & Wade, 1965: 825.
Ilithucia morio; Stål, 1867: 552; Metcalf & Wade, 1965: 825.
Antonae morio; Kopp & Yonke, 1979: 36.
Antonae terminata; Kopp & Yonke, 1979: 37.
Achantomedes flavocephala Fonseca & Diringshofen, 1974: 151, fig. 1 (type loc.: Bolivia). Syn. n.

Material examined. BOLIVIA, 1 female, 1 male. (DZUP).

The characters given by FONSECA & DIRINGSHOFEN (1974) to Achantomedes flavocephala match with those of I. terminata (Fairmaire), nevertheless the type localities are different. The specimens examined present the limbus of tegmina infuscated as described by FAIRMAIRE (1846) but this was not mentioned by FONSECA & DIRINGSHOFEN (1974) and even represented in the illustrations. Stål created the genus Ilithucia to accommodate Ceresa morio Fairmaire because of, among other characters, the presence of four discoidal cells in the tegmina, a non consistent character.

Ilithucia vianai (Remes-Lenicov, 1970) comb. n.

Centrogonia vianai Remes-Lenicov, 1970: 124 (type loc.: Argentina, Jujuy). (A photograph of the holotype was seen).
Penichrophorus vianai; Kopp & Yonke, 1979: 39.

The photograph shows that it is very similar to I. ciliata (Fairmaire), just little more darker especially at the apical portion of the posterior process, contrasting the pre-apical whitish ring.

Ilithucia delvalle sp. n.

Figs 7-8

Diagnosis. Pronotum low, slightly elevated dorsally behind supra-humeral processes, apex almost reaching the end of fifth apical cell of tegmina; supra-humeral processes short, conical, and acute. Male with a distinct black spot before apex of posterior process, and a smoky brown patch at the apex of tegmina.

Measurements (mm). Male/female. Total length 7.20/7.30; length of pronotum 6.00/5.80; width of head 2.02/2.02; distance between tips of supra-humeral processes 2.96/2.60.

Holotype male. Body pale brown marmorate with yellowish-white; head yellow with small black dots irregularly disposed, two of them more or less distinct on supra-antennal ledges close to the eyes; supra-humeral processes blackish; underside of head, thorax, and basal part of legs, black; abdomen black. Head triangular, about twice as broad as long; eyes semiglobose, protruded; vertex well sculptured; ocelli small, equidistant to each other and to eyes, situated just below a line passing through center of eyes. Clypeus ovoid, about two times longer than...
wide. Rostrum extended up to the hind coxae. Pronotum low, in lateral view sloping anteriorly and almost straight posteriorly, just slightly elevated behind supra-humeral processes; metepisternum convex and warty; supra-humeral processes short, conical, acute, almost horizontal, slightly recurved; posterior process tectiform at its two third, lateral semilunar impression well marked, distal one third subulate with apex reaching the end of the fifth apical cell. Tegmina hyaline, veins dark.

Female. Very similar to male. Body almost entirely yellowish-brown; abdomen dorsally and ovipositor, black. Head yellow with two small black dots near eyes. Supra-humeral processes short and slender. Tegmina transparent, somewhat yellowish-amber to the apex.

Holotype male from “El Valle. 2000/ m. Edo Mérida/ VENEZ[uela]. Bordón/leg. 22 V 1983” (CCBM). Paratypes: 3 females and 1 male with the same label data as holotype; 1 female and 2 males "La Mucuy 2000m./ Mérida. VENEZ[uela]./ Bordón 6 VIII 84"; 1 female and 1 male “P. Nac. Yacambú./ 1800m. Sanare./ Edo. LARA. VENEZ[uela]./ Bordón 1 VII 983”; 2 females and 1 male "El Paramito,

Comments. This species is close to *I. brevicornis* (Richter, 1941) presenting the supra-humeral horns very short. The female is almost entirely yellow but the male has the black markings more evident and contrasting.

Etymology. The species name is allusive to the type locality; a name in apposition.

**Ilithucia nigrata sp. n.**

Fig. 9

Diagnosis. Pronotum low with dorsal outline almost straight up to the apex of posterior process; yellowish-brown with black spots irregularly distributed on head and metopidium, and a large one before apex; supra-humeral processes slender, acute, almost horizontal in frontal view.

Measurements (mm). Female. Total length 7.00; length of pronotum 5.60; width of head 2.04; distance between tips of supra-humeral processes 3.20.

Holotype female. Body beneath black including legs and abdomen; head black with small dots irregularly distributed and a stripe between ocelli, yellow. Pronotum yellowish-brown with black spots laterally extended from apices of supra-humeral processes to eyes and lateral margins, and a large one before apex of posterior process; metopidium irregularly black dotted. Pronotum, in lateral view, low, with dorsal outline almost straight from metopidium to posterior apex, slightly undulate above scutellum; median dorsal carina sharp; lateral semicircular impression strongly marked; supra-humeral processes well developed, slender and acute, slightly recurved, in frontal view almost horizontal. Tegmina hyaline, yellowish.

Male. Unknown.

Holotype female from "Bucaramanga, m./2500. SANTANDER/ COL. [olombia] Bordón / leg. 25 III 1984". (CCBM).

Comments. This species is more or less similar to the former one, distinguishing by its dark color with yellowish dots and spots. The pronotum is lower and almost straight dorsally from metopidium to apex of posterior process. The supra-humeral processes are stronger.

Etymology. The name is allusive to its dark color.

**Ilithucia boliviana sp. n.**

Fig. 10

Diagnosis. Pronotum low, dorsal outline horizontal up to the middle, then gradually sloping to apex. Supra-humeral processes stout, almost horizontal, tips black.

Measurements (mm). Male. Total length 8.00; length of pronotum 6.60; width of head 2.32; distance between tips of supra-humeral processes 3.52.

Holotype male. Color yellowish-brown; small dots on vertex near oceli and superior margin, underside of supra-humeral processes up to their tips, sides of posterior process just after semicircular impression, body beneath except pro and
mesothoracic legs, black. Head weakly sculptured. Pronotum coarsely punctured but not warty; in lateral view, the dorsal outline almost straight from metopidium to middle, then gradually sloping to apex; median dorsal carina rounded; semicircular impression weak. Tegmina hyaline, brownish.

Female. Unknown.

Holotype male from “Sorata, Laripe / m 3000 Dpto. La Paz” “BOLIVIA Bordón / leg. 30 IV 1972”. (CCBM).

Comments. In this species the pronotum is also low and straight dorsally but at the distal third it descends rapidly to the apex. The dorsal carina is rounded, not sharp as in I. delvalle sp. n. The coloration is yellowish-brown with undersurface of the body black. It is quite similar to I. terminata (Fairmaire, 1846).

Etymology. It means from Bolivia.

_Ilihucia tachira_ sp. n.

Figs 11-12

Diagnosis. Pronotum slightly elevated behind supra-humeral horns forming a low step in the transition of metopidium to posterior process; this one more or less tectiform, gradually tapering to apex, with a black spot at the apical third. Tegmina with dark spot at apex covering the fifth apical cell.

Measurements (mm) Male/female Total length 8.40/8.80; length of pronotum 6.80/7.20; width of head 2.40/2.48; distance between tips of supra-humeral processes 3.96/4.48.

Holotype male. Head and pronotum yellowish brown, with black spots on: head between eye and ocellus, each side of clypeus near base, metopidium, base and apex of supra-humeral processes, a large one on posterior process just behind the semicircular impression, and at the very tip; undersurface of body, including coxae and base of femora, black; tegmina yellowish hyaline, veins brownish, and a large dull brown spot occupying the entire third apical cell and extended to the limbus. Pronotum with the metopidium warty; supra-humeral horns strong, conic, directed outwards and slightly backwards; posterior process more or less tectiform, in lateral view distinctly elevated behind the supra-humeral horns, forming a low step in the transition of metopidium to posterior process; the dorsal outline almost straight up to the apex which terminates at the level of the fifth apical cell of tegmina.

Female. Very similar to male, just paler with dark spots more dilute, brownish.

Holotype male from “PREGONERO, m/ 2500. Edo. Táchira/ VENEZ[uela] Bordón/ leg. 2 XI 1978” (CCBM). Paratypes: 2 males and 2 females with the same label data as holotype. (CCBM; DZUP).

Comments. This species is somewhat similar to _I. delvalle_ sp. n. having the same apical spot at apex of tegmina. It differs by the strong supra-humeral horns and the dorsum of pronotum more elevated, with a distinct step in the transition of metopidium to the posterior process. This character brings it to near _Antonae_ species.

Etymology. Name of the type locality.
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