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Note on the *Ephuta* SAY of America South of Mexico (Hymenoptera: Mutillidae)

By CAROL G. NAGY¹⁾

(With 3 figures)

The following records, notes and descriptions of new species have been added to our knowledge of the Mutillid genus *Ephuta* SAY since partially revised by SCHUSTER (1951). Material has been studied belonging to the Zoologischen Institut und Zoologischen Museum der Universität Hamburg and to the author's collection.

I am especially indebted to Professor Dr. HERBERT WEIDNER, Hamburg, for the opportunity of examining and describing this material and take pleasure in dedication a new species to him.

Genus *Ephuta* SAY

Type-species: *Mutilla (Ephuta) scrupaea* SAY 1836

The revision of SCHUSTER (1957) reduces *Ephuta* to subgeneric rank, and the subgenus *Xenochile* SCHUSTER had been added.

Key to the Species Examined

- 1 — Females (subgenus *Ephuta* SAY) 2
- Males 9
- 2 — Second abdominal tergite with an elongated silvery maculae which reaching to the anterior margin of disc; head golden-yellow pubescent; sides of thoracic dorsum and the abdomen entirely black; tergites 2—5 with broad, dense bands of silvery sericeous vestiture, interrupted medially by dark hairs *bilunata*
- Second tergite without such maculae 3
- 3 — Hypopygium unarmed; head already black, thorax without spots of silvery pubescence 4
- Hypopygium armed with two blunt teeth, or at least with two minute tubercles 5
- 4 — Flagellum not longer than the length of scape; second spiracle on the thorax rather long, tubuliform and acute; head, propodeal declivity and second segment except posterior margin, black; maculae of second tergite, its posterior margin and the following segments entirely covered with a decumbent, brilliant golden pubescence *sicona*
- Flagellum near twice as long as the length of scape; second spiracle on the thorax not longer than the first; head and abdomen except first segment, black; spots of second tergite absent; its posterior margin and the following segments clothed with extremely long, sparse ivory hairs *weidneri*
- 5 — Size bigger, body entirely black 6
- Size small, body not entirely black 7

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- 6 — Felt line of second tergite absent; antero-lateral margin of pronotum acute, dentiform produced; golden spots of second tergite minute . . . *buftex*
 — Felt line of second tergite well developed, long and hirsute; antero-lateral margin of pronotum not produced dentiform; golden spots of the second tergite rather greatly extended on the disc . . . *anephuta*
- 7 — Head entirely black; maculae of second tergite triangular; abdomen except first tergite, black; apical border of tergites with fine sericeous hairs; pygidial area clearly defined by lateral carinules, nearly as long as the last tergite . . . *cumba*
 — Head a brilliant golden pubescent; maculae of second tergite not triangular . . . 8
- 8 — Middle and hind tibiae with two rows of a recurved spines; sides of propodeum with a spot of silvery, decumbent, brilliant hairs; apical border of second tergite a silvery pubescent and broadly interrupted medially by an erect, redish pubescence; tergites 3—5 only partially whitish on each side . . . *felix*
 — Middle and hind tibiae without spines; propodeum with a narrow, median-longitudinal line of silvery pubescence; apical band of second tergum near entire; segments 3—5 with redish colored semierect pubescence and only a quadrate median spots of silvery hairs . . . *novacula*
- 9 — Scutellar disc produced posteriorly in a two acute spine (subgenus *Arcasina* nov.); body and appendages wholly cataneous; silvery pubescence of head, propodeum, abdominal petiolus and posterior border of second tergite rather dense and decumbent . . . *chendis*
 — Scutellar disc not produced posteriorly (subgenus *Ephuta*) . . . 10
- 10 — Postero-lateral angles of propodeum acute . . . 11
 — Postero-lateral angles of propodeum rounded . . . 12
- 11 — Hypopygium dark castaneous; genal ridge minute and situated near foramen magnum; median shining area of tergite three little, disposed near the base, to a considerable distance of apical keel; basal three segments of flagellum, scape and the legs pale testaceous to fulvous; pubescence of body brilliant golden . . . *olma*
 — Hypopygium yellowish-white; genal ridge great, situated behind base of mandibles; median shining area of tergite three large, nearly as long as the disc, apically in contact by the longitudinal keel; body and appendages black; vestiture silvery, decumbent . . . *argentata*
- 12 — Inner margin of middle coxae with apical tubercle or spine . . . 13
 — Inner margin of middle coxae without such modifications . . . 15
- 13 — Tegulae with few scattered punctures; head narrow; declivity of the propodeum as long as the disc; longitudinal keel of tergite three half as long than the disc . . . *yarasirda*
 — Tegulae densely punctate; head broad; declivity of propodeum much shorter than the disc ($1/2$, $1/3$); tergite three without longitudinal keel . . . 14
- 14 — Subantennal basin subequal in height to clypeal basin; first abdominal tergite silvery pubescent; apical border of tergites 2—6 covered with rather dense, brilliant golden vestiture . . . *minerva*
 — Subantennal basin very small; first abdominal tergite and the apical border of the second silvery pubescent; contiguous band on the following segments lacking . . . *bulmaca*
- 15 — Vestiture bicolorous; front and clypeus with silvery hairs; dorsal part of head, thorax and abdomen entirely clothed with moderately long decumbent, brilliant golden pubescence . . . *dorida*
 — Vestiture unicolorous, everywhere silvery . . . 16
- 16 — Disc of scutellum silvery pubescent; subantennal basin subequal in height to clypeal basin; the subantennal carinae dentiform produced medially; its transverse keel complete; clypeus with sparse, semierect, pale pubescence . . . *elanora*

- Disc of scutellum with sparse pale hairs 17
- 17 — Black; size 9,0 mm; clypeus with rather sparse, dark pubescence; pygidium covered with semierect, silvery vestiture *verbena*
- Dark castaneous; size 5,0 mm; clypeus with dense, silvery pubescence; pygidium nearly glabrous *serapia*

Subgenus *Ephuta* SAY

Ephuta (Ephuta) bilunata sp. n.

♀ — Length about 5,0 mm. Head and abdomen black; sides of thoracic dosum also black; antennae, thorax except lateral dorsal lines, first abdominal segment and legs testaceous; head, metapleurum, first tergite entire and the posterior border of following segments with decumbent, brilliant golden vestiture; band of second tergite triangularly emarginate posteriorly, on the following segments broadly interrupted medially; disc of second tergite with two elongated spots of golden pubescence in a contact to the base; head half as long as broad; pedicellus two times as long as the scape; genae acute; torax two times as long as broad, humeral region rounded; first abdominal segment twice as broad as long; hypopygial tubercle indistinct; middle and hind tibiae spinose; male unknown.

H o l o t y p e : ♀ — „São Paulo, Estancio Mayrink, VIII. 1895, J. METZ“ (deposited in coll. Mus. Hamburg).

Related to *Ephuta tumacacori* SCHUSTER but differs in absence of hypopygial tubercle.

Ephuta (Ephuta) sicona sp. n.

♀ — Length about 5,5 mm. Head, dorsal aspect of flagellum, median spot of propodeum and second tergum except posterior margin, black; thorax and legs fulvous; moderately long maculae of second tergite and the posterior borders of tergites brilliant golden, decumbent; head slightly shorter than broad (2:3); clypeus quadridentate, genae acute; flagellum weakly longer than the scape; thorax longer than broad (3,5:2), rounded anteriorly; posterior spiracles elongated, tubuliform and acute; first abdominal segment as long as broad; pygidium smooth and shining, hypopygium without tubercle; tibiae spined; male unknown.

H o l o t y p e : ♀ — „Ecuador, Guayaquil, 1901, BUCHWALD“ (deposited in coll. mea).

Related to *Ephuta scenica* GERSTAECKER of which differs in the absence of silvery spot on the head.

Ephuta (Ephuta) weidneri sp. n.

♀ — Length about 5,0 mm. Head and abdomen except first segment, dark castaneous toward redish; antennae, thorax, first segment and legs redish-fulvous; pubescence of body ferruginous; posterior fringe of second tergum and the following tergites clothed with long, semierect, ivory hairs; head half as long as wide; flagellum two times as long as the scape; the vestiture of antennae short and semierect; the relative length and width of thorax in a ratio of about 3,5:2,0, also for the first abdominal

segment 2,5:1,0; clypeus quadridentate, genae acute, thorax expressively piriform, much wider in the mesothoracic region than posteriorly; maculae of second tergum and the tubercles of hypopygium lacking; pygidium with shining and smooth median area; tibiae spinose; male unknown.

H o l o t y p e: ♀ — „Brazilia São Paulo, 19. X. 1926, BOSQUE DA SAUDE“ (deposited in coll. Mus. Hamburg).

Related to *Ephuta beatula* Cresson but differs in the absence of silvery pubescent spots of second abdominal tergite, and the absence of apical fringes of following tergites.

Ephuta (Ephuta) cumba sp. n.

♀ — Length about 8,0 mm. Head and abdomen except first segment black; flagellum castaneous; scape testaceous; mandibles, thorax and legs fulvous; apical border of tergites with fine sericeous, brilliant golden vestiture; second tergite with two triangular maculae; head slightly longer than the half of their width; clypeus quadridentate, genae acute; flagellum one and half times as long as the scape; anterior humeral angle rounded; both spiracles prominent but not elongated; thorax twice as long as broad, its sides nearly parallel; first tergite one and half times as long as broad, clothed with decumbent silvery pubescence; pygidial area clearly defined laterally by carinules; hypopygium with tubercle; tibiae spined; male unknown.

H o l o t y p e: ♀ „Brazilia, Estados Rio de Janeiro, Petropolis, I. 1905, F. OHAUS“ (deposited in coll. Mus. Hamburg).

Very similar in appearance to *Ephuta chrysodora* PETRY but differs as follows: tergite three and four with golden vestiture; scutellar scale not developed; thorax with parallel sides.

Ephuta (Ephuta) felix CRESSON

1902. Trans. Amer. Entom. Soc., p. 33.

Material examined: 1♀ — „Cuyaba, Matto-Grosso“ probably lectotype, „*Rhoptromutilla felix* CRESS ♀“ ANDRÉ's handwriting (in coll. mea).

Ephuta (Ephuta) novacula sp. n., Fig. 1

♀ — Length about 7,5 mm. Head black, lateral part of thoracic dorsum and the abdomen dark red; antennae, pleurae and legs ferruginous; head with golden vestiture; propodeum with longitudinal spot of silvery pubescence; side of first tergum, maculae and posterior fringe of second, median spots of the following tergites fulvous silvery pubescent; head nearly as long as broad, clypeus sexdentate; genae very acute produced in a hypostomal tooth; thorax near twice as long as broad, elliptical, expressively arched dorsally; last tergite with median shining line, pygidial area undefined; hypopygial tubercle minute; tibiae without acute spines on outer surface; male unknown.

H o l o t y p e: ♀ — „Brazilia, São Paulo“ no other data on label (deposited in coll. mea).

Differs to *Ephuta statua* GERSTAECKER in having sexdentate clypeus, acute hypostomal tooth, median shining line of last tergite and the absence of tibial spines.

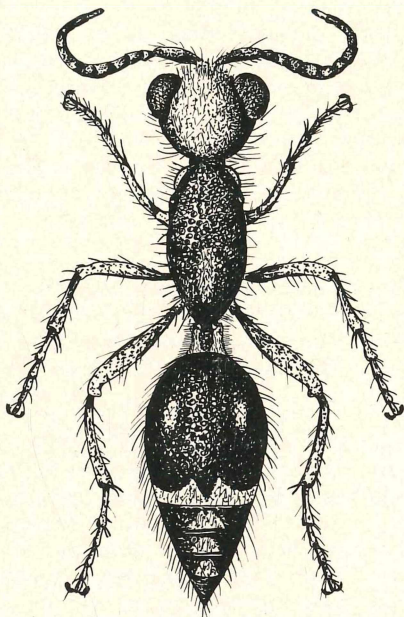


Fig. 1 — *Ephuta (Ephuta) novacula* sp. n., holotype female

Ephuta (Ephuta) buftex sp. n.

♀ — Length about 12,0 mm. Dark ferruginous to black; front, median line of propodeum, first tergite, minute rounded spots of second tergite, posterior fringe and subletaral maculae of following segments a brilliant golden pubescent; head near twice as broad as long; clypeus quadridentate, its median teeth projected forward and have an apparently bidentate aspect; genae acute; malar space as long as the eye width; flagellum not more incrassate, nearly twice as long as the scape; anterolateral angles of the thorax angular, sides parallel constricted weakly near propodeal end; pygidium smooth triangular not margined laterally by carinules; hypopygium armed; tibiae spined; male unknown.

Holotype: „São Paulo, Estancio Mayrink, 29. XI. 1895, J. METZ“ (deposited in coll. Mus. Hamburg).

Differs to *Ephuta puteola* BLAKE in the aspect of thorax.

Ephuta (Ephuta) anephuta sp. n.

♀ — Length about 17,0 mm. Black; pleural part of the thorax, propodeum except median longitudinal line, and first segment of the abdomen clothed with sericeous, silvery pubescence; two rather large maculae of second tergite, its posterior fringe and in the center interrupted bands of following tergites a brilliant golden, decumbent pubescent; head slightly more than two times as broad as long, frons rather flat; eye small and not hemispherical; clypeus quadridentate, median teeth rounded at apex; genae acute; flagellum one and half times as long as the scape; thorax slightly longer than broad, sides parallel anteriorly, convergents posteriorly; hind spiracle very prominent and acute; first abdominal segment twice as broad as long; second tergite with well defined felt lines in a deep groove, near half as long as the tergite; pygidium shagreened, not carinulate behind, apical third with prominent longitudinal keel in the middle; hypopygium carinulate and tuberculate; tibiae spined; male unknown.

H o l o t y p e : ♀ — „Brazilia, Santa Catharina, Boiteuxburgo, 800 m, 1929—30, P. MISSFELDT“ (deposited in coll. Mus. Hamburg).

Related to *Ephuta weberi* MICKEL but differs in having the thorax black and median coxae without apical tubercle.

Ephuta (Ephuta) olma sp. n.

♂ — Length about 10,0 mm. Black; basal fourth segments of antennae, frontal prominence, mandibles and legs fulvous; tegulae ferruginous; head, pronotum, mesopleurum, postscutellum, propodeum and abdominal dorsum except disc of second tergite, clothed with sericeous, decumbent, brilliant golden vestiture; hypopygium concolorous with the abdomen; subantennal carinae parallel, the transverse keel lacking; genae more reduced, without tubercle; humeral angles not expressively angular or acute; tegulae with few, scattered punctures its longitudinal carina half than the disc; scutellum gibbose, postero-lateral angles of propodeal disc divergent and slightly acute; median shining area of tergite three reduced, disposed near the base of disc; wings weakly and uniformly infuscated; female unknown.

H o l o t y p e : ♂ — „Santa Cruz, Rio Grande do Sul, 10. VII. 1895, F. STIEGLMAYR“ (deposited in coll. Mus. Hamburg); 3 ♂ ♂ paratypes same data as the type, in coll. Mus. Hamburg and my own.

Resembles *Ephuta pinha* CRESSON but differs in having the second tergite without median depression.

Ephuta (Ephuta) argentata KLUG

1821. Nova Acta Acad. Nat. Curios., p. 305.

Material examined: 1 ♂ — „Brazilia, Manaos“, probably lectotype, „*Rhoptromutilla argentata* KLUG ♂“ ANDRÉ's handwriting (in coll. mea).

Ephuta (Ephuta) yarasirda sp. n.

♂ — Length about 6.0 mm. Head and thorax black; mandibles, antennae, tegulae, legs and abdomen ferruginous; head pronotum, mesopleu-

rum, propodeal disc, posterior finges of first and second tergites clothed with short, decumbent, brilliant pubescence; this tinged toward golden on the head and pronotum, toward silvery on the rest; subantennal carinae acute triangular, divides medially in a two subequal portions; genae reduced; tegulae with scattered punctures, shining; scutellum gibbose; propodeum clearly divided into horizontal disc and vertical declivity, the latter is glabrous and foveolate, any transverse carina lacking; middle coxae tuberculate, hypopygium yellowish-white; female unknown.

H o l o t y p e : ♂ — „Argentina, District Mendoza, 29. XI. 1906, A. C. JENSEN-HAARUP“ (deposited in coll. Mus. Hamburg).

Related to *Ephuta morada* CRESSON but differs in having body and vestiture bicolorous.

Ephuta (Ephuta) minerva sp. n.

♂ — Length about 7.5 mm. Black; head, propodeum and first tergum clothed with sericeous, silvery pubescence; posterior border of following segments with dense, decumbent, brilliant golden hairs; subantennal carinae strongly divides in a two separate portions; genae reduced; tegulae densely punctate; middle coxae armed with an acute tubercle; scutellum gibbose; second tergite slightly flattened dorsally; hypopygium discolorous; female unknown.

H o l o t y p e : ♂ — „São Paulo, Estancio Mayrink, 9. X. 1895, J. METZ“ (deposited in coll. Mus. Hamburg).

Related to *Ephuta astuta* CAMERON but differs in having the abdominal fringes entire.

Ephuta (Ephuta) bulmaca sp. n.

♂ — Length about 7,5 mm. Resembles *Ephuta yarasirda* but body having only silvery pubescence; subantennal basin rather large, clypeal basin more reduced; genae without tubercle; tegulae uniformly punctured; female unknown.

H o l o t y p e : ♂ — „São Paulo, Estancio Mayrink, VIII. 1895, J. METZ“ (deposited in coll. Mus. Hamburg).

Ephuta (Ephuta) dorida sp. n.

♂ Length about 10,5 mm. Black; body entirely clothed with brilliant golden hairs; subantennal carinae separates in a two subequal portions, but any transverse keel lacking; genae minute; tegulae densely punctate and haired; scutellum gibbose; postero-median tubercle of propodeum prominent; hypopygium discolorous; female unknown.

H o l o t y p e : ♂ — „Costa Rica, Pacific-Seite, 1. XI. 1910, H. SCHMIDT“ (deposited in coll. Mus. Hamburg).

Resembles *Ephuta polydora* GERSTAECKER but differs in having meso-scutum and scutellum, also the disc of second tergite with golden vestiture.

Ephuta (Ephuta) elanora sp. n., Fig. 2

♂ — Length about 9.5 mm. Black; head, pronotum a little, scutellum, propodeum, first tergite and apical border of the second clothed with silvery pubescence; subantennal carinae divides in two subequal portions; genae weakly produced behind base of mandibles; tegulae rather densely haired; scutellum gibbose with dense, semierect silvery pubescence and with few erect, ivory white hairs; posterolateral angles of propodeum rounded, median spine prominent; hypopygium discolorous; wings strongly infuscated; female unknown.

Holotype: ♂ — „San José de Costa Rica, 6. III. 1913, H. SCHMIDT“ (deposited in coll. Mus. Hamburg).

Probably related to *Ephuta vicosa* CRESSON and *Ephuta jatoba* CRESSON, species unknown for me, and differs in having scutellum a silvery pubescent.

Ephuta (Ephuta) verbena sp. n.

♂ — Length about 9.0 mm. Black; pubescence of clypeus black; head, pronotum, propodeum, first tergite, apical border of second tergite and pygidium clothed with sericeous, dense, decumbent silvery pubescence; antennae and legs dark castaneous; wing venation dark brown; wings membrane strongly infuscated; dorsum of thorax and segments 3—6 of the abdomen covered with rather long, sparse, ivory white hairs; subantennal carinae with bunt teeth near the middle, separates in a two subequal portions but any transverse keel lacking; genae weakly produced a short distance behind base of mandibles, its apex rounded and shining;

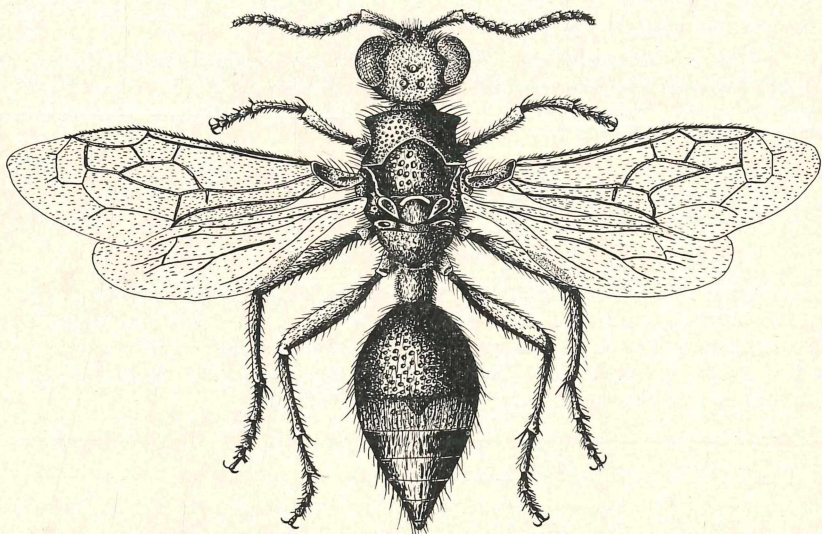


Fig. 2 — *Ephuta (Ephuta) elanora* sp. n., holotype male

tegulae deeply but rather sparsely punctate; hypopygium discolorous; female unknown.

Holotype: ♂ — „San José de Costa Rica, 14. III. 1911, H. SCHMIDT“ (deposited in coll. Mus. Hamburg).

Differs to the other species in the characters described above.

Ephuta (Ephuta) serapia sp. n.

♂ — Length about 5,0 mm. Dark castaneous; resembles *Ephuta verbena* except following respects: pygidium without silvery vestiture; the transverse keel of subantennal carinae present; genae not produced; propodeum abruptly elevated posteriorly, its declivity much shorter than the disc, median tubercle triangular, minute; anterior half of the longitudinal keel of tergite three of abdomen not developed; female unknown.

Holotype: ♂ — „Costa Rica, Pacific-Seite, 1. XI. 1910, H. SCHMIDT“ (deposited in coll. Mus. Hamburg).

Subgenus *ARCASINA* nova

Males, females unknown. Genae produced behind base of mandibles an acute spine; other tubercle situated a considerable distance behind inferior margin of eyes and produce any dilatation of temples; third tubercle having an upper margin of occipital carina; scutellar disc produced posteriorly in a two acute spine; propodeum without separation between disc and declivity; lateral angles prominent, triangular and acute; above margin of mesopleurum and anterior margin of metapleurum without

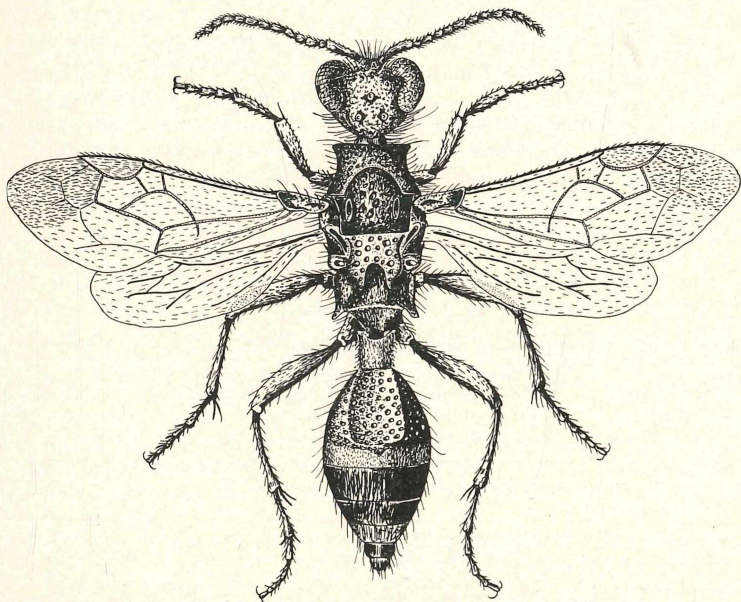


Fig. 3 — *Ephuta (Arcasina) chendisa* sp. n., holotype male

shining areas; inner surface of fore coxae terminating in an acute spine; apices of middle and hind femora squarely truncate; hypopygium with median-longitudinal keel near the base.

Type-species: *Ephuta (Arcasina) chendisa* sp. n., described here, by monotypy and by present designation.

Ephuta (Arcasina) chendisa sp. n. Fig. 3

♂ — Length about 9.5 mm. Dark castaneous; clypeus, front, vertex, mesopleurum, propodeum, first abdominal tergite and the interrupted apical band of the second tergite silvery pubescent; nervures dark brown, wings membrane strongly infuscated; subantennal carinae near parallel, not separated in a two sections; tegulae rather deeply and rather sparsely punctate; first tergite slightly longer than broad, second with median impression on the dorsal surface; hypopygium concolorous; female unknown.

Holotype: ♂ — „Surinam“ (deposited in coll. mea).

This subgenus probably includes in addition to the type-species other previously described ones characterised in having similar features.

Geographical Catalogue of Species

Argentina	Bolivia
<i>yarasirda</i> sp. n., male	<i>olma</i> sp. n., male
Brazilia	Costa Rica
<i>bilunata</i> sp. n., female	<i>dorida</i> sp. n., male
<i>weidneri</i> sp. n., female	<i>elanora</i> sp. n., male
<i>cumba</i> sp. n., female	<i>verbena</i> sp. n., male
<i>felix</i> CRESSON, female	<i>serapia</i> sp. n., male
<i>novacula</i> sp. n., female	Ecuador
<i>buftex</i> sp. n., female	<i>sicona</i> sp. n., female
<i>anephuta</i> sp. n., female	Surinam
<i>argentata</i> KLUG, male	<i>chendisa</i> sp. n., male
<i>minerva</i> sp. n., male	
<i>bulmaca</i> sp. n., male	

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