

Revision of the South American Thynnine Genus *Elaphroptera* Guérin-Ménéville
(Hymenoptera: Tiphidae)

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Abstract.—The South American thynnine genus *Elaphroptera* Guérin-Ménéville is revised. We recognize 20 species, seven are newly described, including: *boliviana* (Bolivia, Peru), *cuzcoensis* (Peru), *dorada* (Argentina), *fuscata* (Bolivia, Peru), *montifacies* (Brazil), *quadrilobata* (Chile) and *spatulata* (Argentina), and the rest are redescribed. New synonymy is given for *Elaphroptera testaceicauda* Durán-Moya 1941 (= *erythrura* Spinola 1851), and *Elaphroptera holomelas* André 1900 and *racovitzai* André 1900 (= *intaminata* (Smith) 1879). A key to the species is provided and male genitalia are figured for each species.

The thynnine genus *Elaphroptera* Guérin-Ménéville includes some of the largest and most commonly collected members of this subfamily in South America. There are 20 species in this genus. We have not seen any unassignable specimens, but the central Andes are so poorly collected that other species may be found. The species most often encountered in collections and most often commented on in the field are *scoliaeformis* and *nigripennis*.

The biology of this group is largely unknown. *Elaphroptera scoliaeformis*, and a species given as near *nigripennis*, have been reported as parasitoids of scarab beetle grubs: *Aulacopalpus pilicollis* (Fairm.) (Rutellinae) and *Macrosoma glacialis* (F.) (Melolonthinae) respectively (Lloyd 1951).

Members of this genus are large, generally more than 1.5 cm long, darkly colored wasps. Unlike most other thynnines in South America, species of *Elaphroptera* lack yellow or whitish markings.

This genus occurs from Peru and southern Brazil south, along the Andes to southern Chile, particularly in mountainous areas (Fig 1). *Elaphroptera* species group into three geographic regions where their distributions overlap. The Chilean Region, which extends from Coquimbo south to Magallanes Province and through several Andean passes into southwestern Andean Argentina, contains the largest number of species, including: *arcuata*, *atra*, *clypeicarinata*, *erythrura*, *herbsti*, *hyalinipennis*, *intaminata*, *nigripennis*, *quadrilobata*,

sanguinicauda, and *scoliaeformis*. A second group of species occurs in the central Andean region, from southern Peru to Tucuman and Catamarca, Argentina. This group includes: *boliviana*, *cuzcoensis*, *dorada*, *fuscata*, *spatulata* and *strandii*. The final group of species, including: *haematodes*, *montifacies* and *vulpina*, occurs in southern Brazil, from São Paulo to Rio Grande do Sul. We have seen no specimens of these Brazilian species collected more recently than the 1950's and it is quite possible that habitat destruction in this region has resulted in the extinction of one or more of them.

This group has received little revisionary attention in the past 100 years. Brèthes (1910) and Schrottky (1920) placed nearly all the thynnine species they described in *Elaphroptera* without further generic or subgeneric discrimination. Their species grouping was simply reiterated by Turner (1910b) in the Genera Insectorum without further study. Preliminary examination revealed that *Elaphroptera*, as treated by Brèthes and Turner, contained species that belonged in other genera including: *Argenthygnus*, *Brethynnus*, *Eucyrtothygnus*, *Glottynnus*, *Pseudelaphroptera*, *Spilothygnus*, *Telephoromyia*, and *Zeena*. However, generic synonymy for *Elaphroptera* given below follows that of Turner (1910b).

For a variety of reasons we have not been able to study a number of primary types. André's types should be in Paris, but they cannot be located. We suspect this is because they are either unlabeled as

such, are completely unlabeled, or are actually lost. Some of Spinola's tiphid types, including those discussed herein have apparently been borrowed from Turin and subsequently lost in Rumania. We feel certain of our identification of species where we have not seen primary types either because we have seen other specimens identified by the original author, or because original descriptions and/or illustrations show unique diagnostic features that make recognition of the species straightforward. However, there are three species described as *Elaphroptera*, which we have not been able to study, the primary types are unavailable and the descriptions are vague enough to make even generic recognition impossible. These species are as follows:

Elaphroptera ruficeps Guérin-Ménéville 1838:245. Holotype female; Brazil: Corrientes (GENOA ?).

Elaphroptera tafiensis Brèthes 1910:233. Holotype male; Argentina: Tucumán, Tafí (LA PLATA, type lost). This is probably not a species of *Elaphroptera*, based on the original description since Brèthes states that the male has yellow markings. This species probably belongs in *Eucyrtothynnus* or *Telephoromyia*.

Elaphroptera weneri Schrottky 1920:182. Syntype males, females; Paraguay: Puerto Bertoni (type lost). This species is also described as having yellow markings in the male. Also, since Schrottky states that it seems similar to *Elaphroptera anisitsi* Turner (1910a) it is probably a species of *Eucyrtothynnus*.

Phylogenetic relationships between *Elaphroptera* and other South American Thynninae are discussed in detail by Kimsey (1992). *Elaphroptera* belongs with the South American genera remaining in the Thynnini, not those moved into the Scotaenini. Although these South American "Thynnini" are probably sufficiently different from the Australasian Thynnini to warrant a separate tribal category. Autapomorphies associated with the male terminalia in *Elaphroptera* indicate that it is the sister group of the other South American Thynnini (Kimsey 1992). Female *Elaphroptera* are relatively unspecialized and do not seem to provide much phylogenetically significant information.

MATERIALS AND METHODS

A large number of species characteristics have been taken from the male genitalia. Terminology used to describe these features is illustrated in Figs. 36-37.

Distributional information includes the months when specimens were collected, indicated by lower case roman numerals enclosed in parentheses.

Specimens used in this study were borrowed from the following individuals and institutions. The name of the contact person is given in parentheses. Type repositories are indicated by the city of the institution given in capital letters at the end of the entry. An asterisk (*) preceding a species entry indicates that the primary type(s) were studied.

- ANN ARBOR - Zoology Museum, University of Michigan, Ann Arbor, U.S.A. (M. O'Brien)
 BERLIN - Zoologisches Museum an der Humboldt-Universität of Berlin, Germany (F. Koch)
 BUENOS AIRES - Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Buenos Aires
 CAMBRIDGE - Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A. (J. M. Carpenter, S. R. Shaw)
 COPENHAGEN - Zoologisk Museum, Copenhagen, Denmark (O. Lomholdt)
 DAVIS - Bohart Museum of Entomology, University of California, Davis, U.S.A. (R. O. Schuster, S. L. Heydon)
 EBERSWALDE - Institute für Pflanzenschutzforschung, Eberswalde-Finow, Germany (J. Oehlke)
 GAINESVILLE - Florida State Collection of Arthropods, Gainesville, U.S.A. (L. A. Stange)
 GENOA - Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy (V. Raineri)
 LA PLATA - Museo de La Plata, Universidad de La Plata, Argentina (R. A. Ronders)
 LONDON - Museum of Natural History, London, England (M. C. Day)
 LOS ANGELES - Los Angeles County Museum of Natural History, Los Angeles, California, U.S.A. (R. R. Snelling)
 MUNICH - Zoologische Staatssammlung, Munich, Germany (E. Diller)
 NEW YORK - American Museum of Natural His-

- tory, New York, U.S.A. (J. G. Rozen, E. Quinter)
 OXFORD - Hope Entomological Collections, Oxford University, England (C. O'Toole)
 PARIS - Muséum National d'Histoire Naturelle, Paris, France (J. Casevitz-Weulersse)
 SALTA - Manfredo Fritz Collection, Salta, Argentina
 SANTIAGO - Museo Nacional de Historia Natural, Santiago, Chile (M. Elgueta D.)
 SÃO PAULO - Museu de Zoologia, Universidad de São Paulo, Brazil (C. R. F. Brandão)
 TUCUMAN - Fundación Miguel Lillo, Tucumán, Argentina (A. Willink)
 TURIN - Istituto di Zoologia Sistemática, Università di Torino, Torino, Italy (P. d'Entreves, A. Rolando)
 VIENNA - Zweite Zoologische Abteilung, Naturhistorisches Museum, Wien (Vienna), Austria (M. Fischer)
 WASHINGTON - U. S. Museum of Natural History, Washington, D. C., U.S.A. (A. S. Menke)

Genus *Elaphroptera* Guérin-Ménéville

- Elaphroptera* Guérin-Ménéville 1838:214. Type: *Myrmecodes dimidiatus* Haliday 1836:327. Original designation.
Klugianus Ashmead 1903:102. Type: *Thynnus haematodes* Klug 1842:37. Original designation. Synonymized by Turner 1910b.
Pycnothynnus Ashmead 1903:101. Type: *Elaphroptera atra* Guérin-Ménéville 1839:241. Original designation. Synonymized by Turner 1910b.

Male.—Body length 12-27 mm. Tongue not elongated, maxillary palpus 2-3x as long as stipes; clypeus typically broadly and shallowly emarginate apically, often projecting medially (Figs. 2-19); mandibles usually elbowed submedially, narrowest near base, thickened subapically with small subsidiary tooth (rarely tridentate), inner margin with small triangular projection near bend; scutellum usually subconical in profile; tergum VII apically truncate with straight lateral carinae in dorsal view; sternum VII slender and apically trilobate, tridentate or triangular; genital capsule (Figs. 36-56); gonocoxa strongly projecting dorsally (sunken in

some species) and apex narrowly bilobate, laterally somewhat lobate, gonostylus long and generally slender, apically rounded or tapering, in some species with broadly rounded dorsal lobe; volsella with digitus large and foliaceous (as in Fig. 37), apically cuplike or C-shaped (as in Fig. 45) and cuspis generally foliaceous, toothlike or projecting ventrally (as in Fig. 51); aedeagus with lateral winglike lobes, often with capitate dorsal lobe originating near base of apical loop, and often with a second pair of usually small lobes ventrad of base of apical loop.

Female.—Body length 7-18 mm. Mandible slender, edentate; pronotal disk generally quadrate, wider than long, with long cervical "collar" (as in Figs. 22, 23); propodeum with narrow dorsal surface and somewhat concave posterior face; tergum I with dense brush of setae on anterior surface and small anterolateral tooth, dorsal surface coarsely punctate with distinct transverse carina; tergum II with 2 transverse carinae and rugose between; tergum VI deeply notched laterally, medially evenly curved and rugose, or densely ridged (Figs. 24-30); sternum VI with U-shaped apical lip and slender curved lateral lobe.

Diagnosis.—*Elaphroptera* species are characterized in the male by the elbowed (usually), multidentate mandibles; highly modified, notched, dentate, lobate or nasiform clypeus; and elaborate genital capsule, with elongate dorsoapical lobes on the gonocoxa, aedeagus with apical loop and well-developed lateral lobes, and large foliaceous or strongly angulate digitus. In females diagnostic features are tergum I with a small anterolateral tooth (rarely absent), tergum II rugose between 2 transverse carinae or sulci, and tergum VI broadly ovoid, with vertical rugae or carinae.

Discussion.—This is a highly specialized and divergent genus differing in many ways from other South American Thynninae as discussed by Kimsey (1992). There are a number of autapomorphies of the male head and terminalia, which characterize this group, including: elbowed mandibles, large foliaceous or C-shaped digitus, and small, relatively slender gonostylar lobe. The presence of a dorsal knob on the aedeagus, and the rugose female tergum II suggest a close relationship with *Dolichothynnus* Turner, and perhaps to a lesser

extent with *Chrysothynnus* Turner, *Spilothynnus* Ashmead and *Ammodromus* Guérin-Méneville, as the aedeagus also has ventral lobes in these genera.

Distribution.—This is one of the largest thynnine

genera in South America based on the number of species. *Elaphroptera* is known from Chile, Argentina, Brazil, Peru, Bolivia and Paraguay. The largest diversity of species occur in Chile (Fig. 1).

KEY TO SPECIES OF *ELAPHROPTERA*

1. Wingless, females 2
- Winged, males 19
2. Propodeum with dorsomedial lobe projecting posteriorly, hook-like in lateral view (Fig. 34) 3
- Propodeum without distinct projecting, hook-like dorsomedial lobe (as in fig. 35) 4
3. Tergum VI with rounded lateral angles, broader subapically than basally (Fig. 27) *erythrura* Spinola
- Tergum VI without lateral angles, or lateral angles, broader basally than subapically or parallel-sided for most of length *intaminata* (Smith)
4. Propodeal posterior surface bulging submedially or subapically in lateral view (Fig. 35), tergum VI with angulate lateral lobe (Fig. 24) *hyalinipennis* Spinola
- Propodeum flat, concave, sinuous, or evenly rounded medially in lateral view (as in fig. 33), tergum VI without lateral lobes 5
5. Pronotal dorsum depressed medially from anterior to posterior margin, with two subquadrate lateral lobes, or depressed submedially with elevated medial welt or ridge, nearly planar with anterior collar (as in Figs. 22, 23) 6
- Pronotal dorsum subquadrate and flat or broadly convex, may have short anteromedial depression, elevated above anterior collar 13
6. Pronotum centrally convex, with elevated medial ridge or welt (as in Fig. 23) 7
- Pronotum centrally concave, with short medial welt or ridge (as in Fig. 22) 9
7. Propodeum with dorsal surface longer than scutellum and bulging, posteriorly concave; propleuron flat ventrally (Fig. 21) *dorada*, new species
- Propodeum without dorsal surface, or dorsal surface much narrower than scutellum, posterior surface sloping obliquely from metanotal margin; propleuron convex ventrally (Fig. 20) 8
8. Sternum VI apicolaterally notched *strandi* Turner
- Sternum VI apically sinuous or evenly rounded but not notched *spatulata*, new species
9. Tergum VI: apical rim forming 2 lateral lobes, sternum VI broadly V-shaped *clypeicarinata* Brèthes
- Tergum VI: apical rim not forming 2 lateral lobes, sternum VI apically broadly rounded or truncate, or lateral margin sinuous or notched 10
10. Sternum VI: apicolateral margin sinuous or notched; propodeum with dorsal surface short and narrower than scutellum 11
- Sternum VI: apicolateral margin evenly rounded apicolaterally, propodeum anterior margin as wide or narrower than scutellum, with large dorsally rounded hump 12
11. Sternum VI: apicolateral margin sinuous; propodeal posterior surface appearing saddled when viewed in lateral view (similar to Fig. 21) *montifacies*, new species
- Sternum VI with apicolateral notch; propodeal posterior surface flat in lateral view. *fuscata*, new species
12. Propodeal dorsum narrow, about as broad as scutellum; pronotal collar lower than pronotal disk in

- lateral view *arcuata* Turner
- Propodeal dorsum broad, about three times as broad as scutellum; pronotal collar level with pronotal disk *boliviana*, new species
13. Propodeum strongly narrowed anteriorly, as narrow as posterior margin of scutellum in dorsal view 14
- Propodeum broad anteriorly, broader than posterior scutellar margin in dorsal view 15
14. Propodeum with long dorsal surface, longer than scutellum 16
- Propodeum with dorsal surface shorter than scutellum in lateral view *herbsti* André
15. Propodeum posterior surface oblique, sloping posteriorly; tergum VI apical rim U-shaped *nigripennis* (Smith)
- Propodeal posterior surface nearly vertical, tergum VI apical rim V-shaped *quadrilobata*, new species
16. Body length more than 1.5 cm; tergum VI narrowed and tapering apically, rugose area longer than wide (Fig. 29); propodeal declivity convex (Fig. 31) *scoliaeformis* (Haliday)
- Body length less than 1 cm; tergum VI broadly rounded apically, rugose area about as long as broad (Figs. 25, 26); propodeal declivity flat 17
17. Face with large pale spot between eye and antenna; propodeal posterior surface broadly convex, without discrete flattened surface; tergum I evenly rounded above anterior face *cuzcoensis*, new species
- Face without pale spot between eye and antenna; propodeal posterior surface with well defined, broad, flattened area; tergum I conically projecting anteriorly in lateral view *atra* Guérin-Méneville
18. Three or more basal abdominal segments red or reddish brown 19
- Three or more basal abdominal segments black or dark brown 24
19. Mandible apically tridentate (Fig. 3); clypeus with noselike medial lobe projecting into apical emargination (Fig. 3) *clypeicarinata* Brèthes
- Mandible apically bidentate; clypeus either projecting medially or flat, but without medial lobe projecting into apical emargination 20
20. Abdominal apex black; clypeus nearly flat in lateral view, with triangular, polished medial bevel, apical margin truncate *hyalinipennis* Spinola
- Abdominal apex red; clypeus with small medial projection and apical emargination beveled, or entire, apex projecting strongly outward and up 21
21. Clypeus with small medial knob, apical margin broadly emarginate, with polished bevel and sharp triangular angle on either side of emargination; head and thoracic pubescence black *scoliaeformis* (Haliday)
- Clypeus without medial knob, apical margin strongly arching up and outward, notched or dentate laterally (as in Figs. 15, 16, 19); head and thoracic pubescence golden to silvery 22
22. Clypeal apical margin in lateral view strongly produced into acute medial projection, often appearing slightly hooked at tip and lateral margin slightly sinuous, with broad lateral tooth (Fig. 16); legs black *haematodes* (Klug)
- Clypeal apical margin in lateral view produced into acute or truncate medial projection, not hooked at tip and lateral margin straight or distinctly notched, lateral tooth obtuse or acute; legs mostly red 23
23. Clypeal apical margin truncate in lateral view, with distinct lateral notch (Figs. 7, 15) *montifacies*, new species
- Clypeal apical margin acute in lateral view, with acute lateral tooth, not notch (Fig. 19) *vulpina* (Klug)

24. Clypeus deeply emarginate apically, with long rounded lobes on either side of emargination, mandible with large medial angle on inner margin and large subapical angle on outer margin (Fig. 13) *straudi* Turner
 — Clypeus either shallowly emarginate, truncate, strongly projecting anteriorly or lobate apicomediaally, without long lateral lobes; mandible usually without large medial and subapical angles 25
25. Mandibles broad, with large medial angle on inner margin and acute subapical angle on outer margin (as in Figs. 5, 12) 26
 — Mandibles slender, without medial or subapical angles 27
26. Clypeus apical margin with medial tooth, not projecting anteriorly (Figs. 12, 14) *spatulata*, new species
 — Clypeus apical margin obtusely angulate, not dentate, apical margin strongly projecting, appearing beaklike in lateral view (Figs. 5, 18) *dorada*, new species
27. Clypeal disk flat or broadly convex, without projection above apical margin (as in Figs. 4, 6) ... 28
 — Clypeal disk with conical, lobate, acute or toothlike medial projection 30
28. Clypeus without polished apicomediaal area, apical margin of emargination with polished subventral bevel; mandible apically bidentate, with low submedial angle on inner margin (Fig. 6) *fuscata*, new species
 — Clypeus with large subtriangular or rounded polished apicomediaal area, apical margin not beveled ventrally; mandible apically bidentate or tridentate, without low submedial angle on inner margin 29
29. Mandible apically tridentate, not elbowed in lateral view, without subbasal angle on inner margin; clypeal polished area triangular (Fig. 4) *cuzcoensis*, new species
 — Mandible apically bidentate, elbowed in lateral view, with sharp subbasal angle on inner margin; clypeal polished area rounded *atra* Guérin-Ménéville
30. Mandible apically tridentate, clypeus with rounded medial noselike projection above polished triangular area (Fig. 11); gonostylus short and broadly rounded apically (as in Fig. 57); wings dark brown *uigripennis* (Smith)
 — Mandible apically bidentate, clypeus conical or with projecting tooth medially, without large polished area; gonostylus slender and tapering apically (except *arcuata*) (as in Fig. 61); wings light brown or hyaline 31
31. Clypeus strongly projecting medially, with acute, often slightly hooked medial tooth (as in Fig. 17) 32
 — Clypeal medial projection conical, without acute medial tooth (as in Fig. 2) 33
32. Clypeal projection not notched laterally, apical margin with two obtuse submedial lobes in front view, body black with extensive red on legs and apical abdominal segments *erythrura* Spinola
 — Clypeal projection notched laterally, apical margin with two sharp submedial teeth in front view (Fig. 11) 33
33. Legs and abdominal apex extensively red; mandible with sharp subbasal tooth (Fig. 11); clypeal apex projecting ventrally below noselike medial projection, appearing lip-like (Fig. 11) *sauginicauda* Duran-Moya
 — Body entirely black; mandible without sharp subbasal tooth; clypeal apex bidentate, projecting anteriorly below acute medial projection *herbsti* André
34. Clypeal apical margin quadrilobate (easiest to see from beneath), without polished, ventrally beveled apical margin (Fig. 10) *quadrilobata*, new species
 — Clypeal apical margin broadly and evenly emarginate, without lobes, apical margin of emargination ventrally beveled (as in Fig. 2) 35
35. Clypeal polished area subtriangular, extending dorsally to medial projection (Fig. 2) *boliviana*, new species

- Clypeal polished area linear along apical margin, widely separated from medial projection 36
 36. Pubescence of head and thorax pale *arcuata* Turner
 — Pubescence of head and thorax black *intaminata* (Smith)

Elaphroptera arcuata Turner

Figs. 30, 32, 36, 57

**Elaphroptera arcuata* Turner 1908:76. Holotype male; Argentina: Patagonia, Chubut, Lago Xanco (LONDON).

Male.—Body length 12-14 mm. Clypeus conical medially, with broad shallow apical emargination and polished bevel ventrally; mandible apically bidentate with small sharp angle subbasally on inner margin, and angular projection submedially, appearing sharply elbowed in lateral view; flagellomere I 2.3 times as long as broad; flagellomere II length three times breadth; scutellum broadly rounded; sternum VII apically trilobate; genital capsule (Fig. 36); gonocoxa dorsomedially projecting and apically bilobate; gonostyle short and rounded, ventral margin concave, with broad rounded dorsal lobe (Fig. 57); digitus small and comma-shaped; cuspis with small rounded outer lobe and large lanceolate inner one next to aedeagus; aedeagus with small slender dorsal lobe, lateral winglike lobes and ventral projection before apical loop. Body entirely black, with silvery to slightly golden pubescence; wing membrane amber-colored.

Female.—Body length 8-9 mm. Frons with narrow ovoid pit at apex of medial sulcus; pronotal disk strongly depressed medially, with large rounded projection on either side, strongly elevated above collar laterally; scutellum considerably narrower than propodeum (Fig. 32); sternum V with posterior setose lobe on either side of VI; sternum VI posterior rim broadly U-shaped. Body dark brown to black with pale spot between eye and antenna.

Diagnosis.—This species closely resembles *intaminata* in both the structure of the male clypeus and genital capsule. *E. arcuata* can be distinguished in the males from those of *intaminata* by having the gonostylus broadly rounded apically and ventrally

emarginate, and pale body setae, and from other *Elaphroptera* by the medially conical clypeus, with the medial projection widely separated from the apical margin, and body entirely black. The female can be distinguished by the medially depressed pronotum, broadly rounded apical tergum and dorsally narrowed and bulging propodeum.

Material examined.—(515 males and 6 females): CHILE: Arauco: 20 km w Caramivda (i); Aysen: Manihuales (i), Coihaique (xii); Bio-Bio: El Abanico (xii); Cautín: Villarrica (xii), Las Raíces (xii), Pucon Peninsula (xi), Termas de Manzanar (xii), 12 km n Loncoche (xii); Chiloe: 30 km s Ancud (xii), Dalcahue (ii), Tepuhueco (xii); Concepcion: Salto de Laja (xii); Curicó: Los Quenes (i); Llanquihue: Petruhue (xi); Magallanes: Laguna Amarga (xii), Parque Nac. Torres del Paine (x); Malleco: Nahuelbuta (xii), Contulmo (i); Nuble: Las Trancas (i), El Marchant (i), Shangri-La (i), Las Cabras (i), Macul (xii) Atacalco (xi), 60 km se Chillán (xii-ii), Macul (xii); O'Higgins: Pilay ne Rancagua (xi); Osorno: La Picada (ii); Santiago: San Ramon (xii), Melipilla (xii), Santiago (xii, i), El Arrayán (xii), Quebrada El Pruno (xi), El Canelo (xi), Quebrada El Manzano (xi, ii); Talca: Alto Vilches (i); Valdivia: 20 km s Valdivia (xi), Valdivia (ii), Curicó (xi); Valparaíso: Valparaíso (i), Renaca (xi). ARGENTINA: Chubut: PN Los Alerces (i), Neuquén: PN Lanín (i), Pucará (xii), Rio Negro: San Carlos de Bariloche (x-xii), El Bolsón (xi), Lago Nahuel Huapi (x), Llao Llao (xii).

Elaphroptera atra Guérin-Méneville

Figs. 26, 33, 37

Elaphroptera atra Guérin-Méneville 1838:241. Holotype male; Chile (GENOA).

Male.—Body length 13-15 mm; clypeus flattened, with broad, shallow apical emargination, lateral angle somewhat rounded, with medial polished and impressed ovoid area extending to apical margin; mandible apically bidentate, with rounded submedial and sharp subbasal angles, appearing

strongly elbowed in lateral view; flagellomere I length 2.5 times breadth; flagellomere II three times breadth; forecoxa with projecting medial hook on inner margin; scutellum broadly rounded; sternum VII trilobate with subapical swelling medially; genital capsule (Fig. 37): gonocoxa dorsomedially sunken toward apex with large, broad apical lobes and small sublateral angle before gonostylus; gonostylus long and tapering apically, widest near base; digitus large and foliaceous, nearly as long as aedeagus, cuspis with rounded apical lobe, flattened and appressed against aedeagus; aedeagus with small dorsal projection and lateral winglike lobes before apical loop. Body entirely black with long silvery pubescence; wings lightly brown stained.

Female.—Body length 8 mm; frons with small circular medial pit; pronotal disk subquadrate, anterior margin slightly impressed, elevated above collar; propodeum with short rounded dorsal surface and flat posterior declivity (Fig. 33); tergum VI broadly rounded apically with thickened and carinate and sinuous lateral edge and transparent apical rim, rugose area about as long as broad (Fig. 26); sternum V not thickened or projecting posterolaterally; sternum VI apical plate broadly V-shaped.

Diagnosis.—This is another species with an all black male with pale setae as in *arcuata*. In the males *atra* appears to be most similar to *erythrura* based on the clypeus having a dorsal polished bevel and apically emarginate, the mandible elbowed with an inner subbasal tooth, the gonocoxa dorsomedially emarginate, and the digitus large and foliaceous. The female more closely resembles that of *nigripennis*, having the pronotum depressed anteromedially, tergum VI with a transparent rim, and the propodeum with a dorsal surface. Males can be distinguished from these and other *Elaphroptera* species by the flat deeply emarginate clypeus with a subtriangular bevel, the forecoxae with a hook on the inner margin, the aedeagus with a dorsal lobe, and both the gonostylus and digitus elongate and foliaceous. Females can be distinguished by tergum I conically projecting anteriorly, the broadly rounded tergum VI, and the face without pale markings.

Material examined.—(191 males and 5 females): CHILE: Aconcagua: Saladilla (xi), San Felipe (x); Aysen: Aysen-Coyhaique (i, iii); Cautín: Pucon (xii); Concepción: Concepción (ix), Salto de Laja (xi); Coquimbo: Pichidandqui (ix, x); Curicó: Cajón de Río Claro (x); Magallanes: Laguna Amarga (xii), Rubes (xii); Malleco: Angol (ix); Santiago: Macul (ix-xi), Santiago (ix, xii), El Peumo (i), El Tabo (x), Maipu (viii), El Portezuelo (xi), El Volcan (ix, xi), Río Colorado Maipo Canyon (x), Cuesta la Dormida (xi), Tiltil (xi), El Arrayán (xi), Melocoton (x), El Canelo (xi); Valparaíso: Los Perales (x), Valparaíso (viii, x).

Elaphroptera boliviana Genise and Kimsey,
new species
Figs. 2, 38, 58

Male.—(Holotype) Body length 18 mm; forewing 16 mm; clypeus broadly conical medially, with broad deflexed polished bevel extending to apex of cone (Fig. 2); mandible apically bidentate, without angles or teeth on inner margin, appearing evenly curved in lateral view (Fig. 2); scutellum strongly elevated and subconical; sternum VII apically tridentate; genital capsule (Fig. 38): gonocoxa depressed dorsomedially ending in two large lobes, with sharp angle on either side before gonostylus; gonostylus less than twice as broad as long and tapering apically, broadest subbasally (Fig. 58); digitus foliaceous, long and tapering apically, broadest submedially; cuspis flattened and appressed against aedeagus; aedeagus with small dorsal lobe and two winglike lateral lobes before apical loop. Body entirely blackish with long pale yellowish setae; wings faintly brown stained. Paratypes are structurally similar to type except varying in body length from 11-18 mm, and the forewing length 10-19 mm.

Female.—Body length 11-13 mm; genal region evenly rounded ventrally; pronotal disk subquadrate, bulging laterally, sunken and even with collar medially; propodeum with bulging dorsal surface, evenly rounded to slightly concave posterior surface; tergum VI rugose area wider than long, apicomediaally with smooth translucent rim; sternum VI posterior rim broadly U-shaped; body dark

brown with broad pale band across antennal sockets.

Diagnosis.—Two species, *boliviana* and *cuzcoensis* have similar males, and may be closely related. Males of both have the mandibles straight, without an inner tooth, the digitus and gonostylus are large and foliaceous, and the aedeagus lacks a dorsal lobe. *El. boliviana* can be distinguished by the apically bidentate mandibles, clypeal emargination V-shaped, with shallow broad apical bevel, and gonocoxa without ventral carinae. Female *boliviana* most closely resemble those of *montifacies* and less so *arcuata*, based on the structure of the pronotum and propodeum, but can be distinguished from them by the evenly rounded tergum VI and dorsally broad propodeum.

Etymology.—This species is named for its country of collection.

Types.—Holotype male: BOLIVIA: Cochabamba Prov., Coari, 3500 m, Foerster, Mar. 1957 (SALTA). Paratypes 49 males and 3 females: Cochabamba Prov.: 1 male, Siberia, 2900 m, L. Peña, Feb. 1976 (BUENOS AIRES); 2 males, Acuirre, M. Fritz, Feb. 1971 (SALTA); 1 male, Coari, 3500 m, J. Foerster, Mar. 1957 (BUENOS AIRES); La Paz Prov.: 3 males, La Paz, 4000 m, Nov. 1905, Magretti collection (GENOA, DAVIS); 1 male, Altiplano, Pillapi, 70 km e La Paz, 3780 m, 14-17 April 1964, in field of alfalfa and grass, J. L. Chudley (LONDON); 2 females, 14 males, Río Mauri, General Campero, 13-14 Feb. 1954, W. Forster (MUNICH, DAVIS, BUENOS AIRES); 1 female, Yungas de Corani, 2500 m, 30 Sept. 1953, W. Forster (MUNICH); Potosi Prov.: 2 males, E. Ocuri, 4000 m, L. Peña, Feb. 1976 (SALTA); 11 males, 50 mi n Potosi, 22 Feb. 1951, Ross & Michelbacher (DAVIS, SAN FRANCISCO); 1 male, Yocona, 3500 m, L. Peña, Feb. 1976 (SALTA); 7 males: Pacajes Prov., near Caquiaviri, 4000 m, March 1983, S. Keen (ANN ARBOR, DAVIS); PERU: Puno Prov.: 3 males Puno, May 1937, J. Soukup (NEW YORK); 1 male, 10 mi n Ayaviri, Jan./Mar. 1951, Ross & Michelbacher (SAN FRANCISCO), Puno, 3900 m, Weyrauch, Dec. 1940 (TUCUMAN); Cuzco Prov.: 1 male, Machu Pichu, 2400 m, Weyrauch, Jan. 1969 (TUCUMAN).

Elaphroptera clypeicarinata Brèthes

Figs. 3, 39

**Elaphroptera clypeicarinata* Brèthes 1910:242.
Holotype male; Argentina: Chubut (BUENOS AIRES).

Male.—Body length 21-23 mm; clypeus apically trilobate with medially protruding rounded lobe, projecting into apical emargination, emargination with broad ventrally curved bevel (Fig. 3); mandibles apically trilobate, with sharp submedial angle on inner surface, appearing nearly straight in lateral view; flagellomere I twice as long as broad; flagellomere II 2.4 times as long as broad; scutellum strongly projecting and rounded dorsally; sternum VII subtriangular apically with strong medial lobe; genital capsule (Fig. 39); gonocoxa strongly produced dorsomedially projecting apically into two large foliaceous lobes, each slightly bending laterally; gonostylus elongate, apically rounded and narrowest basally, with separate, low subtruncate dorsal lobe at base of digitus; digitus broadly elbowed, wrapping around dorsal gonocoxal lobes; cuspis closely appressed to venter of aedeagus; aedeagus with acute, elongate and apically capitate ventral lobe, and lateral lobes enlarged, apically bilobate and cupping apical lobes of gonocoxa. Head, thorax and legs black with black pubescence; abdomen red with pale setae; wing membrane amber-colored.

Female.—Body length 8-9 mm; frons with deep medial sulcus; gena rounded ventrally; pronotal disk depressed medially, abruptly elevated above collar; scutellum slightly elevated above propodeum in lateral view; dorsal surface of propodeum short, rounded and elevated, posterior surface concave; sternum V posterolateral corners not projecting, but with group of long hairs; tergum VI with longitudinal rugulae and punctures, apical rim forming two lateral lobes; sternum VI rim broadly V-shaped. Body black, paler on mandibles and antennae; frons with large yellow area above antennae and between eyes.

Diagnosis.—Although this large wasp, with a red abdomen in the males, superficially resembles *scoliaeformis* it appears to be most closely related to *hyalinipennis* and *nigripennis*, based on the

following derived features: the C-shaped digitus, and elaborate cuspis with large well-developed ventral lobe. *E. clypeicarinata* can be distinguished in the male by having the mandibles apically tridentate and not elbowed, and clypeus emarginate with a medial lobe projecting into the emargination, and no apical bevel. The laterally lobate tergum VI and V-shaped sternum VI are the most distinctive features of female *clypeicarinata*.

Material examined.—(90 males and 3 females): ARGENTINA: Chubut: El Bolsón, Lago Puelo (xi, xii), Neuquén: Pucará, San Martín de los Andes (xii), Río Negro: Bariloche (xi), Llao Llao (xii), 4 km s Puerto Moreno (xi); CHILE: Aysen: Lago Frio (i), Coihaique (xii).

Elaphroptera cuzcoensis Genise and Kimsey,

new species
Figs. 4, 25, 40

Male.—(Holotype) Body length 19 mm; forewing 17 mm; clypeus broadly convex with large polished triangular area medially, ventral margin without transverse bevel (Fig. 4); mandible apically tridentate without angulate inner margin, nearly straight in lateral view; scutellum broadly conical; sternum VII apically trilobate; genital capsule (Fig. 40); gonocoxa deeply emarginate dorsomedially, with sharp tooth or angle on either side before gonostylus, strongly produced ventrally with 2 submedial carinae; gonostylus slender and tapering apically, widest medially; digitus long and tapering apically; cuspis foliaceous, appressed to aedeagus; aedeagus with large hooked lateral lobe and low ventral lobe before apical loop. Body entirely black with long pale silky setae, becoming browner on dorsum of head and thorax.

Female.—Body length 11 mm; genital region evenly rounded ventrally; pronotal disk subquadrate, elevated above collar; propodeum with long dorsal surface evenly rounded to posterior surface; tergum VI apically broadly rounded, laterally sinuous, coarsely rugose area as broad as long (Fig. 25); sternum VI posterior rim broadly U-shaped. Body dark brown, with large yellow spot between eye and antenna.

Diagnosis.—*E. cuzcoensis* appears to be closely related to *boliviana*, as discussed under that spe-

cies. However, *cuzcoensis* males can be distinguished by the apically tridentate mandibles, clypeal emargination evenly concave, with a short broad subtriangular apical bevel, and gonocoxa with ventral carinae. Females can be recognized by the coarsely reticulate and apically broad tergum VI and posteriorly convex propodeum.

Etymology.—This species is named for the collection site of the types in Cuzco, Peru.

Types.—Holotype male: PERU: Cuzco, Akanacu, 1 November 1963 (WASHINGTON). Paratype female: same data as type (WASHINGTON).

Elaphroptera dorada Genise and Kimsey,
new species

Figs. 5, 18, 21, 23, 41

Male.—(Holotype) Body length 12 mm; forewing length 11 mm; clypeus strongly projecting apically, with apical rim extending to apex of projection, appearing beaklike in lateral view, with lateral tooth (Figs. 5, 18); labrum inserted considerably basad of clypeal apex; mandible apically bidentate, broadened submedially with large rounded ventral angle and broadly obtuse dorsal one; flagellomere I 2.2 times as long as broad; flagellomere II length 2.4 times breadth; scutellum broadly conical; sternum VII apex with sharp medial lobe and 2 rounded lateral ones; genital capsule (Fig. 41); gonocoxa dorsomedially sunken between large sublateral lobes, ending apically in two subrhomboid lobes; gonostylus slightly widened medially, tapering apically; volsella: digitus large and lanceolate, more than twice as long as broad, cuspis flattened, appressed to aedeagus; aedeagus with large membranous lateral lobe before apical loop. Body black, with gold pubescence; wing membrane lightly brown tinted. Paratype males vary in body length, 11-16 mm.

Female.—Body length 6-10 mm; face with medial sulcus extending ventrally from small frontal pit; thorax (Figs. 21, 23) propleura flattened ventrally; pronotal disk subtriangular, anteriorly trilobate, with medial ridge extending onto collar, submedially depressed; scutellum bulging, elevated above propodeum; propodeum with small rounded dorsal surface, concave posteriorly; sternum V

unmodified; tergum VI rugose posterior surface broadly ovoid, with membranous lateral rim ending apicomediaally. Body dark brown to black with pale spot between eye and antennal socket.

Diagnosis.—The male mandible and genitalia, and female propodeum and pronotal disk suggest a close relationship with *spatulata*. However, this species can be clearly distinguished from *spatulata* and other *Elaphroptera* species by the male clypeus, coloration, and gonocoxa. Female *dorada* can be recognized by the pronotum having a medial welt, the dorsally bulging propodeum, and ventrally flat propleura.

Etymology.—This is a nonsense name.

Types.—Holotype male: ARGENTINA: Catamarca, Capillitas, February 1987, 2600 m (SALTA). Paratypes: 29 males and 19 females; 24 males and 19 females, same data as type; 5 males: Tucumán, Tafí del Valle, and El Suncho, March 1956 (BUENOS AIRES, DAVIS, SALTA, TUCUMAN).

***Elaphroptera erythrura* Spinola**

Figs. 27, 34, 42

Elaphroptera erythrura Spinola 1851:295. Holotype male; Chile (TURIN ?).

Elaphroptera relictata Saussure 1867:126. Holotype female; Chile (VIENNA ?). Synonymized by Turner 1910b.

Elaphroptera testaceicauda* Durán-Moya 1941:151. Lectotype male (desig. by Kimsey and Brown 1993); Chile: Limache (EBERSWALDE). **New synonymy.

Male.—Body length 14-15 mm; clypeus with sharp slightly hooked medial projection, appearing nose-like in lateral view, apical emargination broad and shallow, with small triangular flattened medial area on apical margin, and ventral bevel; mandible apically bidentate with obtusely rounded area on inner margin subbasally, strongly elbowed in lateral view; flagellomere I 2.3 times as long as broad; flagellomere II length 2.6 times breadth; scutellum broadly rounded; sternum VII trilobate apically; genital capsule (Fig. 42); gonocoxa sunken dorsomedially, with large angulate lateral lobe before gonostylus and narrow apical lobes basally

constricted; gonostylus long, slender and tapering apically; digitus long and slender; cuspis with small lateral lobe and inner lobe appressed to aedeagus; aedeagus with pale lateral lobes before apical loop. Head, thorax, fore and midfemora and abdominal segments I-V black; apical abdominal segments, rest of legs and mandibular apices red, with long silky pale setae; wing membrane faintly brown-stained.

Female.—Body length 9-10 mm; frons with irregular depression as apex of medial sulcus; gena strongly angulate ventrally; pronotal disk subquadrate, abruptly elevated above collar; propodeum with strong dorsomedial projection, appearing hooked in lateral view and strongly concave posteriorly (Fig. 34); sternum V posterolateral angle with long setae; tergum VI broadly ovoid posteromedially, carinate laterally with apical margin thin and transparent, broadly lobate laterally (Fig. 27); sternum VI broadly V-shaped, with digitate lateral lobe. Body reddish brown, face paler near eyes.

Diagnosis.—Although there are several Brazilian species with males having a strongly projecting nose-like clypeus, in these species the apex of this projection is actually the clypeal margin. In *erythrura* and *herbsti* the clypeus strongly projects in a somewhat similar fashion, however, the projection is actually above the clypeal margin. Males of these two Chilean species can be separated by the red apical abdominal segments in *erythrura*, and the laterally notched clypeal margin, with sharp submedial teeth, and aedeagus with a dorsal lobe in *herbsti*. Although the type of *erythrura* is unavailable and that of *relictata* cannot be located the original authors descriptions are sufficient to recognize these species and *testaceicauda* is clearly synonymous. The posteriorly hooked propodeum and laterally angulate tergum VI will immediately distinguish female *erythrura*.

Material examined.—(186 males and 10 females): CHILE: Aconcagua: Saladillo (xi); Coquimbo: Coquimbo (ix, x), Punitaqui (viii); Curicó: Los Quenes (x); Santiago: El Canelo (x-xii), Macul (xi), Santiago (x, xii, i), El Peumo (i), Maipú (viii), Quilicura (x), Renca (xii), Tiltil (xi), Lo Prado (xi); Valparaíso: Cuesta Pucalán (ix), Valparaíso (viii, ix).

Elaphroptera fuscata Genise and Kimsey,
new species
Figs. 6, 43, 59

Male.—(Holotype) Body length 14 mm; clypeus somewhat convex in lateral view, with broad shallow apical emargination, lateral angle sharp, medial area smooth and ventral margin beveled (Fig. 6); mandible apically bidentate, with subapical swelling on inner margin, appearing evenly curved in lateral view; flagellomere I length 2.5 times breadth; flagellomere II length 2.8 times as long as broad; scutellum broadly conical in lateral view; sternum VII apically trilobate; genital capsule (Fig. 43); gonocoxa dorsomedially sunken between sharp sublateral lobes, with elongate basally constricted apical lobes; gonostylus broadest submedially and strongly tapering apically (Fig. 59); digitus broadly foliaceous; cuspis flattened and appressed to aedeagus; aedeagus with membranous lateral lobes before apical loop. Body black with long pale yellowish setae, wing membrane brown-stained.

Female.—Body length 10 mm; face with medial sulcus extending downward from small round frontal pit; pronotal disk strongly sunken medially, bulging laterally into large lateral lobe, medially planar with anterior collar; prothorax strongly dorsoventrally compressed; scutellum strongly compressed laterally; propodeum with short dorsal surface, flattened posteriorly; tergum I anteromedially sharp-edged, forming a right or acute angle in lateral view; sternum V unmodified; tergum VI rugose posterior surface as broad as long or broader, apex narrowly produced and truncate; sternum VI apical rim trilobate, notched sublaterally. Body dark brown, with lower half of face, across eyes, pale.

Diagnosis.—This species can be distinguished in males by the flattened and shallowly emarginate clypeus, mandibles evenly curved and without an inner subbasal tooth, the gonocoxa is dorsomedially sunken, and the aedeagus lacks a dorsal or ventral lobe. *E. fuscata* appears to be most closely related to *cuzcoensis* and *boliviana*, based on the structure of the male clypeus, mandibles and genital capsule. The clypeus is most like that of *boliviana* except that the apical margin is sharply polished, with a discrete ventral bevel. The gonocoxa has ventral

carinae as does *cuzcoensis*, however, the dorsomedial lobes are blunt unlike the condition in these other species. In addition, *fuscata* has the gonostylus strongly expanded medially. Females can be distinguished by the prothorax medially depressed and dorsoventrally compressed, tergum I anteriorly sharply angulate in lateral view, sternum VI apically trilobate, and tergum VI narrowly produced and truncate apically.

Etymology.—The species name refers to the dark body and wing color of the male.

Types.—Holotype male: BOLIVIA: Cochabamba, 55 km se Villa Tunari, Carretera Cochabamba, 25 July 1973, C. Porter, L. Stange and E. Demarest (TUCUMAN). Paratypes: 3 males: BOLIVIA: La Paz, Chulumani, 5 April 1979, M. Cooper (LONDON); 2 males and 2 females: same data as type (GAINESVILLE, BUENOS AIRES, TUCUMAN); 9 males: PERU: Machu Pichu, 1900 m, 4-19 September 1964, C. C. Porter (DAVIS, CAMBRIDGE).

Elaphroptera haematodes (Klug)

Figs. 7, 16, 44

**Thynnus haematodes* Klug 1842:37. Lectotype male (design. by Kimsey and Brown, 1993); Brazil: Cassapava (BERLIN).

Male.—Body length 15-17 mm; clypeal apical margin strongly projecting medially, forming an acute angle in lateral view and appearing slightly hooked at tip, with obtuse lateral notch followed by a rounded basal tooth, ventral bevel large and triangular in ventral view (Figs. 7, 16); mandible apically bidentate with small sharp subbasal tooth on inner margin, strongly elbowed in lateral view (Fig. 7); flagellomere I twice as long as broad; flagellomere II length 2.5 times breadth; scutellum broadly conical in lateral view; genital capsule (Fig. 44); gonocoxa dorsomedially sunken toward apex with sunken dorsoapical lobes short and apically angulate, with large sublateral lobe before gonostylus; gonostylus narrowly triangular, slightly constricted before base; cuspis closely appressed to aedeagus; digitus large and foliaceous; aedeagus with large membranous lateral lobes before apical loop and small dorsal angle or tooth. Head, thorax

and legs black; abdomen dark red with segment I basally black and apical segments darker red to blackish; pubescence long and pale; wing membrane amber-colored.

Diagnosis.—Males of three Brazilian species, *haematodes*, *montifacies* and *vulpina* all closely resemble one another, having a black head and thorax, with pale setae, and brownish red abdomen. *E. vulpina* and *montifacies* also have reddish legs, although leg color is of questionable value. The primary differences among these species involve modifications of the clypeus and genital capsule. In *haematodes* the clypeal margin appears slightly hooked at tip and is slightly sinuous laterally, with broad lateral tooth when viewed laterally. The others have the tip of the projection not hooked and the lateral margin is either straight or distinctly notched, with an obtuse or acute lateral tooth.

Material examined.—(5 males): BRAZIL: Rio Grande do Sul: Arroio Arapua, Pelotas (x), "Cassapava".

Elaphroptera herbsti André

Fig. 45

Elaphroptera herbsti André 1904:308. Holotype male; Chile: Concepción (PARIS ?).

Male.—Body length 15-16 mm; clypeus with large, thin, sharp medial tooth-like projection, slightly hooked in lateral view, apical emargination broad and deep with large wide sublateral notch before lateral tooth, and large ventral bevel; mandible apically bidentate with subapical swelling and small subbasal obtuse angle on inner margin, strongly elbowed in lateral view; flagellomere I and II 2.6 times as long as broad; scutellum obtusely rounded in lateral view; sternum VII apically trilobate; genital capsule (Fig. 45); gonocoxa dorsoapically elongate, ending in long slender lobes; gonostylus long and slender, tapering apically, with low dorsal lobe; digitus cylindrical and C-shaped; cuspis apically broad and truncate; aedeagus with large transparent lateral lobes and long digitate dorsal lobes before apical loop. Body entirely black with long yellowish setae; wing membrane faintly brown-stained.

Female.—Body length 8-9 mm; frons without distinct pit at apex of medial sulcus; gena strongly angulate ventrally; pronotal disk subquadrate, abruptly elevated above collar; scutellum elevated above propodeum; propodeum with short dorsal surface before oblique posterior slope, with obtuse subapical and subbasal swelling or angle; sternum V without apicolateral lobe or angle; tergum VI apical rugose surface ovoid, with wide transparent apical rim; sternum VI with broadly U-shaped apical rim. Body dark brown, with pale maculae on face.

Diagnosis.—As discussed under *erythrura*, *erythrura* and *herbsti* are closely related. *E. herbsti* males can be separated by the red apical abdominal segments, the clypeal margin notched laterally, with two sharp submedial teeth when viewed anteriorly, and aedeagus with a dorsal lobe. Females are distinguished by the propodeum having a short and strongly narrowed dorsum followed by an oblique posterior slope, and a nearly flat pronotal dorsum.

Material examined.—(36 males and 9 females): CHILE: Arauco: Quillota (ix); Concepción: Lirquen (x), Concepción (ix, x); Coquimbo: Los Vilos (x), Talinay (vii); Malleco: Nahuelbuta National Park (ix), Angol (x); Valparaíso: Valparaíso (xi).

Elaphroptera hyalinipennis Spinola

Figs. 24, 35, 46, 60

Elaphroptera hyalinipennis Spinola 1851:296. Holotype male; Chile (TURIN ?).

Male.—Body length 19-23 mm; clypeus apically subtruncate with large triangular apicomедial polished area above apical margin, bulging slightly medially; mandible apically bidentate without teeth or angles on inner margin, evenly curved in lateral view; flagellomere I length 2.3 times breadth; flagellomere II 2.6 times as long as broad; scutellum apically indented or bilobate, conical in lateral view; sternum VII apically with sharp medial tooth and right angle laterally; genital capsule (Fig. 46); gonocoxa dorsomedially bulging and elongate, apical lobes narrowed basally and broadly separated apically; gonostylus short, broad and rounded apically, narrowest basally, with obtuse low dorsal lobe (Fig. 60); digitus strongly elbowed, apically

cuplike around aedeagus and cuspis; cuspis appressed to aedeagus; aedeagus with dorsal digitate projection and long ventral lobes below apical loop. Head, thorax and legs black; abdomen red except segment I basally and VI and VII black, pubescence erect and golden; wing membrane amber-colored.

Female.—Body length 7-10 mm; frons with deep medial sulcus; gena rounded ventrally; pronotal disk with an anteromedial depression, abruptly elevated above collar; scutellum rounded, more elevated than dorsal surface of propodeum; propodeum with conical posteromedial elevation on dorsal surface, posteriorly flattened (Fig. 35); sternum V posterolateral corners unmodified; sternum VI broadly U-shaped; tergum VI with angulate lateral angles and a narrow posterior plate (Fig. 24). Body light brown, darker on thorax, yellow areas above antennae between eyes, gena and posterior margin of vertex (more visible on some specimens than others).

Diagnosis.—This species appears to be related to *nigripennis* and *clypeicarinata* as the male genitalia are quite similar among the three species. *E. hyalinipennis* males can be distinguished from those of *nigripennis* and *clypeicarinata* by the flat clypeus medially with a large, polished triangular area, mandibles not elbowed and without subbasal tooth on inner margin, and abdomen red except the base of segment I and segments VI and VII. The female of *hyalinipennis* most closely resembles that of *intaminata*. It can be distinguished from that and other species by having the propodeum bulging medially and tergum VI with an angulate lateral lobe.

Material examined.—(521 males and 35 females): CHILE: Arauco: Caramavida (ii), Contulmo (xii, ii); Aysen: Puerto Cisnes (ii), Lago Frío (i), Balmaceda (i), Aysen (i), Río Manihuales (i), 16 km nw Cisnes Medio (xii-ii); Cautín: Volcan Villarrica (xii), n shore Lago Villarrica (xi, xii), 30 km ne Villarrica (i), Termas de Manzanar (xii), Nueva Imperial (i), Cudico (i), 21 km ne Pucon (xii-ii), 15 km ne Villarrica (xii-ii), La Selva w Temuco (xii), Lago Caburga (i), Chiloe: Dalcahue (i); Llanquihue: Lago Chapo (xi); Malleco: Curacautín (iii), 40 km w Angol (xii-ii), Puren (xii-ii), Victoria (xii-ii), Nahuelbuta National Park (ii); Osorno: Puyehue (xii-iii), Anticura (iii), 8 km w La Picada

(ii), Río Golgol (x, iii), 30 km e Purranque (i); Santiago: Santiago (x); Valdivia: Valdivia (xi-iii), Anticura (ii), Puerto Fui (iii); ARGENTINA: Chubut: PN Los Alerces (ii), Lago Mendez (i, ii); Neuquén: PN Lanín (x-iii), Pucará (xii, i), Lago Lacar (xi), Bajada de Rahue (iii); Río Negro: El Bolsón (xi).

Elaphroptera intaminata (Smith)

Fig. 47, 56

**Thynnus intaminata* Smith 1879:173. Holotype male; Chile (LONDON).

Thynnus holomelas André 1900:105. Holotype female; Chile: Patagonia, Cerro de Ultima Esperanza, Magellanes (PARIS, lost?). [Non-type material labeled by André was studied].

New synonymy.

Thynnus racovitzai André 1900:105. Holotype male; Chile: Patagonia, Cerro de Ultima Esperanza, Magellanes (PARIS, lost?). [Non-type material of André's was studied]. **New synonymy.**

Male.—Body length 14-16 mm; clypeus densely and finely punctate, conically produced anteriorly, apex of cone located well above apical margin, apical margin broadly emarginate with sharp lateral angle, and smooth ventral bevel; mandible apically bidentate, with small secondary tooth and small subbasal angle on inner margin, elbowed in lateral view; flagellomere I length 2.3 times breadth; flagellomere II 3 times as long as broad; scutellum broadly rounded; sternum VII evenly trilobate apically; genital capsule (Fig. 47); gonocoxa dorsally projecting apically in long sharp apical lobes; gonostylus parallel-sided, slightly curved ventrally and broadly rounded apically, with broad rounded dorsal lobe; digitus bilobate with slender curved apical lobe and rounded basal lobe; cuspis with strong ventrally projecting lobe apically; aedeagus with lateral winglike lobes, long slender dorsomedial projection and broad ventromedial lobes before apical loop (Fig. 56). Body black, with long black pubescence; wing membrane amber-colored.

Female.—Body length 7-9 mm; face with medial sulcus extending ventrally from small round frontal pit; gena rounded ventrally; pronotal disk subquadrate, divided by a broad medial depression

and nearly planar with collar; scutellum strongly bulging dorsally and compressed laterally; propodeum dorsal surface bulging and knoblike, posterior surface strongly concave; sternum V posterolateral corners projecting beside tergum VI; sternum VI broadly V-shaped; tergum VI rugose posterior face subrectangular, with thin transparent rim. Body dark brown to black, paler above antennae between eyes.

Diagnosis.—The structure of the male clypeus and genital capsule indicates a close relationship with *arcuata*. *E. intaminata* males can be distinguished by the slender gonostylus, and black body setae, and from other *Elaphroptera* by the characteristics discussed under *arcuata*. Females are fairly unmodified, but can be identified by the medially depressed pronotum, and the propodeum dorsally bulging and knoblike, and strongly concave posteriorly.

Material examined.—(315 males and 40 females): CHILE: Chiloe: Puntra (xii), Queilon (xii); Concepción: Salto de Laja (xi); Curicó: Los Quenes (x), El Coigual (x), Las Trancas (iii); Llanquihue: Salto Petrohue (xii); Magallanes: Puerto Natales (xii), Laguna Amarga (xii); Malleco: Las Raíces (xii), Victoria (i); Maule: Cauquenes (xii); Nuble: Recinto (xii-ii), Las Trancas (xii-ii), Las Comadres near Chillán (ii); O'Higgins: Rancagua (xi); Osorno: Puyehue (x), Osorno (ix); Santiago: Santiago (i), Quebrada El Prumo (xi), El Manzano (xi); Talca: Alto Vilches (xii-ii); Valdivia: 20 km se Valdivia (ii), Valdivia (x-xii); Valparaíso: Valparaíso (xi); ARGENTINA: Chubut: PN Los Alerces (i), PN Lanín (x-iii); Río Negro: Bariloche (xi).

Elaphroptera montifacies Genise and Kimsey,
new species

Figs. 8, 15, 48, 61

Male.—(Holotype) Body length 17 mm; clypeus broadly and deeply emarginate with deep lateral notch, entire apex projecting anteriorly, appearing truncate in lateral view, medially slightly concave with broad ventral bevel (Figs. 8, 15); mandible apically bidentate with small sharp subbasal angle on inner margin, appearing elbowed in lateral view; flagellomere I length 2.3 times breadth; flagellomere II 2.5 times as long as broad; scutellum conical in

lateral view; sternum VII apically tridentate; genital capsule (Fig. 48); gonocoxa dorsomedially sunken between large sublateral lobes, with large rounded apical lobes; gonostylus elongate, slender and tapering apically (Fig. 61); digitus elongate, 3.5 times as long as broad, with slender basal half; cuspis flattened and appressed to aedeagus; aedeagus with dorsal knob and lateral membranous lobes at base of apical loop. Head and thorax black with red on mandible, 2 small spots at top of eyes, posterior pronotal margin, tegulae, fore and midfemoral apices, tibiae, tarsi and hindleg; abdomen red, except base of segment I; wing membrane amber-colored, veins dark red.

Female.—Body length 10 mm; face with deep medial sulcus; genal area rounded ventrally; pronotal disk broadly subquadrate, shallowly depressed anteromedially, with low medial ridge and level with collar; scutellum lower than dorsum of propodeum; propodeum with narrow projecting dorsal surface, posteriorly concave subapically, bulging below; sternum V without posterolateral lobes or projections; tergum VI tapering apically with wide transparent rim; sternum VI apical plate broadly U-shaped. Body reddish brown, paler on face, flagellum, tibiae and tarsi; thorax nearly black.

Diagnosis.—As discussed under *haematodes*, that species, *montifacies* and *vulpina* appear to be closely related, and, in males, the projecting, nose-like clypeal margin will immediately separate these species from all others. In *montifacies* the clypeal margin is truncate in lateral view with a distinct lateral notch, not a tooth as in the other two species. Females have the pronotum sunken medially, which aligns them structurally with *clypeicarinata*, *arcuata* and *boliviana*. In addition, *montifacies* females have the propodeum with a narrow dorsal lobe and saddled posteriorly, and the apicolateral margin of sternum VI is sinuous.

Etymology.—This name refers to the strongly protruding, "mountain"-like appearance of the male face in lateral view.

Types.—Holotype male: BRAZIL: Santa Catarina, Nova Teutonia, November 1960, F. Plaumann (DAVIS). Paratypes: 18 males, same data as type, except various dates: September 1964, February 1966 (DAVIS, SÃO PAULO, CAMBRIDGE); 2 males: Theresopolis, F. Schneider

(COPENHAGEN); 20 males and 5 females: Río Grande do Sul, Stieglmayr (VIENNA, DAVIS).

***Elaphroptera nigripennis* (Smith)**

Figs. 9, 49

**Thynnus nigripennis* Smith 1879:172. Lectotype male (desig. by Kimsey and Brown, 1993); Chile (LONDON).

Male.—Body length 20-24 mm; clypeus with rounded noselike medial projection, with subtriangular polished and somewhat concave bevel bounded laterally by rounded ridge, apical margin subtruncate medially with sharp sublateral tooth at apex of each ridge (Fig. 9); mandible apically tridentate, with obtuse projection on both inner and anterior surface, making mandible appear elbowed in lateral view; scutellum rounded conical in lateral view; flagellomere I length 2.2-2.4 times breadth; flagellomere II 2.5-2.6 times as long as broad; sternum VII apically trilobate; genital capsule (Fig. 49); gonocoxa dorsomedially projecting into slender slightly curved apical lobes; gonostylus short and subquadrate, only slightly wider apically than at base, with broad subtruncate dorsal lobe; digitus slender and C-shaped; cuspis toothlike with two dorsal lobes; aedeagus with dorsal knob, membranous lateral lobes and slender, long, well developed ventral lobes before apical loop. Body entirely black with long black pubescence; wing membrane dark brown.

Female.—Body length 8-11 mm; frons with deep medial sulcus; gena evenly rounded ventrally; pronotal disk subquadrate, slightly indented anteriorly, abruptly elevated above collar; scutellum elevated above propodeum; propodeum with rounded dorsal surface, posterior surface bulging dorsally and concave below on other side of medial welt or ridge; sternum V without posterolateral projection; tergum VI rugose surface broadly ovoid with wide transparent apical rim; sternum VI posterior rim broadly U-shaped. Body dark brown to black with yellow maculae on face between eye and antennal socket.

Diagnosis.—This is the largest of the all species with black males, males of other black species are less than 2 cm long. It is commonly encountered in

Andean Argentina and mountane Chile. Aside from the large size and relatively dense black setae on the male body, *nigripennis* can be recognized by the structure of the male clypeus, which is apically truncate, with a small rounded medial projection, subtended by a depressed polished and ventrally sharp-edged area. The C-shaped digitus suggests a close relationship with *arcuata*, *clypeicarinata*, *intaminata* and *hyalinipennis*. *E. nigripennis* is probably most closely related to *hyalinipennis* and *clypeicarinata* as discussed under those species. Females have the pronotum subquadrate, without a discrete medial depression, the propodeum is posteriorly convex in lateral view, and the metanotum is sunken dorsally and forms a narrow, deep notch between the scutellum and propodeum.

Material examined.—(1512 males and 32 females); CHILE: Arauco: Contulmo (xii, ii), Pichinahuel (ii), Caramavida (i, ii), 20 km w Caramavida (ii); Aysen: Lago Frío (i), 15 km s Las Juntas (xii), 16 km nw Cisnes Medio (xii, i), El Buchen (ii); Bio-Bio: El Abanico (xii); Cautín: Villarrica (x), 30 km ne Villarrica (i), Pucon (ix, xii), Temuco (i), La Selva w Temuco (xii), Volcan Villarrica (xii-ii), Cherquenco (i), Bellavista n shore Lago Villarrica (xii), 15 km ne Villarrica (ii); Chiloe: Cuaco (xii), Ancud (xii), 22 km n Quellon (xii), Dalcahue (i); Curicó: El Coigual (x-i), Las Trancas (iii), Río Colorado (i), Cubillo Cordillera Curicó (i), El Buchen (ii); Linares: Estero Leiva (i); Llanquihue: 3 km e Casa Pangue (xi), Lago Chapo (xi); Malleco: 40 km w Curacautín (xii-ii), Cordillera Nahuelbuta (i), Termas de Río Blanco (i), Curacautín (ix-ii), Angol (xi), 12 km e Malacahuelo (xii), Laguna de Catren (xii), Las Raíces (xii, ii), Princesa 20 km w Curacautín (xii), 17 km w Angol (xii-ii), 30 km w Angol (ii), 40 km w Angol (xii-ii); Nuble: Chillán (xii, ii), Trancas se Recinto Shangri-La (xii), Las Cabras (xi, i), 60 km se Chillán (xii-ii), Recinto (xii), Las Trancas (i, ii), se Termas de Chillán (xii), 22 km ese Recinto (xii); Osorno: Puyhue (xii-ii), Pucatrihue (ii), Anticura (xi); Santiago: Santiago (iii); Talca: Alto de Vilches (x-i), El Radial (i); Valdivia: Chanchan (iii), Valdivia (xi, xii); ARGENTINA: Chubut: Puerto El Sagrario Lago Mendez (i), Cholila (ii), PN Los Alerces (xi, xii); Neuquén: Cerro Chapelco (xi), Lago Lacar 5 km e Hua-Hum (x, xi), Pucará (xii-iii), PN Lanín (x,

i, ii), PN Nahuel Huapi (xii-ii); Río Negro: El Bolsón (xii) El Tronador (ii), Bariloche (xi, xii), Lago Mascarini (xi), 11 km e Llao Llao (xii), Lago Nahuel Huapi Puerto Blest (xi), 4 km s Moreno (xi), Puerto Frias (xii), 114 km w Bariloche (xii).

Elaphroptera quadrilobata Genise and Kimsey,

new species

Figs. 10, 28, 50

Male.—(Holotype) Body length 13 mm; forewing 11 mm; clypeus subconical medially, apical rim with 4 lobes (Fig. 10); mandible apically bidentate, with small subbasal angle on inner margin, elbowed in lateral view; flagellomere I length 2.6 times breadth; flagellomere II 3.2 times as long as broad; scutellum broadly conical; sternum VII with sharp medial lobe and 2 rounded lateral ones; genital capsule (Fig. 50): gonocoxa sunken dorsomedially, with short closely appressed apical lobes, angulate sublateral lobes nearly touching each other; gonostylus slender, tapering abruptly near apical third, widest medially; digitus long lanceolate; cuspis flattened and appressed to aedeagus; aedeagus with large lateral winglike lobes at base of apical loop. Body black, except pale mark on vertex at top of each eye, posterior pronotal margin and tegula pale, pubescence long and pale; wings lightly brown stained.

Female.—Body length 7 mm; frons with small ovoid pit at apex of medial sulcus; pronotal disk subquadrate, elevated abruptly above collar; scutellum, pronotum and propodeum planar; propodeum with long dorsal surface, abruptly declivous posteriorly, posterior surface nearly flat; sternum V without posterolateral corners projecting; tergum VI rugose area widest dorsally, apical rim V-shaped (Fig. 28); sternum VI rim broadly V-shaped. Body reddish brown, paler on face between eye and antenna.

Diagnosis.—The most unusual feature of this species is the apically quadrilobate male clypeus, which lacks a ventral bevel. Although not all *Elaphroptera* have the male apical clypeal margin emarginate, none of the rest have medial lobes of this kind. Modifications of the male genitalia, including the aedeagus without dorsal or ventral lobes, the cuspis simple, gonocoxa dorsomedially

emarginate, and digitus large and foliaceous, suggest a relationship with species found in Peru and Bolivia, *cuzcoensis* and *boliviana*. Other diagnostic features of male *quadrilobata* are the simple, unbent mandibles, and long pale setae on the otherwise black body. Based on the subquadrate, undivided female pronotum *quadrilobata* females most closely resemble those of *nigripennis*, *scoliaefornis*, and *cuzcoensis*. However, this feature is probably of little phylogenetic value, as it is probably the primitive state. Other diagnostic features of female *quadrilobata* are the propodeum with a long dorsal surface and abruptly declivous posteriorly, and sternum and tergum VI both apically V-shaped.

Etymology.—The species name refers to the four-lobed male clypeus.

Types.—Holotype male: CHILE: Coquimbo Prov., Manquehua, s Punitaqui, 1-5 August 1960, L. E. Peña (DAVIS). Paratypes: 1 male, Aconcagua, Termas de Jahuel, near San Felipe, 16-19 October 1984, C. Porter and T. O'Neil (GAINESVILLE).

Elaphroptera sanguinicauda Durán-Moya

Figs. 11, 17, 51

**Elaphroptera sanguinicauda* Durán-Moya 1941:150. Holotype male; Chile (VIENNA).

Male.—Body length 15 mm; clypeus with sharp, noselike medial projection, acute in lateral view, apical margin projecting ventrally, medially truncate or slightly bilobate, deeply notched laterally, without ventral bevel (Figs. 11, 17); mandible slender, apically bidentate, with sharp subbasal tooth on inner margin, not particularly elbowed in lateral view; flagellomere I 2.2 times as long as broad, flagellomere II length 3 times breadth; scutellum broadly rounded; sternum VII apically trilobate; genital capsule (Fig. 51): gonocoxa not depressed dorsomedially, dorsoapically projecting and apical lobes slender and narrowly rounded apically; gonostylus small and somewhat narrowed medially, about 4 times as long as broad, with broadly rounded dorsal lobe; digitus broadly C-shaped; cuspis broad and flat with long tapering ventral and dorsal lobes extending on either side of aedeagus; aedeagus with digitate dorsal lobe before apical loop and widened ventral lobe. Body black with

apical 2 abdominal segments and legs red, pubescence silvery; wings lightly brown tinted.

Diagnosis.—The structure of the male mandibles, general clypeal shape and coloration indicate a close relationship between *erythrura*, *sanguinicauda* and *herbsti*. However, the structure of the genital capsule is very different from these species, more closely resembling that of *nigripennis*. Additionally, male *sanguinicauda* can be distinguished from them by having the clypeus apicolaterally notched and with a lip-like flap below the medial projection. The female is unknown.

Material examined.—(27 males) Chile: Coquimbo; Santiago: La Dormida to Tiltil (xi), Cerro Colorado near Renca (xi); Valparaíso: Las Viscachas (xii).

***Elaphroptera scoliaeformis* (Haliday)**

Figs. 29, 31, 52

**Myrmecodes scoliaeformis* Haliday 1836:327. Holotype female; Chile (LONDON).

**Myrmosa dimidiata* Haliday 1836:328. Syntype males; Chile (LONDON, OXFORD). Synonymized by Turner 1910b.

Elaphroptera dimidiata Guérin-Ménéville 1838:240. Holotype female; Chile (GENOA?). Synonymized by Dalla Torre 1897. Nec Haliday 1836.

Elaphroptera pallidipennis Guérin-Ménéville 1838:241. Holotype male; Chile (GENOA?). Synonymized by Dalla Torre, 1897.

Male.—Body length 23–30 mm; clypeus with small sharp noselike medial projection, apical margin broadly emarginate with narrow ventral bevel, lateral apical tooth acute; mandible apically bidentate, with small subbasal tooth on inner margin, strongly elbowed in lateral view; flagellomere I length 2.5 times breadth; flagellomere II 2.8 times as long as broad; scutellum rounded conical; sternum VII with sharp medial tooth, lobate laterally; genital capsule (Fig. 52); gonocoxa strongly produced dorsomedially into elongate and slender apical lobes; gonostylus long and slender narrowest at base, 5 times as long as broad, with strongly rounded dorsal lobe; cuspis large and flattened against aedeagus, digitus a slender digitate apical lobe;

aedeagus with large flattened dorsal and ventral lobes, and lateral lobes large and apically expanded, extending cuplike over cuspis. Head, thorax and legs black, abdomen red, except base of tergum I black; wing membrane dark brown; pubescence black.

Female.—Body length 16–18 mm; frons with medial sulcus; gena rounded ventrally; pronotal disk subquadrate, convex in lateral view, elevated above collar; propodeum without distinct dorsal surface, with thickened and rounded dorsal and lateral margin, sunken dorsomedially, posterior half convex (Fig. 31); tergum I with anterior brush of dense long setae; sternum V posterolateral corners unmodified; tergum VI rugose area twice as long as broad, tapering apically to short medial projection subtended by short even row of setae, deeply notched laterally (Fig. 29); sternum VI V-shaped posteriorly. Body dark brown to black with yellow maculae between eye and antenna.

Diagnosis.—This is the most commonly encountered thynnine species in the southern Andes. It is also the largest bodied *Elaphroptera* species. Males fly low over the ground in large numbers in some areas, searching for females. *E. scoliaeformis* does not appear to be closely related to any other species, although it superficially resembles *clypeicarinata* in size and coloration. The most distinctive features of male *scoliaeformis* are the all red abdomen, elbowed mandibles, clypeus conical medially with broad apical emargination, gonocoxa strongly projecting dorsally, and small, digitate digitus. Females are also generally larger-bodied, usually more than 1.5 cm long, than those of other species although smaller individuals do occur. They can be distinguished from other species by the the subquadrate relatively flat pronotal disk, propodeum with little or no dorsal surface, and declivity convex, and tergum VI narrowed and tapering apically.

Material examined.—(1445 males and 85): CHILE: Arauco: Contulmo (iii), Caramavida (ii), Pichinahuel (ii), Ilicurá (xii), Manzanar (xii); Bio Bio: El Abanico (xii); Chiloe: Dalcahue (i), Chiloe (xii); Concepción: Salto de Laja (xii-i), Concepción (x, xii, i), 6 km s San Pedro (xii); Cautín: Villarrica (x-xii), 15 km ne Villarrica (xii-ii), 10 km ne Pucon (i), 21 km ne Pucon (xii-ii), 30 km ne Villarrica (i), 20 km e Temuco (i), Bellavista n shore Lago

Villarrica (xii), Lago Caburgua (i), La Selva w Temuco (xii), Chacamo w Temuco (i); Curicó: Las Trancas (iii), Cordillera Cubillo (i), Río Teno (xi), El Coigual (x-i), Cajón de Río Claro se Los Quenes (x), Río Colorado (i), Río Vergara (i), 6 km e Los Quenes (i), Buchen (i), Los Quenes Estero La Juala (i); Linares: Estero Leiva (i); Llanquihue: Maullín (ii), Petruhue (xi), 12 km s Los Muermos (xi), 3 km e Casa Pangue (xi), Lago Chapo (xi), Fresia (xi); Malleco: 17 km w Angol (xii-ii), Contulmo National Monument (xii-ii), 14 km e Malacahuelo (xii), Las Raíces (x-xii), La Fusta (xii), Angol (i), Victoria (xi-ii), 45 km w Angol (xii-ii), Termas de Río Blanco (i), Curacautín (ix-xii), 30 km w Angol (ii), 20 km w Curacautín (xii-ii); Maule: 15 km e Curanipe (i), Tregualemu w Cauquenes (xii); Nuble: Las Trancas (xii-ii), Recinto (xi, xii), 60 km se Chillán (xii-ii), Refugio Las Cabras (ii), 40 km e San Carlos (xii), 15 km e San Carlos (xii); Osorno: 20 km e Puyehue (i), Puyehue (xi-ii), Río Gol Gol (xi), 30 km w Purranque (i), Pucatrihue (ii), 8 km w Refugio la Picada (ii); Santiago: El Canelo (xi-xii), El Peumo (i), Guayacan (xii), La Pirámide (i), Macul (xii), El Armayan (x), Quebrada El Manzano (ii), San José de Maipo (x), Huelquen (xii), Santiago (x-xii), Río Colorado Maipo Canyon (x); Talca: El Radial (i), Alto Vilches (x-xii), 22 km n Talca (xii); Valdivia: 20 km s Valdivia (xi), Cudico (xi), Valdivia (x-ii), Chanchan (iii), Neltume (iii), Rinihue (ii), Enco (iii), Puerto Fui (iii), Corral (x), Bas. Chihuio (ii); Valparaíso: Zapallar (xii); ; ARGENTINA: Chubut: El Bolsón Lago Puelo (x), Parque Nac. Los Alerces (xi, xii), El Maitén (i); Neuquén: Pucará (xi-i), Lago Lacar (x), Parque Nacional Lanín (xi-ii), Parque Nac. Nahuel Huapi (xii-iii); Neuquén (iii); Río Negro: 14 km w Bariloche (xi, xii), 11 km e Llao Llao (xi), Llao Llao (xii), Bariloche (xi), El Bolsón (xi), 4 km s Puerto Moreno (xi), Lago Mascardi (xi), Río Los Repollos (xi).

Elaphroptera spatulata Genise and Kimsey,
new species

Figs. 12, 14, 20, 22, 53

Male.—(Holotype) Body length 13 mm; forewing length 11 mm; clypeus apically broadly emarginate, with large medial tooth dividing ventral bevel as well, lateral angle sharp (Figs. 12, 14);

mandible apically bidentate, with large ventral tooth and large swelling submedially on inner margin; flagellomere I length 2.3 times breadth; flagellomere II 2.7 times as long as broad; scutellum conical; sternum VII apically tridentate; genital capsule (Fig. 53): gonocoxa dorsomedially ending in two large rounded lobes, sunken between sharp submedial lobes; gonostylus less than twice as long as broad, broadest medially, strongly tapering apically; digitus foliaceous, inner margin strongly angulate near midline of gonocoxa; cuspis flattened, truncate apically, appressed to aedeagus; aedeagus with winglike lateral lobes before apical loop, and small ventral lobe. Head, thorax, legs and abdomen black, except pale spot near top of eye, posterior pronotal margin pale and abdominal segment VII red; pubescence erect and golden; wing membrane light amber colored.

Female.—Body length 9 mm; face with deep medial sulcus extending ventrally from small frontal pit; thorax (Figs. 20, 22); pronotal disk subtriangular with sharp, carinate medial projection and broadly rounded lateral lobes; propleuron ventrally flattened and necklike; scutellum bulging and laterally compressed; propodeum with tiny dorsal surface, posterior surface concave above midline, convex below; sternum V unmodified; tergum VI rugose area about as broad and long, broadly truncate apically; sternum VI with narrow broadly U-shaped apical rim. Body dark brown with pale spot on face between eye and antennal socket.

Diagnosis.—The odd, strongly angulate mandible in males of this species suggests a close relationship with *strandi*, as discussed under that species. Male *spatulata* can be immediately recognized by the strongly trilobate clypeal apex, gonocoxa dorsally with submedial lobes small and barely separated, and gonostylus short, wide medially and strongly tapering apically. Females have a subtriangular pronotal disk, which is level with the anterior collar medially, little or no dorsal propodeal surface, and ventrally convex propleura. Females also most closely resemble those of *strandi*, sharing similar pronotal and propodeal modifications.

Etymology.—The name *spatulata* refers to the peculiar male mandibles, which are ventrally broadened and shovel-like.

Types.—Holotype male: ARGENTINA: Tucumán, Tafí Viejo (BUENOS AIRES). Paratypes: 1 male and 1 female, same data as type; 1 male: Tucumán, Horco Molle, 24 April–9 May 1968, C. C. Porter (BUENOS AIRES, DAVIS).

***Elaphroptera strandi* Turner**

Figs. 13, 54

**Elaphroptera strandi* Turner 1910a:215. Lectotype male (desig. by Kimsey and Brown 1983); Peru: Marcapata (LONDON).

Male.—Body length 16–18 mm; clypeus with apical emargination extending dorsally two-thirds of the way through the clypeus, with rounded elongate lobe on either side, ventral bevel confined to middle of emargination (Fig. 13); mandible apically bidentate, with large subapical angle on outer margin, inner margin with large submedial projection; flagellomere I 2.2 times as long as broad; flagellomere II length 2.3 times breadth; scutellum rounded; sternum VII apically trilobate; genital capsule (Fig. 54); gonocoxa deeply sunken dorsomedially, with slender, medially constricted apical lobes, and adjacent large acute submedial lobes; gonostylus long and slender, about 4 times as long as broad, tapering apically, narrowed at base; digitus foliaceous; cuspis short and subtruncate, appressed to aedeagus; aedeagus with lateral transparent wing-like lobes before apical loop. Body black, pubescence pale, wings lightly brown stained.

Female.—Body length 8–10 mm; frons with narrow medial sulcus; pronotal disk curved laterally, elevated medially in broad ridge or hump; propodeum with horizontal dorsal surface about as long as scutum followed by concave slope ending in vertical declivity; sternum V without posterolateral projection or swelling; tergum VI broadly subovoid, posterior margin irregularly truncate with membranous edge; sternum VI apex deeply notched sublaterally, resulting in 3 apical truncate lobes. Body dark brown, paler on face between eye and antenna.

Diagnosis.—This species is most similar to *spatulata*, based on the large angle on the inner surface and second subapical angle on the outer surface of the male mandibles, gonocoxa

dorsomedially emarginate, digitus large, and foliaceous, and aedeagus without dorsal or ventral lobes. *E. strandi* can be distinguished from *spatulata* by the deeply emarginate and strongly lobate male clypeus, a feature unique in *Elaphroptera*, the gonocoxa dorsally with submedial lobes large and well separated, and the gonostylus slender and parallel-sided. Females also closely resemble those of *spatulata* as discussed under that species. They can be distinguished by the apicolaterally notched sternum VI, a feature not found in *spatulata*.

Material examined.—(233 males and 160 females): PERU: Marcapata, ARGENTINA: Salta: Cuesta Obispo (i–iii).

***Elaphroptera vulpina* (Klug)**

Figs. 19, 55

**Thynnus vulpina* Klug 1842:36. Lectotype male (desig. by Kimsey and Brown, 1993); Brazil: Porto Alegre (BERLIN).

Male.—Body length 15–17 mm; clypeus appearing conical in lateral view, apex deeply emarginate, apex of emargination strongly protruding, with sharp tooth on either side, ventral bevel large and subtriangular (Fig. 19); mandible apically bidentate with swelling or obtuse angle adjacent to subsidiary tooth, and small subbasal tooth on inner margin, elbowed in lateral view; flagellomere I length 2.2 times breadth; flagellomere II length 3 times breadth; forecoxa short and globular, ventrally with medial projection overhanging a concave area before apex; scutellum conical in lateral view; sternum VII trilobate; genital capsule (Fig. 55); gonocoxa dorsomedially depressed, with apicomедial lobes slender and basally constricted and sharply incised between large, flat sublateral lobes; gonostylus long and slender, at least 3.5 times as long as broad, tapering apically and slightly narrowed at base; digitus large and foliaceous; cuspis small and appressed to aedeagus; aedeagus with small sharp dorsal projection, rounded ventral lobes and truncate lateral winglike lobes before apical loop. Head, thorax, coxae and base of abdominal segment I black; mandible, small spot next to top of eye, clypeal apex, posterior pronotal

margin, tegula, legs beyond coxae and rest of abdomen red; pubescence long, erect and golden; wing membrane amber-colored.

Diagnosis.—The structural similarities between this species and *haematodes* have been discussed under *haematodes*. *E. vulpina* can be distinguished by the male clypeal margin projecting and acute in lateral view, not hooked at tip, and with an acute lateral tooth. Females are not known.

Material examined.—(9 males): BRAZIL: Santa Catarina: Nova Teutonia (ix, x, ii), Cruzeiro (xii), São Paulo: Cerro Negro (xii).

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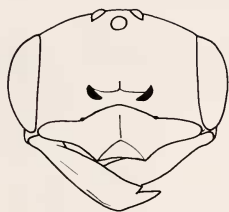
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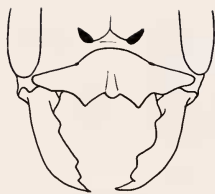
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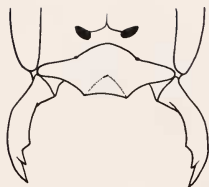
Fig. 1. Distribution map of species of the genus *Elaphroptera* Guérin-Méneville. Southern Andean species include: *arcuata*, *atra*, *clypeicarinata*, *erythrura*, *herbsti*, *hyalinipennis*, *intaminata*, *nigripennis*, *quadrilobata*, *sanguinicauda*, and *scoliaformis*. The central Andean region, from southern Peru to northern Argentina includes the species: *boliviana*, *cuzcoensis*, *dorada*, *fuscata*, *spatulata* and *strandii*. Southern Brazilian species are: *haematodes*, *montifacies* and *vulpina*.



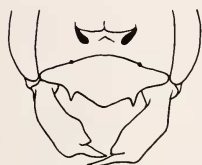
2. boliviana



3. clypeicarinata



4. cuzcoensis



5. dorada



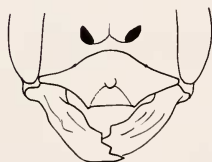
6. fuscata



7. haematodes



8. montifacies



9. nigripennis



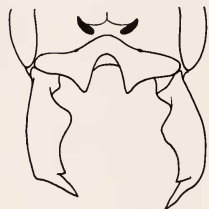
10. quadrilobata



11. sanguinicauda

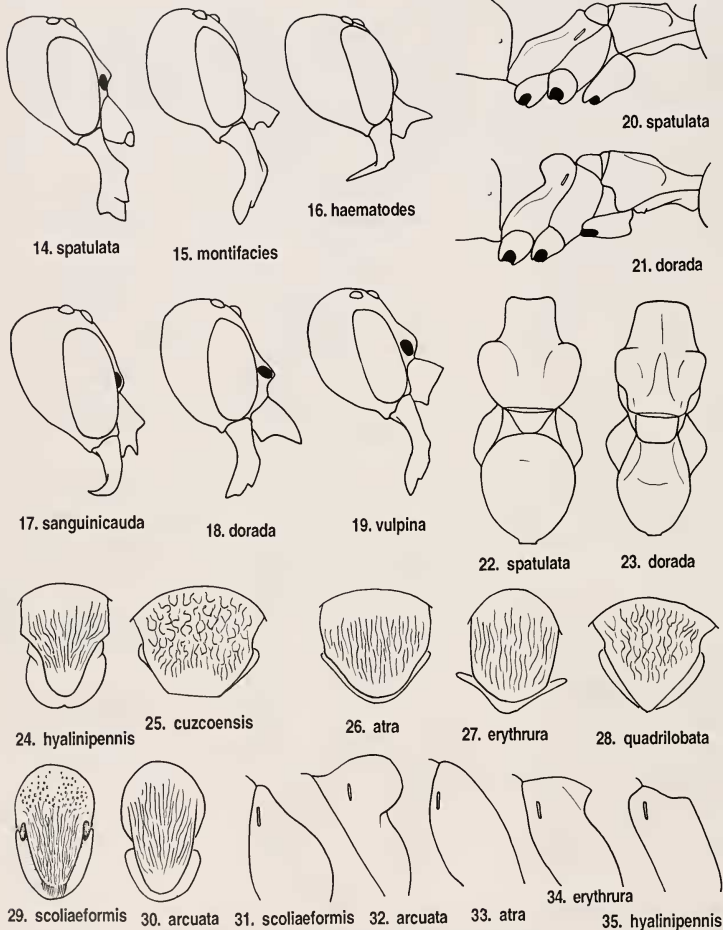


12. spatulata

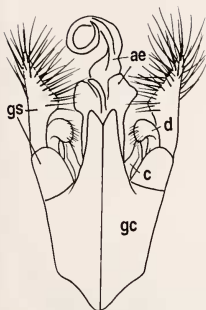
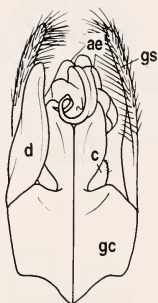
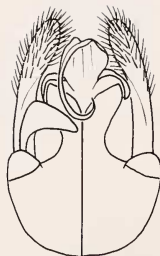


13. strandi

Figs. 2-13. Front view of male face. Figs. 3-13. Face with frons and vertex removed.



Figs. 14-19. Male head, lateral view. Figs. 20-21. Female thorax, lateral view. Figs. 22-23. Female thorax, dorsal view. Figs. 24-30. Posterior view of female apical abdominal tergum. Figs. 31-35. Female, propodeum, lateral view.

36. *arcuata*37. *atra*38. *boliviana*39. *clypeicarinata*40. *cuzcoensis*41. *dorada*42. *erythura*43. *fuscata*44. *haematodes*45. *herbsti*46. *hyalinipennis*47. *intaminata*

Figs. 36-47. Male genital capsule, dorsal view, with cuspis removed from one side. Abbreviations: ae = aedeagus, c = cuspis, d = digitus, gc = gonocoxa, gs = gonostylus.

48. *montafacies*49. *nigripennis*50. *quadrilobata*51. *sanguinicauda*52. *scoliaeformis*53. *spatulata*54. *strandii*55. *vulpina*56. *intaminata*57. *arcuata*58. *boliviana*59. *fuscata*60. *hyalinipennis*61. *montafacies*

Figs. 48-55. Male genital capsule. Figs. 48-50, 52-54. Dorsal view, with cuspis removed from one side. Figs. 51, 55. Lateral view. 2. Dorsal view of genital capsule. Fig. 56. Aedeagus, lateral view. Figs. 57-61. Detail of gonostylus, lateral view. Abbreviations: ae = aedeagus, c = cuspis, d = digitus, gc = gonocoxa, gs = gonostylus.