Rev. Biol. Trop., 30(2): 121-129, 1982

New species of *Euglossa*. II. (Hymenoptera: Apidae).

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(Received for publication March 18, 1982)

Abstract: Keys are provided for males of the *analis, cybelia* and *piliventris* species groups, and new species or subspecies are described in each. In addition, a new species allied to *E. stellfeldi* and a new species of subgenus *Euglossella* are described.

With the use of perfume baits, the available collections of Euglossini have increased greatly. As these baits are coming into greater use as an ecological tool, names are needed, especially for some of the commoner species that were rare or lacking in collections before the use of baits. The species to be described in this series will be for the most part, those that are well represented in collections, but I shall also describe a few that are less well collected but very distinctive. In some cases, I shall validate names that have been in informal use. Some of them have been treated as "in press" (Moure, 1967), but were not then published, and some have been used in floral biology papers. Future papers will treat the *bursigera, cordata* and *purpurea* species groups. The present paper deals with the relatively small *analis, cybelia* and *piliventris* species groups, and two miscellaneous species not of the above mentioned groups. The format and terminology follows the previous paper (Dressler, 1978a) and the infrageneric classification outlined by Dressler (1978b).

A. The *Euglossa analis* species group: This small group is relatively uniform in most features; all are dark blue-violet bees with the bronze, green or blue terminal segments in sharp contrast with the dorsal coloration. *Euglossa mixta* is a common and widespread bee, visiting many different perfume flowers and several perfume baits, but especially methyl salicylate. The other species are often confused with *E. mixta* in the field, but each differs consistently in a few structural details, color of the terminal

Key to males of the *Euglossa analis* species group

1. Mandible bidentate; posterior mid-tibial tuft present (though may be very small) 2
1. Mandible tridentate; posterior mid-tibial tuft quite lacking 4

2. Sternum II with a large, confluent cushion of hairs; clypeus green; terminal terga blue . . . . . *Euglossa villosiventris* Moure
2. Sternum II with small, widely separeted tufts; clypeus blue 3

3. Terga V–VII bright green . . . . . *E. analis* Westwood
3. Terga V–VII red-bronze . . . . . *E. bidentata*, new sp.

4. Mid-tibial tuft comma-shaped; bee 12-13 mm. long . . . . . *E. cognata* Moure
4. Mid-tibial tuft oblong or paramecium-shaped; bee 10-11 mm. long. 5

5. Terga V-VII bright green . . . . . *E. retroviridis*, new sp.
5. Terga V-VII red-bronze 6

6. Terga IV–V flushed with bronze; mid-tibial tuft deeply notched . . . . . *E. iopyrrha*, new sp.
6. Terga IV-V dark blue; tuft not notched . . . . . *E. mixta* Friese

segments, and/or size. The acute pronotal angles of these species and the generally tridentate mandibles are suggestive of *Euglossella,* but these resemblances may represent parallelisms rather than an especially close relationship. The males of four previously named species and the three to be described here may be distinguished by the following key. The females of *E. mixta* and *E. cognata,* which are to be distinguished primarily by size, are markedly bronzy from tergum III (or even the margin of II) backward. Except for *E. villosiventris,* I do not have females of the other species, and I expect that they will be very difficult to distinguish.

1. *Euglossa bidentata,* new sp.

Total length 11.7 mm; head width 4.7 mm; abdominal width 4.3 mm.

Color: Ivory paraocular markings well developed; forward side of antennal scape black; front of clypeus dark blue, with blue-black keels; sides of clypeus and paraocular areas blue-green; upper frons dark blue; episternum blue-green; scutum and scutellum dark blue; terga I-IV dark blue-purple; V bright red-bronze; VI-VII golden bronze; hind tibia dark blue.

Vestiture: Plumose hairs of thorax short, denser behind, tawny, darker above; hairs on scutum short, mixed tawny and black.

Punctation: Coarse and uneven on front of clypeus; on episternum coarse, dense; on scutum and scutellum coarse, dense, punctures of different sizes; on tergum II asymmetric , variable in size; denser on III.

Tongue reaching third coxa; mandibles bidentate; labrum wider than long, with median keel; clypeus tricarinate; scutellum subquadrate, about half as long as wide, with slight median depression, markedly convex above; sternum II with small, widely separated tufts; mid tibia: posterior tuft small, subcircular; anterior tuft trapezoid-oblong, with shallow notch; hind tibia oblong-rhomboid, obtuse.

Female: Unknown.

Holotype: Male, Llullapichis, Rio Pachitea, Huánuco, Peru, 3 Feb. 1975, R.L. Dressler 1636 (U.S.N.M.) **Paratypes**: 4 males of type series, 29 Jan.-14 Feb. (Dressler coll. and to be distributed): 1 male, Yarinacocha, Loreto, 3 Sep. 1972, E.W. Stiles (Dressler coll.); 1 male, S. Maria de Erebato, Bolívar, Venezuela, Aug. 1973, M. Gaiani (Dressler coll.); 2 males, I.P.E.A.N., Belém, Pará, Brazil, 23 Oct. 1968, Dressler 1190 (Dressler coll.).

This species is represented by few specimens, but it is constant over a large area. It is very similar to the common *E. mixta,* but differs in the bidentate mandibles and in the presence of the posterior tuft of the mid-tibial velvet area. It differs from *E. analis* not only in color, but in the flatter and distinctly longer scutellum, and in the bluer and somewhat more rhomboid hind tibia. The epithet, of course, refers to the bidentate mandibles, an unusual feature in this species group. Two males of the type series bear pollinaria of *Paphinia,* an orchid genus not recorded for Peru. The bees have been collected with eugenol, skatole and vanillin. Specimens of this species have been provisionally identified as "RD 1190".

2. *Euglossa iopyrrha,* new sp.

Total length 12 mm; head width 5 mm; abdominal width 4.8 mm.

Color: Ivory paraocular markings well developed; forward side of antennal scape black: front of clypeus dark blue; sides of clypeus and paraocular areas leaden blue; upper frons dark blue; episternum dark greenish blue; scutum dark blue; scutellum dark blue-violet; tergum I black-purple; II dark purple; III basally dark purple, distally red-bronze; IV-V red-bronze; VI-VII golden bronze; hind tibia dark blue.

Vestiture: Plumose hairs of thorax short, denser behind, tawny, dusky above; hairs on scutum mostly black, longer behind.

Punctation: Punctures small and uneven on front of clypeus; on episternum coarse; on scutum and scutellum coarse, dense, punctures of different sizes; on tergum II deep, asymmetric, of different sizes; denser on III.

Tongue reaching sternum II; mandibles tridentate; labrum wider than long, with median keel; clypeus tricarinate; scutellum subquadrate, about half as long as wide, with slight median depression, markedly convex above; sternum II with small, widely separated tufts; mid tibia: posterior tuft lacking; anterior tuft oblong, markedly notched; hind tibia rhomboid-oblong, obtuse.

Female: Unknown.

Holotype: Male, Colonia Rio Branco, Obidos, Pará, Brazil, May 1953, José Brazilino (U.S.N.M.). **Paratypes:** 1 male, Obidos, Dec. 1955, F.M. Oliveira (Dressler coll.); 1 male, Obidos, June 1956, F.M. Oliveira (Dressler coll.).

This species is distinctive in the greater extent of the bronze coloration on the abdomen. It is slightly larger than *E. mixta* and differs from that species in the form of the mid-tibial tuft. The epithet refers to the combination of violet and flame colors. Additional material has been seen in Brazilian collections, where this species was provisionally identified as "BR 9".

3. *Euglossa retroviridis,* new sp.

Total length 11.3 mm; head width 4.8 mm; abdominal width 4.6 mm.

Color: Ivory paraocular markings narrow but complete; forward side of antennal scape black; front of clypeus dark blue; sides of clypeus and paraocular areas dark greenish blue; upper frons dark blue; episternum greenish blue; scutum and scutellum blue-violet; terga I-III blue-purple; IV somewhat redder; V golden green; VI-VII bright green; hind tibia dark blue.

Vestiture: Plumose hairs of thorax short, tawny, dusky above; hairs on scutum short, mostly black.

Punctation: Coarse, uneven on front of clypeus; on episternum coarse, dense; on scutum and scutellum coarse, dense, punctures of different sizes; on tergum II asymmetric, of different sizes, with some interspaces as large as punctures; on tergum III finer and denser.

Tongue reaching sternum I; mandibles tridentate; labrum wider than long, with median keel; clypeus tricarinate; scutellum subquadrate, half as long as wide, with slight median depression, markedly convex above; sternum II with small, widely separated tufts; mid tibia: posterior tuft lacking; anterior tuft oblong; hind tibia rhomboid-oblong, obtuse.

Female: Unknown.

Holotype: Male, Leticia, Amazonas, Colombia, 7 June 1974, R.L. Dressler 1555 (U.S.N.M.). **Paratypes:** 4 males from type series, 6-7 June (Dressler coll. and to be distributed); 2 males, Puerto Asis, Putumayo, 2 Feb. 1971, H. Kennedy (Dressler coll.); 1 male, S. Carlos de Rio Negro, Amazonas, Venezuela, 10 Feb. 1972, M. Gaiani (Dressler coll.): 1 male, S. Maria de Erebato, Aug. 1973, M. Gaiani (Dressler coll.): 3 males, Mazaruni Potaro, Rockstone, Guyana, 11 Aug. 1970, N.H. Williams (Dressler coll.); 4 males, Dawa, Tapakuma, Pomeroon, 11-30 Mar. 1970, C. Dodson (Dressler coll.); 4 males, I.P.E.A.N., Belém, Pará, Brazil, 23-28 Oct. 1968, Dressler 1184 (Dressler coll. and to be distributed).

This species, like *E. bidentata,* is widely distributed and distinctive, but still relatively scarce in collections. In color pattern, it resembles *E. analis,* but its structural details are more like those of *E. mixta,* from which it differs in color pattern, slightly larger size and squarer scutellum. The epithet, *retroviridis,* refers to the bright green of the last segments. Most specimens were collected at methyl cinnamate, but two were collected at skatole. One Colombian specimen and one from Belém bear pollinaria of *Coryanthes,* and other Brazilian specimens bear pollinaria of *Gongora* and *Notylia.* Specimens of this species have been provisionally identified as "RD 1184".

B. The *Euglossa cybelia* species group: This is a very distinctive group, readily recognized by the dark blue-violet face without paraocular white markings. Several species also have a dark brown or black median blotch on the labrum, which adds

to the dark frontal aspect. In most cases, even the females of this group may be recognized by the blue clypeus, though the clypeus is blue-green in females of *E. charapensis, E. cybelia* and *E. nigropilosa.* Except for *E. charapensis,* the males of all species have very similar hind tibiae, subtriangular and markedly rounded behind. As the bees of this group are distinctive in color pattern and vestiture, the males and females are easily matched in all cases. Dressler (1978b) assigned this group to the subgenus *Euglossa,* but *E. cybelia,* at least, is known to construct aerial nests, very like those of *E. turbinifex,* of the *bursigera* group (see Dressler 1978a, Fig. 1). It is quite possible that future work will show this group to be more closely allied to the *bursigera* group than to the *cordata* group. A key to the males of the known species follows.

Key to males of the *Euglossa cybelia* species group

1. Tergum II with a single, large, confluent cushion of hairs; scutum golden to Bronze . . . . . *E. championi* Cheesman
1. Tergum II with 2 small, widely separated tufts; scutum golden, green or blue 2

2. Hind tibia subacute; mid-tibial tufts subequal in size and shape . . . . . *E. charapensis* Cockerell
2. Hind tibia rounded behind; mid-tibial tufts different in size or shape 3

3. Abdomen blue-violet; anterior mid-tibial tuft paramecium-shaped . . . . . *E. cybelia* Moure
3. Abdomen dark green or blue-green; anterior mid-tibial tuft either comma-shaped or deeply notched . . 4

4. Anterior mid-tibial tuft distinctly 2-lobed; labrum usually with a large dark brown spot 5
4. Anterior mid-tibial tuft comma-shaped; labrum usually white with 2 translucent spots 6

5. Tongue subequal to body length; hairs of scutum largely black . . . . . *E. nigropilosa* Moure
5. Tongue reaching tergum II; hairs of scutum gray . . . . . *E. nigromaculata* Moure

6. Puntation of scutum dense, with large punctures about twice the diameter of more numerous smaller punctures; front of scutum dark blue . . . . . *E. ioprosopa,* new sp.
6. Punctation of scutum sparser, punctures of different sizes, but not as above; scutum golden . . . . . *E. dressleri* Moure

4. *Euglossa ioprosopa,* new sp.

Total length 11 mm; head width 4.8 mm; abdominal width 4.3 mm.

Color: Ivory paraocular markings lacking; forward side of antennal scape black; front of clypeus blue-violet with black median keel; sides of clypeus and paraocular areas dark bottle green; upper frons blue-violet; episternum bottle green with golden hues; scutum blue-violet in front, bottle green behind, with golden hues; scutellum bottle green with golden hues; abdomen dark bottle green above, ventrally green with golden hues; hind tibia shiny bottle green.

Vestiture: Plumose hairs of thorax tawny, short, dense, especially behind; hairs on scutum short, dense, mostly black.

Punctation: Coarse, even, not very dense on clypeus; on episternum coarse, dense; on scutum coarse, dense, of 2 sizes; on scutellum large, but not dense; on tergum II fine and very dense, with narrow, but quite shiny, smooth marginal band.

Tongue reaching sterna II-III; labrum subquadrate, wider than long, with median keel; clypeus with prominent median keel and weaker laterals; scutellum rounded, less than half as long as wide, biconvex above; sternum II with small, widely separated tufts; mid tibia: posterior tuft small, oblong; anterior tuft slightly larger, comma-shaped, with large pale patch distally; hind tibia triangular-oblong, obtuse.

Female: Unknown.

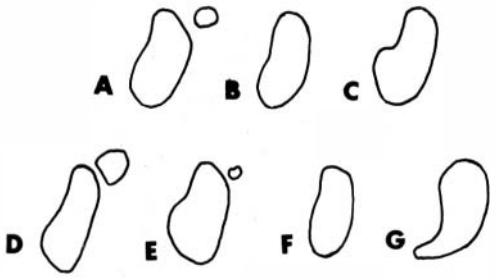

Fig. 1. Outlines of mid-tibial tufts of the *Euglossa analis* group. Drawn with a camera lucida; all at about the same magnification. (A) *E. bidentata.* (B) *E. retroviridis.* (C) *E. iopyrrha.* (D) *E. villosiventris.* (E) *E. analis.* (F) *E. mixta.* (G) *E. cognata.*

Holotype: Male, Llullapichis, Rio Pachitea, Huánuco, Peru, 5 Feb. 1975, R.L. Dressler 1611 (U.S.N.M.). **Paratypes**: 15 males from type series, 29 Jan. 12 Feb. (Dressler coll. and to be distributed); 13 males, Leticia, Amazonas, Colombia, 7-9 June 1974, Dressler 1556 (Dressler coll. and to be distributed); 1 male, Puerto Asis, Putumayo, 2 Feb. 1971, skatole, H. Kennedy (Dressler coll.); 1 male, Rio San Miguel, Napo, Ecuador, 4 Feb. 1971, H. Kennedy (Dressler coll.); 1 male, Región Alto Caura-Cuchime, Bolívar, Venezuela, 300 m, 10 Apr. 1963, Expedición La Salle (Dressler coll.); 1 male, Tiboku, Guyana, *S.* [*tanhopea*] *grandiflora,* 10 Apr. 1969, C. H. Dodson (Dressler coll.); 1 male, Curepe, Trinidad, cineole, 7 June 1972, F. D. Bennett (Dressler coll.); 9 males, I.P.E.A.N., Belém, Pará, Brazil, 23-28 Oct. 1968, Dressler 1185 (Dressler coll. and to be distributed).

This is probably the most widely distributed of all the species in the *cybelia* species group, but it was not well represented in collections before the use of perfume baits. Superficially it most resembles *E. maculilabris* and *E. nigrifacies,* but it differs from both of these distinctly shaggier bees in the shape of the mid-tibial tufts and only rarely has the nearly black labrum typical of these species. It is probably more closely allied to *E. dressleri,* which it resembles in the form of the mid-tibial tufts, but it has denser punctation of two quite different sizes on the scutum, and has the front portion of the scutum distinctly blue, while *E. dressleri* has both scutum and scutellum uniformly golden. Two specimens from the type series, and two Ecuadorian specimens in my collection are atypical in that they have rudimentary white paraocular markings, otherwise lacking in the *cybelia* group, and unusually long tongues. Tongue length is variable in this series, and I believe these specimens are referable to *E. ioprosopa,* but, as they are atypical, I do not cite them as paratypes. The epithet, *ioprosopa,* refers to the dark, blue-violet face characteristic of the species. This species has been collected visiting *Gongora* flowers, of which it is a likely pollinator. One specimen from Belém bore pollinaria of *Notylia,* and in Guyana it is apparently an accessory visitor of *Stanhopea grandiflora.* The bees are collected especially at skatole and vanillin, and in lesser numbers at cineole, methyl salicylate and 2-phenylethyl acetate. Specimens of this species have been provisionally identified as "RD 1185" and "BR 14".

Key to males of the *Euglossa piliventris* species group

1. Clypeus with a prominent black band from base to apex . . . . . *E. piliventris* Guérin
1. Clypeus white with 2 translucent spots 2

2. Slits of sternum II widely separated, with a definite median depression between slits behind . . . . . *E. ignita* Smith
2. Slits of sternum II convergent at the midline, without a definite depression between them behind. 3

3. Mid-tibial tufts close together, appearing as a single subtriangular tuft . . . . . *E. imperialis* Cockerell
3. Mid-tibial tufts distinct, not in contact 4

4. Abdomen bronze (Costa Rica and Panama) . . . . . *E. flammea* Moure
4. Abdomen green or blue (Amazonian South America and coastal Brazil) . . . *E. chalybeata* Friese

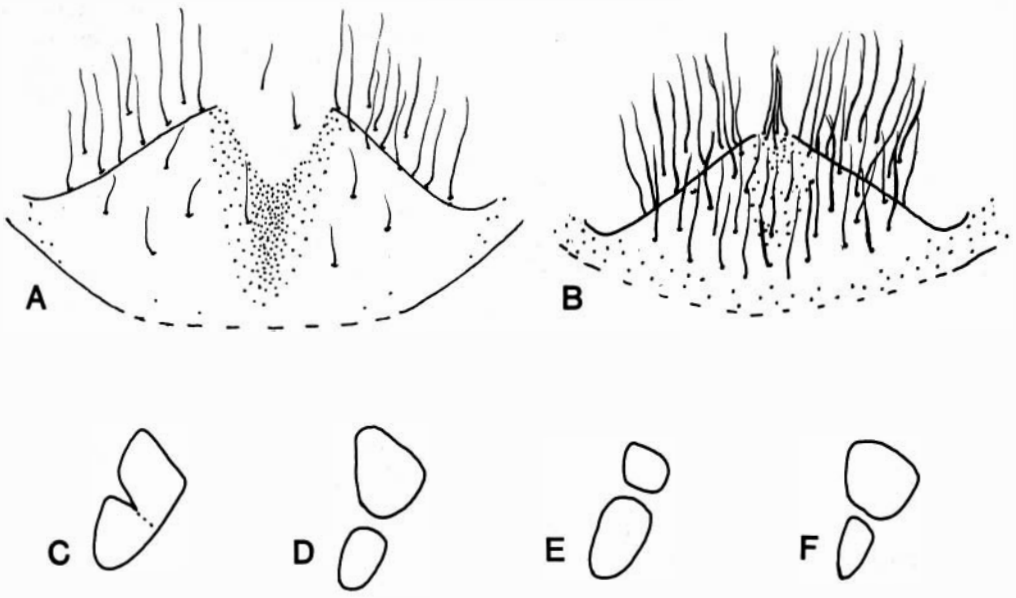

Fig. 2. Recognition features of *Euglossa chalybeata* and its allies. Above: sternal slits. (A) *E. imperialis.* (B) *E. ignita.* Below: mid-tibial tufts. (C) *E. imperialis.* (D) *E. chalybeata.* (E) *E. flammea.* (F) *E. ignita.*

C. **The *Euglossa piliventris* species group**: The large, long-tongued bees of this complex (*Glossura* in the strictest sense) are abundant in wet, lowland forests. In the Amazon area, especially, *E. chalybeata, E. ignita* and *E. imperialis* are so very similar that they are almost impossible to distinguish in the field. *Euglossa imperialis* is usually a bit larger than *E. chalybeata,* and *E. chalybeata* a bit larger than *E. ignita,* so that *E. imperialis* and *E. ignita* may usually be distinguished by size, alone, but *E. chalybeata* is intermediate in size and overlaps with both. The structural details by which males may be separated have been described by Moure (1969), and are illustrated in figure 2. *Euglossa imperialis* is easily separated by the form of the mid-tibial tufts, while *E. chalybeata* and *E. ignita* are most easily separated by the form of the sternal "slits". If specimens have dried with the hindlegs covering sternum II, they may still be separated by the proportion of the mid-tibial tufts. I know of no formula for the separation of females (see key to the males).

5. *Euglossa chalybeata iopoecila,* new subsp.

Total length 17 mm; head width 5.3 mm; abdominal width 5.5 mm.

Color: Ivory paraocular markings well developed, wider below; forward side of antennal scape black; front of clypeus dark blue, with black median keel; sides of clypeus dark blue shading to green; upper frons dark blue; episternum, scutum and scutellum blue-violet; abdomen blackish blue-violet above, slaty blue below; hind tibia blue-violet.

Vestiture: Plumose hairs of thorax rather short and dense; dusky above, whitish gray below; hairs on scutum moderately long, dense, mixed brown and black.

Punctation: Coarse and irregular on front of clypeus; on episternum medium size, sparse, separated by interspaces twice puncture diameter; on scutum fine and sparse, interspaces larger than punctures; on scutellum coarse, rather dense, with some

micropunctures; on tergum II fine and sparse, interspaces larger than punctures; denser on III.

Tongue 1.5-2 mm longer than body; labrum subquadrate, as long as wide, tricarinate; clypeus protuberant, with rounded median keel; scutellum rounded, more than half as long as wide, biconvex above; sternum II with oblique slits that converge at the midline; mid tibia: posterior tuft subovate, with pale patch below; anterior tuft triangular-oblong, much smaller than posterior, with patch of paler hairs behind; hind tibia triangular, subacute.

Female: Unknown.

Holotype: Male, Alexandra, Paraná, Brazil, 8 Dec. 1968, R.L. Dressler 1318 (U.S.N.M.) **Paratypes**: 7 males from type series (Dressler coll.).

This handsome bee ranges from São Paulo to Paraná, as indicated by material in Brazilian collections. I find no clear structural difference between this and *E. chalybeata* of the Amazon area, and so treat it as a subspecies of *chalybeata.* This southern population is distinguished by the dark, blue-violet coloration, to which the epithet refers. The bees were collected at cineole, eugenol and methyl salicylate.

D. **Miscellaneous new species**: One of the following species belongs to a group of only two species, while the other is a member of the subgenus *Euglossella,* a group that is still poorly sampled, and will almost certainly remain so until one or more new perfume baits are identified and put into use. These two species are placed together here for convenience.

6. *Euglossa (Glossura) annectans,* new sp.

Total length 12 mm; head width 5 mm; abdominal width 4.8 mm.

Color: Ivory paraocular markings well developed, wider below; forward side of antennal scape ivory; front of clypeus blue-green with blue median keel; sides of clypeus dark green; paraocular areas bottle green; upper frons dark bottle green; episternum, scutellum and scutum dark bottle green; abdomen dark bottle green above, green with golden hues below; hind tibia very dark bottle green.

Vestiture: Plumose hairs of thorax moderately long, sparse on episternum, denser behind, tawny, dusky above; hairs on scutum dense, mixed tawny and black.

Punctation: Punctures coarse and rather dense on front of clypeus; on episternum small and sparse, interspaces wider than punctures; on scutum of moderate size, dense, sparser behind; on scutellum coarse, dense, with some micropunctures; on tergum II fine and dense, decreasing in size behind, with prominent smooth marginal bands on II and III.

Tongue about 1 mm shorter than body length, or subequal; labrum wider than long, with median keel; clypeus protuberant; scutellum rounded, margin straight medially, about 2/5 as long as wide, rather flat, with slight median depression; sternum II with small, widely separated tufts; mid tibia: posterior tuft subcircular; anterior tuft oblong, twice as long as posterior; hind tibia triangular, abruptly obtuse.

Female: Similar to male, but scutum and scutellum dark blue; abdomen dark green or blue-green; punctation on scutum, scutellum and episternum coarser; scutellar tuft large, 3/5 scutellar length; tibiae dark blue.

Holotype: Male, Floresta de Tijuca, GB., Brazil, 8 Jan. 1966, R.L. Dressler 444 (U.S.N.M.). Allotype female: from type series, 9 Jan. 1966 (U.S.N.M.). **Paratypes**: 4 males, 1 female, from type series (Dressler coll.). 2 males, 1 female (Moure coll., Univ. Fed. Paraná); 2 males, 1 female (Dodson coll., Marie Selby Botanical Gardens); 2 males, from type locality, 23 Jan. 1966, Dressler 450 (Dressler coll.); 1 male, 25 Nov. 1968, Dressler 1316 (Dressler coll.); 1 male, Rio de Janeiro, 12 Apr. 1971, H. Kennedy (Dressler coll.); 3 males, Santa Teresa, Espirito Santo, 19 Nov. 1968, Dressler 1308 (Dressler coll.); 1 male, Iguazú Falls, Misiones prov., Argentina, 21

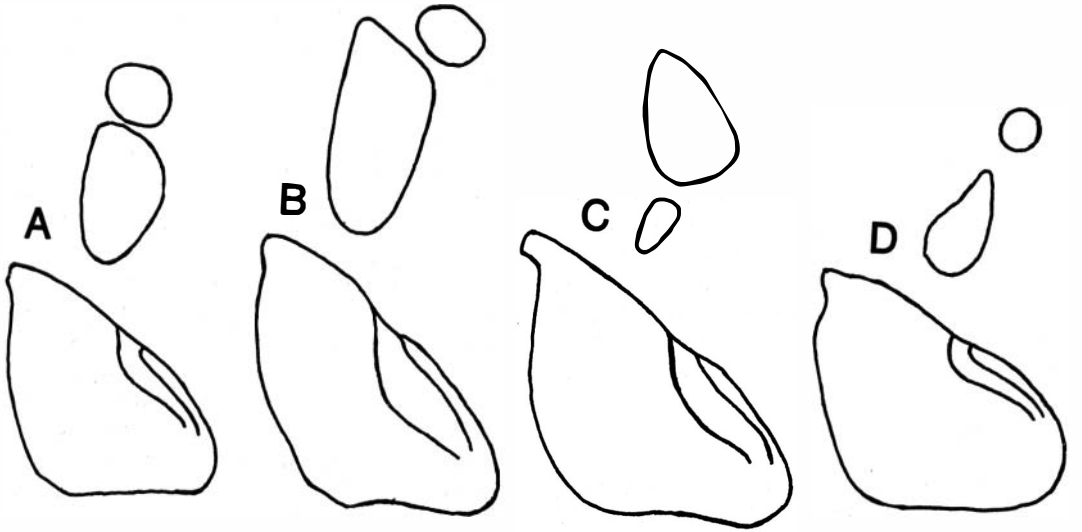

Fig. 3. Outlines of mid-tibial tufts (above) and hind tibiae (below). All drawn with camera lucida; tufts at greater magnification than tibiae. (A) *E. annectans.* (B) *E. bigibba.* (C) *E. chalybeata iopoecila.* (D) *E. ioprosopa.*

Nov. 1972, E.W. Stiles (Dressler coll.); 1 female, Villa Morra, Paraguay, 4 Dec. 1904, J.D. Anisits (Dressler coll.).

This species is closely allied to *E. stellfeldi,* and, like that species, combines features of subgenus *Glossura* with features of subgenus *Euglossa.* The epithet, *annectans,* refers to its position as a link between these two groups. *Euglossa annectans* differs from *E. stellfeldi* by its larger size, by the blue male clypeus, by the posterior margin of the male scutellum being straight, rather than shallowly concave, and by the much larger posterior mid-tibial tuft. This is a fairly common species in the Tijuca hills, above Rio de Janeiro. The type series was collected while feeding on flowers of *Ischnosiphon* cf. *ovatus* (Marantaceae). The males have been seen visiting flowers of *Houlletia brocklehurstiana,* and *E. annectans* is probably a pollinator of that orchid. Other males have been collected with the pollinaria of *Cirrhaea* on the forelegs. The males have been collected especially at vanillin, and in lesser numbers at cineole, eugenol and skatole. Specimens of this species have been provisionally identified as "RD 414" and "BR 7".

7. *Euglossa (Euglossella) bigibba,* new sp.

Total length 13.5 mm; head width 5.2 mm; abdominal width 5.6 mm.

Color: Ivory paraocular markings well developed, wide, wider below; forward side of antennal scape 3/4 ivory; front of clypeus green with brown median keel; sides of clypeus and paraocular areas green; upper frons and episternum dark green; scutum dark green in front, shading to blue-green behind; scutellum dark blue; abdomen basally green shading to blue-green behind, below green with golden hues; hind tibia shiny blue-green.

Vestiture: Plumose hairs of thorax short but dense, tawny; hairs on scutum dense, mainly brown with some black.

Punctation: Punctures coarse on front of clypeus; on episternum fine and sparse,

interspaces 3 times puncture diameter; on scutum fine and dense, sparser behind; on scutellum of medium size and density; on terga II-III elongate, moderately large.

Tongue subequal to body; mandibles tridentate; labrum slightly wider than long, with strong median keel; clypeus protuberant, tricarinate; scutellum rounded, margin shallowly concave medially behind, slightly less than half as long as wide, strongly biconvex above; sternum II with small, medially confluent tufts of hairs; mid tibia: posterior tuft large, subcircular; anterior tuft oblong, wider than posterior, about three times as long, with long hairs; hind tibia narrowly triangular, acute.

Female: Unknown.

Holotype: Male, Tebas (=Pebas), Peru, "685 80" (Budapest). **Paratype**: 1 male, Peru, "685 80" (Dressler coll.).

This remarkable bee is known only from a few specimens. While it is clearly referable to *Euglossella,* it resembles *Glossura* in the protuberant clypeus, the long tongue and the biconvex scutellum, to which the epithet, *bigibba,* refers. It is amply distinct from all known species, but is probably closest to *E. polita,* which is smaller, with flatter clypeus and shorter tongue and has the entire dorsal surface blue-violet. *Euglossa cyanea,* also blue-violet, is of about the same size as *E. bigibba,* and has a protuberant clypeus, but the tongue is shorter, and the sternal tufts are small and widely separated.

RESUMEN

Se incluye claves para la identificación de los machos de los grupos *analis, cybelia* y *piliventris* y se describe especies y subespecies nuevas en cada uno de ellos. Además se describe una nueva especie, aliada a *E. stellfeldi* y una nueva especie del subgénero *Euglosella.*

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