

FIFTH CONTRIBUTION TO THE KNOWLEDGE OF
THE GENUS *ARCHYTTAS* JAENNICKE, 1867
(Diptera, Tachinidae)*

JOSÉ HENRIQUE GUIMARÃES

Escola Nacional de Veterinária, Universidade Rural, Estado do Rio

(With 48 text-figures)

This paper contains a study on the tachinid genus *Archytas* Jaennicke, 1867. The descriptions of 6 species, two apparently new, are presented. CURRAN (1928) has given a comprehensive treatment of the species referred to here, but the author deemed it necessary to review these species in view of the importance of the characters of the male genitalia. These characters prove to be constant for the different species and provide additional, thoroughly reliable criteria, which are effective for identification in cases where characters previously used have failed.

I am under obligation to Dr. Hugo de Souza Lopes, distinguished student of *Sarcophagidae* of the world, for the privilege of studying the material of the Instituto Oswaldo Cruz collections. My sincere thanks go to Dr. R. L. Araujo of Instituto Biológico, São Paulo, for generous co-operation.

Archytas lateralis Macquart, 1843

(Figs. 1-10)

Jurinia lateralis Macquart, 1843: 199, pl. 3, fig. 10 (Mexico).

? *Jurinia candens* Walker, 1849: 720.

Jurinia apicalis Jaennicke, 1867: 82 (Mexico).

Jurinia lateralis Bigot, 1888: 78 (Mexico).

Archytas lateralis Coquillett, 1897: 143.

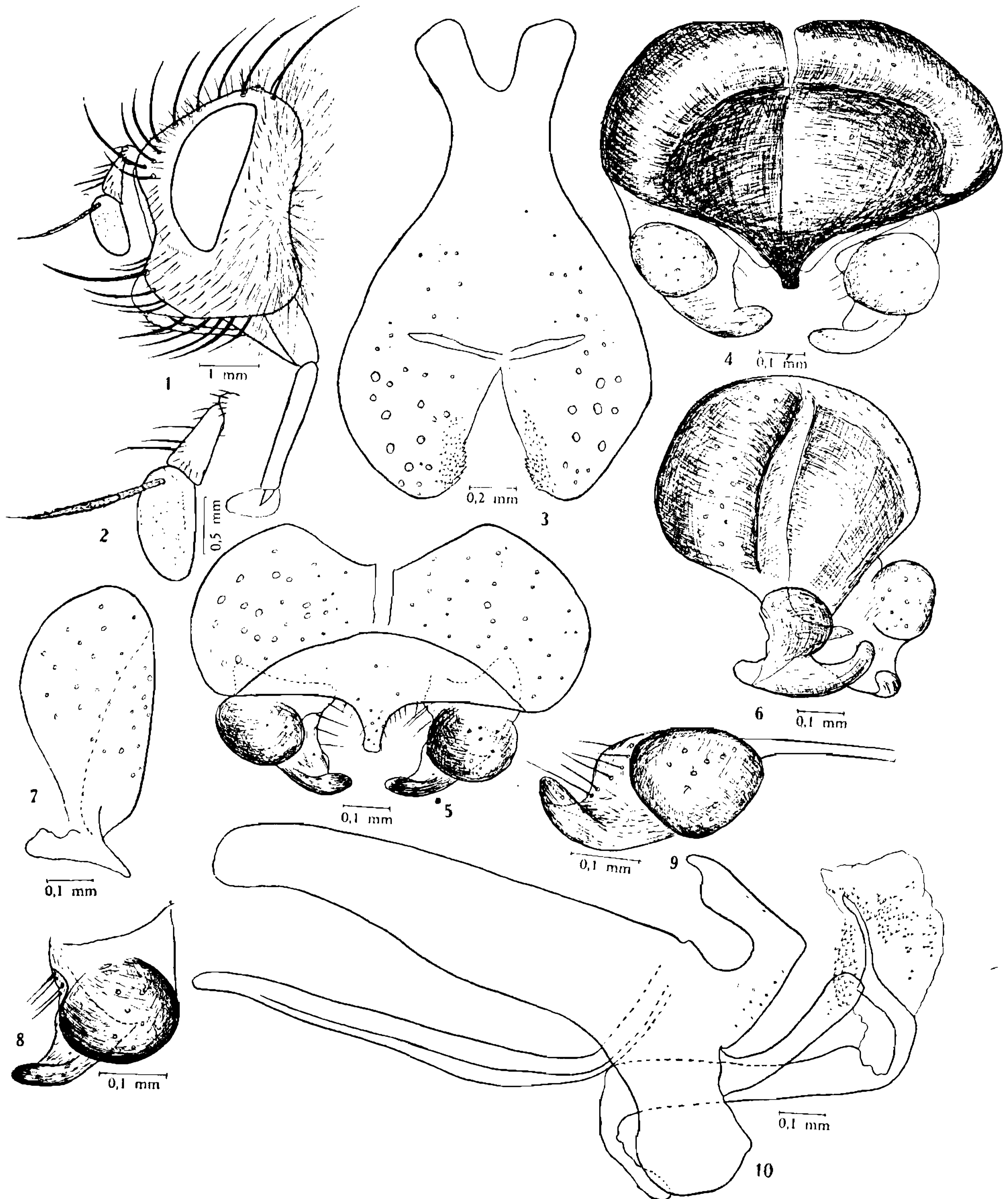
Archytas lateralis Curran, 1928: 22 figs. 14-15.

* Received for publication August 23, 1962.

This study carried out in the Laboratory of Medical Zoology and Parasitology, Escola Nacional de Veterinária, was supported by funds provided by the Brazilian Conselho Nacional de Pesquisas.

Male: Total length 9 to 12 mm.

Head yellow, silvery pollinose. Front about 0,35 of head width. Frontalia yellowish at base of antennae and orange red towards ocellar triangle. Parafrontalia and ocellar triangle with sparse black hairs. Front with two rows of ocellar bristles, the innermost with 6 to 7 con-



A. lateralis Macquart, 1843, male — Fig. 1: Head, side view; fig. 2: antenna; fig. 3: fifth sternite; fig. 4: outer forcipes, posterior view; fig. 5: outer forcipes, superior view; fig. 6: outer forcipes, side view; fig. 7: outer forcipes, lateral view; fig. 8: forcipes inferiores, superior view; fig. 9: forcipes inferiores, posterior view; fig. 10: inner forcipes.

vergent and parallel bristles, the outermost with 4 to 5 reclinate bristles. Parafacialia with long and irregular black hairs near eye edge. Genae about 0,37 of eye height, sparsely clothed with small and black hairs. Antennae yellowish; second segment about 0,80 the length of third; third segment darkened. Arista with the first joint as long as second.

Thorax ground colour black, with rather bright pollen. Mesonotum with 4 presutural acrostical bristles and 3 post sutural ones; 4 presutural dorsocentral bristles and 4 post sutural ones; 2 intralar presutural and 3 post sutural. Propleura clothed with fine black hairs. Postalar wall with few inconspicuous yellowish hairs. Scutellum orange red with 3 lateral bristles, 1 pair of decussate apical, 1 pair of discal and 1 pair of erect pre apical bristles. Wings hyaline, veins yellowish at base. R 5 inferiorly with few bristles at base. Segments of the costal vein as follow: II: 70; III: 50; IV: 65; V: 30; VI: 7. Calypters opaque, white. Legs brown, claws reddish at base.

Abdomen castaneous, with a dark median vitta. Second and third tergite with lateral bristles only; third with one pair of median marginal bristles; fourth with a row of marginal ones; fifth with two rows of discal and a small row of marginal ones. Hypopygium brownish red. *Forcipes superiores* sub-truncate at apex; *forcipes inferiores* with a globular basal swelling lobe and a pair of narrow inward arms.

Material studied: 1 ♂, Arizona, VIII-1902, F. H. Snow coll.; 1 ♂, Las Cruces, New Mexico, VI-1916 (I. O. C. coll. nr. 8905); 1 ♂, bearing a label "Coll. Snow" (I. O. C. coll. nr. 8906).

This species is closely related to *A. metallicus* in general appearance. *A. lateralis* has the calypters white, whereas those of *A. metallicus* are testaceous. *A. lateralis* may be quickly differentiated from *A. metallicus* by the fact that the tip of the forcipes superiores is truncate, whereas in the latter species it is pointed.

Archytas metallicus Desvoidy, 1830

(Figs. 11-17)

Jurinia metallica Desvoidy, 1830: 35 (Holotype from Carolina, in Newmarket).

Tachina hystrix Wiedemann, 1830: 283 (Holotype originally in Fabr. coll., but now lost; paratype in Wien).

Tachinodes hystrix Brauer et Bergenstamm, 1889: 133.

Jurinia hystricoides Williston 1886: 300 (N. America).

Archytas hystrix, Coquillett, 1897: 142.

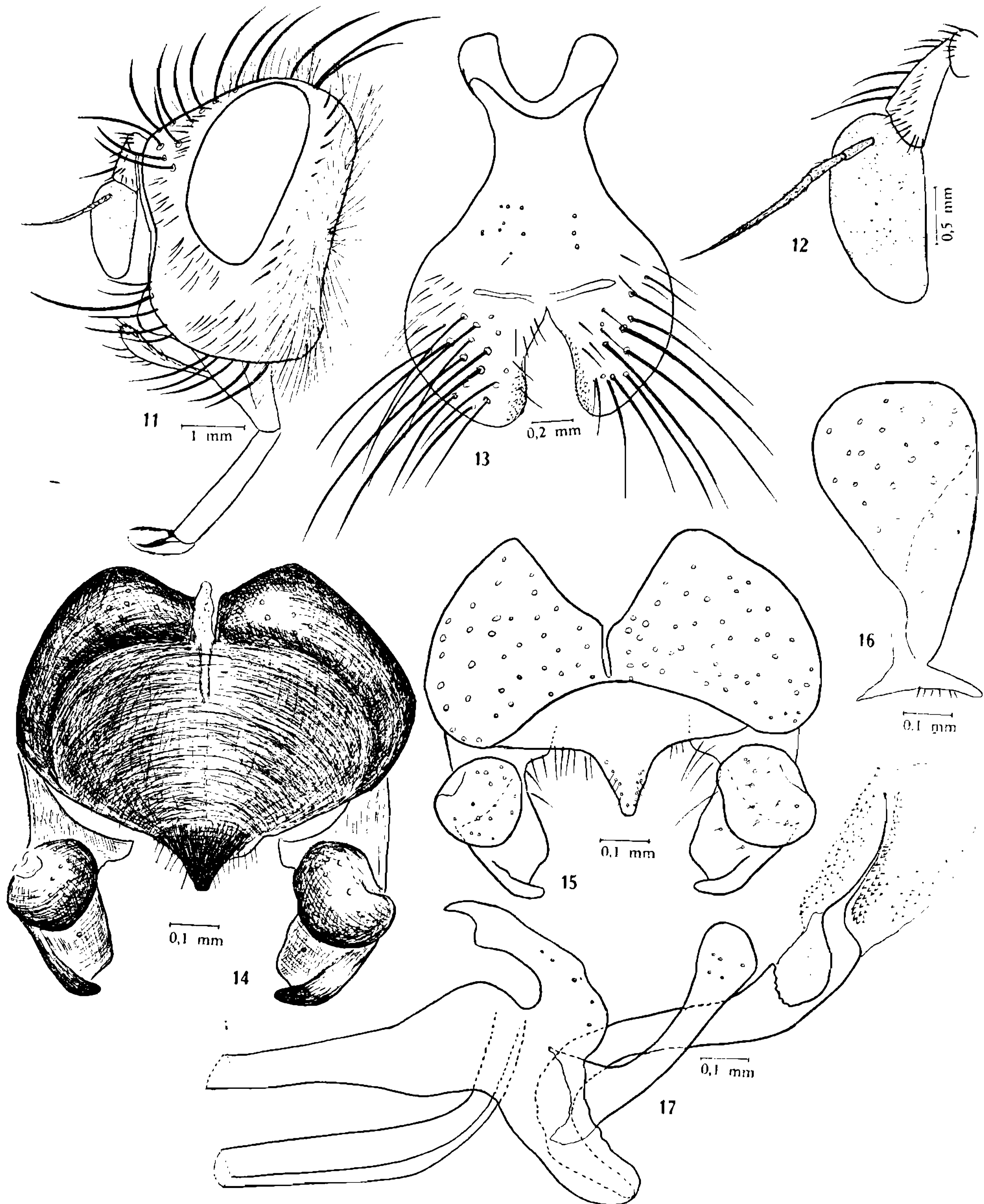
Archytas pilosa Curran, 1928: 206, fig. 4.

Archytas metallica Aldrich, 1931: 120.

Male: Total length 10 to 14 mm.

Head yellow, silvery pollinose. Front about 0,33 of head width. Parafrontalia brown, with yellowish pollen. Two rows of frontal bristles; the innermost with about 8 bristles, the two uppermost reclinate; the

outermost row with 2 convergent bristles. Parafrontalia clothed with black hairs, with two pairs of reclinate and divergent fronto-orbital bristles, the uppermost pair is as robust as the outer vertical bristles. Frontalia brownish. Antennae brown, second article about 0,66 the



Archytas metallicus Desvoidy, 1830, male — Fig. 11: Head, side view; fig. 12: antenna, side view; fig. 13: fifth sternite; fig. 14: outer forcipes, posterior view; fig. 15: outer forcipes, superior view; fig. 16: outer forcipes, side view; fig. 17: inner forcipes.

length of third. Arista brownish. Parafacialia sparsely clothed with black hairs. Palpus long not much thickened apically, a little bowed upward. Facialia moderately bulging in profile. Epistoma prominent.

Thorax shining brown, with rather thin changeable yellowish pollen. Post-alar callus and scutellum broadly yellowish brown, testaceous pollinose. Chaetotaxy as in *A. lateralis*. Postalar wall with rare yellowish hairs. Pleura clothed with black hairs. Wings hyaline, faintly infuscated; segments of costal vein as follows: II: 67; III: 60; IV: 75; V: 32; VI: 5. R 5 inferiorly setulose at base. Calypters testaceous.

Abdomen brownish red, somewhat darkened in the median vittae. Chaetotaxy as in *A. lateralis*. Hypopygium dark brown. *Forcipes superiores* tapering outward to a pointed apex (figs. 14-15). Inner forcipes as in fig. 17.

Material studied: 2 ♂♂, Woodville, Texas, 4-VIII-1938, (I. O. C. nr. 8907 and 8909); 3 ♂♂, College Station, Texas, 16-VIII-1939, H. J. Reinhard (I. O. C. nr. 8909).

The present status of this species was discussed by ALDRICH (1931) and we have adopted his conclusions. As stated in the discussion of *A. lateralis*, *A. metallicus* is superficially very much like that species.

Archytas aterrimus Desvoidy, 1830

(Figs. 18-28)

Jurinia aterrima Desvoidy, 1830: 35 (Type from Carolina).

Jurinia leucostoma Desvoidy, 1830: 37 (Type from Carolina).

Tachina atra Walker 1852: 273.

Archytas aterrima Coquillett, 1897: 143.

Archytas aterrima Curran, 1928: 223, fig. 12.

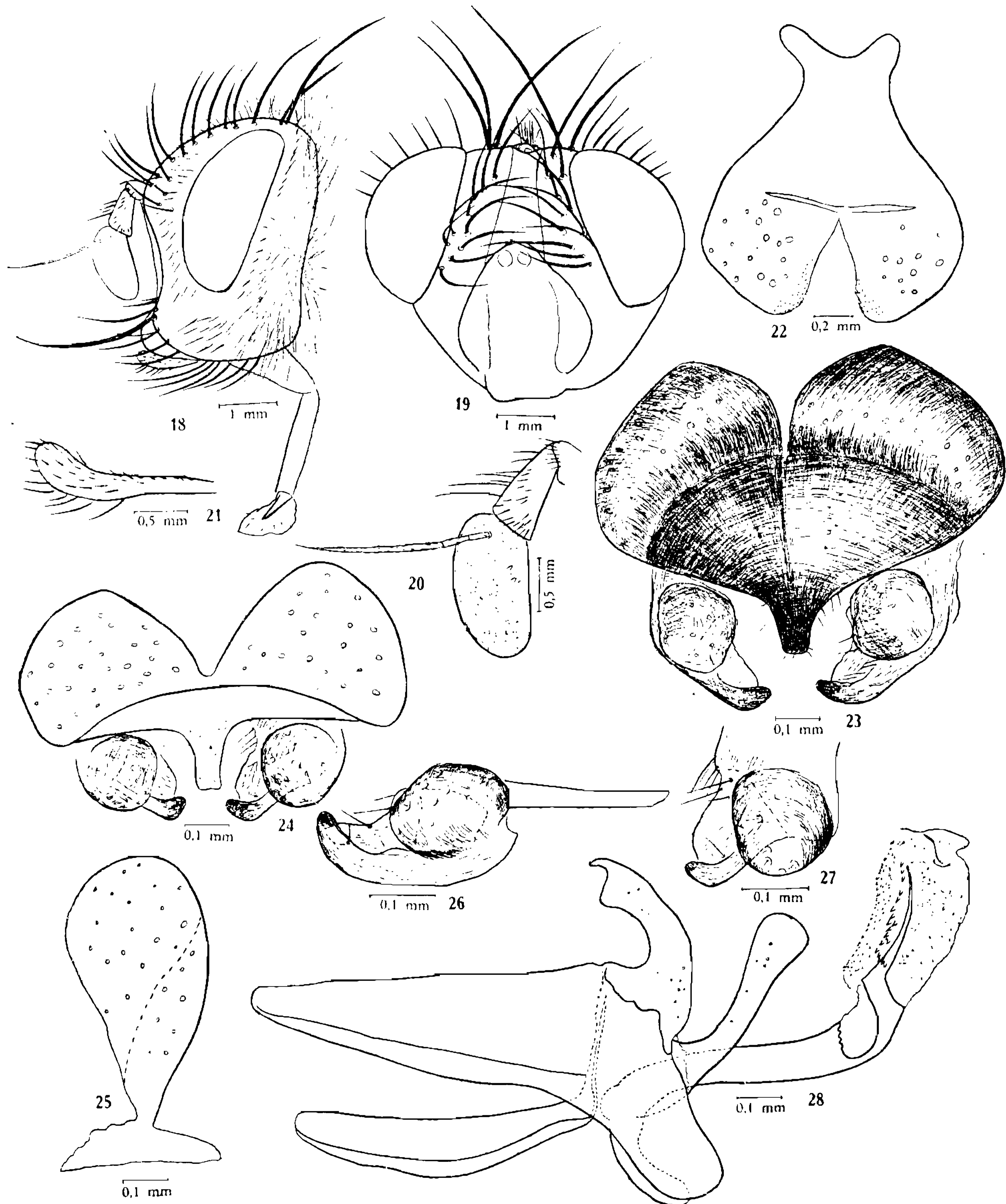
Male: Total length 9 to 14 mm.

Head yellowish, silvery pollinose. Front about 0,33 of head width. Parafrontalia reddish, clothed with small black hairs. Ocellar triangle brown. Front with two rows of frontal bristles; the two uppermost reclinate. Parafrontalia with two reclinate fronto-orbital bristles. Frontalia reddish toward the ocellar triangle. Antennae yellowish; third segment brownish red. Second antennal joint about 0,66 the length of third. Arista brown. Facialia bulging upward in profile. Palpi yellowish, slightly enlarged at apex. Parafacialia with sparsely black and yellow hairs. Gena about 0,40 of eye height.

Thorax brown, gray pollinose. Postalar callus and scutellum somewhat yellowish. Chaetotaxy as in *A. lateralis*. Propleura clothed with minute black hairs. Wings hyaline; veins yellowish at base. R 5 inferiorly with few small bristles at base. Segments of the costal veins as follows: II: 60; III: 50; IV: 65; V: 24; VI: 5. "Epaulet" yellowish. Calypters white, opaque. Legs brown.

Abdomen red brown to black, with bluish reflections, third tergite shining reddish. Hypopygium brownish red. *Forcipes superiores* truncate at apex. The *forcipes inferiores* closely resemble those of *A. metallicus*.

Material studied: 1 ♂, Callicoon, New York, 2-VII-1937, L. L. Pechuman (I. O. C. nr. 8910); 1 ♂, College Station, Texas, 6-VI-1919, H. J. Reinhard, (I. O. C. nr. 8911); 1 ♂, Nepperhan, Yonkers, 7-VIII-1930, Bromley (I. O. C. nr. 8912).



Archytas aterrimus Desvoidy, 1830, male — Fig. 18: Head, side view; fig. 19: head, frontal view; fig. 20: antenna; fig. 21: palpus; fig. 22: fifth sternite; fig. 23: outer forcipal, posterior view; fig. 24: outer forcipal, superior view; fig. 25: outer forcipal, side view; fig. 26: forcipal inferiores, superior view; fig. 27: idem, posterior view; fig. 28: inner forcipal.

The outer forcipis of *A. aterrimus* are most likely to be confused with those of *A. lateralis*, differing in minor details of the shape from the *forcipis inferiores* arms, as illustrated in this paper. Another difference: *A. aterrimus* abdomen is generally black with bluish reflections, rather than reddish brown.

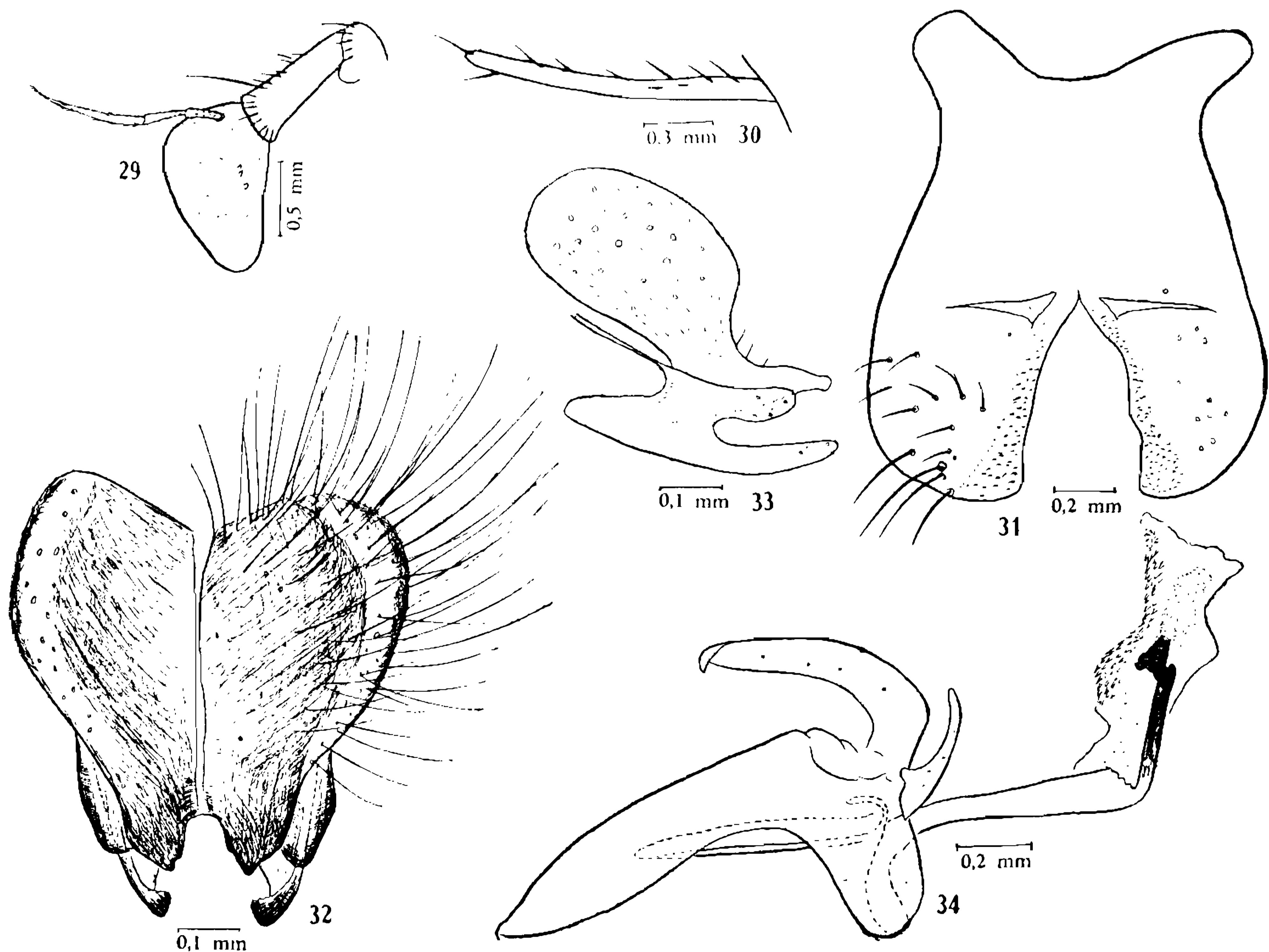
Archytas willistoni Curran, 1925

(Figs. 28-34)

Archytas willistoni Curran, 1925: 9 (Described from M. Grosso, Brazil. Types in the Amer. Mus. of Nat. Hist.).
Archytas willistoni Curran, 1928: 281, fig. 40.
Archytas willistoni Guimarães, 1960: 122, figs. 23-24.

Male: Total length 11 mm.

Head yellowish, silvery pollinose. Front about 0,35 of head width. Parafrontalia with yellowish pollen, with two rows of frontal bristles; the inner row with 7 convergent bristles. the two uppermost reclinate. The outer row with 4 reclinate and slightly convergent bristles. Parafrontalia clothed with black and few yellowish hairs. Ocellar



Archytas willistoni Curran, 1925, male — Fig. 29: Antenna; fig. 30: palpus; fig. 31: fifth sternite; fig. 32: outer forcipis, posterior view; fig. 33: outer forcipis, side view; fig. 34: inner forcipis.

triangle brown. Antennae yellowish, third segment reddish brown with the outer margin strongly convex, (fig. 29). Second segment about 0,80 the length of third. Arista brownish with the second segment slightly bulging upward in profile. Gena about 0,25 of eye height. Palpi spatulate, yellow.

Thorax darkened, with golden yellowish pollen. Humeral callus, postalar callus and scutellum yellowish. Mesonotum clothed with black and yellow hairs. Chaetotaxy as in *A. lateralis*. Wings hyaline; segments of costal vein as follows: II: 55; III: 39; IV: 55; V: 20; VI: 5. "Epaulet" yellowish. Calypters white, opaque. Legs brown, with gray pollen.

Abdomen reddish yellow, silvery pollinose. Second tergite with a darkened median spot. Chaetotaxy as in *A. lateralis*. Hypopygium yellowish. *Forcipes superiores* excised apically; *forcipes inferiores* with the posterior lobe straight in profile, anterior lobe long directed inward.

Material studied: 1 ♂, Araguary, Minas Gerais, Brazil, X-1937, R. Spitz (I. O. C. nr. 8913).

Differs strikingly from all of the species of *Archytas* by its filiform palpi. In all other aspects, shape of antennae excluded, it resembles *A. diaphanus* (Fabr.).

Archytas araujoi sp. n.

(Figs. 35-41)

Male: Total length 11 mm.

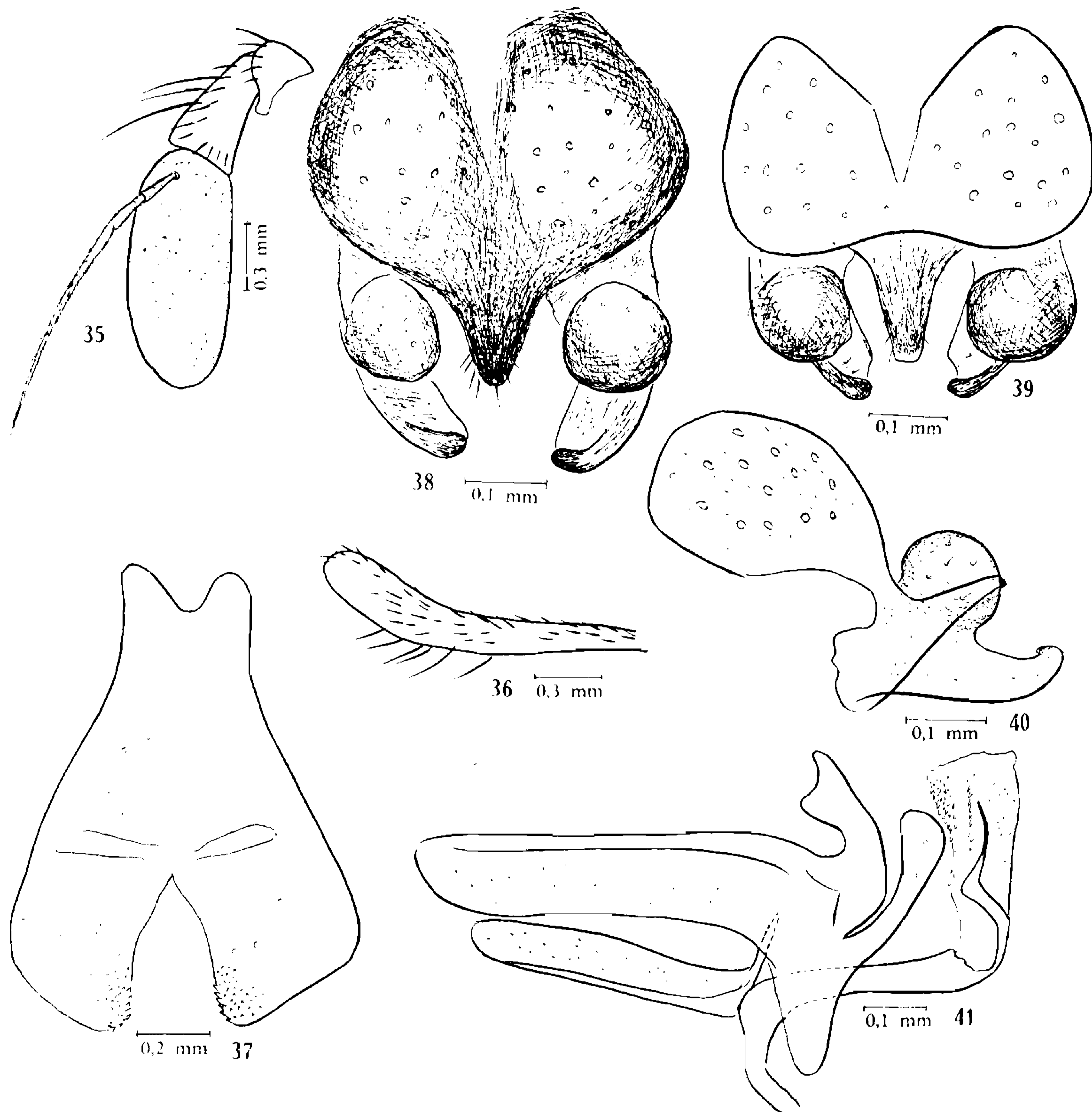
Head yellowish, silvery pollinose. Front about 0,24 of head width. Parafrontalia black, gray pollinose, with small irregular black hairs. Chaetotaxy as in *A. aterrimus*. Facialia with few inconspicuous black hairs. Antenna brownish red, second article approximately the length of first. Vibrissa as long as the outer vertical bristle. Genae sparsely clothed with long black and yellow hairs. Gena about 0,35 of eye height.

Thorax brownish, gray pollinose. Mesonotum with 4 narrow dark stripes often poorly defined, interrupted at suture and stopping far before base of scutellum. Scutellum and post-alar callus brownish red, dusted with testaceous pollen. Propleura clothed with dark hairs. Chaetotaxy as in *A. lateralis*. Wings sub-hyaline, slightly infuscated; veins yellow at base; segments of costal vein as follows: II: 57; III: 42; IV: 52; V: 22; VI: 6. "Epaulet" brownish red; "sub-epaulet" yellowish. Calypters testaceous, with rims faintly darkened.

Abdomen wholly shining brown. Chaetotaxy as in *A. lateralis*. Fifth sternite brown, outer forcipes as in figures 38-40.

Material studied: Holotype and 1 paratype males, from Utinga, Pará, Brazil, 4-IX-1938, Damasceno (I. O. C. nr. 8915); 1 paratype male from Utinga, Pará, Brazil, VII-1936, Almeida.

In general appearance *A. araujo* is similar to *A. lenkoi* Guimarães, 1961. It may be easily distinguished from this species by its small size (11 mm) whereas *A. lenkoi* is larger (14 to 15 mm). The most striking difference is found in the male terminalia. This species is named after Dr. R. L. Araujo.



Archytas araujo sp. n., male — Fig. 35: Antenna; fig. 36: palpus; fig. 37: fifth sternite; fig. 38: outer forcipes, posterior view; fig. 39: outer forcipes, superior view; fig. 40: outer forcipes, side view; fig. 41: inner forcipes.

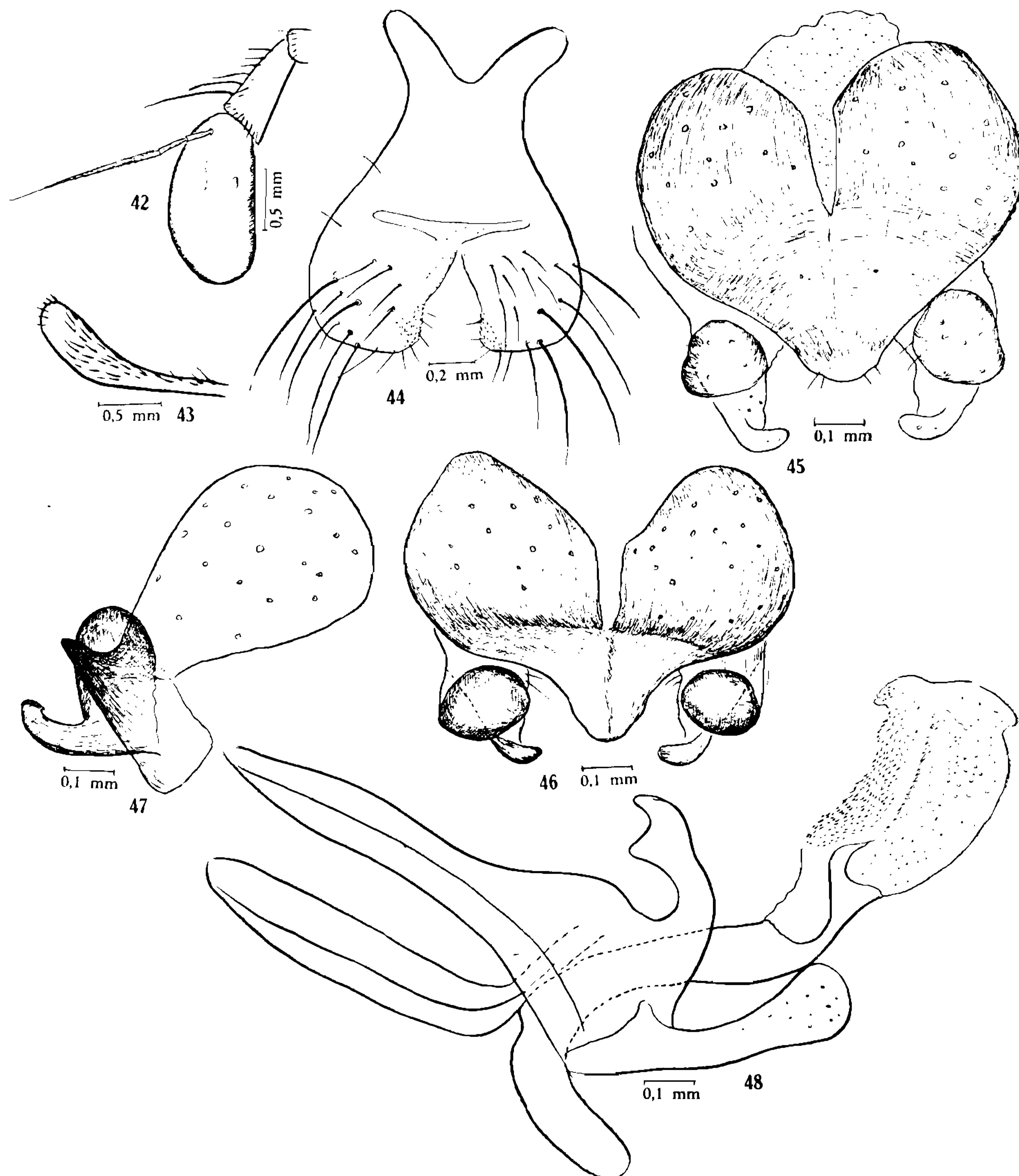
Archytas pearsoni sp. n.

(Figs. 42-48)

Male: Total length 13 mm.

Head reddish, yellowish pollinose. Parafrontalia black, silvery pollinose. Front with about 0,32 of head width, with two rows of frontal bristles. The inner row with 9 to 11 convergent bristles, the two upper-

most reclinate, the outer row with 3 proclinate bristles, two of which situated below bases of antennae. Antenna reddish brown; second article about 0,56 the length of third; third article brown, reddish posteriorly toward basel. Parafacialia sparsely clothed with black hairs. Gena about 0,56 the length of third; third article brown, reddish posteriorly toward basel. Parafacialia sparsely clothed with black hairs. Gena about 0,36 of eye length, gently prominent with numerous small white and black



Archytas pearsoni sp. n., male — Fig. 42: Antenna; fig. 43: palpus; fig. 44: fifth sternite; fig. 45: outer forcipes, posterior view; fig. 46: idem, superior view; fig. 47: idem, side view; fig. 48: inner forcipes.

hairs. Palpi yellow, not much thickened apically, a little bowed upward. Haustellum short, moderately stout, smaller than eye height.

Thorax black, dusted with changeable gray pollinosity. Scutellum and post-alar callus brownish with testaceous pollen. Wings sub-hyaline, slightly infuscated, tinged faintly with brown on costa near base. R 5 with few black hairs at base. Segments of costal vein as follows: II: 80; III: 63; IV: 80; V: 25; VI: 7. Calypters testaceous. "Epaulet" reddish. Propleura clothed with long and fine pale hairs. Pleura with black hairs. Post-alar wall with fine inconspicuous white hairs. Legs brownish, claws reddish at base.

Abdomen dark brown. *Forcipes superiores* broad, tapering apically, with a blunt or rounded tip.

Material studied: Holotype male from Pará, Brazil, H. R. Pearson VII-1948 (I. O. C. nr. 8915).

A. pearsoni sp. n., has a superficial resemblance with *A. duckei* Guimarães, 1961, but they are easily differentiated by the shape of the male terminalia. This species is named after Mr. Henry Richard Pearson.

SUMÁRIO

No presente trabalho são redescritas as seguintes espécies do gênero *Archytas* Jaennicke, 1867: *Archytas lateralis* Macquart, 1842, *Archytas metallicus* Desvoidy, 1830; *Archytas aterrimus* Desvoidy, 1830 e *Archytas willistoni* Curran, 1925. São ainda descritas duas espécies novas, provenientes do Estado do Pará, Brasil: *Archytas pearsoni* e *A. araujoii*. O material estudado pertence à coleção do Instituto Oswaldo Cruz, Rio de Janeiro.

REFERENCES

- ALDRICH, J. M., 1931, Notes on Diptera n.º 5. *Proc. Ent. Soc. Wash.*, 33 (5): 116-121.
- BIGOT, J. M. R., 1888, Diptères nouveaux ou peu connus. 33 partie, XLI. Tachinidae. *Ann. Soc. Ent. France*, (5) 8: 77-101.
- BRAUER, F. M. & BERGENSTAMM, J. E., 1889-1893, Die Zweiflüger des Kaiserlichen Museum zu Wien IV, V, VI. Vorarbeiten zu einer monographie des Muscaria Schizometopa (exclusive *Anthomyidae*). Pars 1-3. *Denks. Mat. Naturv. k. Akad. Wiss.*, 56: 69-180, Taf. 1-11; 58: 305-446; 60: 89-240.
- COQUILLET, D. W., 1897, Revision of Tachinidae of North America of Mexico. *U. S. Dept. Agr. Div. Ent.*, Tech. Bull. 7: 1-156.
- CURRAN, C. H., 1925, New Diptera in the American Museum of Natural History *Amer. Mus. Nov.*, 176: 1-10, 2 figs.
- CURRAN, C. H., 1928, Revision of the American species of *Archytas*. *Can. Ent.*, 60: 218-226, 249-256, 275-280, 40 figs.
- GUIMARÃES, J. H., 1960, Contribuição ao conhecimento do gênero *Archytas* Jaennicke, 1867 (Diptera, Tachinidae). *Mem. Inst. Oswaldo Cruz*, 58 (10): 115-124, 38 figs.
- GUIMARÃES, J. H., 1961, Terceira contribuição ao conhecimento do gênero *Archytas* Jaennicke, 1867 (Diptera, Tachinidae). *Mem. Inst. Oswaldo Cruz*, 59 (3): 355-396, 106 figs.

- JAENNICKE, F., 1867, Neue Exotische Dipteren. *Senckenberg. Nat. Ges.*, 6: 311-408, Taf. 43-44.
- JAENNICKE, F., 1867, Neue Exotische Dipteren aus den Museen zu Frankfurt a. M. und Darmstadt, 1-99, 2 Taf. (Reprint).
- MACQUART, M. J., 1843, Dipteres exotiques ou peu connus: 162-460. *Mem. Soc. Sci. Lille*, 2 (3), 1842: 3-304, 36 pls.
- ROBINEAU-DESVOIDY, J. B., 1830, Essais sur les Myodaires. *Mem. Sav. étrang. Acad. Paris*, 2: 2-813.
- WALKER, F., 1849, *Catalogue of the specimens of Dipterous Insectes in the collection of British Museum*. 4: 688-1172, London.
- WALKER, F., 1852, *Insecta Saundersiana or characters of undescribed insectes in the Collection of W. W. Saunders* 3: 157-252; 4: 253-414, 2 pls. London.
- WIEDEMANN, C. R. W., 1830, *Aussereuropaische Zweiflügelige Insecten*, 2: 2-684, 5 pls., Hamm.
- WILLISTON, S. W., 1886, Dipterological notes and descriptions. *Trans. Amer. Ent. Soc.*, 13: 287-307.