A NEW SPECIES OF THE ANNULIMANA GROUP OF THE GENUS
DROSOPHILA (DIPTERA, DROSOPHILIDAE).

Carlos Ribeiro Vilela 1,2
Maria Augusta Q. R. Pereira 1

ABSTRACT

Drosophila aragua, sp. nov. (type-locality: 10 km S of Santa Maria da Serra, São Paulo, Brazil), belonging to the annulimana group of the subgenus Drosophila is described and illustrated. It is closely related to D. aracicas Pavan & Neher and D. annulimana Duda but readily distinguished by male genitalic.

INTRODUCTION

D. annulimana was doubtfully described by Duda (1927) as a probable variety of D. larasita Schiner. The annulimana group was first cited by Pavan & Cunha (1947). Breuer & Pavan (1950) divided the group into three subgroups as follows: species with prescutellar bristles, D. annulimana, D. aracicas and D. arasima; species without prescutellar bristles, anterior scutel/ar bristles convergent, D. gibberosa and D. arasima; species without prescutellar bristles, anterior scutellar bristles divergent, D. aracicas and D. araganae. Buria & Pavan (1953), followed by Wheeler (1968), considered D. talamancana as member of the D. annulimana species group. Another species, D. breueriae, was included in the group by Rocha (1971). D. aragua described below is a new member in the annulimana group. The type specimen of the D. larasita Schiner recently loaned to us by the Naturhistorischen Museum in Vienna, will be subject of a forthcoming paper. We anticipate here that it clearly belongs to the annulimana group and it is different from D. annulimana sensu Dobzhansky & Pavan (1943).

Drosophila (Drosophila) aragua, sp. n.
(Figs. 1, 2)

Drosophila sp Z Vilela et al., 1960. 839.

Type-material. Holotype male, labelled: “Brasil-Sp, 10 Km S. Santa Maria da Serra, 22°40’S, 48°12’W, F. M. Sene col., 15.VIII.1960/HOLÓTIPO Drosophila aragua”; paratypes (10 ♂, 21 ♀): same data as holotype. All paratypes but two were originated from F2 and F3 generations of an isofemale line. Holotype, one male paratype and the female which gave origin to the isofemale line were wild-caught. An additional paratype is labelled: “Argentina-Tuc, 14 Km N. Tucumán, 26º39’S, 65º14’W, Sene & Vilela col., 25-26.X.1978/PARÁTIPO Drosophila aragua”. The postabdomen of holotype and 8 paratypes (4 ♂, 4 ♀) were removed, dissected and placed in microvials attached to the respective specimens. All the specimens are in the “Museu de Zooloología da Universidade de São Paulo” (São Paulo).

External characters of imagines. ♂, ♀. Arista with 3-5 dorsal and 2-3 ventral branches plus the terminal fork. Antennae dark brown. Front brown, pollinose. Orbita lighter, Middle orbital with 1/2 of other two; base of middle orbital in front of and laterally from that of anterior. Second oral varying from 1/4 to the same size of first; sometimes 3 large orals of about the same size. Face brown, pollinose. Carina slightly broad below, sulcate, pollinose.

1. Departamento de Biologia, Instituto de Biociências, Universidade de São Pau-lo, Caixa Postal 11461, São Paulo, SP.
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Figure 1. Drosophila arenata, sp. nov. (holotype): A, epandrium, cerci and surstyli, lateroblique aspect; B, hypandrium, lateroblique aspect; C-E, aedeagus and aedeagal apodeme, several aspects.
Palpi dark brown, pollinose with bristles on ventral surface. Cheeks brown, pollinose, their greatest width about 1/3 greatest diameter of eyes. Eyes brown, with short black piles.

Acrostichal hairs in 8 irregular rows. Two long prescutellars. Anterior scutellars convergent. Mesonotum yellowish brown, pollinose, bristles arising from dark brown spots somewhat fused in anterior and lateral region. Scutellum dark brown, pollinose, with some irregular yellowish brown spots. Pleurae dark brown, pollinose. Sterno-index about 0.3. Halteres yellowish brown. Coxae and femora brown; tibiae proximally brown, distally dark brown; first segment of tarsi proximally yellow, distally dark brown. 2nd and 3rd yellowish, 4th light brown and 5th dark brown. Apical bristles on first and second tibiae, preapicals on all three.

Abdomen brown, posterior margin of tergite with a narrow, irregular, pollinose, light stripe and anterior margin with diffuse pollinose spots.

Wings light brown, surface slightly wrinkled. Costal index about 3.3; 4th vein index about 1.8; 5c index about 1.2; 4v index about 0.7; M index about 0.4. Apex of first costal section black, swallowed, with two slightly enlarged bristles. Third costal section with heavy bristles on its basal 2/3. Third and fourth longitudinal veins slightly convergent. Crossveins clouded.

Wings length about 3.3 mm ($\sigma$); 3.4 mm ($\varphi$).

Body length (dried specimens) about 4.6 mm ($\sigma$); 4.7 mm ($\varphi$).

Internal characters of imagines and genitalia. $\sigma$. Epandrium partially micropubescent; lower portion with about 22 bristles; upper portion usually without bristles. Cercus partially micropubescent, fused at lower 1/3. Surstylus partially micropubescent with about 11 primary teeth, 18 secondary teeth and 14 marginal bristles. There is no distinct difference between marginal bristles and secondary teeth.

Hyandrium slightly shorter than epandrium; bow of hyandrium absent; conchae of hyandrium bearing one anterior bristle.

Figure 2. Drosophila aragua, sp. nov. (holotype): Surstyl, posterior aspect.
Aedeagus with a pair of short, subapical, straight spurs; rough plate of posterior apex about 1/5 of its dorsoventral width; dorsal region convex with a pair of wing-shaped projections; dorsal cleft occupying all length but the apex. Aedeagal apodeme and ventral rod broadly fused. Gonopods well-developed with 2-3 small subapical sensilla, linked to conchae of hypandrium by membranous tissue. Phallosomal index about 1.4.

? Ovopositor apically pointed with about 18 marginal and 7 discl teeth. Spermathecae light bulb-shaped, weakly sclerotized with irregular, circular ridges on proximal region; distal surface covered with small bristles; duct deeply invaginated.

Eos. Four filaments.

Puparia. Reddish brown; horn index about 18.6; each anterior sprigue with about 11 branches.

Chromosomes. Not studied.

Life cycle. About 38 days (at 25°C); maturing time about 20 days, larval stage about 9 days, and pupal stage about 6 days.

Relationships. D. aragua belongs to the annulimana group of the subgenus Drosophila. The presence of a rough plate on the apex of the aedeagus and small bristles covering distal surface of spermathecae relates this species to D. annulimana Duda and D. araicus Pavan & Naernur, from which it differs chiefly in the shape of the aedeagus.

Distribution. Known from the type-locality in the state of São Paulo, Brazil, and from the province of Tucumán, Argentina (D. sp Z of Vielea et al., 1960: 839).

Etymology. The species name refers to the toponym “Ribeirão Aráku”, a creek nearby the type-locality.

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REFERENCES


