

TWO NEW NEOTROPICAL SPECIES OF THE "REPLETA GROUP"  
OF THE GENUS *DROSOPHILA* (DIPTERA, DROSOPHILIDADE)<sup>1</sup>

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ABSTRACT

*Drosophila serido*, sp. nov. and *Drosophila borborema*, sp. nov. (Type-locality: Milagres, State of Bahia), belonging to the "repleta group" of the genus *Drosophila*, are described. Both are very similar in external morphology but are easily distinguished by the structure of the male genitalia.

*Drosophila serido*, sp. n.

*External characters of imagines* — ♂. Arista with 6-8 branches, 7 being the usual number; antennae yellowish with the bases dark brown; front light brown, pollinose. Anterior, middle orbital and posterior vertical arising from a yellowish area. Hairs of anterior orbits, posterior orbital, anterior vertical and postvertical with basal dark spots. Middle orbital with about 1/2 length of other two. Second oral about 1/2 length of first. Carina broad below, sulcate. Falpi pale yellow, with several bristles. Face yellowish brown. Cheeks yellowish gray; their greatest width about 1/4 greatest diameter of eyes. Eyes vermilion-like (Patterson, 1943), with short black pile.

Acrostical hairs in 8 rows; no prescutellars; anterior scutellars convergent. Sterno-index about 0.8. Mesonotum gray, pollinose, bristles arising from dark spots with a slight tendency to fuse. Scutellum dark brown, pleurae dark brown. Halteres pale yellow. Legs uniform dark brown. Apical bristles on first and second tibiae, preapicals on all three.

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Abdomen pale yellow, each segment with an interrupted, wide, dark brown band (the two colors strongly contrasting) which bends to the anterior margin at the angle of the tergite, leaving a small irregular pale area.

Wings clear, veins brown; apex on first costal section black. Costal index about 2.8; 4th vein index about 1.8; 5X index about 1.4; 4C index about 0.5. Two well-developed bristles at apex of first costal section; third costal section with heavy bristles on its basal 1/3.

Length of body 2.3-3.0 mm (in live specimens); wings 2.1-2.7 mm.

*Internal characters of imagines and genitalia* — Testes orange, with 2 1/2 inner and 2 1/2 outer coils. Genital arch of male with bristles (10-15) only in the ventral region (figs. 1-2). Anal plate not fused with the posterior margin of genital arch (figs. 1-2). Forceps with 10-12 primary teeth (Hsu, 1949), 5-7 marginal bristles (figs. 1-2). Figs. 1-3 show various views of penis apparatus and hypandrium. Ventral receptacle with about 15 irregular coils.

*Other characteristics, relationship and distribution* — Eggs with 4 filaments. Puparia brownish, each anterior spiracle with about 14 branches, horn index about 1.9. Relationship — Appears to belong to the *mulleri*-subgroup (Wheeler, 1949; Wasserman, 1962) of the *repleta*-group of the subgenus *Drosophila*. Distribution — We have collected this species at the following places: Junco do Seridó and São José das Espinharas (Paraíba), Bom Jesus and Barra do Maxaranguape (Rio Grande do Norte); Milagres, Cachoeira dos Monteiros, Ibotirama and Barreiras (Bahia); Cabo Frio (Rio de Janeiro); Peruibe (São Paulo); and Miranda (Mato Grosso). Type material from Milagres (Bahia). Holotype and paratypes placed at Museu de Zoologia, Universidade de São Paulo, Brazil. The specific name is derived from Junco do Seridó where a large collection was made.

### *Drosophila borborema*, sp. n.

*External characters of imagines* — ♂. Arista with 6-8 branches, 7 being the usual number. Antennae yellowish, with the bases dark brown. Front light brown (darker than *Drosophila serido*), pollinose. Anterior, middle orbital and posterior vertical arising from a yellowish area. Hairs of anterior orbits, posterior orbital, anterior vertical and postvertical with basal dark spots. Middle orbital with about 1/2 length of other two. Second oral about 1/2 length of first. Carina broad below (narrower above than in *Drosophila serido*) and sulcate. Palpi pale yellow, with several bristles. Face yellowish brown. Cheeks yellowish gray, their greatest width about 1/4 greatest diameter of eyes. Eyes vermilion-like, with short black piles.

Acrostical hairs in 8 rows, no prescutellars. Anterior scutellars convergent. Sterno-index about 0.8. Mesonotum silver gray (more silvery than *Drosophila serido*), pollinose; bristles arising from dark spots with a slight tendency to fuse. Scutellum dark brown. Pleurae dark brown. Halteres pale yellow. Legs uniform dark brown. Apical bristles on first and second tibiae, preapicals on all three.

Abdomen pale yellow, each segment with an interrupted wide dark brown band (the two colors weakly contrasting) which bends

to the anterior margin at the angle of the tergite, leaving a small irregular and diffuse pale yellow area (usually missing on the 6th).

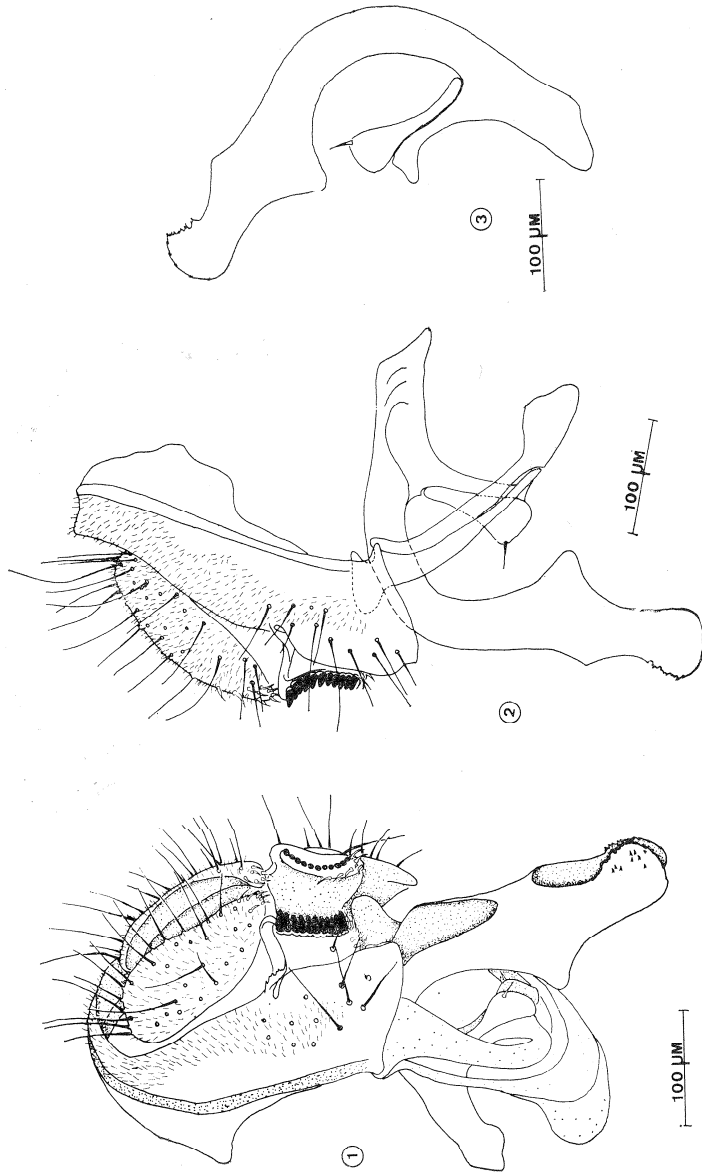
Wings clear, veins brown; apex on first costal section black. Costal index about 2.7; 4th vein index about 1.9; 5X index about 1.4; 4C index about 0.5. Two well-developed bristles at apex of first costal section; third costal section with heavy bristles on its basal 1/3. Length of body 2.2-2.8 mm (in live specimen), wings 2.0-2.5 mm.

*Internal characters of imagines and genitalia* — Testes orange, with 1 1/2 inner and 2 1/2 outer coils. Genital arch of male with bristles (6-11) only in the ventral region (figs. 4-5). Anal plate not fused with the posterior margin of the genital arch (figs. 4-5). Forceps with 8-11 primary teeth, 6-8 marginal bristles (figs. 4-5). Figs. 4-6 show various views of penis apparatus and hypandrium.

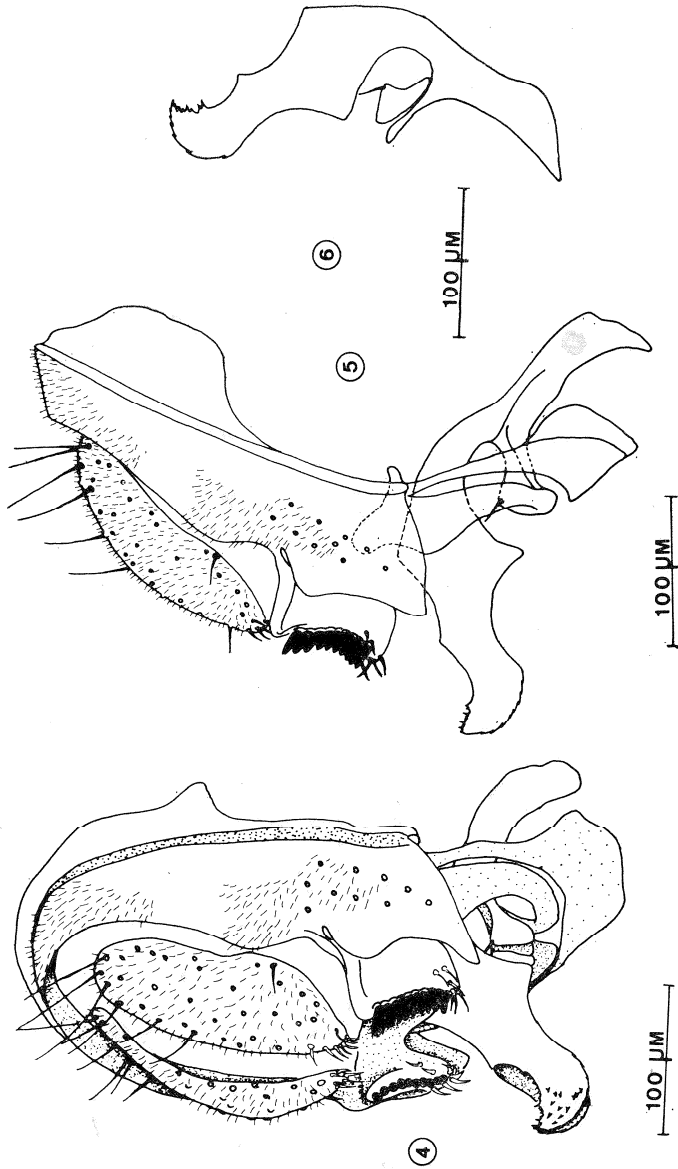
*Relationship and distribution* — Appears to belong to the *mulleri*-subgroup of the *repleta*-group of the subgenus *Drosophila*. Distribution — We have collected this species at the following places: Bom Jesus (Rio Grande do Norte); Junco do Seridó (Paraíba); Milagres and Cachoeira dos Monteiros (Bahia). Holotype and paratypes placed at Museu de Zoologia, Universidade de São Paulo, Brazil. The specific name is derived from Chapada da Borborema (highlands) where the city of Junco do Seridó is located.

#### REFERENCES

- Hsu, T. C., 1949. The external genital apparatus of male Drosophilidae in relation to systematics. *Univ. Texas Publ.* 4920: 80-142.
- Patterson, J. T., 1943. The Drosophilidae of the Southwest. *Ibidem* 4313: 7-214.
- Wasserman, M., 1962. V. Cytological studies of the *repleta*-group of the genus *Drosophila*: V. The *mulleri*-subgroup. *Ibidem* 6205: 85-117.
- Wheeler, M. R., 1949. Taxonomic studies on the Drosophilidae. *Ibidem* 4920: 157-195.



*Drosophila serido*, sp. nov.; male genitalia: fig. 1, semilateral view; fig. 2, lateral view; fig. 3, penis, lateral view.



*Drosophila borborema*, sp. nov.; male genitalia: fig. 4, semilateral view; fig. 5, lateral view; fig. 6, penis, lateral view.