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RHYNCHOSCIARA PAPAVEROI, A NEW BRAZILIAN SPECIES (DIPTERA, SCIARIDAE)

Marta Erps Breuer

Abstract

Rhynchosciara papaveroi, *sp. n.* (*type-locality*: *Brazil, Minas Gerais, Monte Verde*) *is described. The new species belongs to Group I* (americana-*like*) *of Breuer* (*1969*). *It differs from all other known species* (*10*) *of the genus in the form of the female hypogynium.*

Some groups of male and female mature larvae of a new species of *Rhynchosciara* were collected in Monte Verde, State of Minas Gerais, Brazil, at an altitude of approximately 1600 m, near a pine plantation, by Miss Thelma Picard, from the Department of Biology, University of São Paulo, in August, 1967. From these groups of larvae only a few adults were obtained. Later, several other larval groups of the same species were collected, but it has been impossible to maintain them in satisfactory conditions for the obtention of additional adults.

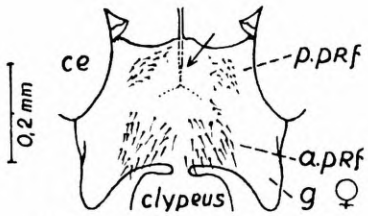
Rhynchosciara papaveroi, sp. n.

Body and wings velvety black. ♀ — body length: 7 mm; wing length: 8.5-9 mm; ♂ — body length: 6 mm, wing length: 7-7.5 mm.

Head: Prefront (Figs. 1, 2) (here intended as the preantennal region of the front) divided by the divergent arms of an inverted Y-shaped sulcus (Fig. 1, shown by an arrow) into an anterior and posterior prefront; anterior prefront covered by irregularly distributed setae; posterior prefront subdivided, in its turn, by the stem of the inverted Y-shaped sulcus into two lateral regions, each one presenting small setae, smaller than those of the anterior prefront, arranged into a group of 15-20 (in 7 specimens examined), medianly localized, but sometimes distributed more towards the superior border of the prefront. Prementum (Fig. 3) with its lateral wing-like expansions well-developed. The three pairs of tentorial arms of the head's endoskeleton present (Fig. 2). Last antennal segment larger than the penultimate.

Wing (Fig. 4): Setae on C, R, R_1, R_5, section y (characteristic of the genus *Rhynchosciara*); section x with setae on distal half (2-11 in 12 wings examined); c slightly shorter than 1/2 of w; in all the examined specimens of *Rhynchosciara* (11 species), c is always around 1/2

Departamento de Biologia Geral, Instituto de Biociências, Universidade de São Paulo.



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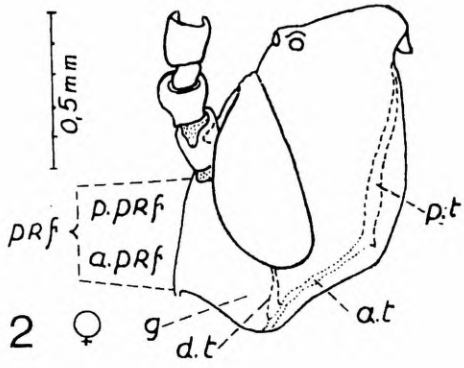

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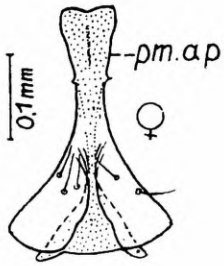

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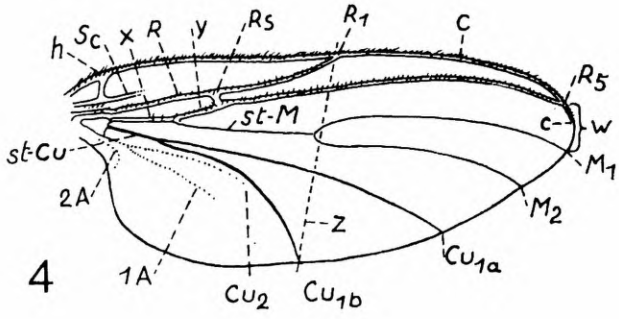

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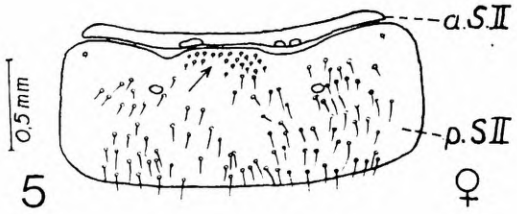

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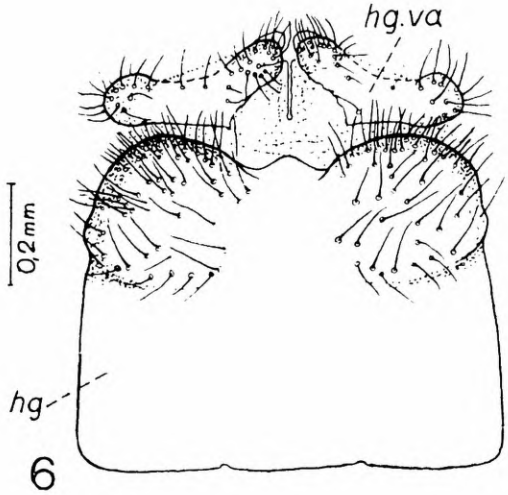

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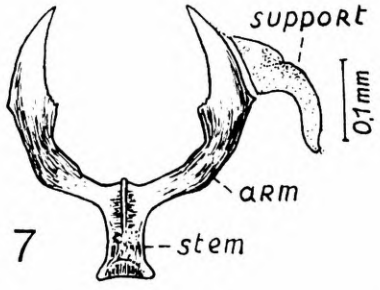

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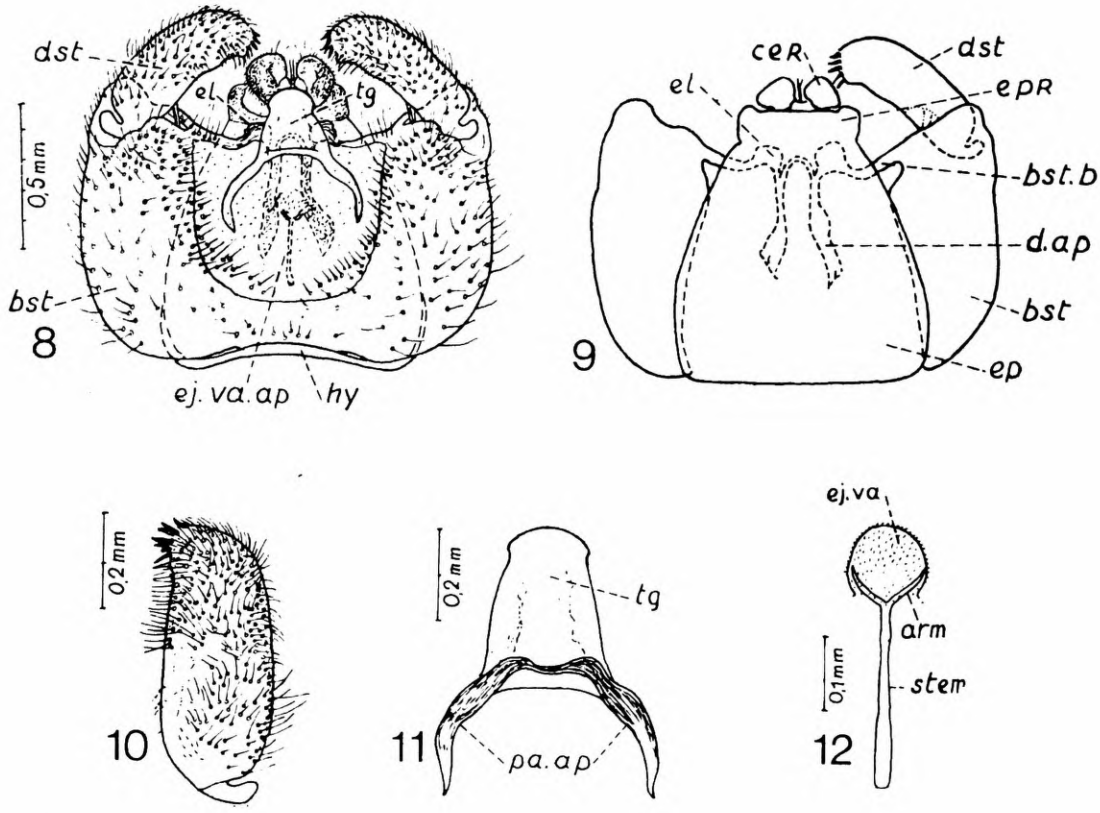
Rhynchosciara papaveroi, sp. n.; 1, prefront; 2, head capsule, lateral view; 3, prementum; 4, wing; 5, abdominal sternite II; 6, hypogynium; 7, vaginal fork with support.



Rhnchosciara papaveroi, sp. n. 8, male terminalia, ventral view; 9, same, dorsal view; 10, dististylus; 11, tegmen with parameral apodeme; 12, ejaculatory valve with apodeme.

of w, and this confirms Frey's statement (1942: 31) that this is a generic character; st-Cu shorter than section x; z passing slightly beyond base of bifurcation of M; length of arms of the fork of M/sh-M: $\bar{x}$ = 1.66 in 9 wings of ♀, $\bar{x}$ = 1.82 in 3 wings of ♂, meaning that st-M is shorter than the length of the arms of the bifurcation of M; in all the species examined this is observed, with the only exception of *R. argentiniensis* Lengersdorf.

Pre-abdomen: Very small setiform sense organs (Fig. 5, indicated by an arrow) surrounded by a relatively large halo, in the number of 6, 8, and 23, in 3 ♀, and 11 in 1 ♂, present in the median anterior part of the second sternite's posterior portion. The variation in the number of the setiform sense organs in *papaveroi,* sp. n., invalidates this character as distinctive between Groups I and II, which were defined as having small or high numbers of organs, respectively (Breuer, 1969).

Female genitalia: Hypogynium (anterior part of the transformed sternite VIII) rectangular (longer axis vertical) (Fig. 6), with a rounded projection at the posterior sides (characteristic for this species), covered with setae; median posterior border with a small triangular projection between the rounded projections. Hypogynal valve (Fig. 6) (posterior part of the transformed sternite VIII) laterally expanded into ovoid lobes, covered with not very dense setae, especially in the anterior portion. Vaginal fork with supports as in Fig. 7.

Male terminalia (Figs. 8, 9). Genitalia: basal inner portion of basistyli fused. Dististyli (Figs. 8, 10) not strongly bent, with 6 and 7 spines. Tegmen (Fig. 11) with posterior border convex, at either side ending into a very small laterally pointed beak with an elbow between the basistylus' bridges (expansion in inner posterior portion of the basistylus) and the dorsal apodemes (Figs. 8, 9). Ejaculatory valve apodeme as in Fig. 12.

Holotype ♀ (wing in slide) and 1 paratype ♀, n.º 1, pinned; paratype n.º 1 with 7 accompanying slides; paratypes 2-7 (n.º 2-4 ♀, n.º 5-7 ♂) boiled in KOH, and preserved in glycerin, with several parts mounted in slides (respectively 7, 9, 4, 3, 4, and 8 slides), all from Monte Verde, Minas Gerais (1.600 m), VIII.1967 (T. Picard), deposited in the Museu de Zoologia da Universidade de São Paulo.

Some other specimens were in a bad condition, and were not included in the typical series.

TAXONOMIC DISCUSSION

The genus *Rhynchosciara* has up to the present, the following recognized species (according to Breuer, 1969):

Group I (*americana*-like)

1. *americana* (Wiedemann) (= *atra* Macquart = *angelae* Nonato & Pavan)
2. *baschanti* Breuer
3. *villosa* Rübsaamen
4. *argentiniensis* Lengersdorf
5. *guimaraesi* Breuer

Group II (*milleri*-like)

6. *milleri* Pavan & Breuer
7. *grelleti* Breuer

Group III (*mathildae*-like)

8. *brevicornis* Rübsaamen
9. *busaccai* Breuer
10. *mathildae* Breuer

R. argentiniensis and *guimaraesi* are provisionally placed in Group I, as the division of the groups is primarily based in the form of the female hypogynal valve, and those two species are only known from the males. However, these two species have been placed here because they have setae in section x of the wing, and because *guimaraesi* is similar to *baschanti* Breuer. Walker's species, *cognata, praecipua, primogenita,* and *propinqua,* are unrecognized.

I consider *papaveroi,* sp. n., as belonging to Group I, for the following reasons:

(i) The hypogynal valve has lateral expansions forming ovoid lobes covered with setae;

(ii) The larvae spin cocoons juxtaposed, the all group, as seen from above, having the appearance of a honey-comb, as in the species *R. americana* and *baschanti*. Larvae of *milleri* (Group II) pupate isolately. Larvae of Group II are unknown. The larvae of *papaveroi*, sp. n., are cream colored, when mature, differing in this respect from all the other known mature larvae (*americana* larvae are brownish-red; *baschanti* more reddish than in *americana*; *milleri* dark-greyish);

(iii) Three pairs of tentorial arms are present.

R. papaveroi, sp. n., differs from all other species of Group I (*americana*-like) in the form of the female genitalia; also by the male genitalia, in the form of the tegmen. On the other hand, it seems to be related to *baschanti* and *guimaraesi*, in the presence of an elbow between the basistylus' bridges and the dorsal apodemes.

The species name is given in honour of Mr. Nelson Papavero (Museu de Zoologia da Universidade de São Paulo).

List of abbreviations

The following abbreviations are used here in the illustrations:

1A — 1st anal vein
2A — 2nd anal vein
ap — apodeme
a. prf — anterior prefront
a. SII — anterior portion of sternite II
a. t — anterior arm of tentorium

bst — basistylus
bst. b — basistylus' bridge

C — costa
c — end of C in w
ce — compound eye
cer — cercus
Cu_{1a} — cubitus 1a
Cu_{1b} — cubitus 1b
Cu_2 — cubitus 2

d. ap — dorsal apodeme
dst — dististylus
d. t — dorsal arm of tentorium

ej. va — ejaculatory valve
ej. va ap — ejaculatory valve apodeme
el — elbow
ep — epandrium
epr — epiproct

g — gena

h — humeral cross-vein
hg — hypogynium
hg. va — hypogynal valve
hy — hypandrium

M_1 — media 1
M_2 — media 2

pa. ap — parameral apodeme
pm. ap — premental apodeme
p. prf — posterior prefront
prf — prefront
p. SII — posterior portion of sternite II
p. t — posterior arm of tentorium

R — radius
R_1 — radial 1
R_5 — radial 5
R_s — radial sector

Sc — subcosta
st-Cu — stem of cubitus
st-M — stem of Media

tg — tegmen

w — section between the ends of R_5 and M_1

x — section x

y — scetion y

z — line drawn from end of R_1 in C to the end of Cu_{1b}

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