Description of a New Species of Sand Fly *Lutzomyia (Pressatia) mamedei* n.sp. (Diptera: Psychodidae) from Rio de Janeiro, Brazil

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A new species of sand fly from Santa Cruz, State of Rio de Janeiro, Brazil is described as Lutzomyia (Pressatia) mamedei.

Key words: diptera - psychodidae - phlebotominae - *Lutzomyia (Pressatia) mamedei* n.sp. - morphological description

From a sand fly female captured in Santa Cruz, municipality of Rio de Janeiro city, in April 1980, 30 eggs were obtained which originated female sand flies of an unknown species. We propose the name *Lutzomyia (Pressatia) mamedei* n.sp. in honor of Mr Joaquim Mamede de Carvalho e Silva.

Lutzomyia (Pressatia) mamedei n.sp.
(Figs 1-7)

Holotype female. Sand fly with 2.2 mm and very pale in colour. Head hight including clypeus 0.35 mm long, 0.38 mm wide. Eyes separated by 0.15 mm. Clypeus 0.11 mm long bearing 18 setae. Head: clypeus ratio 3.18; 1. Labrum, measured from the distal margin of the clypeus 0.23 mm long. Lengths of flagellomeres: I - 0.300 mm; II - 0.135 mm; III - 0.130 mm; IV - 0.110 mm; V - 0.120 mm; VI - 0.120 mm; VII - 0.120 mm; VIII - 0.120 mm; IX - 0.105 mm; X - 0.100 mm; XI - 0.115 mm; XII - 0.100 mm; XIII - 0.080 mm; XIV - 0.060 mm. Ratio between length of flagellomere I: length of labrum - 1.28:1. Ascoids paired on flagellomeres I-XIII, absent from flagellomere XIV - 0.11 mm long on flagellomere II, extending to the articulation with flagellomere III. Total palpal length 0.77 mm. Lengths of palpomeres: 1 - 0.05 mm; 2 - 0.12 mm; 3 - 0.15 mm; 4 - 0.11 mm; 5 - 0.34 mm. Palpal formula 1.4.2.3.5, with palpomere 5 longer than 3 + 4. Cibarium with four irregular horizontal teeth and 7 vertical teeth and without lateral denticles. Pigment patch poorly defined. Cibarial arch absent. Pharynx unarmed 0.17 mm long and with maximum width of 0.05 mm. Thorax, measured from the anterior edge of the mesonotum to the posterior margin of the scutellum, 0.56 mm long. Thorax totally infuscated. Wing length 1.75 mm, maximum width 0.56 mm, ratio between wing length and maximum width = 3.2:1. Lengths of wing sections: R2 (*alpha*) - 0.46 mm; R2+3 (*beta*) - 0.23 mm; R2+3+4 (*gamma*) - 0.49 mm; R1 tip (*delta*) - 0.20 mm. Ratio *alpha:beta* = 2.0:1. Wing pattern: *gamma* > *alpha* > *beta* > *delta*. Legs without special characters; length of anterior femur and tibiae 0.75 mm and 0.75 mm respectively. Abdomen 1.61 mm long. Body of the spermatheca in the form of an irregular round capsule measuring 0.023 mm by 0.025 mm with thin walls, with slight constriction, an well developed "head". Individual spermathecal ducts 0.06 mm long and 0.006 mm wide and strongly chitinized walls. Common duct 0.24 mm long 0.03 mm wide with finely striated membraneous walls.

Type material - Holotype female (slide no. 779): captured in the district of Santa Cruz, municipality of Rio de Janeiro city on 24 April 1990, with mouth aspirator SM Oliveira coll. Paratype females (slides nos. 230, 376, 908, 1379) from a colony maintened in our laboratory. Holotype and paratypes in the Belo Horizonte reference collections of sand flies at Centro de Pesquisas "René Rachou", Fundação Oswaldo Cruz.

DISCUSSION

The subgenus *Pressatia* Mangabeira 1942 is characterized by palpomere 5 longer than palps 3 + 4. Antenal ascoids simple and cibarium with four horizontal teeth and distinct group of vertical

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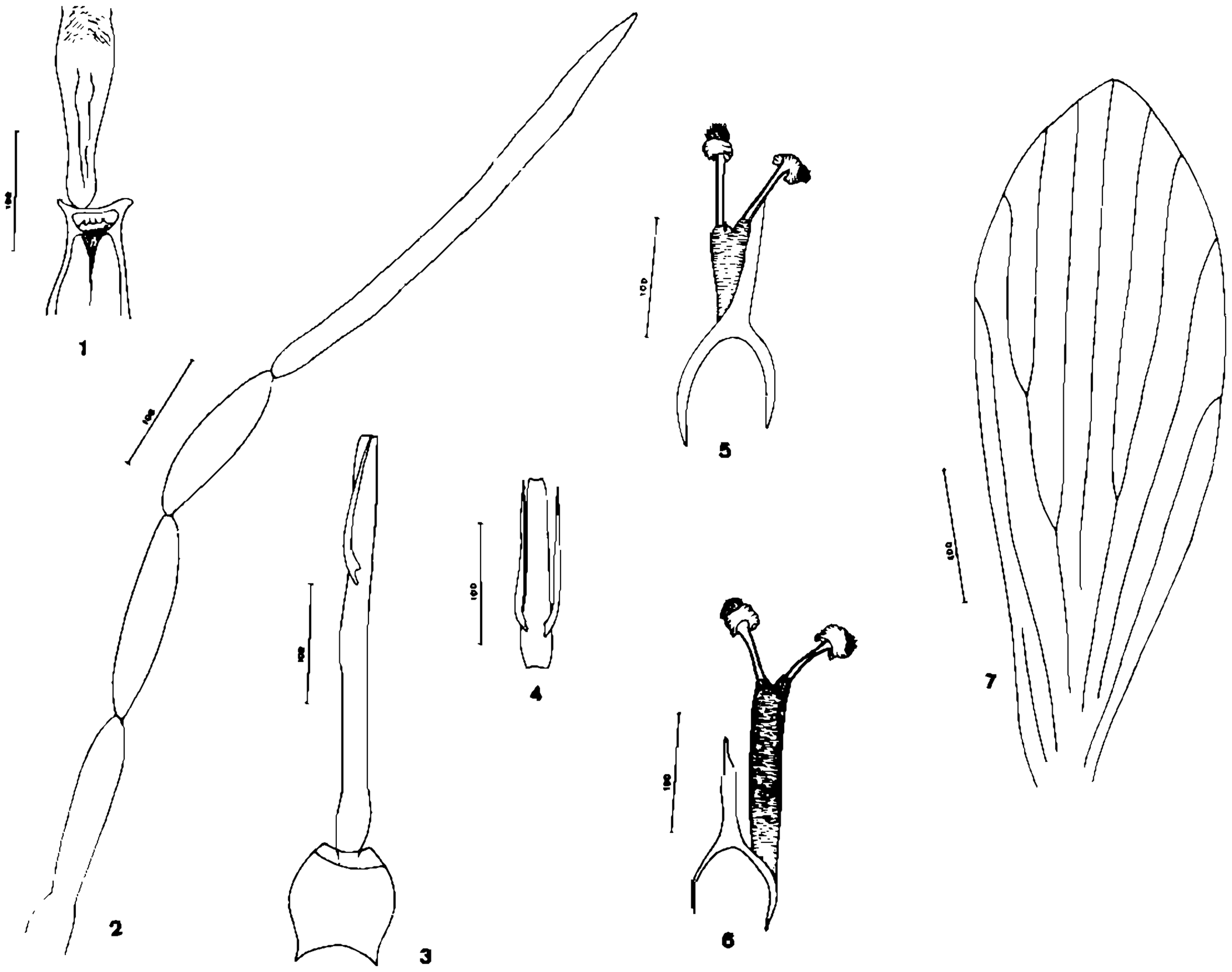

Lutzomyia (Pressatia) mamedei Oliveira et al. n. sp. Fig. 1: cibarium. Fig. 2: palp. Fig. 3: flagellomere I. Fig. 4: flagellomere II showing ascoids. Figs 5,6: spermathecae and genital fork. Fig. 7: wing. Figs 2-4, 7 from holotype (slide no. 779). Fig. 1 from paratype (slide no. 230). Fig. 6 from a dissected female (slide LM SPM). Scale is µm.

teeth on each side of cibarium. Pharynx unarmed. Body of spermatheca smooth walled with protruding terminal knob. Individual ducts with chitinized wall much shorter and thinner than common duct. Seven species are known in the subgenus (Bermudez et al. 1993): *Lutzomyia calcarata, L. camposi, L. choti, L. dysponeta, L. equatorialis, L. triacantha* and *L. trispinosa*. Based on morphological characters *L. mamedei* is included in the subgenus *Pressatia* and differs from all described females in the subgenus (*L. calcarata, L. camposi, L. triacantha, L. dysponeta* and *L. choti*). The spermathecae of these species are generally similar but in *L. mamedei* the common duct is finely striated with the body of spermathecae distinct from all known females.

It should be noted that *L. mamedei* could not be the undescribed females of *L. equatorialis* or *L. trispinosa* in aspects such as: the general aspect and measurements of *L. mamedei* do not match with the original description of the males of *L. equatorialis* and *L. trispinosa*; the geographical distribution of these species does not correspond to that of *L. mamedei*; laboratory colony of *L. mamedei* never produced males suggesting this species to be parthenogenetic (aspect to be published elsewhere).

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