

A NEW NEOTROPICAL BITING MIDGE OF THE *CULICOIDES*
DEBILIPALPIS GROUP (DIPTERA: CERATOPOGONIDAE)

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This paper is based on specimens collected by the second author during an investigation of the vector of *Trypanosoma minasense* in the marmoset *Callithrix penicillata*. The material given to the first author for determination is described here as new.

Culicoides espinolai Felipe-Bauer & Lourenço-de-Oliveira, new species (Figs. 1-9).

Female: Wing length 1.18 (1.03 - 1.31, n = 14) mm; breadth 0.50 (0.44 - 0.55, n = 14) mm. **Head:** Dark brown. Eyes (Fig. 2) broadly separated by the width of 2 ommatidial facets, with short interfacetal hairs. Antenna brown (Fig. 3) with lengths of flagellar segments in proportion of 17-13-14-15-14-15-15-16-16-16-18-18-31; antennal ratio 0.84 (0.77 - 0.89, n = 14), sensilla coeloconica present on segments 3,8 - 10; double. Palpus brown (Fig. 7) with lengths of segments in proportion of 9-30-30-11-13; third segment slender, slightly swollen distally, with a small deep sensory pit on distal portion; palpal ratio 3.1 (2.5 - 3.4, n = 14). Proboscis long, P/H ratio 1.00 (0.97 - 1.12, n = 14), mandible with 14 - 17 teeth. **Thorax:** Dark brown, scutum without prominent pattern in slide mounted. **Legs** (Figs. 4 - 6) brown, knee spots brown; femora uniformly brown to tips, all tibiae with subbasal narrow pale rings and hind tibia with a narrow, faint apical pale ring; hind tibial comb (Fig. 9) with 4 spines, the two nearest the spur longest, subequal. **Wing** (Fig. 1) with pattern as figured; pale spot over r-m crossvein extending from vein M to costal margin; the two poststigmatic pale spots in cell R5 separated, the posterior one located slightly proximad to the anterior one, the distal pale spot narrow and transverse lying in the middle of distal portion of cell R5; cell M1 with 2 pale spots, the distal one lying far from wing margin; cell M2 with a pale spot covering vein M1 + 2 in base, a faint pale spot lying adjacent to midportion of mediocubital stem, a round pale spot at tip of cell

near wing margin and a pale spot lying behind medial fork and one in front of mediocubital fork, this last also absent in some specimens; cell M4 with a round pale spot near wing margin; anal cell with a round pale spot in distal portion and a faint pale area in the base; macrotrichia moderately numerous in the distal third of the wing, costal ratio 0.61 (0.59 - 0.62, n = 14). Halter pale. **Abdomen:** Dark brown. Spermathecae (Fig. 8) 2 plus a long rudimentary third and a sclerotized ring; ovoid, slightly unequal, greatly sclerotized, measuring 0.057 by 0.043 and 0.048 by 0.036 mm with necks relatively long, stout, and slightly tapering.

Male: Unknown.

Distribution: Brazil.

Types: Holotype ♀, EPAMIG, Faz. Exp. Guimarães Rosa, Felixlândia (18° 46' S 44° 54' W). MG, 28-X-1986. R. Lourenço de Oliveira col., biting man. Paratypes. 13 ♀ ♀, as follows: 5 ♀ ♀, Manga Velha, Vargem Grande, Felixlândia, MG, 29-X-1986. R. Lourenço de Oliveira col., biting on marmoset; 2 ♀ ♀, Ponte Nova, Felixlândia, MG 30-X-1986. R. Lourenço de Oliveira col., biting on marmoset; 3 ♀ ♀, Ponte Nova, MG, 1-XI, 2-XI-1986. R. Lourenço de Oliveira col., biting man; 3 ♀ ♀, Limeira, Felixlândia, MG 3-XI-1986. R. Lourenço de Oliveira col., biting man. [Holotype ♀ (n° 157) and part of paratypes (no. 158 - 166) in Instituto Oswaldo Cruz, Rio de Janeiro, Brazil; 4 paratypes: 1 ♀, Ponte Nova, Felixlândia, MG 30-X-1986. R. Lourenço de Oliveira col., biting on marmoset and 1 ♀, same data except 2-XI-1986, biting man, in National Museum of Natural History, Smithsonian Institution, Washington D.C., USA; 1 ♀, Ponte Nova, Felixlândia, MG, 30-X-1986. R. Lourenço de Oliveira col., biting on marmoset, in Museo de la Plata, Argentina; 1 ♀, Limeira, Felixlândia, MG, 3-XI-1986. R. Lourenço de Oliveira col., biting man, in Depto. de Epidemiologia, Universidade de São Paulo, São Paulo, Brazil.]

Discussion: This species is named in honor of Professor Helio Espínola, entomologist, Federal University of Minas Gerais.

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Culicoides espinolai is a typical member of the *debilipalpis* group, where it most closely resembles *C. insinuatus* Ortiz & Leon (1954, Bol. Inf. Cient. Nac. 7: 564 - 590) and *C. todatangae* Wirth & Blanton (1973, Amazoniana 4 (4): 405 - 470) by the presence of a pale spot in cell M2 lying adjacent to midportion of mediocubital stem. Both species differ from *espinolai* by the greater pilosity of eyes. *C. espinolai* differs from *insinuatus* by the larger size, the aspect of the femora, the reduced size of pale spots in the wing and the greater palpal ratio and proboscis. It differs from *todatangae* by broadly separated eyes and well separated poststigmatic pale spots in cell R5.

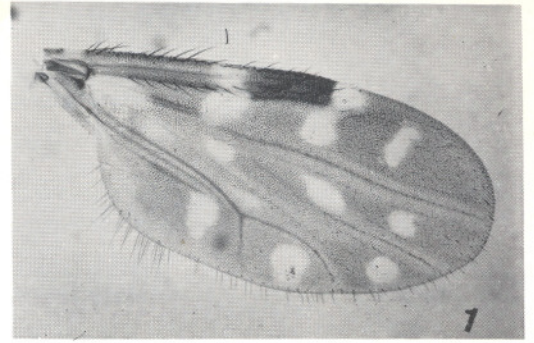
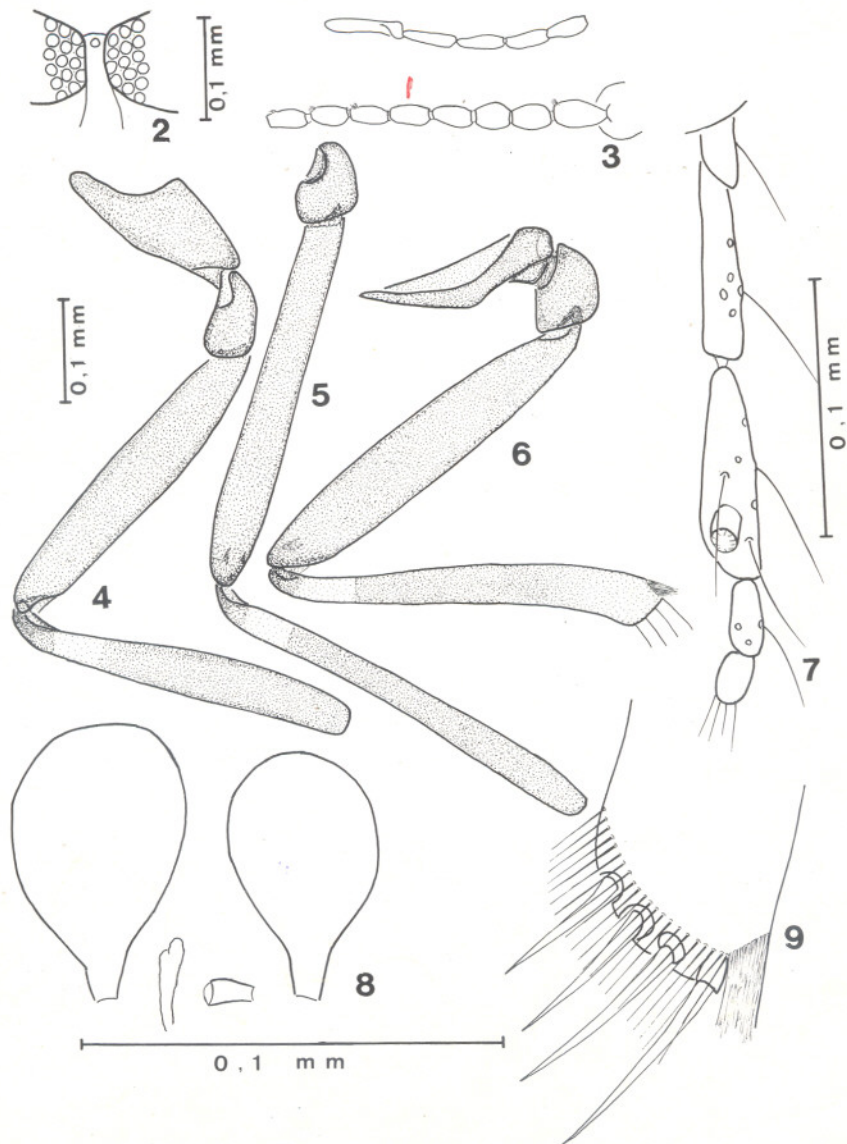


Fig. 1: Photograph of female wing of *Culicoides espinolai* n. sp.



Figs. 2-9: *Culicoides espinolai* n. sp. female; 2, eye separation; 3, antenna, 4, fore leg; 5, mid leg; 6, hind leg; 7, palpus; 8, spermathecae; 9, hind tibial comb.