Culicoides lobatoi, a New Brazilian Biting Midge of the Limai Group (Diptera: Ceratopogonidae)

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A new Brazilian species of the Culicoides limai group, C. lobatoi from Nova Friburgo, State of Rio de Janeiro, is described and illustrated from female specimens.

Key words: Neotropical bloodsucking midge  Culicoides limai group - Culicoides lobatoi sp. n.

Studies of material from light trap collection made by Felippe-Bauer in Nova Friburgo, Rio de Janeiro, Brazil, revealed a new species described here based on female specimens.

In our study we used the terminology employed in the comprehensive revisions on Culicoides, by Wirth and Blanton for Panama (1959), the Amazon Basin (1973), and the West Indies (1974), and the Atlas of wing photographs of Neotropical species, by Wirth et al. (1988).

Culicoides lobatoi Felippe-Bauer, new species
(Figs 1-10)

Palpus (Fig. 6) brown; length of segments in proportion of 8-18-22-7-9; third segment swollen distally, with a large, deep, round sensory pit; palpal ratio 2.2 (1.9-2.3, n = 9). Proboscis dark brown, moderately long, P/H ratio 0.76 (0.71-0.83, n = 9); mandible (Fig. 4) with 14 (n = 6) rarely with 13 (n = 1) or 15 (n = 2) teeth.

Thorax: brown; scutum (Fig. 9) with prominent pattern, including a submedian anterior pair of elongated pale spots and two pairs of lateral pale spots, a prescutellar brown area and a median area with sublateral pair of dark brown bands; scutellum broadly brown in middle, pale on sides; postscutellum pale. Legs (Fig. 10) dark brown, knee spots blackish; fore- and midfemora with subapical and all tibiae with subbasal pale spots; hind tibia with 1/3 apical pale; first tarsomere of the hind leg brown and the further paler; hind tibial comb (Fig. 7) with four spines, the two nearest the spur longest, subequal. Wing (Fig. 1) with pattern as figured; cell R4 with three pale spots, the poststigmatic area and in the middle of cell one large and broadly reaching wing margin, the one narrow and faint pale line in the distal tip of the cell; cell M1 with two pale areas, the proximal large and oval, the distal one broadly reaching wing margin and connected with the distal pale line of the cell R5; cell M2 with area between medial and medio- cubital forks continuously pale connected with the first distal pale spot of cell, the second distal pale spot larger than first and meeting wing margin; cell M4 with a broad rounded pale spot extending from vein M1+4 to wing margin; vein M1 with a faint pale streak; anal cell with one large and strangled pale spot in distal portion, extending from vein Cu2 to margin of the cell; base of the wing with a pale spot extending broadly from costal vein to margin of anal cell; macrotrichia moderately dense on distal half of the wing, including anal cell; costal ratio 0.58 (0.54-0.59, n = 8); halter pale.

Abdomen: dark brown. Spermathecae (Fig. 8) two plus rudimentary 3rd and sclerotized ring; ovoid

Female: wing length 1.03 (0.95-1.08, n = 8) mm; breadth 0.52 (0.46-0.54, n = 8) mm.

Head: dark brown. Eyes (Fig. 3) slightly separated by a distance of 1/3 ommatidial facet, baric. Antenna (Figs 2, 5) brown except on the first 2/3 of the segments 4-7, which are paler; lengths of flagellar segments in proportion of 16-14-16-17-16-16-16-16-16-18-18-31; antennal ratio 0.77 (0.74-0.78, n = 7); sensilla coeloconica present on segments 3, 8-10, double on 3, triple on 9-10, and double or as often triple on 8.
**Culicoides lobatoi** sp. n., female. Fig. 2: antenna. Fig. 3: eye separation. Fig. 4: mandible. Fig. 5: antennal segments 8-10. Fig. 6: palpus. Fig. 7: hind tibial comb. Fig. 8: spermathecae. Fig. 9: mesonotum. Fig. 10: legs (left to right) hind, mid and fore.

with long well sclerotized necks, slightly unequal, measuring 0.038 by 0.048 mm and 0.033 by 0.043 mm, plus necks 0.011 mm long (n = 9); sclerotized ring with length 0.010 mm (n = 9).
Male: unknown.

Distribution: Brazil (Rio de Janeiro).


Etymology: this species is named in honor of Dr Wladimir Lobato Paraense, in recognition of his important contributions to the study of the Brazilian planorbid molluscs during the past 40 years.

Discussion: this species most closely resembles C. limai Barreto, C. antunesi Forattini and C. boliviensis Spinelli & Wirth by general aspects of the wings. C. lobatoi, antunesi and boliviensis have similar pale markings on all legs while C. limai presents an additional pale spot on subapical portion of hind femur. C. lobatoi presents P/H ratio greater than in limai, antunesi, and boliviensis, while these three species have sensilla pattern 3,7-10 and antennal ratio greater than 1, C. lobatoi shows values of 3,8-10 and 0.77 respectively.

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REFERENCES


