Two new species of Bakerius from the Amazon Basin (Homoptera: Aleyrodidae)

Abstract

Two new species of Bakerius are described and comparisons are made with their nearest relatives.

INTRODUCTION

In Aleyrodides do Brasil, Bondar (1923) described the new genus Bakerius of the subfamily Aleurodinae. Adults are characterized as having wings with complete venation (R, Rs, M and Cu), antennae with seven segments, and forewing (tengmen) elongate and without concave indentations along the anal margin. Bondar described three species in his new genus. In 1928, he added three more species of Bakerius, and in 1938 Hempel added one more. With the addition of the present two new species, the genus Bakerius contains nine species listed below.

Bakerius amazonicus, n.sp. — Brazil (Amazonas)

KEY TO ADULTS OF BAKERIUS

1a. Hindwings bearing distinctive spots (Fig. 6, 9-14) .......................................................... 2
1b. Hindwings without distinctive spots (Fig. 1-5) .......................................................... B. maculatus n. sp.
2a. Forewing bearing only small, distinctive spots (Fig. 9-11) .................................................. 3
2b. Forewing bearing diffuse spots and clouded areas (Fig. 6, 12-14) .......................... 6
3a. In forewing, only one spot between R and Rs (Fig. 9) .................................................. B. calmoni Bondar
3b. In forewing, two spots between R and Rs (Fig. 10, 11) .................................................. 4
4a. In forewing, basal costal spot isolated from margin (Fig. 10) ........................................ B. sublatus Bondar
4b. In forewing, basal costal spot contiguous with margin (Fig. 11) .................................. 5
5a. In hindwing, eight spots present; forewing length less than 1.9 mm (Fig. 11) ........ B. attenuatus Bondar
5b. In hindwing, seven spots present; forewing length more than 2.0 mm ................................ B. glandulosus Hempel
6a. In forewing, complete apical band and subapical band from R to costal margin (Fig. 12) B. phrygilanthi Bondar

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6b. In forewing, apical band interrupted and subapical band appearing as spot between R and costal margin (Fig. 6, 13, 14) ........................................ 7
7a. In forewing, basal half of costal area without spots, and without spots near apical margin (Fig. 13) .......................................................... B. conspurcatus (End.)
7b. In forewing, basal half of costal area bearing spots, and spots at or near apical margin (Fig. 6, 14) .......................................................... B. sanguineus Bondar
8a. In forewing, four large spots between R and M; in hindwing only tiny spots between R and Rs (Fig. 14) ........................................ 8
8b. In forewing, only one large and two intermediate sized spots between R and Rs (Fig. 6) .......................................................... B. amazonicus n. sp.

Bakerius maculatus Penny & Arias, n. sp. (Fig. 1-5)

Description based on 1 male, 1 female on slides and 1 male in alcohol. Holotype male and allotype female in the Systematic Entomology Collections of INPA, Manaus. Paratype male in the U.S. National Museum, Washington, D.C., U.S.A.

Head: Acutely angular in dorsal aspect. Vertex not elevated above eyes, color creamy white with dark fuscous anterior border. Ocelli near compound eyes on occiput, clear with fuscous border. Compound eyes large, dark fuscous, strongly emarginate anteriorly. Antennae consisting of small, quadrinate, pale yellow scape; rectangular, pale yellow pedicel; and five long, thin flagellar segments. Frons bulbously inflated, pale yellow. Rostrum three-segmented; attaining base of forelegs; pale yellow, except extreme tip dark fuscous.


Legs: Pale yellow, basally grouped close together; coxae large. Two tarsal segments; first about twice as long as second segment in males, of equal length in female.

Tegmen (Forewing): About twice as long as wide, without concave sculpting of any sort. Radius (R) and radial sector (Rs) veins complete. Male with auxiliary crossvein between R and costal margin. Media (M) complete, reaching apical margin of wing. Cubitus (Cu) present as clear line from wing base to anal margin. Anal vein apparently absent. Base color pale yellow; four fuscous maculations along costal margin; one fuscous maculation between R and Rs; three fuscous maculations along anal margin.

Hindwing: R, Rs and faint indication of M; pale yellow; without maculations.

Abdomen of Male: Seven abdominal segments, pale yellow; dark orange marking ventrally on segment II and laterally at base of segment VII. Caudal margin of segment VI with strong spine ventrally, without knob dorsally. Segment VII with raised knob dorsally at mid-length, pale fuscous. External male genitalia consisting of two long, lateral lobes, tapering to acute, inwardly-pointed terminal points; color pale yellow. Median genital filament short, thin, yellowish, curved dorsally.

Abdomen of Female: Seven pale yellow abdominal segments closely grouped together. Ventral spine terminal, upturned.

Body Length: Male, 4.0 mm (excluding genital lobes); female, 2.8 mm.

Tegmen Length: Male, 3.2 mm; female, 3.0 mm.

Variation: Males have an auxiliary crossvein between R and costal margin, which is missing in the female. There is also sexual dimorphism.

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in wing maculations and in the length of the second tarsal segment, when compared with the first segment.

Geographical Distribution: Holotype and paratype males were both collected at Brazil: Amazonas, Manaus, by Jorge R. Arias. The allotype female was collected at Brazil: Amazonas, 60 km north of Manaus, by Norman D. Penny.

Temporal Distribution: Holotype male and allotype female were collected on 11 and 9 Oct. 1979, while the paratype male was collected on 23 Oct. 1979, indicating a possible October emergence of this species.

Ecology: The holotype and paratype males were taken from a Malaise trap in secondary forest on the INPA campus. The allotype was collected with an aerial net on understory vegetation in a primary forest.

Bakerius maculatus appears to be most closely related to B. attenuatus Bondar and other spotted-winged species, but differs from all others by the lack of spots on the hindwings. The name maculatus comes from the Latin word meaning spot, referring to the wing maculations.

Bakerius amazonicus Penny & Arias, n. sp. (Fig. 6-8)

Description based on 1 female on a slide. Holotype deposited in the Systematic Entomology Collections of INPA, Manaus.

Head: Acutely angular in dorsal aspect. Vertex not elevated above eyes, pale yellow with dark fuscous anterior border. Compound eyes large, dark fuscous, strongly emarginate anteriorly. Ocelli near compound eyes on occiput, clear with fuscous border. Antennae consisting of small, quadrate, pale yellow scape; e-
longate, pale yellow pedicel and five thin, elongate, pale yellow flagellomeres. Frons bulbously inflated, pale yellow. Rostrum three-segmented; attaining base of forelegs; pale yellow, except extreme tip dark fuscous.


Legs: Basally grouped close together, with large coxae. All legs pale yellow. Two subequal tarsal segments.

Tegmen (Forewing): About twice as long as wide, without concave sculpting of any sort. R and Rs complete. M complete and reaching apical margin of wing. Cu present as clear line from wing base to anal margin of wing. Anal vein apparently absent. Base color pale yellow with three large, fuscous maculations along costal margin; three large, fuscous maculations along anal margin; and two large, fuscous maculations along apical margin. These maculations interspersed with numerous smaller, distinct fuscous spots.


Female Body Length: 3.3 mm.

Female Tegmen Length: 3.9 mm.

Geographical Distribution: Holotype female, was collected at Brazil: Amazonas, Manaus, by Jorge R. Arias.

Temporal Distribution: Holotype was collected on 16 October 1979.

Ecology: The holotype was taken from a Malaise trap in secondary forest on the INPA campus.

Fig. 6-8: Bakerius amazonicus n. sp.: 6) — Dorsal view of female; 7) — Lateral view of female; 8 — Ventral view of female.
Bakerius amazonicus appears to be most closely related to B. phrygilanthi and B. sanguineus, but can be separated from these, and all other species of Bakerius by the pattern of maculations of the wings, as given in the key. The name amazonicus refers to the river basin in which the type specimen was collected.

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RESUMO

Duas espécies novas de Bakerius Bondar, 1923 são descritas do Amazonas e algumas comparações são feitas com outras espécies mais relacionadas.

Two new...