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Scientific Note

Host plants of *Aetalion reticulatum* (Linnaeus, 1758) (Hemiptera: Aetalionidae) in Brazil: a new record on *Couroupita guianensis* Aubl. (Lecythidaceae) and occurrence patterns on native and exotic species

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Abstract. *Couroupita guianensis* Aubl. (Lecythidaceae) is a species native to the Amazon region that exhibits exuberant flowering and conspicuous fruits and is widely found in several Brazilian regions as part of urban tree planting. As few phytophagous insects have been recorded in association with *C. guianensis*, this study aimed to report, for the first time, the occurrence of *Aetalion reticulatum* (Linnaeus, 1758) (*Aethalion* [sic] Latreille, 1810) (Hemiptera: Aetalionidae) on *C. guianensis*, and to analyze patterns of occurrence of this insect on native and exotic plants in Brazil. Treehoppers were collected from a *C. guianensis* tree in Brasília, Federal District, Brazil, and subsequently identified as *A. reticulatum*. Eggs, nymphs, and adults were found, indicating that the insect can complete its entire life cycle on this plant. Ants of the genus *Camponotus* Mayr, 1862 (Formicidae: Formicinae: Camponotini) were found in a beneficial association with the treehoppers. This study also shows that records of the treehopper on exotic plant species are more numerous than those on native species in Brazil, although records on native plants have been increasing each year.

Keywords*:* forest entomology, treehopper, phytophagous insects, insect–plant interaction.

Couroupita guianensis Aubl. (Lecythidaceae), commonly known as "abricó-de-macaco" or "cuia-de-macaco", is a plant native to the Amazon region that is widely used in urban landscaping in several Brazilian cities, including Brasília, Federal District (Silva Júnior & Lima 2010; Cabello et al. 2026). In addition to its exuberant flowering, the tree also attracts attention because of its globose fruits, which can weigh up to three kg and serve as a food source for humans and regional wildlife (Silva Júnior & Lima 2010).

Extracts of *C. guianensis* have considerable insecticidal potential, with studies demonstrating mortality effects on larvae of *Helicoverpa armigera* (Hübner, 1809) and *Spodoptera litura* (Fabricius, 1775) (Lepidoptera: Noctuidae) (Baskar et al. 2010; 2015; Ponsankar et al. 2016). Few studies have investigated the insects found in association with *C. guianensis*. Existing studies have focused primarily on pollinators belonging to the orders Hymenoptera and Diptera (Ormond et al. 1981). One of the most relevant studies concerning phytophagous insects found on *C. guianensis* reported the occurrence of larvae, pupae, and adults of *Ptecticus testaceus* (Fabricius, 1805) (Diptera: Stratiomyidae) obtained from fruits of this plant species (Pujol-Luz & Leite 2001). To date, there have been no records of phytophagous insects of the order Hemiptera feeding on *C. guianensis*.

Aetalion reticulatum (Linnaeus, 1758) (*Aethalion* [sic] Latreille, 1810) (Hemiptera: Aetalionidae) is a widely distributed treehopper in Brazil, with records ranging from the northern to the southern regions of the country and occurring on several host plants, both native and exotic (Gallo et al. 2002; Oliveira 2024; Santos 2026). Although several studies have reported new host associations and expansions of the insect's geographic distribution in Brazil, little is known about its actual impact on native Brazilian plants.

This study aimed to report the occurrence of *A. reticulatum* on *C. guianensis* for the first time and to analyze patterns of occurrence of this insect on native and exotic plants in Brazil.

Individuals (nymphs and adults) of *A. reticulatum* were observed on a *C. guianensis* tree in Brasília, Federal District, Brazil (15°43'52.2"S, 47°53'55.0"W) in August 2026. The observed tree was approximately 6–7 m tall and was bearing flowers and floral buds. The identity of the plants was confirmed with the description by Silva Junior & Lima (2010) and Cabello et al. (2026). Brasilia is located in the Cerrado biome that has two well-defined seasons, and the regional climate is classified as AW (i.e., a tropical climate with rain in summer and drought in winter), in which the rainy season runs from October to April and the drought from May to September (Köppen & Geiger 1928).

Some insects were collected and stored in Falcon tubes containing 70% ethanol for subsequent identification in the laboratory. The collected insects were compared with the literature to ensure accurate species identification (Santos et al. 2015; Zanuncio et al. 2015; Castro et al. 2019; Oliveira 2024; Santos 2026). In addition to the treehopper, ants (Insecta: Formicidae) were found in association with the insect; these were also collected and stored in Falcon tubes containing 70% ethanol for genus-level identification. Photographic records were obtained using an iPhone® 13 Pro Max.

The insects were identified as *A. reticulatum*. Eggs, nymphs, and adults were found on the tree examined (Fig. 1), indicating that the species is capable of completing its entire life cycle on *C. guianensis*. Ants of the genus *Camponotus* Mayr, 1862 (Formicidae: Formicinae: Camponotini) were found in association with *A. reticulatum* (Fig. 1A). Beneficial associations between this treehopper and other insects, such as ants and bees, have previously been reported and well documented by several authors in different regions of Brazil (Oliveira 2024). Among the insect genera and species reported in association with *A. reticulatum* are ants, particularly those of the genus *Camponotus*, including records of *Camponotus crassus* Mayr, 1862 (Almeida-Neto et al. 2003), as well as stingless bees, particularly species of the genus *Trigona* Jurine, 1807 (Hymenoptera: Apidae: Meliponinae), with five species having already been recorded in different regions of Brazil (Oliveira 2024).

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Aetalion reticulatum is widely distributed in the Neotropical region, with documented records from Central America and throughout much of northern, central, and southern South America, including Colombia, Venezuela, Guyana, Suriname, French Guiana, Ecuador, Peru, Bolivia, Brazil, Paraguay, Argentina, and Chile (Yuan 1990).

To date, 31 plant species belonging to 18 families, including *C. guianensis* and the family Lecythidaceae, have been recorded as hosts of *A. reticulatum* in Brazil (Castro et al. 2019; Oliveira 2024; Evangelista et al. 2026; Santos 2026). Of these, 19 are exotic and 12 are native to Brazil (Fig. 2); thus, exotic plants represent approximately 1.6 times the number of native plants recorded. Therefore, exotic plants predominated among the recorded hosts, accounting for 61.3% of the total. This pattern highlights the ability of *A. reticulatum* to utilize a wide diversity of plants, including non-native species, which may favor its occurrence and establishment in different environments. Despite the higher number of records on exotic plants, this does not necessarily indicate a feeding preference. This difference may be related, for example, to plant availability, the number of studies conducted, geographic distribution, or ease of observation.



Figure 1. *Aetalion reticulatum* (Linnaeus, 1758) (Hemiptera: Aetalionidae) on a *Couroupita guianensis* Aubl. (Lecythidaceae) tree in Brasília, Federal District, Brazil. A) General view of the tree examined; B) Detail of the floral buds with insects; C) Nymphs and adults in association with ants of the genus *Camponotus*; D) Adult on an egg mass.

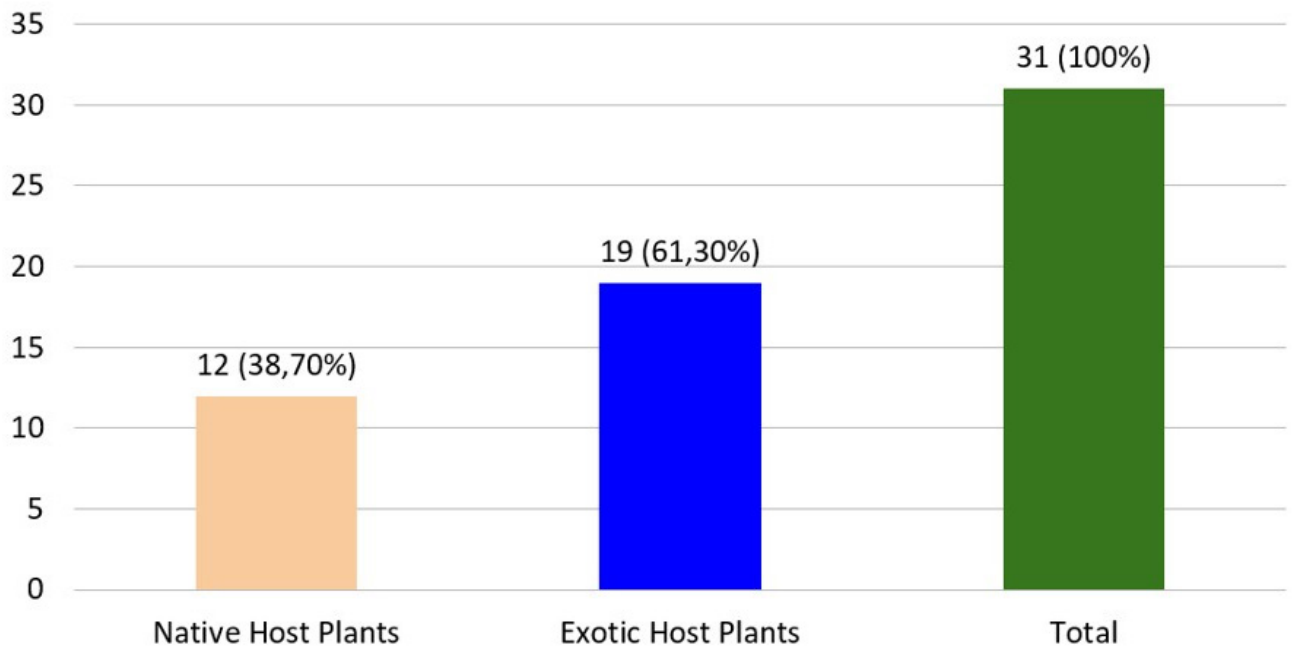


Figure 2. Number and percentage of native and exotic plant species recorded as hosts of *Aetalion reticulatum* (Linnaeus, 1758) (Hemiptera: Aetalionidae) in Brazil.

Among the native host plants, twelve species belonging to eight different botanical families were recorded, including nine native species occurring in the Atlantic Forest, eight in the Amazon, seven in the Cerrado, three in the Caatinga, three in the Pantanal, and two in the Pampa. It is important to note that the same plant species may occur in more than one biome, as shown in Tab. 1.

To our knowledge, this is the first documented occurrence of *A. reticulatum* associated with *C. guianensis*. With this record, the number of native Brazilian host plants of this insect is increased, further supporting the polyphagous and non-specific nature of the species. Further studies on this treehopper, involving increased sampling efforts throughout Brazil, may expand the number of host plants, both native and exotic, recorded for this species within the country.

Table 1. Recorded native host plant species of *Aetalion reticulatum* (Linnaeus, 1758) (Hemiptera: Aethalionidae) in Brazil and their occurrence across different biomes (Castro et al. 2019; Oliveira 2024; Evangelista et al. 2026; Santos 2026). AM, Amazon; CA, Caatinga; CE, Cerrado; MA, Atlantic Forest; PT, Pantanal; PP, Pampa.

Host	Family	Biome
Anacardium occidentale L.	Anacardiaceae	AM, CA, CE, MA, PT, PP
Euterpe oleracea Martius	Arecaceae	AM
Bauhinia forficata Link	Fabaceae	MA
Erythrina speciosa Andrews	Fabaceae	CE, MA
Mimosa scabrella Bentham	Fabaceae	MA
Dipteryx alata Vogel	Fabaceae	CE
Clitoria fairchildiana Howard	Fabaceae	AM, MA
Couroupita guianensis Aubl.	Lecythidaceae	AM
Piper aduncum L.	Piperaceae	AM, CE, MA
Triplaris americana L.	Polygonaceae	AM, CE, MA, PT
Dictyoloma vandellianum Adr. Juss.	Rutaceae	AM, CA, CE, MA
Cecropia pachystachya Trécul	Urticaceae	AM, CA, CE, MA, PT, PP

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Authors' Contributions

MTC: Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing; MFSA: Investigation; SCLM: Investigation.

Conflict of Interest Statement

The authors declare no competing interests.

Ethical Approval

Not applicable.

Data Availability

Not applicable, all data used is disponible on manuscript.

Generative AI Statement

We used AI tools exclusively for linguistic editing and readability improvements. The use of these tools was strictly limited to textual enhancement and did not involve data analysis, results interpretation, or the development of scientific conclusions.

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