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FIRST RECORD OF EDIBLE LARVAE OF Rhinostomus barbirostris (FABRICIUS, 1775) (COLEOPTERA: CURCULIONIDAE) ON Oenocarpus bataua MART. IN THE STATE OF ACRE, BRAZIL

PRIMEIRO REGISTRO DE LARVAS COMESTÍVEIS DE Rhinostomus barbirostris (FABRICIUS, 1775) (COLEOPTERA: CURCULIONIDAE) EM Oenocarpus bataua MART. NO ESTADO DO ACRE, BRASIL

PRIMER REGISTRO DE LARVAS COMESTIBLES DE Rhinostomus barbirostris (FABRICIUS, 1775) (COLEOPTERA: CURCULIONIDAE) EN Oenocarpus bataua MART. EN EL ESTADO DE ACRE, BRASIL

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ABSTRACT

This study presents the first record of edible larvae of Rhinostomus barbirostris on the Oenocarpus bataua palm tree in Acre, Brazil. The record was made in the native forest of the Chico Mendes Extractive Reserve (RESEX) in the municipality of Epitaciolândia. The larval record expands knowledge about the distribution of the species in the southwestern Amazonia and represents the first step toward future research focused on their bioprospecting.

Keywords: Edible Insects. Coleoptera. Arecaceae. Southwestern Amazon.

RESUMO

Este estudo apresenta o primeiro registro da ocorrência de larvas comestíveis de Rhinostomus barbirostris na palmeira Oenocarpus bataua no Acre, Brasil. O registro foi realizado em floresta nativa da Reserva Extrativista Chico Mendes (RESEX) situada no município de Epitaciolândia. O registro das larvas expande o conhecimento sobre a

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distribuição da espécie no sudoeste da Amazônia e representa a primeira etapa para futuras pesquisas voltadas para a bioprospecção das mesmas.

Palavras-chave: Insetos Comestíveis. Coleoptera. Arecaceae. Sudoeste da Amazônia.

RESUMEN
Este estudio presenta el primer registro de larvas comestibles de Rhinostomus barbirostris en la palmera Oenocarpus bataua en Acre, Brasil. El registro se realizó en el bosque nativo de la Reserva Extractivista Chico Mendes (RESEX), en el municipio de Epitaciolândia. El registro de las larvas amplía el conocimiento sobre la distribución de la especie en el suroeste de la Amazonía y representa el primer paso para futuras investigaciones orientadas a su bioprospección.

Palabras clave: Insectos Comestibles. Coleoptera. Arecaceae. Suroeste de la Amazonía.

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1 INTRODUCTION

Rhinostomus barbirostris (Fabricius, 1775) (Coleoptera: Curculionidae), is a holometabolous insect with a neotropical distribution that generally coincides with the palm family (Arecaceae) (Morrone; Cuevas, 2002; Delgado *et al*., 2008; Casas-Reátegui *et al*., 2018). Although adults are commonly documented (Setz, 1991; Choo *et al*., 2009; Araujo *et al*., 2018), immature forms, especially the larval stage, remain poorly understood, particularly in the Brazilian Amazon (Coimbra Junior, 1984; Molina *et al*., 2023).

Larvae of *R. barbirostris* can develop in palm tree stem of Arecaceae species such as *Oenocarpus bacaba*, *Mauritia flexuosa*, *Oenocarpus bataua*, *Attalea phalerata*, among others, after natural or intentional fall (Coimbra Junior, 1984; Choo *et al*., 2009; Casas-Reátegui *et al*., 2018). In some regions of the Amazon, the larvae are considered a food resource by traditional peoples and communities and can be eaten raw, boiled, roasted, or fried in their own oil (Coimbra Junior, 1984; Araujo; Beserra, 2007; Choo *et al*., 2009; Casas-Reátegui *et al*., 2018; Cerna *et al*., 2021; Jaramillo-Vivanco *et al*., 2023).

Considering that there were no official records of the occurrence of *R. barbirostris* beetle larvae in the state of Acre, in the southwestern Brazilian Amazon, this study aims to present the first record of these larvae found in the stems of *O. bataua* palm trees growing spontaneously in local native forests.

2 MATERIAL AND METHODS

The larvae were found and collected from the stems of adult *O. bataua* palm trees growing spontaneously in a native forest area located in the rubber tapper settlement called “Pinheiro”, located near the “Riozinho” stream (10°44'19.4“S; 68°48'56.1”W), within the Chico Mendes Extractive Reserve (RESEX), in the municipality of Epitaciolândia, Acre, Brazil (Figure 1).

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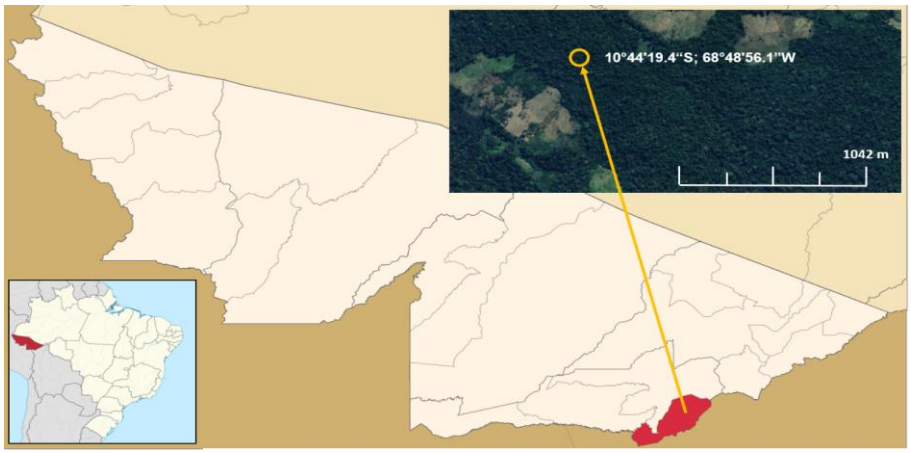
Figure 1

Location of the larvae collection point



Sources: SIRGAS Datum (2000); IBGE (2022); Google Earth Engine (2025).

The collection of biological material was authorized and carried out as part of research registered with the Biodiversity Authorization and Information System (SISBIO 87534-1 and 87970-1) and the National System for the Management of Genetic Heritage and Associated Traditional Knowledge (SisGen A33BAE0). The specimen of *O. bataua* botanical material was deposited in the Herbarium of the Zoobotanical Park (UFACPZ), under number 30555.

To collect the larvae, it was necessary to fell an adult *O. bataua* palm tree. On the ground, using an axe, the trunk was cut crosswise into smaller pieces, which were then split lengthwise to facilitate the collection of as many intact larvae as possible (Figura 2A–F).

3 RESULTS AND DISCUSSION

In the middle region of the palm tree stem, galleries containing numerous live larvae of *R. barbirostris* were observed (Figure 2A–C). These larvae were cream-colored, soft, and greasy in consistency, with a characteristic odor (Figure 2D–F).

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Figure 2

A Oenocarpus bataua stem being opened with the help of an axe; B - Numerous Rhinostomus barbirostris larvae in the stem galleries; C - Close up of a larva in a sample gallery of the stem; D - Larva collected; E and F - Larvae collected and packed in a container.

Source: Prepared by the authors.

At the same time, numerous pupae and some adult forms were found in the stem apical region, showing that the entire development cycle of the Curculionidae occurs inside the stem of this palm tree (Figure 3A–F).

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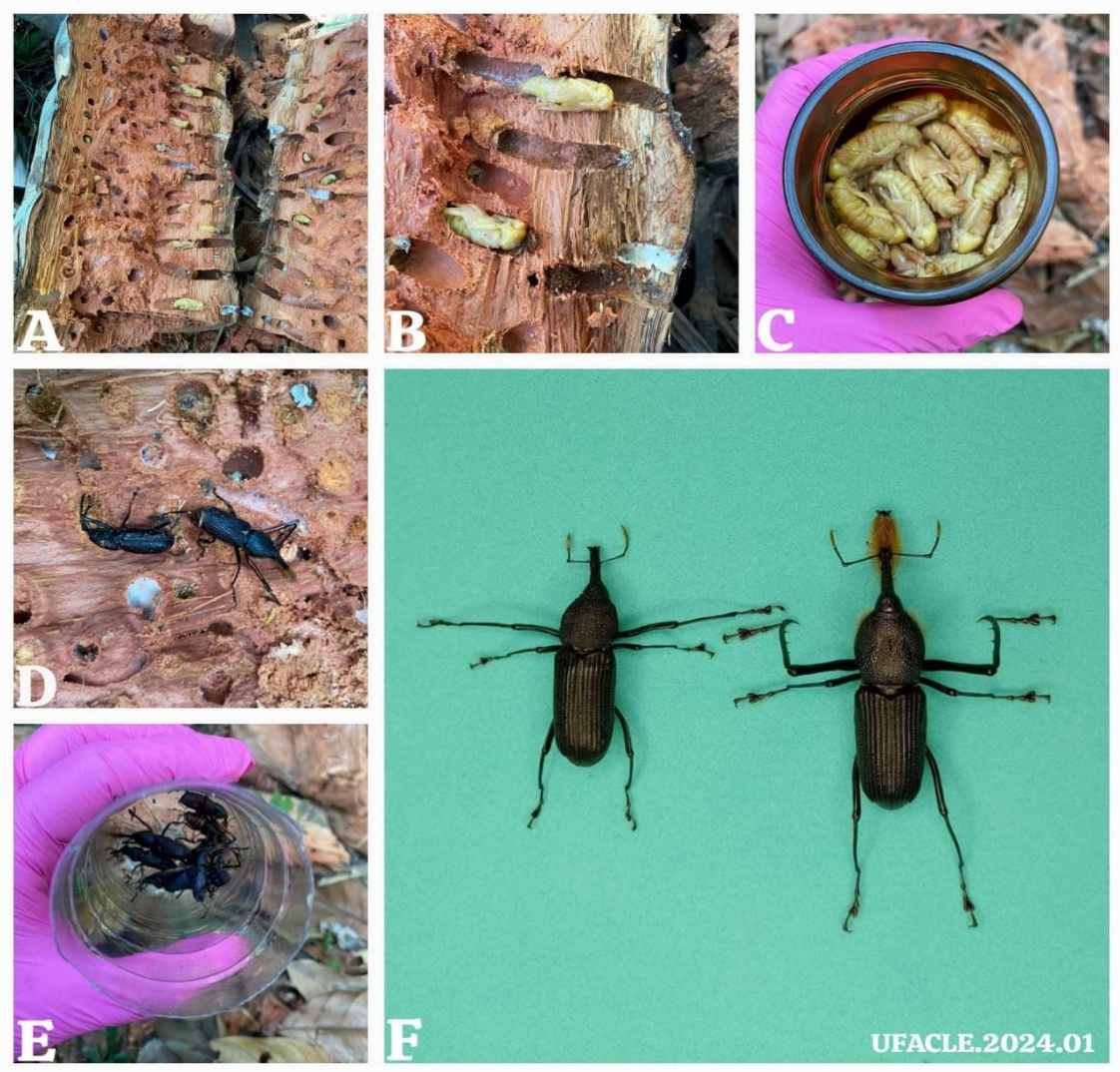
Figure 3

A - Pupae of Rhinostomus barbirostris in the stem galleries; B - Pupae in the stem; C - Pupae collected; D - Adults in the stem; E - Adults collected; F - Adults of R. barbirostris, duly identified, female (left) and male (right)



Source: Prepared by the authors.

Rhinostomus barbirostris (Fabricius, 1775) (Coleoptera: Curculionidae). New Record: BRAZIL. Acre: Epitaciolândia, Chico Mendes Extractive Reserve (RESEX), "Colocação" Pinheiro, near Igarapé Riozinho, terra firme forest (10°44'19.4"S and 68°48'56.1"W), 250 m altitude, June 20, 2024 (pupa and adult), D.M. Soares (insect collection number: 01) (UFACLE.2024.01).

In the state of Rondônia, in the southwestern Brazilian Amazon, the same larvae were recorded on the trunk of *O. bataua* (synonym: *Jessenia bataua*), where they are locally called "**mãyõrã**" by the Paiter Suruí indigenous people (Coimbra Junior, 1984).

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Although documented in other regions of the Amazon region (Choo *et al*., 2009), there was still no record of the presence of these larvae in association with palm trees in the state of Acre, Brazil. Thus, documenting the presence of immature forms of *R. barbirostris* on the trunk of the *O. bataua* palm tree filled a gap in knowledge about its occurrence in the state of Acre, since until now only adult forms of this species had been recorded in Acre (Machado; Liesenfeld, 2019).

4 CONCLUSION

The photographic images of *R. barbirostris* larvae consolidate the first official document of its occurrence in the state of Acre and a new record for the southwestern Brazilian Amazon. This discovery constitutes the initial stage for future research focused on their bioprospecting.

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