UFSM

Ciência Florestal

ISSN 1980-5098
OPEN ACCESS

Ci. Fl., Santa Maria, v. 35, e72096, p. 1-8, 2025 • https://doi.org/10.5902/1980509872096
Submitted: 25th/10/2022 • Approved: 4th/12/2024 • Published: 27th/02/2025

Short Communication

First record of *Oncideres dejeanii* Thomson, 1868 (Coleoptera: Cerambycidae) attacking *Copaifera langsdorffii* Desf. (Kuntze) (Fabaceae) in Brazil

Primeiro registro de *Oncideres dejeanii* Thomson, 1868 (Coleoptera: Cerambycidae) atacando *Copaifera langsdorffii* Desf. (Kuntze) (Fabaceae) no Brasil

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ABSTRACT

Copaifera langsdorffii Desf. (Kuntze) (Fabaceae) is a slow-growing tree, reaching 25 to 40 meters in height and living up to 400 years, with wide distribution in South America. The objective of this work was to report, for the first time, the occurrence of *Oncideres dejeanii* Thomson (Coleoptera: Cerambycidae) cutting and using *C. langsdorffii* as a host. Adults of *O. dejeanii* were observed cutting, dropping, and ovipositing on tree branches and shoots of *C. langsdorffii*, in a gallery forest, in Diamantina, Minas Gerais state, Brazil. The plant species and the beetle have a wide geographic distribution; thus, *O. dejeanii* can become an important pest of this plant.

Keywords: Forest; Pest; Oil

RESUMO

Copaifera langsdorffii Desf. (Kuntze) (Fabaceae) é uma árvore de crescimento lento, atingindo de 25 a 40 metros de altura e vivendo até 400 anos, com ampla distribuição na América do Sul. O objetivo deste trabalho foi relatar, pela primeira vez, a ocorrência de *Oncideres dejeanii* Thomson (Coleoptera: Cerambycidae) cortando e utilizando *C. langsdorffii* como hospedeiro. Adultos de *O. dejeanii* foram observados cortando, derrubando e ovipositando em galhos e brotos de árvores de *C. langsdorffii*, em uma mata de galeria, em Diamantina, Minas Gerais, Brasil. A espécie vegetal e o besouro têm ampla distribuição geográfica; assim, *O. dejeanii* pode se tornar uma importante praga dessa planta.

Palavras-chave: Florestas; Pragas; Óleo

1 INTRODUCTION

Copaifera langsdorffii Desf. (Kuntze) (Fabaceae) is a slow-growing tree, reaching 25 to 40 meters in height and living up to 400 years (Veiga Júnior; Pinto, 2002), with wide distribution in South America (Lorenzi, 2002). The essential oil of this species is used in the pharmaceutical industry due to its bactericidal, anti-inflammatory, and skin-healing properties, as a fixative in cosmetics, solvent for paints and varnishes, and for its insecticidal action (Alves *et al*., 2012; Costa-Lotufo *et al*., 2002; Paiva *et al*., 2002; Prophiro *et al*., 2012; Quemel *et al*., 2021). Brazil's Amazon region is the primary producer and exporter of this oil (Santana *et al*., 2014). Insects causing damage to *C. langsdorffii* trees can reduce the quantity and quality of the essential oil and cause the death of these trees.

Beetles of the genus *Oncideres* (Cerambycidae) cut off fresh branches, where the adult females make incisions and lay their eggs under the bark (Lemes; Cordeiro, 2021). Several species within this genus are recognized as forest pests in Brazil, with *Oncideres dejeanii* Thomson, 1868, *Oncideres impluviata* (Germar, 1824) and *Oncideres saga* (Dalman, 1823) as the most important. *Oncideres dejeanii* occurs in Argentina, Brazil, Paraguay, and Uruguay (Monné, 2005) and is considered one of the most polyphagous insects (Lemes; Cordeiro, 2021), being reported in more than 100 species from 29 botanical families (Baucke, 1962; Carvalho; Resende; Silva, 1995; Cordeiro *et al*., 2010; Dillon; Dillon, 1946; Link; Costa; Thum, 1994; Link; Costa; Thum, 1996; Marinoni; Insigen, 1968; Monné, 2002, 2004; Moraes; Berti Filho, 1974; Paro; Arab; Vasconcellos-Neto, 2011; Seffrin *et al*., 2006; Teixeira; Bianchetti, 2000). However, there are no previous reports of attacks on *C. langsdorffii* in Brazil.

The objective of this work was to report, for the first time, the occurrence of *O. dejeanii* cutting and using *C. langsdorffii* as a host in Brazil.

2 MATERIAL AND METHODS

Adults of *Oncideres* sp. were observed cutting, dropping, and ovipositing on tree branches and shoots of *C. langsdorffii* in a gallery forest in Diamantina, Minas Gerais state, Brazil (18°14'56" S, 43°36' 00" W, 1280 m, highland tropical climate - Cwb). Adult specimens were collected and sent to taxonomist Dr. Isaac Reis Jorge from the Universidade Federal do Paraná (UFPR), Brazil.

3 RESULTS AND DISCUSSIONS

The insects were identified as *O. dejeanii* (Figure 1, A-D), an important pest of cultivated forest species and homogeneous stands (Seffrin *et al*., 2006).

The females of *O. dejeanii* attacked young and adult trees (Figure 1 C and D). In the first case, the plants lost its apical bud, affecting its growth potential. When attacked by this insect, adult trees suffer intense defoliation and weaken (Lemes; Cordeiro, 2021).

There are no registered insecticides to control *O. dejeanii* in *C. langsdorffii* in Brazil. Biological control using fungi of the *Beauveria* and *Metarhizium* genera may be a promising alternative (D´avila; Costa; Guedes, 2006). Removing cut branches from the area also helps with control, as this is where the larvae develop, forming a second generation in the field that will attack new trees (Lemes; Cordeiro, 2021).

4 CONCLUSIONS

This is the first record of *O. dejeanii* attacking *C. langsdorffii* in Brazil, which could become an important pest of this tree.

Figure 1 – A. Branch of *Copaifera langsdorffii* cut by *Oncideres dejeanii*; B. Beetle on the branch; C. Tree that had a branch cut off; D. young individual of *C. langsdorffii* cut by *O. dejeanii*, Diamantina, Minas Gerais, Brazil

(A) (B)

(C) (D)

Source: Author (2013)

ACKNOWLEDGMENT

This work was carried out with the support of the "Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)" - Financing Code 001, "Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)" and "Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG)".

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How to quote this article

VIEIRA, E. R. D.; CARVALHO, G. A. S.; CALDEIRA, Z. V.; FAUSTINO JÚNIOR, W.; LEMES, P. G.; ASSIS JÚNIOR, S. L.; SOARES, M. A. First record of *Oncideres dejeanii* Thomson, 1868 (Coleoptera: Cerambycidae) attacking *Copaifera langsdorffii* Desf. (Kuntze) (Fabaceae) in Brazil. **Ciência Florestal**, Santa Maria, v. 35, e72096, p. 1-8, 2025. DOI 10.5902/1980509872096. Available from: https://doi.org/10.5902/1980509872096. Accessed in: day month abbr. year.