

# FIRST RECORD OF LAUXANIIDAE (DIPTERA, LAUXANIOIDEA) IN PARAÍBA, BRAZIL

PRIMEIRO REGISTRO DE LAUXANIIDAE (DIPTERA, LAUXANIOIDEA) NA PARAÍBA, BRASIL

PRIMER REGISTRO DE LAUXANIIDAE (DIPTERA, LAUXANIOIDEA) EN PARAÍBA, BRASIL

Alessandre Pereira-Colavite<sup>1</sup>

Matheus Nascimento<sup>2</sup>

João Paulo Nunes<sup>3</sup>

## Abstract

*Hirtodeceia picta* (Wiedemann, 1830) is recorded for the first time for Paraíba, being the first official Lauxaniidae registered in the state. The current distribution of the species in Brazil is discussed based on the collections of Peter W. Lund between 1825 and 1829.

**Keywords:** new record, lauxaniid flies, Northeast Brazil.

## Resumo

*Hirtodeceia picta* (Wiedemann, 1830) é registrada pela primeira vez para a Paraíba, sendo o primeiro Lauxaniidae oficialmente registrado para o estado. Uma discussão sobre a atual distribuição da espécie no Brasil é feita baseada nas coletas de Peter W. Lund entre os anos 1825 e 1829.

**Palavras-chave:** novo registro, moscas lauxaniídeas, Nordeste brasileiro.

## Resumen

*Hirtodeceia picta* (Wiedemann, 1830) se registra por primera vez para Paraíba, siendo el primer Lauxaniidae registrado oficialmente para el estado. Una discusión sobre la distribución actual de la especie en Brasil se basa en las colecciones de Peter W. Lund entre 1825 y 1829.

**Palabras clave:** nuevo registro, moscas lauxaniidas, noreste brasileño.

<sup>1</sup> Laboratório de Entomologia, Departamento de Sistemática e Ecologia, CCEN, Universidade Federal da Paraíba. ORCID: <https://orcid.org/0000-0002-7660-8384>. E-mail: [alepercol@gmail.com](mailto:alepercol@gmail.com)

<sup>2</sup> Laboratório de Entomologia, Departamento de Sistemática e Ecologia, CCEN, Universidade Federal da Paraíba. ORCID: <https://orcid.org/0000-0001-5259-9738>. E-mail: [matheus.aug.nascimento@gmail.com](mailto:matheus.aug.nascimento@gmail.com)

<sup>3</sup> Laboratório de Entomologia, Departamento de Sistemática e Ecologia, CCEN, Universidade Federal da Paraíba. ORCID: <https://orcid.org/0000-0002-0441-4935>. E-mail: [jpbarbudo2@gmail.com](mailto:jpbarbudo2@gmail.com)

## INTRODUCTION

Lauxaniidae are one of the largest families of flies in Schizophora, consisting of about 200 living genera and 2100 species (Gaimari and Silva 2020). The Neotropical region currently includes 77 genera and 391 species (Gaimari and Silva 2020), of which 46 genera and 109 species are found in Brazil (Silva 2022). Morphological, biological and classification considerations, as well as an identification key for most neotropical genera, are presented in Gaimari and Silva (2010).

Adults are characterized by their small to moderately size (2–11 mm); varied color patterns, often in yellow, brown and/or black tones, and with marks, spots, bands, and/or reticulating patterns; head with postocellar setae convergent to cruciate, rarely absent; orbital plate with two fronto-orbital setae, rarely zero to one; vibrissa absent; prescutellar acrostichal seta usually present; scutellum with two pairs of setae; anepisternum setulose, with one strong seta near posterior margin; katepisternum setulose, with one to two setae dorsally; wing with C unbroken; Sc complete, separated from R<sub>1</sub>; cell cup small with rounded apex. A fully description to the Neotropical species was provided by Gaimari and Silva (2010).

Although faunistic knowledge in the northeastern Brazil has become increasingly important in recent times —especially taxa such as birds, mammals and reptiles—, little is known about the richness and diversity of the arthropod fauna, especially Diptera. Our recent efforts collecting along Paraíba biomes have contributed to the knowledge of the hidden diversity in the state. Few dipterous families have specimens cataloged for Paraíba, being the main known groups flies of medical and forensic importance, such Phlebotominae and Sarcophagidae.

We bring here the first record of lauxaniids, *Hirtodeceia picta* (Wiedemann, 1830). Distribution records are listed for Country (State [Municipality]). New records in bold. The presumable distribution of *H. picta* is discussed and typed in italics.

## RESULTS AND DISCUSSION

***Hirtodeceia picta*** (Wiedemann, 1830) (Fig. 1). Type locality: Brazil.

Diagnosis: head mostly yellow, nearly twice as high as long; frons anteriorly swollen and haired; body brown with paler markings. scutum not strongly arched; dorsocentral 0+3; scutellum flat; wing colored; legs mostly pale; hind tibia with weak preapical seta. Additional characters see Shewell (1986).

Distribution: Brazil (**Paraíba [João Pessoa]**, *Rio de Janeiro* [presumable type locality], Santa Catarina [Nova Teutônia]).

Material examined: 1 male “BR, PB, João Pessoa/ Mata do DSE/ 12-18.VII.2014/ Malaise/ AP Colavite col.” [DSECO002744DP].

The genus *Hirtodeceia* is monotypic and was erected to include the species *Sciomyza picta* Wiedemann, 1830 (Shewell 1986). The only official record for this endemic Brazilian species is the specimens studied by Shewell from Santa Catarina (southern Brazil), in addition to the original description.

According Wiedemann (1830), the material for describing *H. picta* (under the name *Sciomyza picta*) comes from the collection of the Danish merchant Bernt W. Westermann. Papavero (1973: 283) states that the specimens in Westermann’s Brazilian collection consist of material collected by the Danish naturalist Peter W. Lund.

Lund arrived in Brazil in 1825, living and collecting in the state of Rio de Janeiro (Papavero 1971: 89–90, 207), in the municipalities of Niterói, Nova Friburgo, Campos [dos Goytacazes] and São Fidélis, including Serra dos Órgãos. After establishing an important insect collection, Lund returned to Denmark in 1829. There is no record of Lund collections outside of the locations in Rio de Janeiro. Also, the description of *H. picta* in 1830 is later than his return to Europe, in 1829. Lund definitively returned to Brazil in 1835.

According Papavero (1971), when Lund returned to Denmark, his collections were sent to the Museum of Natural History of Copenhagen and Prince Christian (later King Christian VIII). However, Wiedemann (1830) affirms that the type was in the collection of Westermann. There are also other instances of specimens described by him that were “aus Brasilien” and “In Westermann’s Sammlung”, so it seems that at least some material went from Lund to Westermann, and not following the path that Papavero found (S. Gaimari pers. comm.).

There is an information gap to ensure that part of the material collected by Lund was purchased by Westermann. Consequently, it is safer to maintain the distribution of *H. picta* as presumed for Rio de Janeiro. Future studies and other details could help solve this problem permanently.

The new record for *H. picta* keeps the species endemic to Brazil and expands its range to 1,800 km from Campo dos Goytacazes (nearest collection by Lund) and 2,900 km from Nova Teutônia (material studied by Shewell). *Hirtodeceia picta* is only found in the Atlantic Forest domain.



**Figure 1.** *Hirtodeceia picta*, habitus, lateral view.

Over the next few years, a considerable effort will be made to describe the Diptera fauna of Paraíba, especially in the Caatinga region. Among the Lauxaniidae already sampled, there are several new species awaiting description, including two or three new genera.

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