

# The identity of *Endrosis braziliensis* Moore, 1883 (Lepidoptera: Oecophoridae, Oecophorinae)

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## Abstract

The identity of *Endrosis braziliensis* Moore, 1883 is recognized. *Aulonophora* Becker, gen. nov. is proposed to accommodate it [*Aulonophora braziliensis* (Moore, 1883), comb. nov. Description and illustrations of adult, genitalia, and larval shelter are presented.

**Keywords:** Lepidoptera, Oecophoridae, Oecophorinae, *Aulonophora*, *Endrosis*, identity, taxonomy, new genus, Neotropical.

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## Resumen

Se reconoce la identidad de *Endrosis braziliensis* Moore, 1883. Se propone *Aulonophora* Becker, gen. nov. para situarla [*Aulonophora braziliensis* (Moore, 1883), comb. nov. Se presentan descripciones e ilustraciones del adulto, genitalia y refugio larval.

**Palabras clave:** Lepidoptera, Oecophoridae, Oecophorinae, *Aulonophora*, *Endrosis*, identidad, taxonomía, género nuevo, Neotropical.

## A identidade de *Endrosis braziliensis* Moore, 1883 (Lepidoptera: Oecophoridae, Oecophorinae)

## Resumo

A identidade de *Endrosis braziliensis* Moore, 1883 é reconhecida. *Aulonophora* Becker, gen. nov. é proposto para acomodá-la [*Aulonophora braziliensis* (Moore, 1883), comb. nov. Apresentam-se descrição e ilustrações do adulto, genitália e abrigo larval são apresentadas.

**Palavras-chave:** Lepidoptera, Oecophoridae, Oecophorinae, *Aulonophora*, *Endrosis*, identidade, taxonomia, novo gênero, Neotropical.

## Introduction

*Endrosis braziliensis* Moore, 1883 was described on the base of specimens reared by Jones (1883), in São Paulo, Brazil. This species has not been treated in any of the major catalogues treating the Oecophoridae (Meyrick, 1922; Gaede, 1938, 1939), and the Microlepidoptera (Heppner, 1984). The type-material seems to be lost (at least it has not been found in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM). Synoptic collections representing all the species in VOB were taken to the last institution and to the Natural History Museum, United Kingdom,

London (NHMUK), Natural History Museum, United Kingdom, where some of Jones' collection is deposited; K. Sattler, pers. comm.). According to the Liverpool Museum site, the collections were destroyed by an incendiary bomb in 1941, what was confirmed by I. Wallace, Curator: "*I can confirm that the material was completely destroyed in the war-time fire*". Specimens in the author's collection (VOB), also obtained from reared material, fits the description of both the immatures, the adults and the peculiar behavior presented by both Moore & Jones (1883, 31, 32). The species is not congeneric with the cosmopolitan *E. sarcitrella* (Linnaeus, 1758), the type-species of this Oecophoridae genus neither with any of the genera belonging to this family, requiring a new genus to include it. The neotype is provisionally deposited in the author's collection (VOB) and will be transferred, together with the collection, to a Brazilian institution in the future.

## Material and methods

This work is based on a series of eight specimens reared by the author and on the pertinent literature. Genitalia were prepared following the methods described by Robinson (1976). Terms for morphological characters follow Hodges (1971).

## Abbreviations

The following abbreviations are used in the text:

FW	= forewing
g. s.	= genitalia slide
MG	= Minas Gerais State, Brazil
NHMUK	= Natural History Museum, London, United Kingdom
USNM	= National Museum of Natural History, Washington, DC
TS	= Type specie
VO	= Vitor O. Becker Collection, Serra Bonita Reserve, Camacan, Bahia, Brazil

## *Aulonophora* Becker, gen. nov.

TS: *Endrosis braziliensis* Moore, 1883, *Proc. Lit. phil. Soc. Lpool.*, 37, 31-33, here designated.

Diagnosis: Small, grey. FW elongate, narrow, with four diffuse dots along middle of wing, from base to termen, equidistant from each other.

Description: Labial palpi evenly curved, reaching beyond vertex, 2<sup>nd</sup> segment twice, 3<sup>rd</sup> as long as, eye diameter. Frons smooth, vertex with rough, long scales. Antenna long ciliated, 2/3 as long as FW. FW narrow, three times as long as wide, costa straight, apex and termen round, oblique towards tornus; 11 free veins, R4 + R5 fused, to before apex, M1 to apex, Cu1A near M3, at lower end of cell. HW with M3+Cu1A, stalked beyond lower end of cell.

Male genitalia: Tegumen and uncus forming a conical tube, narrowing towards apex; valva triangular, sacculus process curved towards costal margin; vinculum round; juxta a pair of thin digital processes; phallus thick, short; vesica with long cornuti.

Female genitalia: Ovipositor very long, thin, extending to four times the length of bursa copulatrix, when fully extended; apophysis posterioris five times longer than anterioris; antrum and ductus bursae short, sclerotized; corpus bursae an elongate bag; signum absent.

Behavior: The caterpillars build a long, thin tube, attached to the trunk bark (Figure 4).

Distribution: Brazil.

Etymology: From the Greek *αυλον*, -οσ (*aulon*, -os) = pipe, tube + *phoreus* = bearer, carrier; feminine.

Remarks: The specimens were compared with the thousands of oecophorid specimens, collected

all over the Neotropical region, in the author's collection (VOB), which represent all the Neotropical genera, including the type-species of most of them, as well as with the material in the collections of USNM and NHMUK. Nothing could be found that either fits or resembles this little grey species. The wing venation is like those of *Decantha boreasella* (Chambers, 1873), a bright colored North American species, as illustrated by Hodges (1974, 14, fig. i), but has distinct genitalia. The genitalia are typical of some New World genera such as *Inga* Busck. However, in *Inga* the FW has 12 veins, with R4+R5 branched. Also, the larvae of *Inga* are leaf tiers, and build a loose cocoon before pupation.

*Aulonophora braziliensis* (Moore, 1883), **comb. nov.** (Figures 1-4)

*Endrosis braziliensis* Munroe, 1883, *Proc. Lit. phil. Soc. Lpool.*, 37, 31-33

Neotype ♂, BRAZIL, MG, Cordisburgo, 15-V-1974, ex *Pouteria caimito* (Ruiz & Pav.) Radlk. (VOB 5147), here designated.

Material studied (6 ♂, 2 ♀, 2 g. s.): BRAZIL: MG, Cordisburgo, 15-18-V-1974, g. s. 6027, 6028, ex *Pouteria caimito* Bark (H. Saturnino) (VOB 5147) (VOB).

Diagnoses: Small, grey. FW whitish irrorated with grey scales; four diffuse, dark grey dots: next to base, basal and distal ends of cell, and before apex.

Description (Figure 1): FW length 7-8 mm (16-20 mm wingspan), grey. Head white. Antenna grey, ringed white. Thorax grey, mixed with white-tipped scales, legs grey, tarsi ringed white distally. Abdomen grey. FW whitish, mixed with grey tipped scales, costa grey; with four equidistant, diffuse dots along middle; a series of large, white blotches along termen, interrupted by thin, grey lines in the vein interspaces. HW shining whitish, cilia as long as wing width.

Male Genitalia (Figure 2): Uncus not differentiated from tegumen, tapering toward round apex; gnathos broadly triangular, longer than uncus; valva an acute triangle, half as broad as long basally; sacculus process a curved spine reaching below costal margin. Vinculum a thin, round belt. Juxta a pair of digital processes as long as phallus diameter. Phallus straight, thick, twice as long as wide, apex triangular, sharp pointed; vesica with 3-4 long, thin cornuti.

Female genitalia (Figure 3): Ovipositor very long, slender, four times as long as bursa copulatrix when fully extended; apophysis posterioris five times longer than anterioris; anterioris as long as bursa copulatrix; ostium and ductus bursae short, sclerotized; corpus bursae an elongate bag, with pair of lateral, rough areas next to ductus bursae; signum absent.

Distribution: Brazil, South and Central (São Paulo and Minas Gerais).

Immatures and behavior (Figure 4): The caterpillars when full grown are cream-yellow, with head and prothoracic plate black; anal plate brown. The caterpillar feeds under the bark of the branches, building a long, thin tube joining feces droplets and small pieces of bark with silk. The tubes collected were 6-7 cm long and 1.5 mm at the end attached to the bark and circa 3 mm at the opposite, free end (Figure 4). About 2 cm before the free end the tube is swollen into a spherical chamber, about 5 mm in diameter, that allows the caterpillar to turn around to go back to feed and where it later pupates. All the tubes collected were hanging, attached to the branches by the base, with the opposite end hanging free. These characters fit the description given by Jones (1883, 31-32): "*This caterpillar was taken on the posts of my "rancho", at the Cantareira Waterworks, San Paulo, in May 1882. It lives in a small chamber excavated in the dead bark of a tree, and from the mouth of this chamber it forms a long tube of silk and minute particles of bark. The tube is very soft and flexible, and the free end is very loose and baggy, forming an excellent covering for the caterpillar when feeding. When the caterpillar is full-fed the tube is eleven centimeters in length, the diameter at the end attached to the bark is little over a millimeter, and the free end between two and three millimeters". ... "When the caterpillar is full fed, it draws up the tube in the middle, and swells it out into a bulb five millimeters in diameter, in which it changes to the pupa state."* ... "*When they [the adults] emerged, they hid themselves in the cracks of the bark, and did not seem at all inclined to fly away. When touched they gave a kind of jump, and "shammed dead". By holding my "killing bottle" below them, and touching them on the head, I was able to kill them without any damage*". This description fits perfectly the material studied here and the adult behavior explains why they were never collected at light. The author has collected intensively all

over Brazil, for over 50 years, with special interest in the Microlepidoptera, but never collected a single specimen of this, or other species that could fit the description of this species.

Host plant: *Pouteria caimito* (Ruiz & Pavon) Radlk. (Sapotaceae).

Remarks: Apart from the neotype, which is labeled as mentioned above, the other seven specimens are labeled as paraneotypes.

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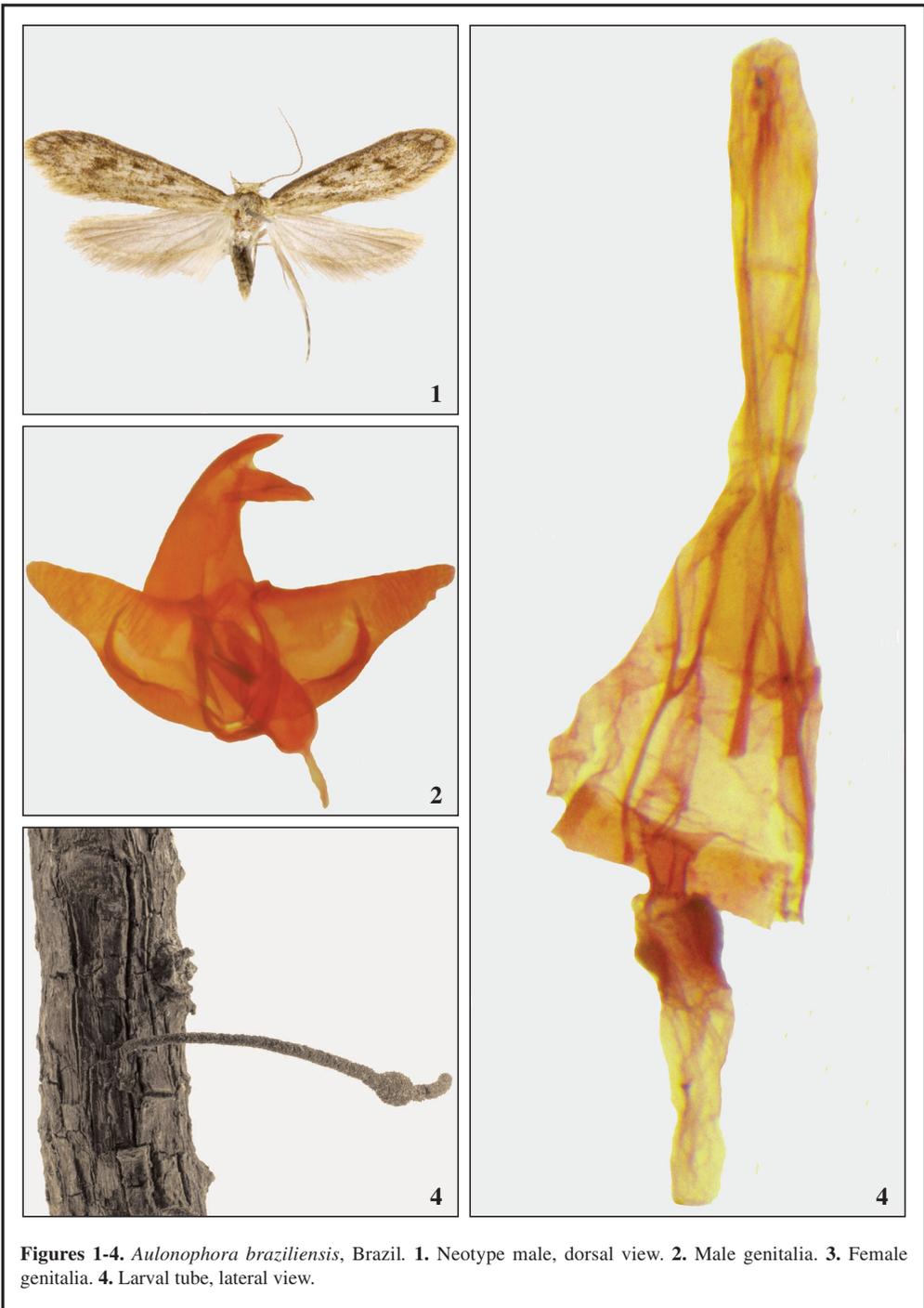
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**Figures 1-4.** *Aulonophora braziliensis*, Brazil. **1.** Neotype male, dorsal view. **2.** Male genitalia. **3.** Female genitalia. **4.** Larval tube, lateral view.