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# New species of Zeuserinae from the Democratic Republic of São Tomé and Príncipe (Lepidoptera: Cossidae)

R. V. Yakovlev & Gy. M. László

## Abstract

Present paper contains the description of a new species, *Pseudozeuzera caminhai* Yakovlev & László, sp. n. collected in São Tomé. The new species' closest relative is the Equatorial-African species, *P. stenlii* Yakovlev, 2009, from which it differs in the male genital structure.

KEY WORDS: Lepidoptera, Cossidae, *Pseudozeuzera*, new species, taxonomy, São Tomé and Príncipe.

## Nueva especie de Zeuserinae de la República Democrática de Santo Tomé y Príncipe (Lepidoptera: Cossidae)

## Resumen

El presente trabajo contiene la descripción de una nueva especie, *Pseudozeuzera caminhai* Yakovlev & László, sp. n. colectada en Santo Tomé. La nueva especie es relativamente próxima a la especie Afroecuatorial, *P. stenlii* Yakovlev, 2009, de la que se separa en la estructura de la genitalia del macho.

PALABRAS CLAVE: Lepidoptera, Cossidae, *Pseudozeuzera*, nueva especie, taxonomía, Santo Tomé y Príncipe.

## Introduction

Cossidae are a family of primitive ditrise Lepidoptera, including over 1200 valid species (VAN NIEUKERKEN *et al.*, 2011). The Cossidae of the Afrotropics are still insufficiently studied, though some African genera have recently been revised: *Arctiocossus* Felder, 1874 (type species - *Arctiocossus antargyreus* Felder, 1874); *Camellocossus* Yakovlev, 2011 (type species - *Cossus abyssinica* Hampson, 1910); *Parolophonotus* Schoorl, 1990 (type species - *Zeuzera auroguttata* Herrich-Schäffer, [1854]), *Pseudozeuzera* Schoorl, 1990 (type species - *Duomitus biatra* Hampson, 1910), *Eburgemellus* Schoorl, 1990 (type species - *Xyleutes geminatus* Gaede, 1930), *Alophonotus* Schoorl, 1990 (type species - *Chalcidica (Duomitus) rauana* Strand, 1909), and *Meharia* Chrétien, 1915 (type species) (YAKOVLEV *et al.*, 2013; YAKOVLEV, 2014; MEY, 2015; YAKOVLEV & WITT, 2017a, b, 2018a, b, c).

The genus *Pseudozeuzera* Schoorl, 1990 includes two species: *P. biatra* (Hampson, 1910) (type locality - S. Nigeria, Old Calabar [Calabar city]) and *P. stenlii* Yakovlev, 2009 (type locality - Congo, Kibali-Ituri, Nia-Nia). *P. biatra* is widely distributed in Sierra Leone, Nigeria, Ghana, Uganda, Cameroon, Togo, Central African Republic, Congo and Gabon, whereas *P. stenlii* - in Congo, Ghana, Cote d'Ivoire and Uganda (YAKOVLEV & WITT, 2018a).

During the examination of the materials deposited in the museum of African Natural History Research Trust (Leominster, G. B.) we found one male specimen belonging to the genus *Pseudozeuzera* collected recently in São Tomé island, which is proved to be a species new to science.

## Material and methods

The collected material is deposited in the collection of African Natural History Research Trust, Leominster (ANHRT). The genitalia were dissected and stained with Eosin red and mounted in Euparal on microscope slides applying standard methods of preparation (LAFONTAINE & MIKKOLA, 1987). The adults were photographed using a Nikon D700 camera equipped with Nikkor AF-S Micro 105 mm lens. The genitalia preparations were photographed using a Tucsen H series digital microscope camera mounted on a Nikon SMZ1500 stereomicroscope.

## Taxonomic part

### DESCRIPTION OF NEW SPECIES

#### *Pseudozeuzera caminhai* Yakovlev & László, sp. n. (Figs 1-2)

Material: Holotype, ♂, SÃO TOMÉ, Ponta Furada, 186 m, 0°14'01.8"N / 6°28'15.5"E, 24-X-2016, MV light trap, Turner, C. R., Tasane, T. leg., Trip Ref: ST-001 (ANHRT - 021). Accession number: ANHRT:2017.21. Specimen unique number: ANHRTUK00052292. Slide number: ANHRT-00042.

Description: Length of forewing 32 mm. Antenna goblet-like, proximal half bipectinate, rami long (3-4 times longer than antenna rod diameter), distal half filiform, without rami; frons, dorsal side of thorax and abdomen covered with admixture of very fine black and white scales. Forewing elongate, apically relatively pointed. Wings of holotype rather worn, pattern mostly erased. Forewing with grey costal margin, with a series of small semicircular dark spots along it; wide black streak with blurred edges in cubital cell; and black reticulated pattern in postdiscal area of forewing. Hindwing relatively narrow, with wide black filling between veins and greyish brown anal margin.

Male genitalia. Uncus very wide, domed, slightly tapered apically; tegumen medium wide, rather short; gnathos arms thin, long, medially fused; valva rather short and wide, leaf-like, costal margin strongly dilated in the basal third of valva, then almost straight towards apex, ventral margin slightly arcuate in its basal third, then almost straight, valva apex broadly rounded; juxta forked, with two relatively wide leaf-like lateral processi; saccus semicircular, medium sized. Phallus very thick, and short, robust armed with a rod-like massive cornutus laterally; everted vesica very thick and domed at base, gradually tapered posteriorly, rather short, without cornuti.

Female unknown.

Etymology: The species is named after the first governor of the islands São Tomé and Príncipe Álvaro de Caminha (?-28 April 1499).

Diagnosis: The new species is the closest relative of *P. stenlii*, from which it is easily distinguishable by the following features of the male genitalia:

1. The valve in *P. caminhai* is significantly wider than in *P. stenlii*,
2. The uncus in *P. caminhai* is larger than in *P. stenlii*,
3. In *P. caminhai* the cornutus of phallus is large, single, while in the phallus of *P. stenlii* there are two large cornuti - one of them is rod-like, being analogous to that of *P. caminhai*, and the second one, erected parallelly to it is ribbon-like.

## Discussion

By the discovery of *P. caminhai*, the species number of the Carpenter moths currently known from the territory of the island state of the Democratic Republic of São Tomé and Príncipe has been increased to two: *Eulophonotus nigrodiscalis* Yakovlev, 2011 and *P. caminhai* sp. n.; both species are endemic to São Tomé island. The Cossidae fauna of the other large island of the Gulf of Guinea, island

of Bioko (previously, Fernando Póo) counts a single endemic species *Gumilevia timorum* Yakovlev, 2011, according to our current knowledge.

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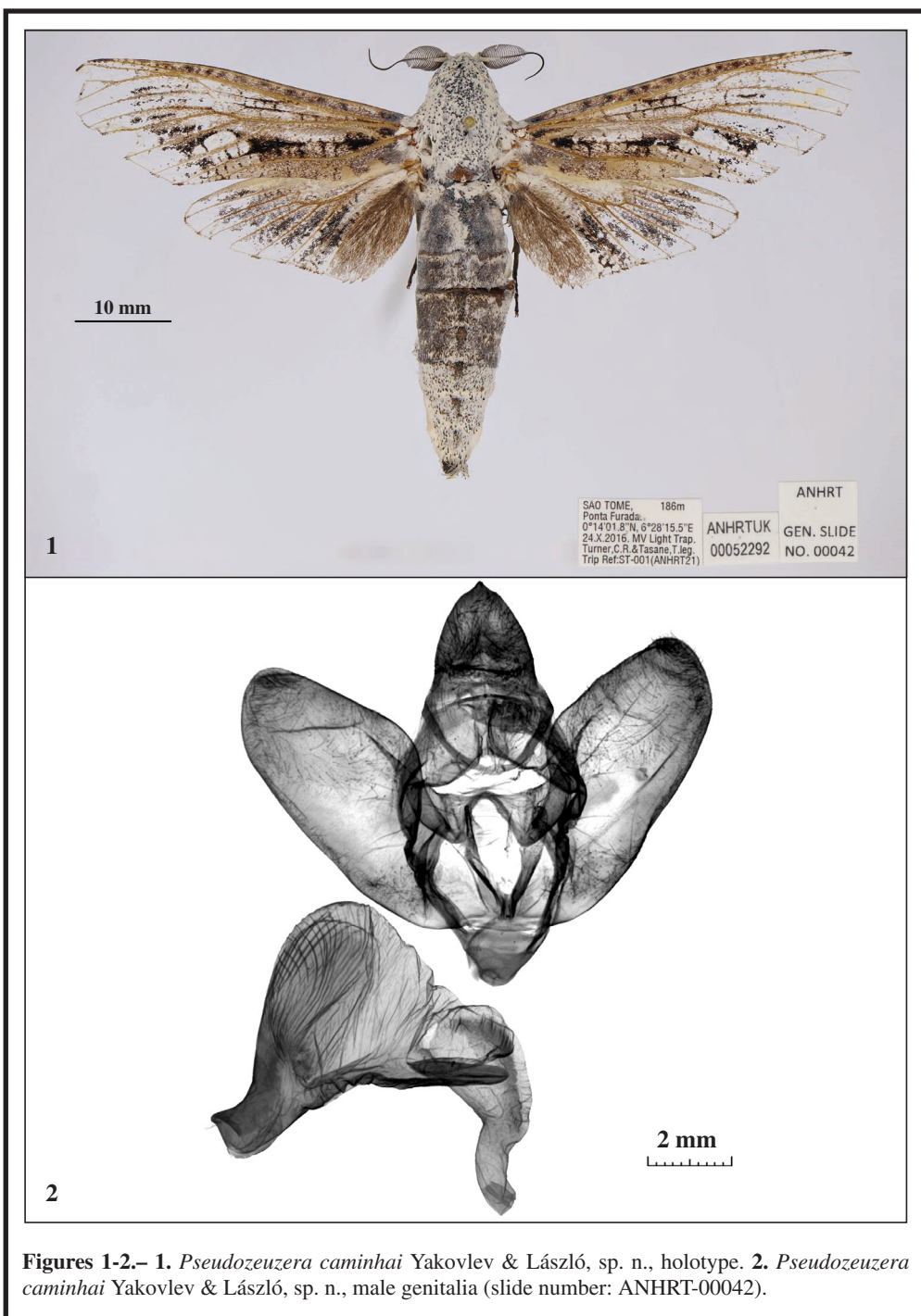
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**Figures 1-2.**– 1. *Pseudozeuzera caminhai* Yakovlev & László, sp. n., holotype. 2. *Pseudozeuzera caminhai* Yakovlev & László, sp. n., male genitalia (slide number: ANHRT-00042).