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Article

Description of the female *Wittoecia brehmi* (Yakovlev & Witt, 2016) (Lepidoptera, Cossidae: Zeuzerinae)

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Abstract
The article describes for the first time the female of *Wittoecia brehmi* (Yakovlev & Witt, 2016) (Lepidoptera, Cossidae: Zeuzerinae), and provides photos of the adult female specimen and female genitalia.

Key words: Biodiversity, Africa, taxonomy, entomology, fauna, Zeuzerinae, Carpenter-Moths.

Introduction

The monotypic genus *Wittoecia* Yakovlev, 2020 was established for *Azygophleps brehmi* Yakovlev & Witt, 2016 – an endemic of the mid-mountain belt of the Bale Mountains from Oromia Province of southeast Ethiopia (Yakovlev & Witt 2016; Yakovlev 2020). In the male genitals structure, the genus is well distinguished from the close genera: *Azygophleps* Hampson, 1892 (type species (by monotypy) - *Hepialis scalaris* Fabricius, 1775), *Phragmacossia* Schawerda, 1924 (type species, by original designation - *Phragmatoecia* (sic) *reticulata* Püngeler, 1900), *Phragmataecia* Newman, 1850 (type species, by monotypy - *Noctua arundinis* Hübner, 1808), *Davidlivingstonia* Yakovlev, 2020 (Type species, by original designation - *Zeuzera boisduvalii* Herrich-Schäffer, 1854) and *Zeuzeropecten* Gaede, 1930 (type species, by original designation – *Zeuzeropecten lactescens* Gaede, 1930). Until present, the females of this genus have not been known. In the materials collected by German entomologists Ralf Fiebig (Roßleben-Wiehe, Germany) and Dirk Stadie (Eisleben, Germany), we found a female of this little known taxon. Its description is given in this article.

Material and methods

The material for this study was Cossidae specimens from Dirk Stadie private collection (Eisleben, Germany). The genital preparations were made according to the method of Lafontaine & Mikkola (1987).

The morphological terminology used in the description follows Kristensen (2003).

Taxonomical part

***Wittoecia brehmi* (Yakovlev & Witt, 2016)**
Azygophleps brehmi Yakovlev & Witt, 2016: 71.
Type locality: Ethiopia, Bale Mountain, Catcha bei Rira, 2350 m, 06°42.899′N, 39°43.441′E.
Type material: holotype (male) in Museum Witt (Munich, Germany).

Material examined. 1 female, Ethiopia, Oromia [Province], Harena forest, Lodge Katcha Camp Ground, 06°48.763′N, 39°10.606′E, 01−03.v.2016, LF, 2316 m, leg. R. Fiebig and D. Stadie (*Dirk Stadie private collection*).

Description. Female (Fig. 1). Significantly bigger than male. Length of fore wing 34 mm. Antenna bipectinate in proximal half (setae equal to antenna rod diameter in length). Fore wing wide, apically semicircular. Costal edge light-brown, hind edge creamy, most of wing area light-yellow; thin undulated transverse brown strokes along all wing area; fringe light-yellow. Hind wing light-yellow with poorly noticeable wavy light-brown pattern on periphery of wing; fringe light-yellow.

Female genitalia (Fig. 2). Ovipositor short; papillae anales tapered, with longitudinal grooves; apophyses posteriores and apophyses anteriores thick, almost equal in length; ostium poorly submerged; antrum funnel-shaped, poorly sclerotized; ductus bursae copulatrix wide, relatively short, membranous; bursa copulatrix bag-like, without signa. In medium part of bursa copulatrix on medium length ductus – small bulla with sclerotized base and membranous periphery. Diameter of bursa copulatrix twice bigger than that of bulla.

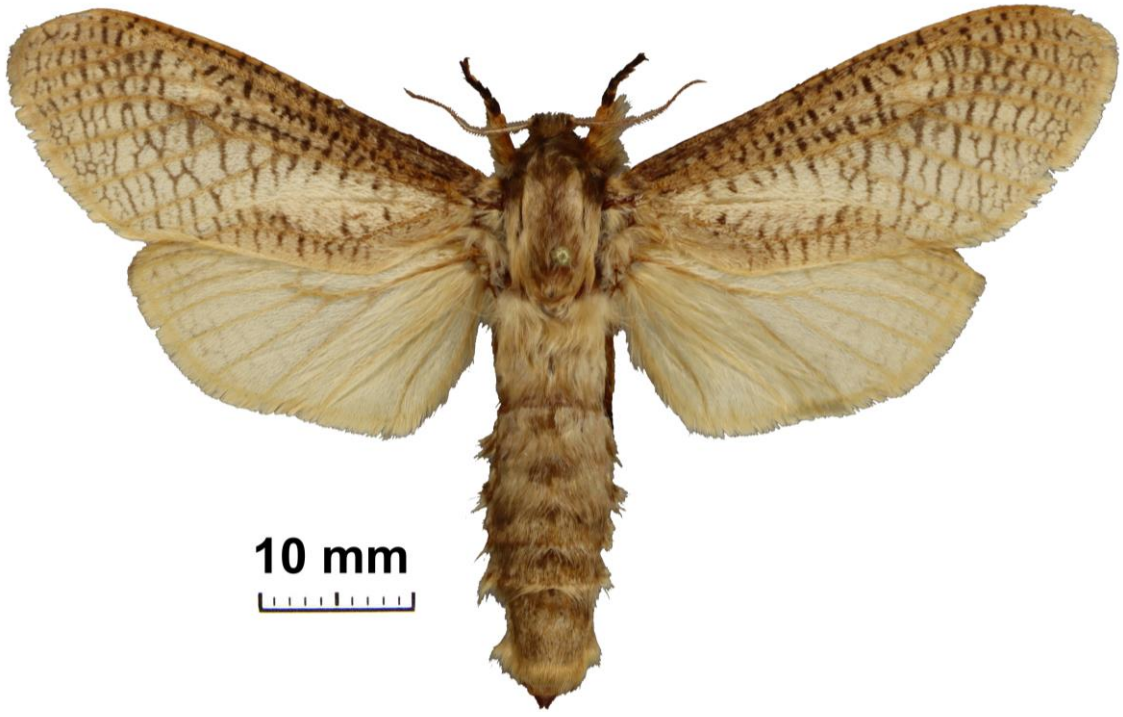

Figure 1. *Wittoecia brehmi* (Yakovlev & Witt, 2016), female (Dirk Stadie private collection).

Diagnosis. Currently, it is difficult to make a detailed analysis of the difference in the female genitals in the genera of the subfamily Zeuzerinae due to objectively poor study of the female morphology, because they are rare in collection materials. It can only be noted that in the genus *Azygophleps* Hampson, 1892 the ovipositor is significantly longer and on the bursa copulatrix there is a star-like signum. The closest in the female genital structure are the African genus *Davidlivingstonia* Yakovlev, 2020 and *Phragmataecia*

Newman, 1850. In the specimens of these genera, the ovipositor is relatively short, and there are no signa on the bursa copulatrix. The female genitalia of the genus *Wittoecia* Yakovlev, 2020 are clearly distinguished in the large bulla which is basally sclerotized.

Figure 2. *Wittoecia brehmi* (Yakovlev & Witt, 2016), female genitalia (slide Genitalpräparat Dirk Stadie 4/2021).

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