ANNALS OF THE UPPER SILESIAN MUSEUM IN BYTOM
ENTOMOLOGY

Vol. **26 (online 003)**: 1–4 ISSN 0867-1966, eISSN 2544-039X (online) Bytom, 22.06.2017

Adam Larysz

Anarsia innoxiella Gregersen & Karsholt, 2017 (Lepidoptera: Gelechiidae) – a new species for the fauna of Ukraine

Upper Silesian Museum, Department of Natural History, pl. Jana III Sobieskiego 2, 41-902 Bytom,
e-mail: a.larysz@muzeum.bytom.pl

Abstract: The paper provides information on *Anarsia innoxiella* Gregersen & Karsholt 2017 (Lepidoptera, Gelechiidae), a new species for the fauna of Ukraine, discovered in the collection of the Upper Silesian Museum, Bytom (USMB). *A. innoxiella* is closely related to the Peach Twig Borer, *Anarsia lineatella* Zeller, 1839, but is distinguishable from the latter by the adult morphology, male and female genitalia, and host plant preferences.

Key words: Lepidoptera, Gelechiidae, Ukraine, new record, faunistics.

INTRODUCTION

The genus *Anarsia* Zeller, distributed in Eurasia and Africa, includes about 100 species (Ponomarenko 2009, Gregersen & Karsholt 2017). Three species occur in Ukraine: *Anarsia eleagnella* Kuznetsov, 1957, *Anarsia lineatella*, Zeller 1839 and *Anarsia spartiella* (Schrank, 1802) (Karsholt & Nieukerken 2013). Of these, *Anarsia lineatella* is known to be a pest of stone fruits of the genus *Prunus* (Rosaceae). It is distributed throughout Europe, except for Ireland, Norway, Estonia and Slovenia (Karsholt & Nieukerken 2013). The species was also introduced to North America in the twentieth century (Bailey 1948, Brunner & Rice 1984). Recent studies have shown that *Anarsia lineatella* is closely related to another species feeding on *Acer* (Sapindaceae), described as *A. innoxiella* (Gregersen & Karsholt 2017). The latter species is widely distributed in Europe and can be found in the same places as *A. lineatella*. *A. innoxiella* is distinguished by its whitish-grey and blackish-grey forewings, which bear longitudinal streaks, with the streak in the middle of the wing being especially prominent, pale grey head, grey thorax and dark grey tegula (Fig. 2). There are also differences in the structure of the genitalia (Gregersen & Karsholt 2017): female genitalia – the ridges extending from the middle of the sclerotised arch of the 8th tergum are distinct in *A. lineatella*, but absent or very indistinct in *A. innoxiella* (Fig. 3). The differences in the male genitalia are given by Gregersen & Karsholt (2017).

MATERIAL AND METHODS

Thirteen specimens of *Anarsia* sp. from the entomological material deposited in the collection of the Upper Silesian Museum (USMB), including their morphology and genitalia, were examined.

RESULTS

Eleven specimens from Mysłowice [CA66], Upper Silesia, and one from the Winnica Reserve [CC40], Province of Łódź, were identified as *Anarsia lineatella* (see also Larysz 2014). The thirteenth specimen is *A. innoxiella*:

– **Lwów** [Lviv], 2 VII [19]30, leg. Anonim, ♀ 5959/80184, prep. genit. 10/2017, det. A. Larysz. The handwritten label also bears the red number "5487" and the identification "Anarsia lineatella ♀" (Fig. 1).

Fig. 1. *Anarsia innoxiella* Gregersen & Karsholt 2017, ♀ Lwów, 02.07.1930 (photo A. Larysz).

CONCLUSION

A. innoxiella closely resembles the Peach Twig Borer *A. lineatella*, but both species can be distinguished by differences in morphology, male and female genitalia, host plant preferences and DNA barcodes (Gregersen & Karsholt 2017). *A. innoxiella* is widespread in Europe and locally common, so this new record of this species from Ukraine adds to our knowledge of its range and distribution.

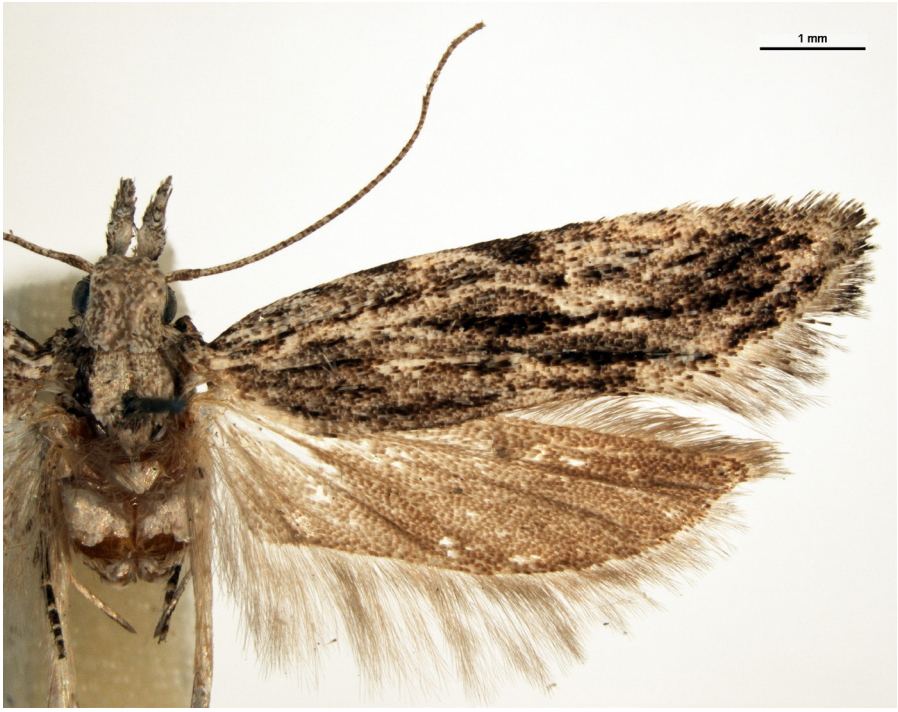

Fig. 2. *Anarsia innoxiella* Gregersen & Karsholt 2017, ♀ Lwów, 02.07.1930, right-hand wings (photo A. Larysz).

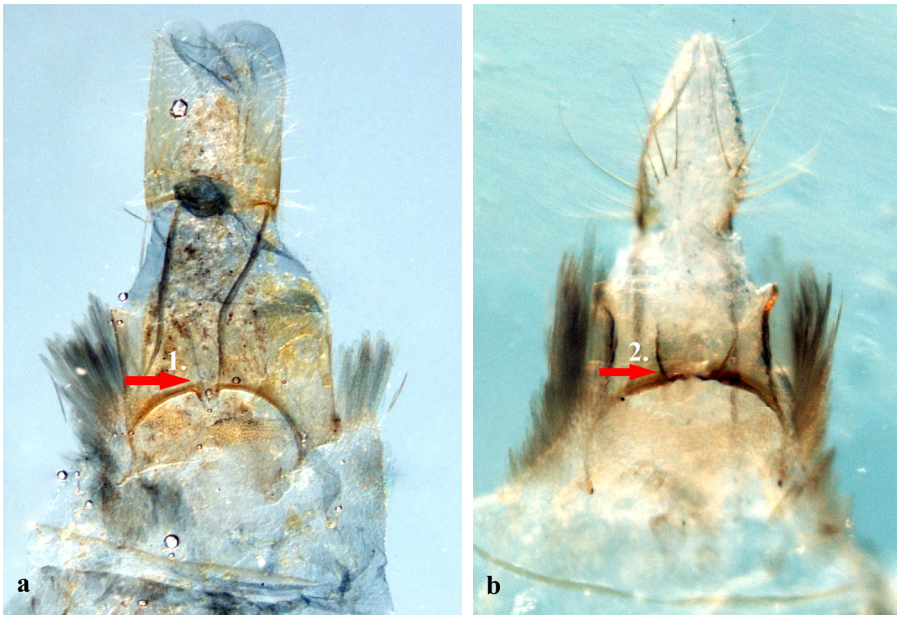

Fig. 3. *Anarsia* female genitalia: **a**. *A. innoxiella* (Lwów, prep. 10/2017); **b**. *A. lineatella* (Mysłowice-Ćmok, prep. 9/2017). **1**. ridges absent; **2**. ridges present (photos A. Larysz).

REFERENCES

Bailey S.F. 1948. The peach twig borer. *Bulletin California Agricultural Experiment Station* 708: 3–56.

Brunner J.F., Rice R.E. 1984. Peach twig borer, *Anarsia lineatella* Zeller (Lepidoptera: Gelechiidae), development in Washington and California. *Environmental Entomology* 13(2): 607–610.

Gregersen K., Karsholt O. 2017. Taxonomic confusion around the Peach Twig Borer, *Anarsia lineatella* Zeller, 1839, with description of a new species (Lepidoptera, Gelechiidae). *Nota lepidopterologica* 40(1): 65–85.

Karsholt O., Nieukerken E.J. van 2013. Lepidoptera, Moths. Fauna Europaea, version 2.6, http://www.fauna-eu.org.

Larysz A. 2014. Materiały do znajomości fauny motyli (Lepidoptera) Polski. *Acta entomologica silesiana* 22(012): 61–65.

Ponomarenko M.G. 2009. Gelechiid Moths of the Subfamily Dichomeridinae (Lepidoptera: Gelechiidae) of the World Fauna. *Dalnauka*, Vladivostok: 389 pp.

Accepted: 18 June 2017; published: 22 June 2017