Nota Lepi. **39**(1) 2016: 79–83 | DOI 10.3897/nl.39.8382

A new species of the genus *Spiniphallellus* Bidzilya & Karsholt, 2008 (Lepidoptera, Gelechiidae, Anomologini)

Jari Junnilainen[1]

1 *Mahlapolku 3 01730 Vantaa, Finland*

http://zoobank.org/1D3C9A82-F60C-4172-AC62-DB2E374F1ABB

Received 4 March 2014; accepted 22 April 2016; published: 18 May 2016
Subject Editor: Lauri Kaila.

Abstract. *Spiniphallellus chrysotosella* **sp. n.** (Gelechiidae: Anomologini) is described. The species is recorded from Bulgaria, Georgia, and Turkey. All three localities of *S. chrysotosella* are rather similar dry rocky slopes where *Jasminum fruticans* L., 1753 (Oleaceae) is a dominant shrub. It is also expected to be the host plant of the new species.

Introduction

The genus *Spiniphallellus* was described and its members diagnosed by Bidzilya and Karsholt (2008) and it was placed in Anomologinae, one of the subfamilies of Gelechiidae. The genus was established for three species collected from mountainous and desert areas of Palaearctic Asia: *S. desertus* Bidzilya & Karsholt, 2008 (Uzbekistan, Turkmenistan, Kazakhstan), *S. stonisi* Bidzilya & Karsholt, 2008 (Kazakhstan), and *S. fuscescens* Bidzilya & Karsholt, 2008 (Turkey). Later on, Šumpich and Skyva (2012) reported *S. desertus* from European Russia. Here a new species of the genus, viz. *S. chrysotosella* sp. n. is described. All these species have specific structures of the genital organs which are typical for the Anomologinae, such as a reduced gnathos, a relatively short valva closely connected to the tegumen, a short tegumen and a well-developed transtilla lobe (Piskunov 1975: 857; Povolný 1979: 44). The new species was recorded for the first time with one specimen from Turkey, Anatolia 01.v.1996 during a sunny day around 10 a.m. It was caught by netting *Jasminum fruticans* L., 1753 (Oleaceae) vegatation on a small dry, rocky hill area. This specimen remained undetermined for several years until three additional specimens were found from Caucasus (Georgia, Gremi) 23–25.v.2011 (Fig. 4). The habitat was again a dry rocky slope with plenty of *Jasminum fruticans*. The specimens were found resting on the leaves of *Jasminum* around 10 a.m. on a bright warm sunny day.

At the end of April, 2013, two additional specimens were found on *Jasminum fruticans* vegetation on the Rupite volcanic hill area near the town of Petrich in SW Bulgaria, Blagoevgrad district. The weather was unusually hot, over 30 degrees Celsius still at dusk. The specimens were attracted by artificial light during the first dark hours.

Zdenko Tokár proposed that the specimens should belong to the genus *Spiniphallellus* and the study of the known species of the genus justified the description of the new species, here named as *Spiniphallellus chrysotosella* sp. n.

Spiniphallellus chrysotosella sp. n.

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Material. Holotype: ♂, **Bulgaria** SW, Struma River valley, Rupite, 41.462°N; 23.256°E, 30.iv.2013. J. Junnilainen leg & coll.: GPJJ201578 and red label "HOLOTYPE of *Spiniphallellus chrysotosella* Junnilainen". – Paratypes: 1 ♂, same locality and data as holotype with green label DNA sample 24244 Lepid Phyl.; 3 ♂, **Georgia** Gremi 42.002°N; 45.657°E, 23–25.v.2011 J. Junnilainen leg., Coll. J. Junnilainen. 1 ♂, **Turkey**, Anatolia, Manavgat, 36.788°N; 31.416°E, 01.v.1996 K. Nupponen & J. Junnilainen leg., Coll. J. Junnilainen. Gen Prep No.7126 Bo Wikström. All paratypes with red label "PARATYPE of *Spiniphallellus chrysotosella* Junnilainen".

Description. Adult (Fig. 1). Wingspan 9–9.5 mm. Labial palp brown with golden shine. Antenna brown, slightly serrate. Head, tegula, and thorax dark brown with glossy golden and purple hue.

Forewing brown with golden shine, with five shiny golden spots: three on the costa, one at 1/5 length of wing from base extending to fold, second at middle of costa, and third 2/3 from base; two spots in fold: one at 1/3 wing length from base and second at 3/5 from base. Hindwing fuscous. Abdomen and legs brown somewhat shiny golden.

Male genitalia (Figs 2, 3). Sternite VIII broad sub-rectangular, laterally rounded, with broad anterior projections on both sides, posterior margin broadly rounded with weak medial indentation. Tegumen relatively short with V-shaped anterior margin; uncus formed as almost sub-rectangular plate, except with posterior margin broadly extended medially, latero-medially with two strong setae and with 6–8 short and thinner setae; valva twice as long as tegumen, elongate, apical half

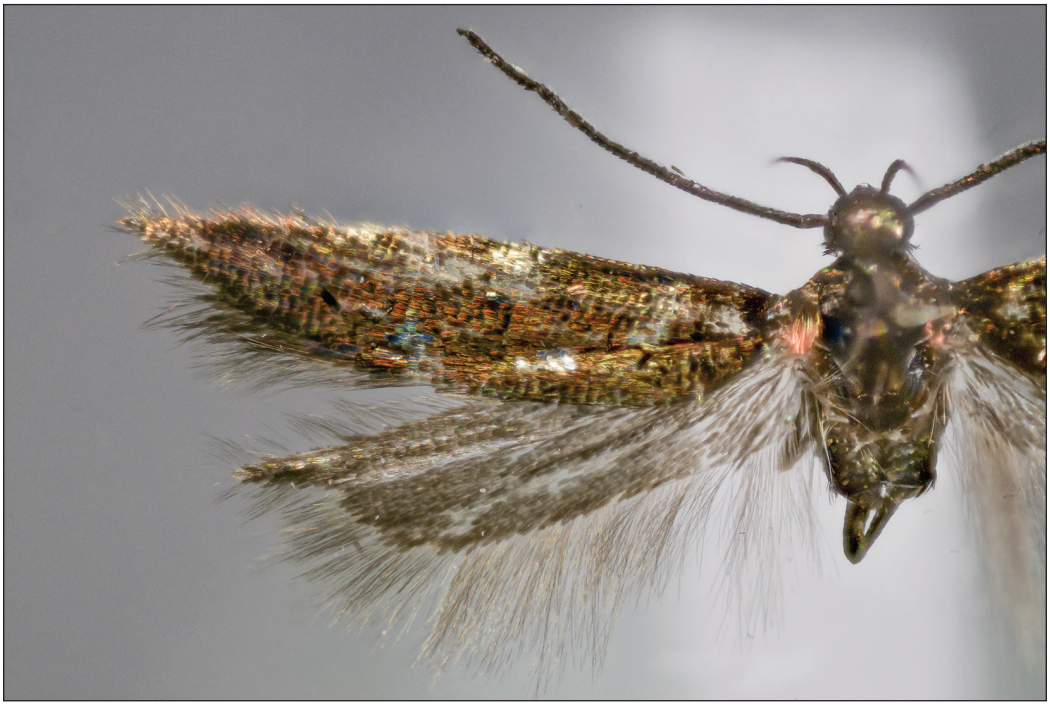
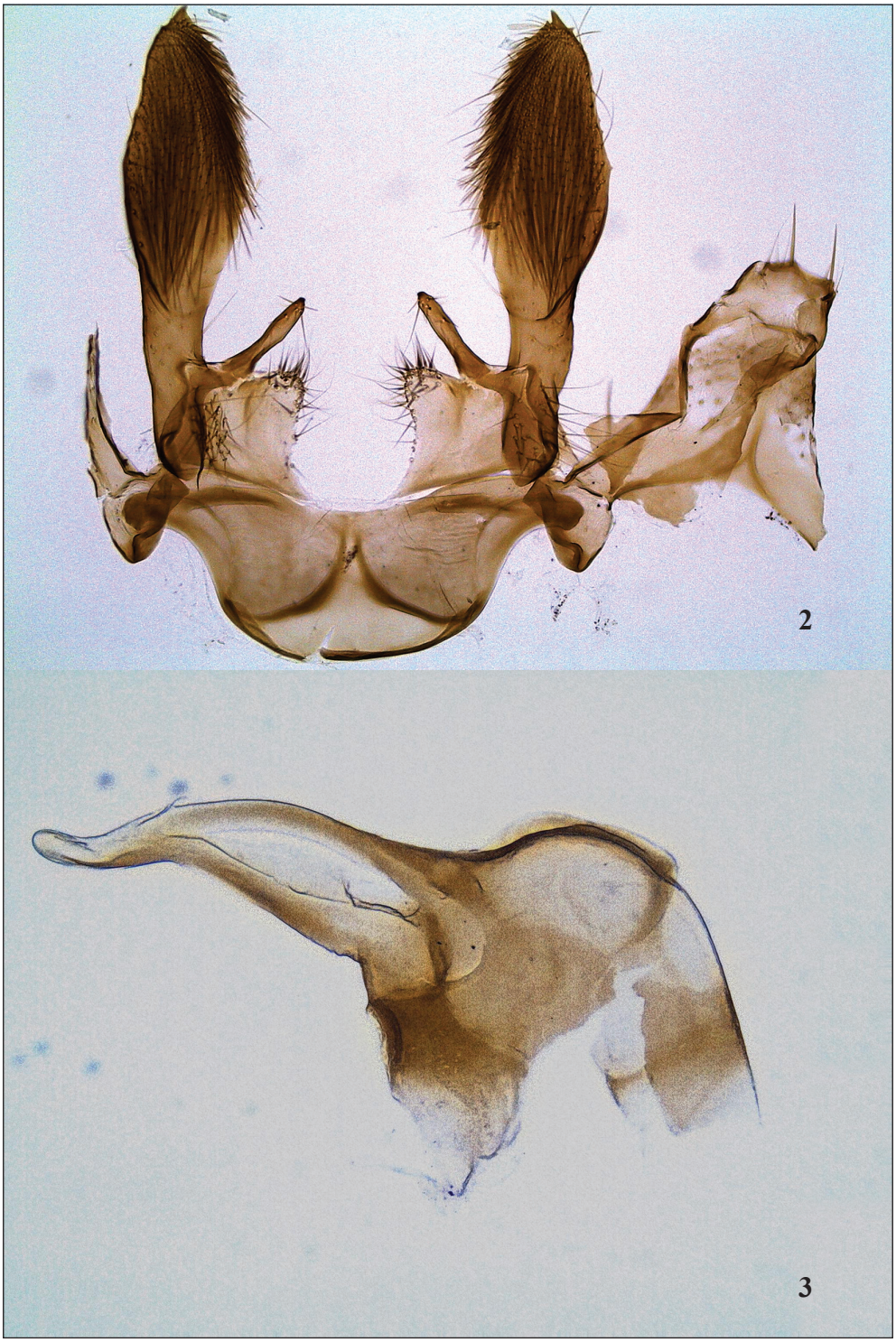


Figure 1. Adult of *S. chrysotosella* sp. n. (Paratype).



Figures 2–3. Male genitalia of *S. chrysotosella* sp. n. **2** Unrolled male genitalia. **3** Phallus.

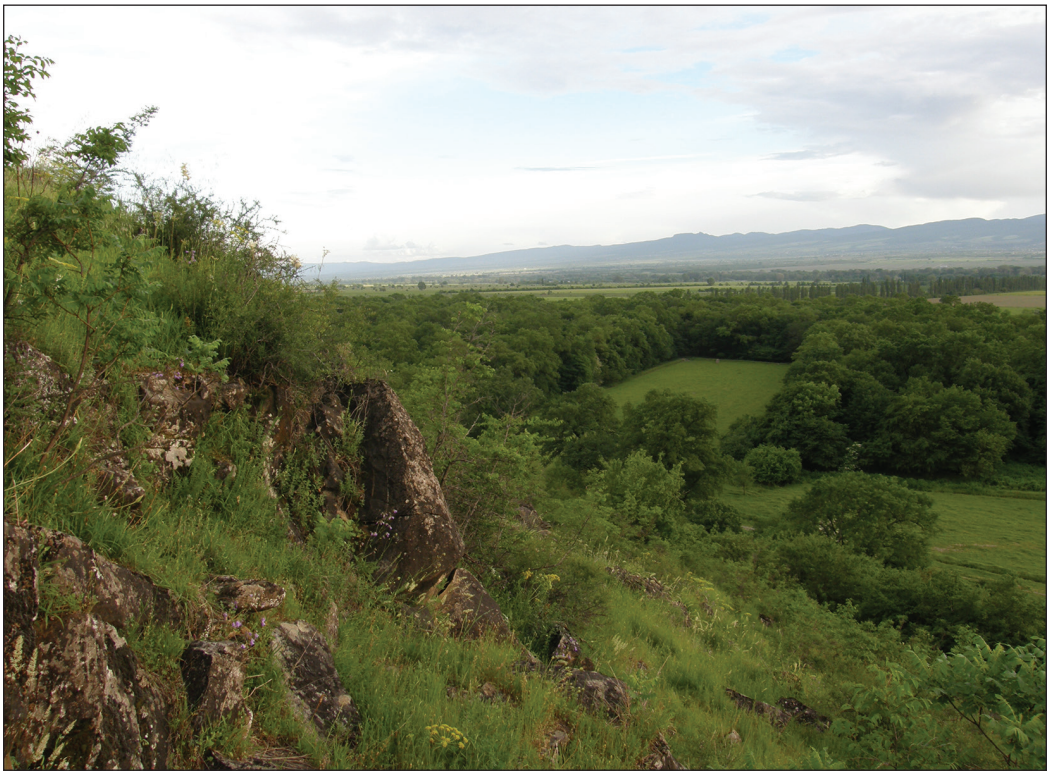


Figure 4. Habitat of *S. chrysotosella* in Georgia, Gremi.

strongly hirsute, apex sharp, weakly pointed inwards; transtilla lobe relatively long, digitate, apically with some fine setae; posterior margin of vinculum medially with broad rounded indentation, laterally formed as sub-triangular plate, distally covered with fine setae; saccus broad, rounded; basal half of phallus almost round, distal part relatively slender, tapered apically; ankylosed by strongly sclerotized and tightly attached anellus.

Diagnosis. Externally the new species is characterized by its forewing with gold shiny markings, which are absent in other close relatives. The species differs from *S. fuscescens* Bidzilya & Karsholt, 2008 by its longer and slenderer valva, longer transtilla lobe and by the form of its vinculum; from *S. stonisi* it differs by its broader uncus, slenderer valva and by distinctive transtilla lobes, lacking in *S. stonisi*; and from *S. desertus* it differs by its slenderer valva, narrower shape of the transtilla, and more rounded saccus.

Female genitalia. Unknown.

Distribution. Bulgaria, Georgia, and Turkey.

Biology. Early stages are still unknown although *Jasminum fruticans* seems to be the most probable host plant. The imago is mostly day active. Flight period begins at the end of April or beginning of May. *S. chrysotosella* has probably been overlooked due to its small size and because it is apparently diurnal and might not be usually attracted to lights.

Etymology. The species name is derived from its golden shiny forewing markings, which are absent from other related taxa.

Remarks. *Spiniphallellus* was originally named based on the characteristic thorn or spine laterally in the medial part of the phallus. This process, however, is actually a strongly sclerotized part of the anellus, tightly fused to the phallus. The phallus is very difficult to remove during dissection without breaking the juxta-anellus complex.

The DNA barcode (sample ID MM24244) shows a very clear difference to all other moths in BOLD (www.barcodinglife.org). The nearest species is *Diasemia grammalis* Doubleday, 1848, which is an exotic Crambiinae moth differing by 8.16%. This barcode difference is so large that its placement is not considered meaningful. No other species of *Spiniphallellus* has been barcoded so far.

Acknowledgements

I want to thank Lauri Kaila and Bo Wikström (Finland) for their valuable comments and grammatical corrections of the manuscript. Marko Mutanen (Finland) gave invaluable help with arranging the barcoding of the specimens. Zdenko Tokár (Slovakia) and Ole Karsholt (Denmark) provided important taxonomical information. Boyan Zlatkov (Bulgaria) helped with fieldwork and upgraded my knowledge of Bulgarian plants. Kimmo Silvonen and Bo Wikström (Finland) helped with the processing of the photographs. I also thank Kari Nupponen (Finland), Urmas Jürivete (Estonia), and Timo Ranki (Luxembourg) for their delightful company during fieldwork.

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