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## Two new species of *Agonopterix* (Depressariidae, Lepidoptera) from Europe

PETER BUCHNER

Mag. Peter Buchner, Scheibenstraße 335, 2625 Schwarza am Steinfeld, Austria. E-mail: buchner.324@te2.at

### Abstract

The species *Agonopterix tripunctaria* **sp. nov.** and *Agonopterix medelichensis* **sp. nov.** are described. *A. tripunctaria*, previously misidentified as *Agonopterix nodiflorella* (Millière, 1866), was recognized as specifically different by the distinctive male genitalia. 19 specimens have been examined, DNA-barcoding yielded full 658 bp fragment of COI from two specimens and a 639 bp sequence from a third, confirming the impression of a rather isolated species. Specimens from Italy, Slovenia, Croatia and Greece had been checked, among them one reared from *Ferulago campestris*. *A. medelichensis* was misidentified as *Agonopterix rotundella* (Douglas, 1846) in NHMV; its male genitalia are erroneously depicted as *A. rotundella* in Hannemann (1953) and (1995). 20 specimens have been examined, from one a 555 bp fragment of COI was obtained, confirming that it is not closely related to *A. rotundella*. Specimens from Austria, Italy, Hungary, Slovakia, Croatia and Greece have been checked, among them one reared from *Trinia glauca*, which had been misidentified as *A. hippomarathri*. A report of *A. rotundella* from Russia also belongs to this species.

**Key words:** Lepidoptera, Gelechioidea, Depressariidae, Depressariinae, *Agonopterix*, Europe, new species, DNA barcoding

### Introduction

Depressariidae as a family initially included the genera *Semioscopis*, *Luquetia*, *Levipalpus*, *Exaeretia*, *Agonopterix* and *Depressaria* (Depressariidae Meyrick, 1883). According to van Nieuwerkerken *et al.* (2011) it became a subfamily of the Elachistidae, before being reduced to a tribe (Depressariini, subfamily Depressariinae, Elachistidae). Heikkilä *et al.* (2014) again separate Depressariinae from Elachistidae and propose a wider concept of Depressariidae. Here this view is followed.

I started working on Depressariidae in 2010 as a co-author of “Microlepidoptera of Europe [ME]: Depressariidae”. The main goal of this series is to provide an identification guide, but inevitably it requires at least a partial revision, and the first results are presented here.

During this work unidentified specimens were dissected and misidentified specimens were found. In most cases identification was possible, but unresolved questions remained. One of the unanswered questions related to a species referred to *A. nodiflorella* in TLMF and ZSM, but with different genitalia, which turned out to be undescribed. Another open question concerned the drawing of the male genitalia of *A. rotundella* in Hannemann (1953) and Hannemann (1995), which clearly do not show this species. The origin of this figure had been found by coincidence: Dissecting the *Agonopterix*-species from NHMV to produce genitalia photos for “ME: Depressariidae”, the genitalia of the specimens referred to *A. rotundella* show perfect correspondence with Hannemann’s drawing. That opened the door to the realization that there is an undescribed species hidden under “*A. rotundella*”.

### Material and methods

Material has been examined from NHMV (Natural History Museum Vienna, “Naturhistorisches Museum Wien”), NMPC (Národní Muzeum v Praze, Česko, “Natural Museum Prague, Czech Republic”), TLMF (“Tiroler