



First Record of *Phycita imperialella* (Ragonot, 1887) from Western Europe (Pyralidae)

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Source: The Journal of the Lepidopterists' Society, 70(1) : 75-76

Published By: The Lepidopterists' Society

URL: <https://doi.org/10.18473/lepi.70i1.a9>

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FIRST RECORD OF *PHYCITA IMPERIALELLA* (RAGONOT, 1887)
FROM WESTERN EUROPE (PYRALIDAE)**Additional key words:** Phycitinae, *Onosma echioides*, Pollino National Park, Italy

Phycita imperialella (Ragonot 1887) is a species of Pyralidae, subfamily Phycitinae, tribe Phycitini. This species was moved several times across different genera. It was described as *Nephoterix imperialella* by Ragonot (1887), reported as *Sciota imperialella* in Fauna Europaea (Karsholt & Van Nieukerken 2015), as *Bradyrhoa imperialella* in Budashkin & Savchuk (2010), and, finally, as *Phycita imperialella* in Leraut (2014). Perhaps the correct combination is that proposed by Budashkin & Savchuk (2010), and molecular analyses could be useful to assign this species to the correct genus. Few data are given for the distribution of this species. Within the original description, it was generically reported from Caucasus, Armenia and Siberia (Ragonot 1887). Successively, the range was extended to Greece and Macedonia (Klimesch 1968), Ukraine (Krim near Kurortne, Friedmar Graf, www.lepiforum.de; Crimea (Budashkin & Savchuk 2010)), and Turkey (Van province, East Turkey (Koçak & Kemal 2012)). To date, the chorotype of *P. imperialella* can be defined as Caucasian-East Mediterranean. Budashkin & Savchuk (2010) found caterpillars of *P. imperialella* feeding on both stems and flowers of *Onosma polyphylla* Ledeb. (Boraginaceae), from mid-June to mid-July. Adults were found from June to October, but more frequently in August, in xerophilous habitats.

In this paper we report the first record of *P. imperialella* from Italy, significantly expanding the range of this species westward. The collection site is situated in

the Pollino National Park on the southern slope of Serra Ambruna Mts., municipality of Saracena, southern Italy (latitude: 39.8234°; longitude: 16.0768°; altitude: 1,035 m). A specimen of *P. imperialella* were found in a clearing surrounded by a *Fagus sylvatica* L. forest with isolated trees and bushes of *Corylus avellana* L., *Fraxinus* spp., *Quercus ilex* L., *Pinus* spp. The shrub-herbaceous layer is characterized by *Spartium junceum* L., *Hieracium* spp., *Dianthus* spp. and some Poaceae species. Geological substratum is calcareous with outcropping rocks. Moths have been sampled by a high brightness UV-LED strips-based light trap (400–315 nm, light angle 120°, 3,000 lumens), positioned at approximately 1.30 meters above the ground, switched on at dusk.

On the 24th of August 2015 we collected one male of *Phycita imperialella* (Fig. 1). The identification was easily carried out comparing the habitus of the specimen with available iconography (Leraut 2014). Wingspan is 29 mm, included within the known measurement range of this species (28–30 mm). The specimen was barcoded (BOLD sequence page: BIBSA855-15; GenBank accession: KU497408) and stored in the collection of the Unità di Ricerca per la Selvicoltura in Ambiente Mediterraneo (CREA-SAM).

The discovery of a new population of this species in the Pollino Massif confirms the biogeographic affinity between south-eastern Europe and southern Italy. In fact, this distribution pattern is shared by several xerothermophilous Lepidoptera species (Scalercio et al. 2014).

Onosma polyphylla, the food-plant indicated by Budashkin & Savchuk (2010), is absent in southern Italy where two subspecies of *O. echioides* (L.) L. are present (Peruzzi & Passalacqua 2008). The collection area is at the southern boundary range of the nominal subspecies of *O. echioides*, which is probably the food-plant of the Italian population of *P. imperialella*.

ACKNOWLEDGMENTS

We are deeply indebted with Frantisek Slamka (Frantisek Slamka Publisher, Slovakia), Franziska Bauer and Francesca Vegliante (Senckenberg Museum of Zoology, Germany) for providing useful literature. We thank the Pollino National Park for releasing us the collection permit (n. 79 of 16th April 2015).



FIG. 1. *Phycita imperialella*, male, Serra Ambruna (Italy), 24.VIII.2015, 29 mm, legit Scalercio S. & Infusino M.

Research financially supported by Project PON03PE_00024_1 (Ambi.Tec.Fil.Legno-ALForLab).

LITERATURE CITED

- BUDASHKIN, Y. I. & V. V. SAVCHUK. 2010. New faunal and bionomic materials of the Crimean Lepidoptera. *Optim. Protect. Eco.* 2: 42-57.
- KARSHOLT, O. & E. J. VAN NIEUKERKEN (2015) Lepidoptera. Fauna Europaea Web Service, version 2.6.2. Available from: <http://www.faunaeur.org> (accessed 16th October 2015).
- KLIMESCH, J. 1968. Die Lepidopterenfauna Mazedoniens. IV. Microlepidoptera. Pos. Izdan. Prirodon. Muzej Skopje. 5: 1-201.
- KOÇAK, A. Ö. & M. KEMAL. 2012. List of the two thousand species of Pterygot insects in Van province (East Turkey). *Cesa New.* 81: 87 pp.
- LERAUT, P. J. A. 2014. Moths of Europe, Pyralids 2. Ed. N.A.P. Editions, Verrières-le-Buisson, France. 441 pp.
- PERUZZI, L. & N. G. PASSALACQUA. 2008. Taxonomy of the *Onosma echioides* (L.) L. complex (Boraginaceae) based on morphometric analysis. *Bot. J. Linn. Soc.* 157: 763-774.
- RAGONOT, E. L. 1887. Diagnoses d'espèces nouvelles de Phycitidae d'Europe et des Pays limitrophes. *Ann. Soc. Entomol. Fr.* (ser. 6) 7: 225-260.
- SCALERCIO, S., G., LUZZI, & M. INFUSINO. 2014. First record of *Pempelia amoenella* (Zeller, 1848) for Western Europe (Lepidoptera Pyralidae). *Biodiv. J.* 5: 217-220.

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Submitted for publication 19 October 2015; revised and accepted 23 November 2015.