

Schinia cognata (Lepidoptera: Noctuidae, Heliiothinae), an enigmatic specimen in the collection of the Royal Belgian Institute of Natural Sciences

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Abstract. During recent curatorial work in the Lepidoptera Collection of the Royal Belgian Institute of Natural Sciences, a specimen of *Schinia cognata* (Freyer, 1833) was found, which was earlier recorded as *Schinia cardui* (Hübner, 1790). Some information on the faunistics and biology of *S. cognata* are given and the specimen is considered to be an adventive.

Samenvatting. Tijdens recente beheerswerken in de Lepidopteraverzameling van het Koninklijk Belgisch Instituut voor Natuurwetenschappen werd een exemplaar van *Schinia cognata* (Freyer, 1833) teruggevonden dat vroeger als *Schinia cardui* (Hübner, 1790) vermeld werd. Informatie over de faunistiek en biologie van *S. cognata* wordt gegeven en het exemplaar wordt beschouwd als adventief.

Résumé. Pendant la curation de la collection des lépidoptères à l'Institut Royal des Sciences naturelles de Belgique, un exemplaire de *Schinia cognata* (Freyer, 1833) a été trouvé, qui était mentionné auparavant comme *Schinia cardui* (Hübner, 1790). Des informations concernant la faunistique et la biologie de *S. cognata* sont données et l'exemplaire est considéré comme adventif.

Key words: *Schinia cognata* – First record – Belgium – Faunistics.

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In 1912, Lambillion recorded the species "*Heliothis Cardui* Hb." for the first time from the Belgian fauna, after he found a specimen in the collection of the Belgian naturalist Gérard-Filot (Liège) (Fig. 1). The specimen was captured at the end of May 1909, but it is not clear whether Gérard-Filot collected the specimen himself or he obtained it from somebody else. This record seems to have caused some doubt among later authors (e.g. Lhomme 1923–1935, Hackray & Sarlet 1979) as they did not mention this record, not even in a remark. However, while preparing the first version of the Catalogue of the Lepidoptera of Belgium (De Prins 1998), the entire Belgian entomological literature was consulted and the record of *Schinia cardui* (Hübner, 1790), as the species should be named currently, was added in the Notes section, but not as a native species because it was very unlikely that this species would be part of the Belgian fauna. The record was repeated unaltered in the subsequent version of the catalogue (De Prins 2016) which also served as the basis of the online Catalogue of the Lepidoptera of Belgium (De Prins *et al.* 2019).

During recent curatorial work in the Belgian Lepidoptera collection of the Royal Belgian Institute of Natural Sciences, Brussels (RBINS), the actual specimen of this "*Heliothis Cardui* Hb." was recovered from the collection of P. Houyez (Fig. 2), who probably acquired the collection of Gérard-Filot. It became immediately clear that the initial identification by Lambillion was wrong; the specimen is in fact a female of *Schinia cognata* (Freyer, 1833).

The genus *Schinia* Hübner, 1823, is called "flower moths" because nearly all species are diurnal and tend to rest on flowers. It is a Holarctic genus with most species occurring in the Nearctic, eastern United States and Canada, though some species have also been recorded from California as well. According to Fibiger *et al.* (2009), there are three species of *Schinia* in the European fauna:

S. cardui, *S. cognata*, and *S. purpurascens* (Tauscher, 1809). The last of these is so far only known in Europe from Southeastern European Russia where it flies in steppe country and meadows where its main foodplant, *Cephalaria gigantea* (Ledeb.) Bobrov (Dipsacaceae) occurs. *Schinia cardui* is distributed in southern Europe in three separate subspecies: the nominate one occurring from Central and Southern France, through southern Central Europe and Southeastern Europe to the Urals, *S. cardui cuprea* Zilli & Fibiger, 2009, known from Spain and *S. cardui purpurata* (Staudinger, 1901) known from the Pontus (Turkey). The habitat of *S. cardui* consists of mesoxeric pastures and meadows with a rich herbaceous vegetation in which many flowers are present. Its main foodplant is *Picris hieracioides* L. (Asteraceae), though it has been found as well on *Armeria* spp. (Fibiger *et al.* (2009: 216). Other recorded foodplants, such as *Atriplex* and *Chenopodium*, need confirmation.

Schinia cognata is a xerothermophilous species occurring on steppes, meadows with rich, mixed vegetation on sandy or rocky soil and is distributed from the Eastern Alps (Austria, Southern Czech Republic) eastwards to the Southern Urals and throughout Turkey. In Fauna Europaea (Fibiger & Skule 2017) the species is mentioned from Austria, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Greece, Hungary, Macedonia, Romania, Slovakia, Slovenia, Southern European Russia, and Ukraine. In the 21st Century further, some isolated populations were discovered in South France, Hautes Alpes (Bachelard *et al.* 2007). The main larval foodplant of *S. cognata* is *Chondrilla juncea* L. but it has been recorded from various other Asteraceae, including *Prenanthes purpurea* L. which had already been recorded by Freyer in the original description of the species (Freyer 1833–1836).

As suggested above, the occurrence in Belgium of this xerothermophilous steppe species is highly improbable, even though the foodplant, *Ch. juncea*, grows very rarely

in the extreme southern parts of Belgium (De Langhe *et al.* 1983: 630). According to the same authors, the plant is adventive in some other regions. In the early 20th Century, collections were often assembled with the aim of having a "complete" collection and little or no attention was paid to the faunistic, biological and taxonomic information regard to a certain specimen. Specimens were exchanged with other collectors, bought or sold on international insect fairs and, therefore, it is sometimes very difficult to retrieve the origin of a specimen. Often, the data under such specimens merely mention the name of the collector and a number which refers to a catalogue. The fact that the specimen under consideration bears a rather informative label suggests that it must have really been caught at Stoumont, unless faunistic fraud is involved. Because the nearest populations of *S. cognata* are

situated in Southeast Austria and Southeast France, and no intermediate populations are known, this specimen should be considered at the most as an adventive one, brought to Belgium by human agency and so it is recorded as such in the "About" section of the online Catalogue of the Lepidoptera of Belgium (De Prins *et al.* 2019) together with a selection of other adventive or imported species.

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« Ayant eu l'occasion de visiter la collection de M Gérard-Filot, naturaliste liégeois bien connu, j'y ai noté la présence de deux *Noctuidae* intéressantes : l'*Emmelia Trabealis* Sc., capturée à Comblain-au-Pont, près du confluent de l'Ourthe et de l'Amblève, par M. Gérard Salme, également de Liège (c'est la seule capture de cette espèce dont J'aie connaissance pour la province de Liège; elle doit remonter à 15 ou 20 ans), et un spécimen pris à Stoumont (Amblève) d'une espèce dans laquelle je n'ai pu, après un bref examen, reconnaître que *Heliothis Cardui* Hb., ce qui porterait à 5 le nombre des espèces indigènes de ce genre?? La capture est datée de fin mai 1909. »

Fig. 1. Part of the original publication in which Lambillion (1912) recorded "*Heliothis Cardui* Hb." from the Belgian fauna. © Biodiversity Heritage Library.

Fig. 1. Fragment uit de originele publicatie waarin Lambillion (1912) "*Heliothis Cardui* Hb." vermeldt voor de Belgische fauna. © Biodiversity Heritage Library.



Fig. 2. *Schinia cognata* (Freyer, 1833), female, Belgium, LG, Stoumont, 25.v.1909, ex coll. Gérard-Filot, ex coll. P. Houyez, at present in RBINS. © Jurate De Prins.

Fig. 2. *Schinia cognata* (Freyer, 1833), vrouwtje, België, LG, Stoumont, 25.v.1909, ex coll. Gérard-Filot, ex coll. P. Houyez, aanwezig in RBINS. © Jurate De Prins.

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