

Gravitarmata margarotana (Heinemann, 1863), a new species for the Belgian fauna (Lepidoptera : Tortricidae)

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Samenvatting. *Gravitarmata margarotana* (Heinemann, 1863), een nieuwe soort voor de Belgische fauna (Lepidoptera : Tortricidae)

Gravitarmata margarotana (Heinemann, 1863) wordt van twee vindplaatsen uit het noordoosten van de provincie Antwerpen vermeld : Oud-Turnhout en Postel. Het gaat om de eerste waarnemingen van deze soort in België.

Résumé. *Gravitarmata margarotana* (Heinemann, 1863), une espèce nouvelle pour la faune belge (Lepidoptera : Tortricidae).

Gravitarmata margarotana (Heinemann, 1863) a été trouvé dans deux localités situées dans le nord-est de la province d'Anvers: Oud-Turnhout et Postel. Il s'agit de la première mention de cette espèce en Belgique.

Key words : faunistics - nomenclature - *Gravitarmata margarotana* - *Retinia resinella* - *Barbara herrichiana* - Tortricidae.

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Introduction

Last autumn Knud Larsen discovered in a box with undetermined Microlepidoptera, a reddish-brown Tortricid moth, which was probably a new species for the Belgian fauna. After examination of the genitalia by W. De Prins the specimen was undoubtedly determined as a male of *Gravitarmata margarotana* (Heinemann, 1863). It was collected by Alex Riemis on 19th April 1988 on dry heath with gradients to acid bog surrounded by coniferous woodland at Oud-Turnhout (Prov. Antwerpen). Two other specimens turned up in the collection of W. De Prins, captured on 6th May 1976 at Postel (Prov. Antwerpen) in mixed woodland.

Description

Imago (see figs 1-3): Forewings of *Gravitarmata margarotana* reddish-brown, with uniformly gray spots and intermixed transverse stripes bordered by thin black lines, wingspan 14-18mm. *G. margarotana* has often been confused with *Barbara herrichiana* (Obraztsov, 1960), but the latter is easily determined by the presence of minute, lustrous, lead-coloured spots with black border which fuse into a line, wingspan 16-22mm. *G. margarotana* could also be confused with *Retinia resinella* (Linnaeus, 1758) which has a greyer groundcolour and a pattern with silver shining lines (see fig. 4).

The genitalia of the genus *Gravitar mata* Obraztsov, 1946 are easily distinguished from those of the closely related genera *Rhyacionia* Hübner, [1825], *Retinia* Guenée, 1845 and *Barbara* Heinrich, 1923 by its clearly defined bilobed uncus and the sclerotized socii (see fig. 438 in Kuznetsov 1978).

Biology and habitat

Kuznetsov (1978: 508) says that *G. margarotana* feeds in branches and cones of pine, fir and spruce. The diapausing pupa hibernates. The flight period is April and May. The larva of *Barbara herrichiana* feeds on the same trees but in the shoots, although some authors (Patocka 1960; Kuznetsov 1978) mention that it feeds also in the cones. Further observation on feeding behaviour is necessary because the two species were mixed up previously or simply considered as one single species. The specimen from Oud-Turnhout was caught in a light-trap put up on dry lowland heath surrounded by coniferous woodland. Maybe the presence of some isolated pines can have an influence on the occurrence of the species. Other characteristic Lepidoptera species in the area are *Neofaculta ericetella* (Geyer, [1832]), *Eupithecia satyrata* (Hübner, [1813]), *Eupithecia subumbrata* ([Denis & Schiffermüller], 1775), *Ematurga atomaria* (Linnaeus, 1758), *Pachynemina hippocastanaria* (Hübner, [1799]), *Plusia putnami* (Grote, 1873) and *Hypenodes turfosalis* (Wocke, 1850) (A. Riemis, pers. comm.). The Postel specimens were caught at light on an open place between mixed woods on sandy soil.

Distribution

Palaeartic (Obraztsov 1964: 44) : from France (Alsace, Seine-et-Marne, Fontainebleau, Barbiron, Bourron, Seine-et-Oise, Maissons-Laffite, Saclas) (Lhomme 1935: 314) eastwards to Germany (Pfalz, Berlin, Schlesien) (Hannemann 1961: 116; Kennel 1921: 362) via Austria, N-, NW-, SW-Russia, Southern Primorye till China and Japan (Kuznetsov 1978: 508). Also known from Poland (Razowski 1987: 129). In general the species is said to be rather local (Obraztsov 1964: 44) and rare (Hering 1932: 180) but is probably overlooked in many areas. The discovery of this local species in Belgium represents the most north western locality in Europe. The species is not mentioned from any other European country than those cited here.

The distribution-pattern of *Barbara herrichiana* is quite similar but it also occurs in Greece, Spain and the former Czechoslovakia (Medvedev 1989: 721; Vives Moreno 1992: 181) and Asia Minor (Obraztsov 1964: 41). This species is probably better adapted to warmer areas whereas *G. margarotana* avoids the hot summers of the Mediterranean climate.

Figure 1 : *Gravitarmata margarotana* (Heinemann, 1863)
♂, Belgium, prov. Antwerpen,
Postel, 6.V.1976, leg. and coll.
W. De Prins.



Figure 2 : *Gravitarmata margarotana* (Heinemann, 1863)
♀, Belgium, prov. Antwerpen,
Postel, 6.V.1976, leg. and coll.
W. De Prins.



Figure 3 : *Gravitarmata margarotana* (Heinemann, 1863)
♂, Belgium, prov. Antwerpen,
Oud-Turnhout, 19.IV.1988, leg.
A. Riemis, coll. F. Verhoeven.

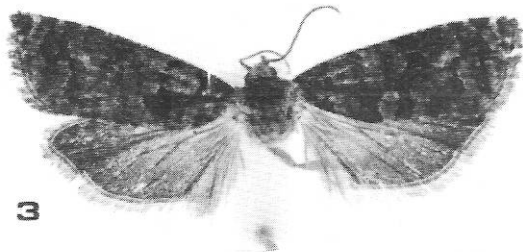
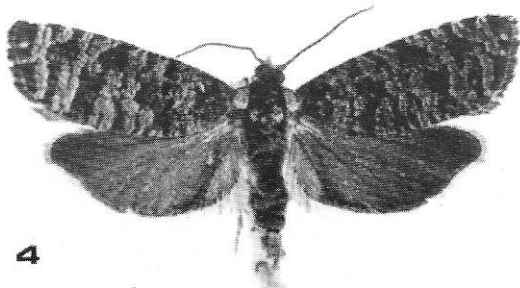


Figure 4 : *Retinia resinella* (Linnaeus, 1758) ♀, Belgium,
prov. Antwerpen, Deurne,
15.V.1988, leg. and coll. W. De Prins.



Nomenclature

The name *margarotana* has been used on several occasions within the family Tortricidae. *Aethes margarotana* (Duponchel, 1836) was described by Duponchel (1836) as *Argyrolepis margarotana* after material collected in southern France (Nîmes). This taxon belongs to the tribe Cochylini of subfamily Tortricinae, and thus does not take part in the discussion. *Gravitarmata margarotana* was described by Heinemann (1863) as *Retinia margarotana* after material from northwestern Germany (Schlesien). Under the same name - *Retinia margarotana* - the taxon currently known as *Barbara herrichiana* was described by Staudinger (1871) after one specimen from Greece (Mount Parnassos).

There has always been some confusion in the name of the latter two taxa as they have been mentioned several times as *margarotana*, however with different author names. We give a short list of the most important publications in which one or both species were mentioned.

Gravitarmata Obraztsov, 1946, *Z.wien.ent.Ges.* **30**: 42.

Type species: *Retinia retiferana* Wocke, 1879, *Z. ent. Breslau* (N.F.) **7**: 73, by original designation (Nye & Fletcher 1991: 138). *Retinia retiferana* Wocke, 1879 is a junior subjective synonym of *Retinia margarotana* Heinemann, 1863.

Gravitarmata margarotana (Heinemann, 1863)

Retinia margarotana Heinemann, 1863; *Die Schmetterlinge Deutschlands und der Schweiz, Zweite Abtheilung, I,1. Die Wickler*, p. 95.

Synonyms and nomenclature:

Retinia amethystana de Peyerimhoff, 1872: 239.

Retinia retiferana Wocke, 1879; Wocke 1879: 73.

Evetria retiferana (Wocke, 1879); Rebel 1901: 103; Spuler 1910: 264; Kennel 1921: 362; Meyrick 1927: 532; Hering 1932: 180; Eckstein 1933: 84; Lhomme 1935-1946: 314.

Gravitarmata retiferana (Wocke, 1879); Obraztsov 1946: 42.

Gravitarmata margarotana (Heinemann, 1863); Hannemann 1961: 116; Obraztsov 1964: 44; Kuznetsov 1978: 508; Schröder 1978: 130; Leraut 1980: 97; Razowski 1987: 129.

Barbara Heinrich, 1923, *Bull. U.S. natn. Mus.* **123**: 11, 27.

Type species: *Evetria colfaxiana* Kearfott, 1907, *Trans. Am. ent. Soc.* **33**: 3, by original designation (Nye & Fletcher 1991: 41).

Barbara herrichiana Obraztsov, 1960

Barbara herrichiana Obraztsov, 1960; *Beitr. Ent.* **10**: 464

Synonyms and nomenclature:

margarotana Herrich-Schäffer, 1848, pl. 21, fig. 148 (uninominal).

Retinia margarotana H.-S.; Wocke 1861, 99 (nomen nudum); Staudinger, 1871: 220.

Evetria margarotana H.-S.; Rebel 1901: 103; Spuler 1910: 264; Kennel 1921: 361; Hering 1932: 180. Eckstein 1933: 84; Lhomme 1935-1946: 315.

Barbara margarotana H.-S.; Obratsov 1946: 42; Swatschek 1958: 128; Patocka 1960: 72.

Barbara herrichiana Obratsov, 1960; Obratsov 1960: 464; Hannemann 1961: 120; Kuznetsov 1978: 508; Schröder 1978: 131; Leraut 1980: 97; Razowski 1987: 128; Vives Moreno 1992: 181.

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Boekbesprekingen

Pavlicek-van Beek, T., Ovaa, A.H. & Made, J.G. van der (Eds): *Future of butterflies in Europe: strategies for survival* (Proceedings of an International congress, held at Wageningen during April, 12-15, 1989). 24 x 17 cm, 326 p., vele tekstfiguren en tabellen, Department of Nature Conservation, Agricultural University, Wageningen, gebonden, 1992, HFL 45,- (ISBN 90-6754-249-0).

Dit boek is samengesteld uit lezingen, welke gehouden werden te Wageningen in 1989 in het kader van een internationaal symposium rond het thema "De Toekomst van Dagvlinders in Europa". Het bevat 34 bijdragen en 15 "posters", alle in het Engels geschreven door specialisten op gebied van taxonomie, ecologie en bescherming van dagvlinders uit diverse Europese landen.

De lezingen zijn gegroepeerd in zes secties :

1. Butterflies in the European countries.
2. Mapping and monitoring as tools for scientific research and management.
3. Ecology of butterflies.
4. Population dynamics in butterfly populations.
5. Future of butterflies in Europe.
6. Posters.

Sommige artikels zijn erg kort, andere echter zijn erg uitgebreide studies.

Al wie geïnteresseerd is in Europese dagvlinders en begaan is met hun toekomst zal zijn gading vinden in dit, naar verhouding erg goedkope, boek. Een aanrader zowel voor vakmensen en amateur-entomologen als voor de 'groene jongens'!

Alain Olivier