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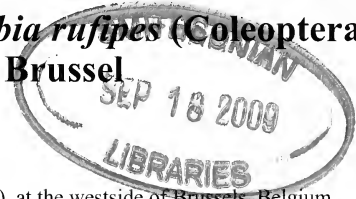
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## De roodpootkoprakever, *Necrobia rufipes* (Coleoptera: Cleridae), aan de westrand van Brussel

Willy Troukens



**Abstract.** *Necrobia rufipes* (Coleoptera: Cleridae), at the westside of Brussels, Belgium.

On 12.X.2008 a specimen of *Necrobia rufipes* (De Geer, 1775) was captured in an apartment at Anderlecht (Belgium, Brussels). It is quite possible the beetle came into the house with rabbit-food. This species is spread all over the world. It is very noxious in store-houses eating copra, oleiferous seeds, and bone-meal. In Egypt it is found in the cranial cavity of mummies.

**Résumé.** Le nécrobie à pattes rouges, *Necrobia rufipes* (Coleoptera: Cleridae), à la périphérie ouest de Bruxelles, Belgique.

Le 12.X.2008 un exemplaire de *Necrobia rufipes* (De Geer, 1775) fut capturé dans un appartement à Anderlecht (Belgique, Bruxelles). Il est possible que l'insecte se soit introduit dans la maison avec des aliments pour lapins. L'espèce est cosmopolite et nuisible dans les entrepôts où sont stockés le coprah, les graines oléagineuses et de la poudre d'os. En Egypte elle fut trouvée dans la cavité crânienne des momies.

**Key words.** *Necrobia rufipes* – Cleridae – Faunistics – Belgium.

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Op 12.X.2008 werd in een woning te Anderlecht een kevertje gevangen dat zonder problemen kon gedetermineerd worden als *Necrobia rufipes* (De Geer, 1775). Dit insect was hier vermoedelijk terecht gekomen met een zakje konijnenvoer, bestaande uit allerlei pitten, zaden en granen. Het vrij slanke kevertje is 6 mm lang, zwak gewelfd en donkerblauw van kleur. De sprietbasis en de poten zijn geelrood, de tarsen iets donkerder. Zowel de kop, het halsschild als de dekschilden zijn bestippeld en zwart behaard. De dekschilden vertonen bovendien stippelrijen die naar achter toe uitgewist zijn.

*N. rufipes* behoort tot de Cleridae (mierkevers), meer bepaald tot de onderfamilie van de Korynetinae waarvan de vertegenwoordigers wereldwijd gevreesd worden als voorraadinsecten. In België zijn hiervan al 4 soorten aangetroffen (Troukens 2008: 73–75).

Door de handel in kopra (gedroogde kokosnoten) is deze soort nu over de hele wereld verspreid. Behalve in kopra en in oliehoudende zaden, zoals soja, ontwikkelen de larven zich ook in aas (Du Chatenet 2000: 53). Net als spektorren (Dermestidae) kunnen ze nog gedijen in die gedeelten die voor de meeste andere aaseters te droog zijn. In pakhuizen en fabrieken tasten ze huiden, vis- en beendermeel aan. Ook melk- en eierpoeder laten ze niet ongemoeid en zelfs in bepaalde medicijnen kunnen ze nog schade aanrichten (Mourier & Winding 1976: 74–75). De ontwikkeling van ei tot imago duurt bij 22°C ongeveer een maand. Op onze breedtegraad kan zich in de vrije natuur één generatie per jaar ontwikkelen. In Frankrijk, waar *N. rufipes* vrij gewoon is, kan men hem van mei tot juli aantreffen op geveld hout (Du Chatenet 2000: 53).

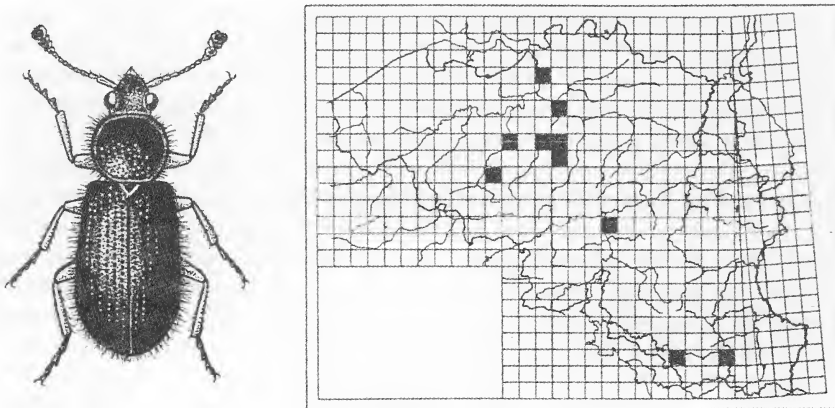


Fig. 1. Vindplaatsen van *Necrobia rufipes* (De Geer, 1775) in België (Bron: K.B.I.N., Brussel).

Hoe lastig het diertje kan worden blijkt uit het verhaal van de Nederlandse entomoloog Corporaal, die in november 1921 met de "Buitenzorg" van Nederlands-Indië naar Europa reisde. Het schip vervoerde ook een lading kopra en ten gevolge daarvan vele roodpootkoprakevers. De diertjes verspreidden zich over het gehele schip en vreten gangetjes in allerlei waren, tot zelfs in een stearinekaars. Zij waren in de passagiershutten zeer hinderlijk, vreten o.a. zeep en nestelden zich in scheerkwasten, borstels en kammen. Als zij op de huid kwamen, maakten zij het de passagiers lastig met hun gekriebel. Ze durfden ook bijten waarbij gelukkig nooit bloed vloeide (Reclaire 1951: 323).

In de keverliteratuur wordt soms vermeld dat *N. rufipes* herhaaldelijk gevonden is in Egyptische mummies. Het betreft uitsluitend dode exemplaren

maar alleen Keer (1930: 460) geeft over dit fenomeen wat meer informatie. Algemeen wordt aangenomen dat men bij het mummificeren van een lijk de hersenen langs de neus uit de schedel haalde en de schedelholte pas na enige tijd vulde met een soort asfalt. Waarschijnlijk zochten insecten door de neus hun weg voor het afzetten van eieren en werden zij op die manier in de mummie door het asfalt geconserveerd. Behalve *N. rufipes* werden in de schedels nog andere aasinsecten gevonden. Keer (1930: 460) noemt expliciet de kevers *Dermestes* sp., *Attagen* *sericeus* Reitter, 1881, *Anthrenus* sp. en de vlieg *Chrysomyia albiceps* (Wiedemann, 1819).

In België is *N. rufipes* verspreid aangetroffen (fig. 1). In het K.B.I.N. te Brussel bevinden zich 146 exemplaren waarvan 88 afkomstig uit Antwerpen (wereldhaven) en 10 uit Denderleeuw (binnenhaven). Behalve 1 ex. in februari en 1 ex. in april werden alle overige museumstukken aangetroffen in juli, juli en augustus.

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Ik dank van harte Wouter Dekoninck en Alain Drumont (K.B.I.N., departement Entomologie, Brussel) voor de gewaardeerde hulp en de faciliteiten bij het raadplegen van de collecties van het museum. Hiermee was het mogelijk om het verspreidingskaartje samen te stellen.

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# *Pelopidas thrax*, a new species for the Island of Kós and an update of its distribution in Greece (Lepidoptera: Hesperioidea & Papilionoidea)

Sylvain Cuvelier

**Abstract.** During a journey (20–28 September 2007) on the island of Kós, a few days were spent to butterfly observation (Lepidoptera: Hesperioidea & Papilionoidea). For the first time, the presence of *Pelopidas thrax* (Hübner, 1821) is documented. Male and female, dorsal and ventral side, are figured. Observations from the islands of Ródos, Kastellórizo and Lesbos are discussed and the Greek distribution of *P. thrax* is updated. Confirmation is also given concerning the presence of *Argynnis pandora* ([Denis & Schiffermüller], 1775) on the island of Kós. A table with all the observations of butterflies during this trip is included.

**Samenvatting.** *Pelopidas thrax*, een nieuwe soort voor het eiland Kós en een actualisering over zijn verspreiding in Griekenland (Lepidoptera: Hesperioidea & Papilionoidea) Gedurende een verblijf (20–28 september 2007) op het eiland Kós, werden enkele dagen gespendeerd aan vlinderobservatie (Lepidoptera: Hesperioidea & Papilionoidea). Voor het eerst wordt de aanwezigheid van *Pelopidas thrax* (Hübner, 1821) gedocumenteerd. Bovenzijde en onderzijde van mannetje en wijfje worden afgebeeld. Observaties op de eilanden Ródos, Kastellórizo en Lesbos worden besproken en de Griekse verspreiding van *P. thrax* wordt geactualiseerd. Ook de aanwezigheid van *Argynnis pandora* ([Denis & Schiffermüller], 1775) op het eiland Kós wordt bevestigd. Er is een tabel met alle vlinderobservaties van deze trip.

**Résumé.** *Pelopidas thrax*, une nouvelle espèce pour l'île de Kós et une mise à jour concernant sa distribution en Grèce (Lepidoptera: Hesperioidea & Papilionoidea) Au cours d'un séjour (20–28 septembre 2007) à l'île de Kós, quelques jours ont été consacrés à l'observation des papillons (Lepidoptera: Hesperioidea & Papilionoidea). Pour la première fois la présence de *Pelopidas thrax* (Hübner, 1821) est signalée. Les recto et verso du mâle et de la femelle sont représentés. Des observations des îles de Rhodes, Kastellorizo et Lesbos sont discutées et la distribution de *P. thrax* en Grèce est mise en évidence. La présence d'*Argynnis pandora* ([Denis & Schiffermüller], 1775) dans l'île de Kós est également confirmée. Un tableau de toutes les observations faites au cours de ce voyage est inclus.

**Key words:** Greece – Kós – Rhopalocera – *Pelopidas thrax* – *Argynnis pandora*.

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## Introduction

The Greek island of Kós is an elongated island in the SE Aegean Sea, in the centre of the Dodecanese Islands (Fig. 1). North of Kós lie the Greek islands Kalimnos, Pserimos, Piati and the Turkish peninsula of Bodrum. The Greek islands of Pergausa, Pacheia, Nissiros, Giali and the Turkish Reşadiye Yarimadası peninsula are situated to the south.

In 1926 Professor Alessandro Ghigi was the first to collect butterflies in Kós (Turati 1929, Ghigi 1929). Since then, a few other articles were published on the butterflies of this island (Rebel 1936, Hartig 1940, Thomson 1985, Olivier 1986, 1987, 1993). An excellent synthesis (Olivier & De Prins 1996) was published mentioning 46 species. One species was confirmed since then (Olivier 1998) bringing the total number to 47 (Dennis *et al.* 2000).

It is obvious from the literature that many places in Kós have either never been prospected or were visited only occasionally. Concerning the second half

of September, being at the end of the touristic season and looking less promising for butterflies, even less data are known.

*Pelopidas thrax* (Hübner, 1821) ranges from the eastern Mediterranean to Africa and from the Arabian Peninsula to the Far East.

In Greece the presence of *P. thrax* has been mentioned in literature for the islands of Sámos and Ródos (Tolman & Lewington 1997, Lafranchis 2004). The species is known from the Turkish coast (Hesselbarth *et al.* 1995) and Cyprus (Makris 2003). But as far as known by the author, the butterfly is documented hereafter for the first time from Kós.

### **Observations on the island of Kós**

A total of 19 butterfly species were observed on the island of Kós during 20–28 September 2007 (Table 1).

A dark grey Skipper, looking a lot larger than the species of the genus *Gegenes* (Hübner, 1819), was first observed by the author on the 21<sup>st</sup> September 2007 in the garden of the Club Med at Kefalos, in the south-western part of Kós (Fig. 2), at 50 m from the sea shore. The butterfly was sitting on the ground for a few seconds and flew away without returning to the same spot. Not having a net at that moment, it was impossible to make a clear identification.

During a field trip on the 23<sup>rd</sup> September near Troulos (Fig. 2), situated in the centre of the northern coast, 10 specimens of *P. thrax* were observed and a fresh male (Fig. 3) and female were collected to document this observation. A few days later, on the 27<sup>th</sup> September, the species was seen again in the same area.

A female specimen (Fig. 3) of this species was collected in Kefalos on the 25<sup>th</sup> of September, indeed confirming its presence on the south-western side of Kós.

The third locality where the species was observed on the 25<sup>th</sup> September is the ancient agora in the city of Kós (Fig. 2) which lies on the eastern side of the island.

During a search for documentation about *P. thrax* on the Internet, an URL ([http://www.lepiforum.de/cgi-bin/lepiwiki.pl?Pelopidas\\_Thrax](http://www.lepiforum.de/cgi-bin/lepiwiki.pl?Pelopidas_Thrax)) was found with a photograph (Kissling 2007) taken at Mastihari (Fig. 2) on the 20<sup>th</sup> October 2007, clearly showing a specimen of *P. thrax*. This locality is situated on the northern coast, not far from Troulos.

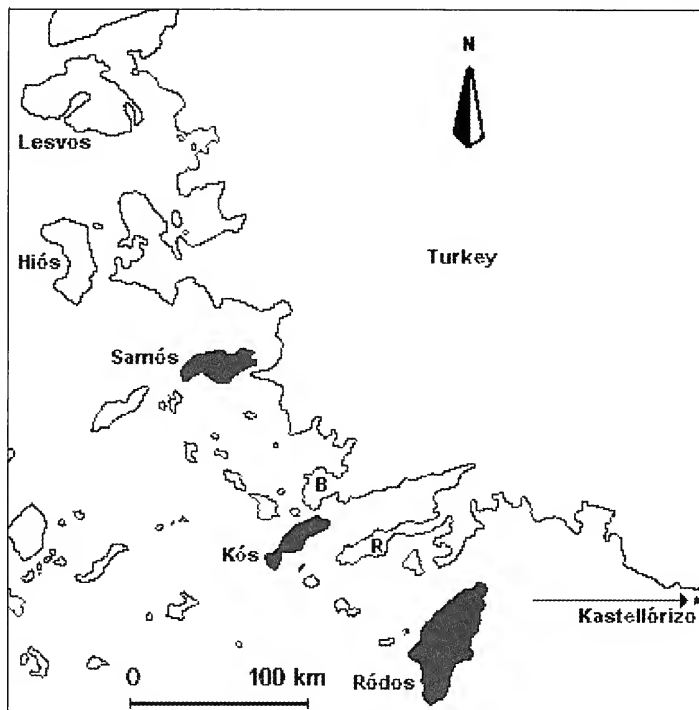


Fig. 1. Greek distribution of *Pelopidas thrax* (islands in grey + arrow). B: peninsula of Bodrum; R: Reşadiye Yarımadası peninsula.

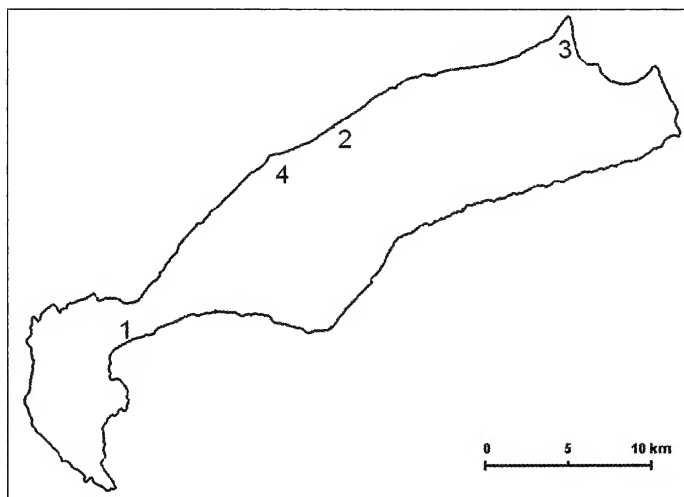


Fig. 2. Location map of *Pelopidas thrax* observations. 1: Kefalos; 2: Troulos; 3: Kós City; 4: Mastihari.



On the 25<sup>th</sup> of September, one specimen of *Argynnis pandora* (Denis & Schiffermüller, 1775) was observed flying in the archaeological site of Asklepion, near Kós city. This confirms the uncertain observation on 17.vi.1992 in the Óros Díkeos at 800 meter (Olivier & De Prins 1996). It is, at this moment however, impossible to draw conclusions on its status, as it might well have been a migrating specimen.

Table 1. Butterfly species observed on the island of Kós during 20–28 September 2007.

Legend:

A: Kefalos (21 ix 2007, 22 ix 2007 & 26 ix 2007)

B: Troulos (23 ix 2007 & 27 ix 2007)

C: Tigaki (23 ix 2007)

D: Zia (23 ix 2007 & 24 ix 2007)

E: Kós city (24 ix 2007 & 25 ix 2007)

F: Asklepion (25 ix 2007)

G: Plaka wood (27 ix 2007)

	A	B	C	D	E	F	G
<b>Papilionidae</b>							
<i>Papilio machaon</i>	x		x		x		
<i>Iphiclides podalirius</i>	x						
<b>Pieridae</b>							
<i>Pieris brassicae</i>	x		x	x	x	x	
<i>Pieris rapae</i>	x	x	x	x	x	x	
<i>Colias croceus</i>	x	x	x				
<i>Pontia edusa</i>		x					
<b>Nymphalidae</b>							
<i>Danaus chrysippus</i>			x		x		
<i>Polygonia egea</i>					x		
<i>Vanessa cardui</i>	x	x				x	
<i>Vanessa atalanta</i>	x						
<i>Argynnis pandora</i>						x	
<i>Maniola telmessia</i>					x		x
<b>Lycaenidae</b>							
<i>Lycaena thersamon</i>	x		x				
<i>Celastrina argiolus</i>		x		x	x		
<i>Lampides boeticus</i>	x	x	x				
<i>Leptotes pirithous</i>	x	x	x				
<i>Polyommatus icarus</i>			x				
<b>Hesperiidae</b>							
<i>Carcharodus alceae</i>		x	x		x		
<i>Pelopidas thrax</i>	x	x			x		

## Review of the Greek distribution of *Pelopidas thrax*

The literature on the Greek distribution of *P. thrax* was critically screened in order to update and clarify its occurrence in this country and to elucidate the phenology in this part of its distribution.

It is clear that the butterfly is present in Sámos and this was confirmed by recent observations from different colleagues (T. Benton, M. S. Mølgaard, L. Pamperis, and P. van den Branden).

There is, however, no detailed published record of *P. thrax* from Ródos. The book on the butterflies of Ródos (Olivier 1993) does not mention this species for Ródos but confirms its occurrence in Sámos. Pamperis (1997) mentions two places in the Aegean Islands without precise indications and confirmed (oral communication) spring observations from Sámos (17<sup>th</sup> June 1991 at Palaiokastros and 30<sup>th</sup> May 1999 at Chora).

The first reference stating the occurrence of *P. thrax* in Ródos comes from Tolman & Lewington (1997) and its occurrence there is also mentioned in Roine (1999) and Lafranchis (2004). The last author confirmed (oral communication) that his mention is based exclusively on Tolman & Lewington (1997).

Dennis *et al.* (2000) confirm the occurrence of *P. thrax* in Sámos but again do not mention Ródos. Dennis *et al.* (2001) presented an overview from 64 islands in the Aegean archipelago stating Sámos as having records of *P. thrax* and >50% probability for the occurrence of *P. thrax* on Ródos.

In the distribution map of MEB-1 (Kudrna 2003) the occurrence of *P. thrax* is confirmed only for Sámos (Kudrna, oral communication).

Trying to elucidate this unclear situation, attempts were made to contact J. Coutsis, R. de Jong, M. S. Mølgaard, A. Olivier, L. Pamperis, E. Philippou, T. Tolman, and P. van den Branden.

John Coutsis (oral communication) confirmed knowing no other record from Ródos than the one mentioned by Tolman & Lewington (1997) and Lafranchis (2004).

Rienk de Jong (oral communication) confirmed that no authentic records are known by him for Ródos but that he observed one specimen on the third of May 2007 at the hotel Palm Beach, on the eastern side of Kós-City. This is not only a confirmation for Kós but also evidence for a spring generation.

Peter van den Branden (oral communication) mentioned finding *P. thrax* in Thermes Kalitheas, 7 km south of Ródos city, between the 22<sup>nd</sup> and 24<sup>th</sup> April 2008. The butterflies were flying in a dry river bed at a distance of 500 to 1500 m of the coast together with *Gegenes pumilio* (Hoffmannsegg, 1804). Only males of *P. thrax* were found and collected. The specimen and photographs sent by P. van den Branden showed some fresh specimens of *P. thrax* and *G. pumilio* (confirmed by genitalia). These observations confirm that *P. thrax* has a spring generation in this area of its distribution. He was, however, unable to find the species again during a visit (mid September 2008) at the same biotope where *G. pumilio* was again present. This was probably just before the start of the autumn generation.

After his reaction, I also received information from T. Tolman. The reason for mentioning Ródos in the Field Guide is based on observations (July 1988) given to him by J. Tierney who observed *P. thrax*, in a small stream bed, near the coast, in the neighbourhood of Mandrakos. It was impossible to locate a place with this name. It probably is Mandrikó, 44 km south-west of Ródos city. These data are in line with the prediction of Dennis (2001) and clearly confirm that *P. thrax* is present in different localities on the island of Ródos. There remains no doubt about the occurrence of *P. thrax* in Ródos.



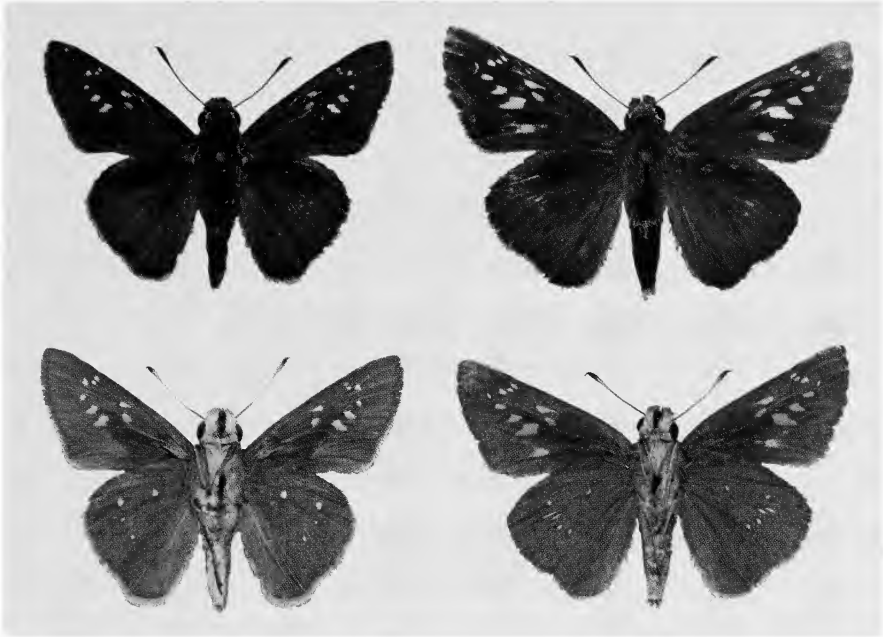


Fig. 3. Left: upperside and underside of male *Pelopidas thrax*, Troulos, 23.ix.2007; Right: upperside and underside of female *Pelopidas thrax*, Kefalos, 25.ix.2007.

For other Greek islands, Dennis *et al.* (2001) give distribution predictions for *P. thrax* from a model based on geographical variables. For the already well studied islands, this model predicts, with >50% probability, the occurrence of *P. thrax* on Megisti (= Kastellórizo) and Simi. For the poorly studied islands the probability was >50% only for the island of Halki.

Very important is the observation from L. Pamperis on the Greek island of Kastellórizo (Fig. 1), at sea level, on 18<sup>th</sup> October 2004, confirming the prediction of Dennis *et al.* (2001). This Greek island lies at 1.8 km to the South of the coast near Kaş (Prov. Antalya, Turkey) and 144 km to the east of Ródos.

L. Pamperis also added three URL addresses that might provide new information on *P. thrax* on Lesvos. He immediately expressed his doubts concerning the correct identification of the species on the two following URL (<http://www.go12islands.com/index.php?cat=50&parent=50&photo=200> and <http://www.greecephotobank.com/showphoto.php?photofilescode=104&page=&keywords=&categorycode>) showing a photograph of a skipper from Ródos. In my opinion, and confirmed by R. de Jong, this is a *Gegenes*. The photograph does, however, not allow for identification at species level.

At that moment, the species list on the third URL (<http://home.zonnet.nl/lesvos/vlinders.htm>) mentioned the presence of *P. thrax* on Lesvos without any proof or detail, plus the observation of *Gegenes nostradamus* (Fabricius, 1793) on 23<sup>rd</sup> May 2005 near Lisvori on the same island.

In her first answer, S. van Leeuwen did send two photographs proving the presence of a *Gegenes*. Some days later she provided a photograph, taken in Lesvos by J. Noorddijk & E. Morriën in September 2004, that was at the origin for mentioning *P. thrax* on the website. This photograph is only adding proof for the presence of *G. nostradamus* in Lesvos but gives no evidence for *P. thrax*. The website was recently adapted and now states that the presence of *P. thrax* on Lesvos is uncertain.

Later two other websites were found, mentioning again *P. thrax* from Lesvos: [http://www.pbase.com/paulcools666/lesvos\\_2007\\_butterflies\\_vlinders](http://www.pbase.com/paulcools666/lesvos_2007_butterflies_vlinders) and [http://www.nederpix.nl/album\\_page.php?pic\\_id=41920](http://www.nederpix.nl/album_page.php?pic_id=41920). In my opinion the photographed specimens are *Gegenes* and this was confirmed by J. Coutsis, V. Dincă, M. S. Mølgaard, and L. Pamperis. There is actually no evidence for the presence of *P. thrax* in Lesvos.

## Conclusions

The presence of *P. thrax* is documented by the author from three different and quite distant localities on the island of Kós. A fourth locality where this species has been photographed by Kissling, was found on the Internet.

Hot, dry grassy places are the preferred habitat of the species. The larval host-plant in Greece is unknown (Tolman & Lewington 1997). Various species of the Poaceae family have been mentioned. In Cyprus the species has been observed ovipositing on *Oryzopsis miliacea* (Makris 2003). It is to be expected that the species is more widespread, especially along the coastline, and further searches during spring and from September to October might add substantial data to the actual known distribution of this species in Kós.

The distribution in Greece is updated (Fig. 1). The species has actually been documented from 4 Greek islands: Sámos, Kós, Ródos, and Kastellórizo. It is to be expected that in the future the butterfly will be found on other Greek islands near the Turkish coast.

The current data indicate that in Greece the butterfly is bivoltine.

The observation of *A. pandora* brings the number of observed species in Kós to 49, but no conclusion can be drawn concerning its status.

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# *Scythris potentillella* (Lepidoptera: Scythrididae), a new species to the Belgian fauna

Frans Groenen

**Abstract.** Two specimens of *Scythris potentillella* (Zeller, 1847) were caught at Lommel (Province of Limburg, Belgium) on 26 July 2008. This species was never recorded from Belgium before. It occurs throughout North-West, Central and East Europe. The larva lives on *Rumex acetosella* and *R. acetosa*.

**Samenvatting.** *Scythris potentillella* (Lepidoptera: Scythrididae), een nieuwe soort voor de Belgische fauna

Op 26 juli 2008 werden twee exemplaren *Scythris potentillella* (Zeller, 1847) verzameld te Lommel (Limburg, België). Dit is de eerste melding van deze soort voor de Belgische fauna. De soort is verspreid doorheen Noord-West-, Centraal- en Oost-Europa. De rups leeft op *Rumex acetosella* en *R. acetosa*.

**Résumé.** *Scythris potentillella* (Lepidoptera: Scythrididae), une espèce nouvelle pour la faune belge

Le 26 juillet 2008, deux exemplaires de *Scythris potentillella* (Zeller, 1847) furent capturés à Lommel (province du Limbourg, Belgique). Il s'agit de la première observation de cette espèce en Belgique. La répartition comprend le nord-est de l'Europe, l'Europe centrale et orientale. La chenille vit sur *Rumex acetosella* et *R. acetosa*.

**Key words:** *Scythris potentillella* – Belgium – Faunistics – First record.

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## Introduction

On July 26, 2008 two males of *Scythris potentillella* (Zeller, 1847) were collected in a waste land habitat of the industrial area Balendijk at Lommel, province of Limburg. The moths were wiped out of the vegetation in late afternoon. The species is new for the fauna of Belgium.

The forewing of *S. potentillella* (Fig. 1) is blackish brown, occasionally without or with many, but mostly with some whitish scales in the fold, at the cell and at the apex of the wing. The moth can easily be confused with several other dark coloured *Scythris* species such as *S. disparella* (Tengström, [1848]), *S. picaepennis* (Haworth, 1828), *S. ericetella* (Heinemann & Snellen, 1878), *S. fuscoaenea* (Haworth, 1828), *S. laminella* ([Denis & Schiffermüller], 1775), and *S. inspersella* (Hübner, [1817]). All these species belong to the Belgian fauna (De Prins & Steeman 2003–2009). For a safe identification the examination of the genitalia is necessary.

The shape of the valvae and sternum 8 in the male genitalia (Fig. 2) and of the sterigma and apophyses in the female are typical for the species. Bengtsson (1997) gives a detailed description of the genitalia.



## Distribution

*S. potentillella* has a West-Palaeartic distribution and is known from Austria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Lithuania, Netherlands, Norway, Poland, Slovakia, Spain, and Sweden (Karsholt & Razowski 1996). The species has also been recorded from Portugal, Italy and Turkey (Bengtsson 1997), but Bengtsson (2007) does not mention Italy and Portugal. The data from Armenia are questionable (Bengtsson 1997).

In the Netherlands *S. potentillella* occurs in the dunes, in the south-east of the province of Noord-Brabant and in the province of Limburg. The closest known locality to Lommel in the Netherlands is at the nature reserve "Plateaux", Valkenswaard, province of Noord-Brabant, at a distance of about 20 km. One male was collected there by the author in 1998 at a warm, dry sandy place with a flowery vegetation, surrounded by wood. The Belgian locality is in the same region as the south-east Dutch localities and completes the West Palaeartic distribution of the species at country level.

## Biology

Little is known about the biology of this species. It lives in dry, sandy, open, places. The larva is known to live in a web tube on the hostplant, sheep's sorrel (*Rumex acetosella* L.), near the soil. Sometimes, under favourable conditions, numerous adults can be observed at one locality (Bengtsson 1997).

Kuchlein (1993) records common sorrel (*Rumex acetosa* L.) and sheep's sorrel as the larval foodplants.

In Belgium the two males were collected in a dry and sandy biotope with a flowery vegetation among which the foodplant of the larva, *R. acetosa*, is growing.

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Fig. 1. *Scythris potentillella* (Zeller, 1847). Belgium, Province of Limburg, Lommel, 26.vii.2008, leg. F. Groenen. Scale bar 2 mm. (Photo: Jurate De Prins).



Fig. 2. *Scythris potentillella* (Zeller, 1847), male genitalia. Belgium, Province of Limburg, Lommel, 26.vii.2008, leg. F. Groenen, gen. prep. FG 1647. Scale bar 100  $\mu$ m. (Photo: Jurate De Prins).

# The most common insect species in Alfalfa fields in Egypt

Mohamed A. Shebl, Soliman M. Kamel, Talaat A. Abu Hashesh & Mohamed A. Osman

**Abstract.** Alfalfa, *Medicago sativa*, is a superb forage, but it can be a shelter for a complex of insect pests, natural enemies and pollinators. Alfalfa insect populations vary significantly from field to field. Therefore, it is essential to check each alfalfa field frequently for the presence of insects. The survey of the insect fauna of alfalfa, was carried out in different areas of Egypt like Ismailia, Suez, Swia Oasis, and The New Valley. Some fields were sampled twice. The samples were taken from the alfalfa experimental fields of the university farm in the season 2003 and the different species were categorized into the following groups: pests, natural enemies, and pollinators.

**Samenvatting.** De meest gewone insectensoorten in luzernevelden in Egypte  
Luzerne, *Medicago sativa*, is een prachtig veevoergewas, maar het kan ook een schuilplaats zijn voor een hele reeks schadelijke en nuttige insecten en voor bestuivers. De populaties variëren van veld tot veld en het is dus nodig om elk veld apart te bemonsteren. Dit onderzoek werd uitgevoerd in verschillende gebieden in Egypte, zoals Ismailia, Suez, Swia Oasis en de New Valley. Een groot aantal exemplaren werd verzameld in de experimentele velden van de universiteit gedurende 2003 en de gevonden soorten werden onderverdeeld in schadelijke insecten, natuurlijke vijanden en bestuivers.

**Résumé.** Les espèces d'insectes les plus communes dans les champs d'alfalfa en Egypte  
La luzerne, *Medicago sativa*, est une plante fourragère utilisée pour l'alimentation du bétail, mais souvent elle héberge un grand nombre d'insectes. Les populations d'insectes varient beaucoup entre les champs et il est donc nécessaire de contrôler chaque champ individuellement. Des investigations furent faites dans différentes régions d'Egypte: Ismailia, Suez, l'oasis de Swia et la Nouvelle Vallée. Certains champs furent étudiés plusieurs fois. Un nombre important d'insectes furent collectés et les espèces furent divisées en trois catégories: insectes nuisibles, ennemies naturelles et pollinisatrices.

**Key words:** Alfalfa – *Medicago sativa* – pests – natural enemies – IPM – pollinators – ecosystem

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## Introduction

Alfalfa, *Medicago sativa*, is a perennial plant which is native to South-West Asia. It has been cultivated for forage longer than any other crop. Not only does alfalfa have a very high yield potential, but it is also one of the most palatable and nutritious forage crops. Because of its high protein and vitamin content, alfalfa is a primary component in the diet of dairy cattle as well as beef cattle and horses. Alfalfa is among the most prized of forage and it is grown worldwide (Summers 1998). This green manure crop occurs in several varieties which have especially been bred so that they are well-adapted to reclaimed agricultural regions in Egypt. Currently 200–300,000 acres of alfalfa are planted in Egypt, and the area is rising each year.

Alfalfa provides shelter and food for a large number of arthropods. Some of them are pests but many have no effect on the crop (Alsuhaibani 1996). At least

1,000 species have been reported from alfalfa in the U.S., with perhaps 100–150 of these causing some degree of injury. Few of these, however, can be described as key pest species, the rest are of only local or sporadic importance, or are incidental herbivores, entomophagous species (parasites and predators), or pollinators (Flanders & Radcliffe 2000). Therefore, alfalfa fields are important contributors to the biodiversity of agricultural systems (Putnam *et al.* 2001). The contribution of alfalfa to the biological diversity and for the nurturing of beneficial insects often goes unrecognized. Incorporating alfalfa into a cropping system should be considered an important environmental benefit. While it is true that alfalfa production fields often represent a significant change from the naturally occurring flora and fauna of a region, it is not true that wildlife is automatically a loser in this tradeoff. Agricultural activities interact significantly with wildlife on several different levels, and many forms of wildlife adapt, adjust, or even thrive within and alongside agriculture (Putnam 1998). In extensive surveys conducted in the Sacramento Valley, California and in subsequent analysis by wildlife biologists, many species of wildlife were found to be present in alfalfa fields. Of the 643 regularly-occurring resident and migratory terrestrial wildlife (amphibians, reptiles, birds, and mammals), 162 species, or 25%, were considered regular users of alfalfa fields to varying degrees (Kuhn *et al.* 1996).

Correct identification and efficient sampling methods for beneficial and pest insects are two critical steps towards the implementation of integrated pest management (IPM) programs. IPM includes the use of all feasible control tactics (e.g. crop rotation, resistant hybrids, and chemical control) to manage pests within a profitable, yet environmentally sound production system. Current integrated pest management (IPM) programs use cultural, biological and chemical tactics for managing alfalfa pests. However, in many instances, IPM is not practiced by alfalfa growers because of the cost and time involved in implementing these tactics (Degooyer *et al.* 1999).

Efficient sampling methods are necessary for making an accurate and timely evaluation of the insect population (infestation) levels. These estimates can then be used for comparison with economic thresholds and consideration of appropriate management tactics. For production of high yielding, high quality alfalfa, the crop should be checked weekly. In cooler weather, sampling can be done less frequently. In hot weather, however, sampling frequency should be increased (insects develop, feed and reproduce faster under warmer conditions). Shorter sampling intervals are also necessary as insect populations and/or damage approach economically damaging levels. Therefore, it was very important to check the insect fauna of alfalfa agroecosystem in Egypt for improving IPM programs and for improving the alfalfa cultivation in Egypt.

## **Material and Methods**

The survey of the insect fauna of alfalfa, *Medicago sativa*, was carried out in different areas of Egypt, like Ismailia, Suez, Swia Oasis, and The New Valley. In Suez, Swia Oasis, and The New Valley samples have been collected from

different fields during the summer season. In Ismailia samples have been collected from the university farm during the whole season of 2003. An area of one feddan (4,200 m<sup>2</sup>) was cultivated with alfalfa in early October. This area received usual agriculture practices, but no chemical control application was practiced. During the season 2003, the sampling technique was based on using a sweep net with which 50 full length, double net-strokes were practiced. The samples were taken by cross distribution of the field every two weeks. The catch was killed in an ordinary cyanide jar, then spread on a sheet of white paper for identification. This is currently the most convenient method of estimating the level of the pest and beneficial insect populations in alfalfa. Although it provides only a relative estimate of the insect density, it is sufficient and cost effective for most insect pests of alfalfa living above ground level. On the other hand, sweep net sampling is not recommended for determining absolute estimates of alfalfa weevil, cutworm, armyworm, grasshopper, or aphid populations. However, the sweep net is often useful for detecting initial low-density populations of alfalfa weevil larvae and pea aphids.

## Results and Discussion

A high number of insects were collected from alfalfa fields. About 10 different orders were found: Coleoptera, Dictyoptera, Diptera, Hemiptera, Lepidoptera, Neuroptera, Odonata, and Orthoptera. The different species were categorized into the following groups, depending on their economic impact:

1.– Pests (table 1), 2.– Natural enemies (table 2), 3.– Pollinators (table 3)

Table 1. The most common pest species in alfalfa fields:

Order	Family	Species
Coleoptera	Curculionidae	<i>Hypera brunneipennis</i> <i>Sitona lividipes</i>
	Scarabaeidae	<i>Tropinota squalida</i> <i>Scarabus sacer</i>
Diptera	Agromyzidae	<i>Liriomyza trifolii</i>
	Muscidae	<i>Musca domestica</i>
	Calliphoridae	<i>Lucilia spp.</i>
Hemiptera	Pentatomidae	<i>Nexara viridula</i>
	Lygaeidae	
Homoptera	Jassidae	<i>Empoasca decipiens</i>
	Aphididae	<i>Acyrtosiphon pisum</i> <i>Therioaphis pisum</i>
Orthoptera	Acrididae	<i>Eupropocnemis plorans</i>
	Tettigonidae	<i>Homorochryphus nitidulus</i>
Lepidoptera	Lycaenidae	<i>Lampides boeticus</i>
	Pieridae	<i>Pieris rapae</i> <i>Colias eurytheme</i>
	Noctuidae	<i>Spodoptera littoralis</i> <i>Spodoptera exigua</i>

The most abundant pest species in alfalfa fields were *Lampides boeticus*, *Hypera brunneipennis*, and several aphid species. In general, the alfalfa weevil (*Hypera postica*) and the Egyptian alfalfa weevil (*H. brunneipennis*) are the most important insect pests of alfalfa. The pea aphid (*Acyrtosiphon pisum*), blue alfalfa aphid (*A. kondoi*), spotted alfalfa aphid (*Therioaphis maculata*), and cowpea aphid (*Aphis craccivora*) are the principal aphid species associated with alfalfa (Summer *et al.* 2007).

Table 2. The most common natural enemies associated with pests in alfalfa fields:

Order	Family	Species
Coleoptera	Coccinellidae	<i>Coccinella septempunctata</i> <i>Coccinella undecimpunctata</i> <i>Scymnus</i> spp.
	Staphylinidae	<i>Paederus alfieri</i>
Diptera	Syrphidae	<i>Syrphus</i> spp.
Hemiptera	Anthoridae	<i>Orius</i> spp.
	Nabidae	<i>Nabis capsiformis</i>
Dictyoptera	Mantidae	<i>Sphodromatis bioculata</i>
		<i>Mantis savigyni</i>
		<i>Mantis religiosa</i>
Neuroptera	Chrysopidae	<i>Chrysoperla carnea</i>
	Myrmeleontidae	<i>Cueta variegata</i>
Odonata	Agrionidae	<i>Ischnura senegalensis</i>
	Libellulidae	<i>Crocothemis erythraea</i>
Hymenoptera	Aphidiidae	<i>Syrphus</i> spp.

Different natural enemies (parasitoids and predators) have been found in the alfalfa agroecosystem associated with their hosts, like lady beetles, bugs, aphid lions and some hymenopteran parasitoids. The most abundant natural enemies are *Bathyplectes curculionis*, *Aphidius* spp., *Trichogramma* spp., *Coccinella* spp., *Orius* spp., *Nabis* spp., and *Chrysoperla* sp. (Summer *et al.* 2007).

Table 3. The most common pollinators in alfalfa fields:

Order	Family	Species
Hymenoptera	Andrenidae	<i>Andrena ovatula</i>
	Anthophoridae	<i>Anthophora</i> spp.
	Xylocopidae	<i>Xylocopa</i> spp.
		<i>Ceratina</i> spp.
		<i>Halictus</i> spp.
	Halictidae	<i>Halictus</i> spp.
	Apidae	<i>Apis mellifera</i>
	Megachilidae	<i>Chalcidoma siculum</i>
		<i>Osmia</i> spp.
		<i>Megachile submucida</i>
<i>Megachile uniformis</i> <i>Megachile mintusemina</i>		



Different bee species have been collected from the alfalfa ecosystem belonging to 6 different families. The most common and abundant species were leafcutting bees (Megachilidae) followed by Halictidae, Anthophoridae and Colletidae, respectively. It was clear that the most abundant species visiting alfalfa flowers was *Megachile patellimana* (El-Badawy 1975). A total of 545 Hymenoptera species, belonging to 13 genera, were obtained at the 20 alfalfa sites. *Megachile*, a genus of solitary bees, was the most frequently collected, representing almost half of all collected bees. The social *Bombus* was second in frequency, and represented 20% of the collections (Brookes *et al.* 1994).

The insect fauna of alfalfa in Saudi Arabia has been studied using a standard 15" sweeping net. The identification of insects revealed the prevalence of 103 insect species belonging to 94 genera, 49 families and 10 orders of Insecta. Of these insects, 18 species were recorded for the first time in Saudi Arabia. The insect fauna of alfalfa was divided, according to their importance for the alfalfa grower, into the following categories: 48% phytophagous insects, 25.6% entomophagous insects, 21.6% pollinating insects and 4.8% other insects (saprophagous species, scavengers, etc.). Studying the entomofauna of alfalfa is important for developing integrated pest management programs for alfalfa and similar crops (Alsuhaibani 1996). A fieldside view of an alfalfa field may show little apparent activity; it is simply a mass of green. However, each successive regrowth of alfalfa creates an environment which teems with insect life. The numbers and species of insects that inhabit alfalfa have been described as "incredible" (Manglitz & Ratcliffe 1988). A count of 591 species was recorded in a field near Ithaca, NY (Pimental & Wheeler 1973). Insects are so abundant in alfalfa fields that university entomology classes can often be found sweeping in these fields to study the diversity of insects to be found there. Some of these insects, of course, feed on alfalfa as a primary source of food, but there are many beneficial insects as well. These 'beneficials' prey on herbivorous or sucking insect pests of alfalfa. Dozens of predacious and parasitic insects occur in alfalfa fields, and several "work horses" of biological control are especially abundant (Leigh 1991). The role of beneficial insects in helping to reduce crop damage in an alfalfa integrated pest management (IPM) program has been understood for some time. However, several of the species present in alfalfa also effect a number of other neighbouring crops where they may greatly reduce the threat of pest damage. Due to its reservoir of insects, planting alfalfa in strips with other crops has been proposed to help distribute and nurture beneficial insects (Leigh 1991).

Nearly 1,000 species of arthropods are associated with the alfalfa agroecosystem and play an integral role in various arthropod plant community complexes associated with the intensified agriculture (Summers 1976). More study should be carried out in the future to study the fauna and flora structure of alfalfa and other crops, plants, and trees as well. However, we should wonder about the effect of climate change and global warming on the fauna and flora structure of different plants, crops, trees, etc. Global warming and climate change are the most important conflicts for agricultural production in the world

right now. So, we need more answers to be ready for any change in the agricultural ecosystem.

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# Notes on *Cytherea pallidipennis* (Diptera: Bombyliidae)

J. Dils & H. Özbek

**Abstract.** *Cytherea pallidipennis* (Abbassian-Lintzen, 1968) was hitherto only known from Iran. It is mentioned here for the first time from Turkey and Israel. A more detailed description is given.

**Samenvatting.** Gegevens over *Cytherea pallidipennis* (Diptera: Bombyliidae) *Cytherea pallidipennis* (Abbassian-Lintzen, 1968) was tot nu toe enkel bekend uit Iran. De soort wordt hier voor het eerst uit Turkije en Israël vermeld. Een meer gedetailleerde beschrijving wordt gegeven.

**Résumé.** Quelques données sur *Cytherea pallidipennis* (Diptera: Bombyliidae) *Cytherea pallidipennis* (Abbassian-Lintzen, 1968) était connu seulement d'Iran. L'espèce est mentionnée ici pour la première fois de Turquie et d'Israël. Une description plus détaillée est donnée.

**Key words:** *Cytherea pallidipennis* – *Cytherea innitidifrons* – Bombyliidae – distribution – Turkey – Israel – Iran.

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## Introduction

*Chalcochiton pallidipennis* Abbassian-Lintzen, 1968 was described from a single female and a single male, and was until now only known from Iran. Here we examine ten males and three females of this bee fly from three countries in Asia Minor (Iran, Turkey and Israel). An additional description is given. The Turkish males were the only ones collected in association with females, although unfortunately, not in copula. The male of this species is most readily distinguished from its congeners by the deep-black dull ground colour of the mesonotum.

In the same paper Abbassian-Lintzen described a second *Chalcochiton* species, *Chalcochiton innitidifrons*, from a single female that seems to be closely related to *C. pallidipennis*. This female differs mainly from *C. pallidipennis* in having a dull frons and black hairs on the anepisternum. Both *C. pallidipennis* and *C. innitidifrons* belong to the genus *Cytherea*.

## *Cytherea pallidipennis* (Abbassian-Lintzen, 1968)

### Material examined:

**Turkey** (new record): 1♂ + 1♀, Hakkari, Suvarihalil pass, 2021 m, N37°29'49.7" E43°20'30.0", 17-06-2005, leg. Dils-Faes (J. D. personal collection); 2♂ + 2♀ Turkey, Bingöl, Biloağlu, 1300 m, N38°55'47.1" E40°20'58.0", 13-06-2005, leg. Dils-Faes (J. D. personal collection).

**Israel** (new record): 1♂, South district Mikhrot, Timna 23 km N Elat, Har Timna, Negev 29.45N 34.59E, 10-03-1995, leg. C. Lange & J. Ziegler (in ZMHB, Berlin).

**Iran:** 6♂, Čerum, 100 km NNE Bouchir, 26-03-1937, leg. Brandt (in KBIN, Brussels).

**Description:**

Male: (figs. 2, 3)

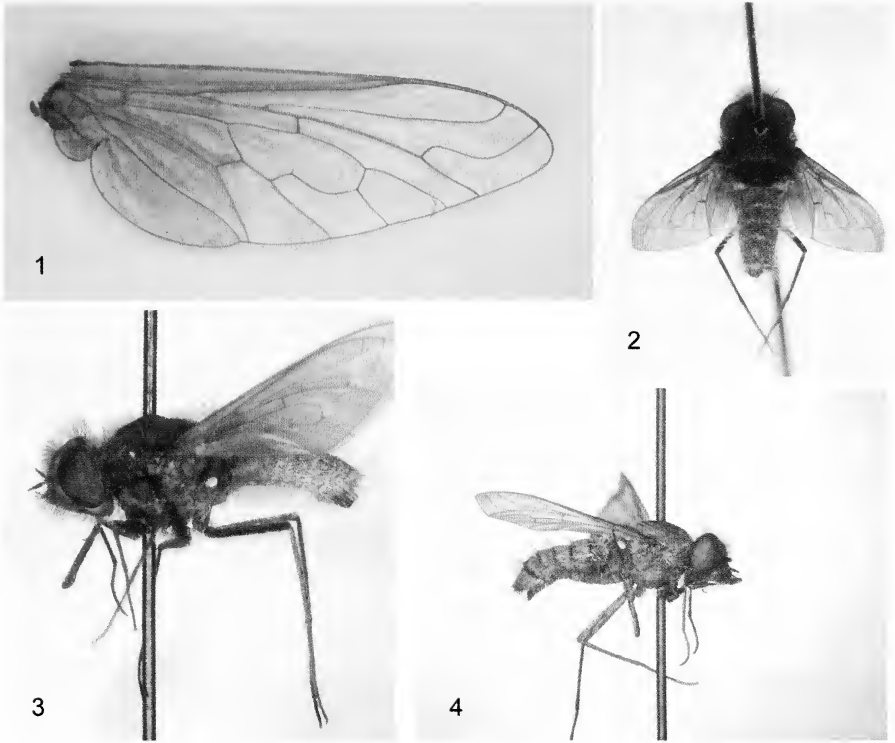
**Head:** Ground colour black, genae separated from bucal cavity and face by a deep groove, all hairs black except on occiput which has an admixture of reddish-yellow hairs, no hairs between the antenna only scattered very fine reddish-yellow scales as on frons and face. Black hairs, on ocellar tubercle as long as the conical flagellum, those on frons becoming gradually shorter towards the antennae. Grey dusting around antenna, genae, face and mentum. Antenna black, scape and pedicel dusted grey, black hairs on scape only. Proportion: flagellum / (scape + pedicel) equals 24/10. The proboscis slightly protrudes beyond the bucal cavity, palpalae 1/3 the length of the proboscis with long brownish hairs. Ratio head / frons 3.1.

**Thorax:** Mesonotum and scutellum dull black in ground colour with mauve dusting. When viewed from the front, two undusted black lines with a narrow mauve central line can be seen on the front of the mesonotum, ending well before the scutellum. Hairs black, those of the scutellum the longest with a shorter vestiture of sparse, scattered, very fine reddish-yellow hairs. Anepisternum with black hairs as long as on scutellum and anepimeron with a few black shorter ones. Other pleural sclerites bare.

**Legs:** Black coxae with black and reddish hairs. Femora black, tibia and tarsi brown. Femora with whitish scales and fine black hairs, 2 or 3 black bristles near apex. Tibia brown with yellowish scales, black spines, pulvilli half the length of the claws, tarsi brown, 4<sup>th</sup> and 5<sup>th</sup> metatarsi darkened.

**Abdomen:** Ground colour brown, tergites with white hairs, those on the posterior edge from T2 to T7 and the dorsum of T2 to T4 as long as the antenna. Hairs on the side of T1 have a yellowish base and an admixture of a few brown hairs. In some specimens the vestiture on T5 and T6 can include a few brown hairs. T2 to T7 covered with a mixture of fine elongated light-brown and yellowish scales. The fine yellowish scales are somewhat more densely distributed near the posterior edges of the tergites, giving an impression of lighter coloured apical bands. Sternites with the same ground colour as the tergites but with yellow posterior margins and scarcely covered with white scales and white hairs.

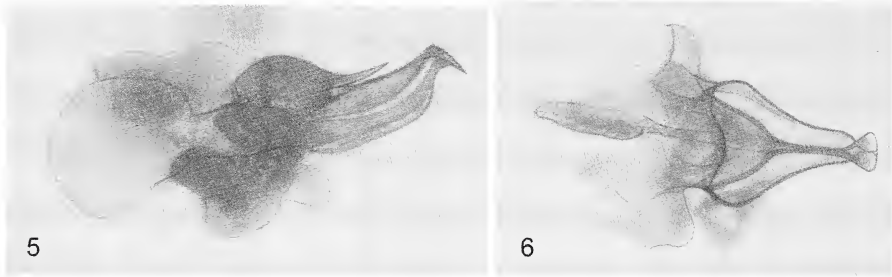
**Wings (fig. 1):** The wings are nearly completely transparent, with the following areas a light tan colour: costal cell, first basal, second basal and anal cell and part of the axillary cell. The infuscation is not sharply defined. The vein, separating the discal cell from third posterior, nearly always with a small appendix. Halteres with brown stem and ivory knob.



Figs. 1–4. *Cytherea pallidipennis* Abbassian-Lintzen, 1968. 1.– Right wing, Iran, Ārum, 100 km NNE Bouchir, 26.iii.1937, leg. Brandt; 2.– Male, dorsal view, Turkey, Bingöl, Bılaođlu, 1300 m, 13.vi.2005, leg. Dils-Faes; 3.– Male, lateral view, idem; 4.– Female, lateral view, idem.

Genitalia (figs. 5–6): Tip of epiphallus smooth, not dented as in the other *Cytherea* species.

Female (fig. 4): The female differs from the male mainly in the wider separation of the eyes (Ratio head / frons 2.32), in a lighter infuscation of the wings, yellowish hairs on anepisternum and scutellum, and in the addition of black hairs (setae) on the posterior margins of tergites 4 to 7 (Holotype 2 to 7). The white hairs on the posterior margins of the tergites are shorter than those of the males. The ground colour of the mesonotum is not black but brownish and there is no mauve dusting as in the male.



Figs.5–6. *Cytherea pallidipennis* Abbassian-Lintzen, 1968. 5.– Lateral view of epiphallus, Iran, Čerum, 100 km NNE Bouchir, 26.iii.1937, leg. Brandt; 6.– Dorsal view of epiphallus, idem.

### Acknowledgment

We wish to thank Dr. J. Ziegler from the ZMHB (Berlin) and Dr. P. Grootaert from the KBIN (Brussels) for the loan of the necessary material.

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# *Odontognophos dumetata* (Lepidoptera: Geometridae), a new genus and a new species for the Bulgarian fauna

Stoyan Beshkov & Boyan Zlatkov

**Abstract.** *Odontognophos dumetata* (Treitschke, 1827) is reported as a new genus and a new species for the Bulgarian fauna. The genus, respectively the species, was collected on light in limestone areas in three localities during September–October 2007. Two of the localities are in Northern Bulgaria: Shoumensko Plato Natural Park above Shoumen Town and Roussenski Lom Natural Park below Ivanovo Village. The third locality is Tchepun Ridge above Dragoman Town, NW from Sofia. Previous wrong records of *Odontognophos dumetata* from Bulgaria are commented.

**Samenvatting.** *Odontognophos dumetata* (Lepidoptera: Geometridae) een nieuw genus en nieuwe soort voor de Bulgaarse fauna.

*Odontognophos dumetata* (Treitschke, 1827) wordt hier voor het eerst als nieuw voor de Bulgaarse fauna gemeld. De soort werd verzameld op licht in drie kalkrijke lokaliteiten in september-oktober 2007. Twee vindplaatsen liggen in Noord-Bulgarije: Natuurpark Shoumensko Plato boven de stad Shoumen en Natuurpark Roussenski Lom bij het dorp Ivanovo. De derde vindplaats is Tchepun boven de stad Dragoman ten noordwesten van Sofia. Eerdere, foutieve vermeldingen van *O. dumetata* uit Bulgarije worden besproken.

**Résumé.** *Odontognophos dumetata* (Lepidoptera: Geometridae) genre nouveau et espèce nouvelle pour la faune bulgare

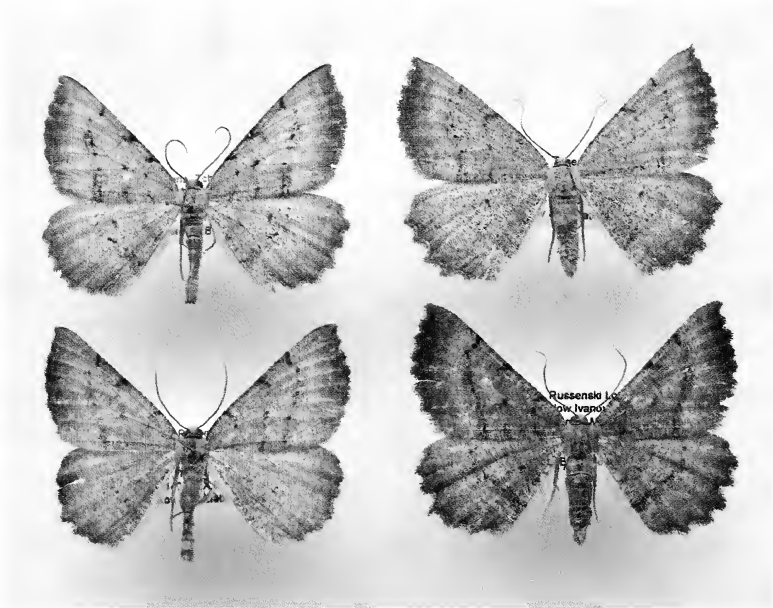
*Odontognophos dumetata* (Treitschke, 1827) est mentionné ici pour la première fois de Bulgarie. L'espèce fut capturée dans trois biotopes calcaires pendant septembre-octobre 2007: en Bulgarie septentrionale, dans les parc naturels Shoumensko Plato près de la ville de Shoumen et Roussenski Lom près du village Ivanovo, et à Tchepun près de la ville de Dragoman au nord-ouest de Sofia. Des mentions antérieures, mais fautives, d'*Odontognophos dumetata* en Bulgarie sont commentées.

**Key words:** *Odontognophos dumetata* – Lepidoptera – Geometridae – Bulgaria – faunistics

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The first record of *Odontognophos dumetata* (Treitschke, 1829) (as *Gnophos*) for Bulgaria was this of Markovitch (1904: 23), who reported it from the surroundings of Razgrad Town in June and mentioned the length of the wing 19 mm. Later on, in his next paper (Markovitch 1909: 30) on the Lepidoptera fauna of Razgrad Town and its surroundings, *Odontognophos dumetata* was not included. *Gnopharmia stevenaria* (Boisduval, 1840) (as *Gnophos*) was reported instead, collected on 20 June 1906. No other original or quoted records of *Odontognophos dumetata* for Bulgaria exist in the literature, even not in the critical comments on the report of Markovitch (1904: 23).



Figs. 1–4. *Odontognophos dumetata* (Treitschke, 1829); 1.– Tchepun Ridge above Dragoman Town, 15.IX.2007, male; 2.– Idem, female; 3.– Roussenski Lom below Ivanovo Village, "Pismata", 01.X.2007, male; 4.– Idem, female.



Fig. 5. Habitat of *Odontognophos dumetata* (Treitschke, 1829); Bulgaria, Roussenski Lom Natural Park, Tcherni Lom River, near Tabachka Village.

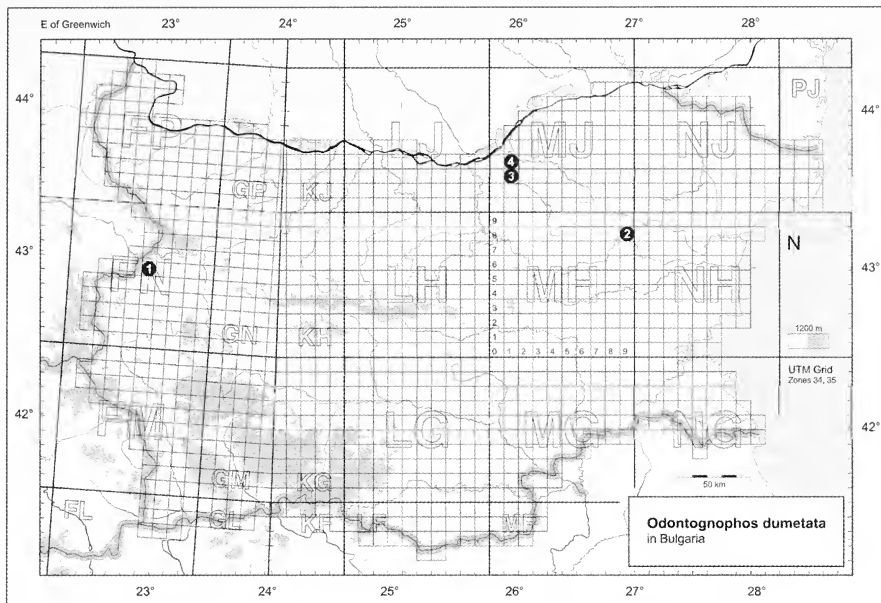


Fig. 6. Map of Bulgaria with localities of *Odontognophos dumetata* (Treitschke, 1829):

- 1 – Tchepun Ridge above Dragoman Town, 975 m
- 2 – Shoumensko Plato Natural Park, "Ohlyuva" above Divdyadovo Suburb, 456 m
- 3 – Roussenski Lom Natural Park, Tcherni Lom, near Tabachka Village, 170 m
- 4 – Roussenski Lom Natural Park, "Pismata" place below Ivanovo Village, 120 m

According to Nestorova (1998: 156) the occurrence of the species was not confirmed for Bulgaria later on, so she accepted *Odontognophos dumetata* as absent from Bulgaria.

Taking into account the flight period given in Markovitch (1904: 23), we take a courage to express the opinion, that the report quoted above should concern *Gnopharmia stevenaria*, a species surely proved in the vicinity of Razgrad and flying in June. *Odontognophos dumetata* flies from the end of August to the beginning of October, its finding in June is very unlikely.

In September–October 2007 we collected *Odontognophos dumetata* in four localities as follows:

W Bulgaria, Tchepun Ridge above Dragoman Town, 975 m, UTM Code: FN55, N42°56'53"; E022°56'14", 15.IX.2007, S. Beshkov & B. Zlatkov leg. at lamps, 2 males and one female.

Shoumensko Plato Natural Park, "Ohlyuva" above the rocks above Divdyadovo Suburb, 456 m, UTM Code: MH98, N43°15'04"; E026°55'10", 28.IX.2007, S. Beshkov & B. Zlatkov leg. single specimen in light trap;

NE Bulgaria, Roussenski Lom Natural Park, Tcherni Lom, near Tabachka Village, on the rocks opposite Orlova Chuka Cave, 170 m, UTM Code: MJ12, N43°36'07"; E025°58'22", 29.IX.2007, S. Beshkov & B. Zlatkov leg. single specimen in light trap;

NE Bulgaria, Roussenski Lom Natural Park, below Ivanovo Village, "Pismata" place near St. Archangel Michail Monastery, 120 m, UTM Code: MJ13, N43°42'02"; E025°59'14", 01.X.2007, S. Beshkov & B. Zlatkov leg. in light traps, 6 specimens.

All localities are warm, open limestone rocky areas with petrophilous vegetation, *Fraxinus ornus*, *Syringa vulgaris*, *Stipa*, etc. These are the first real and documented findings of *Odontognophos dumetata* in Bulgaria.

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# *Blastobasis adustella* (Lepidoptera: Coleophoridae, Blastobasinae), new to the Belgian list

Willy De Prins, Guido De Prins & Knud Larsen

**Abstract.** On 25 July 2008, a male specimen of *Blastobasis adustella* Walsingham, 1894 was caught in a light trap at Merksem (Province of Antwerpen, Belgium). This is the first records of this species from Belgium. Information on the geographical distribution and biology are presented and the species is compared to the three other Belgian Blastobasinae species.

**Samenvatting.** *Blastobasis adustella* (Lepidoptera: Coleophoridae, Blastobasinae), nieuwe soort voor de Belgische fauna

Op 25 juli 2008 werd een mannetje van *Blastobasis adustella* Walsingham, 1894 verzameld in een lichtval te Merksem (Prov. Antwerpen, België). Het is de eerste keer dat deze soort uit België wordt vermeld. Informatie over de geografische verspreiding en de biologie wordt gegeven en de soort wordt vergeleken met de drie andere Blastobasinae soorten die in België voorkomen.

**Résumé.** *Blastobasis adustella* (Lepidoptera: Coleophoridae, Blastobasinae), espèce nouvelle pour la faune belge

Le 25 juillet 2008, un exemplaire mâle de *Blastobasis adustella* Walsingham, 1894 fut trouvé dans un piège à Merksem (province d'Anvers, Belgique). Il s'agit de la première mention de cette espèce en Belgique. Des informations sur la distribution et la biologie sont données et l'espèce est comparée aux trois autres espèces qui figurent sur la liste des Blastobasinae de Belgique.

**Key words:** *Blastobasis adustella* – *Blastobasis lignea* – Faunistics – Belgium – First record.

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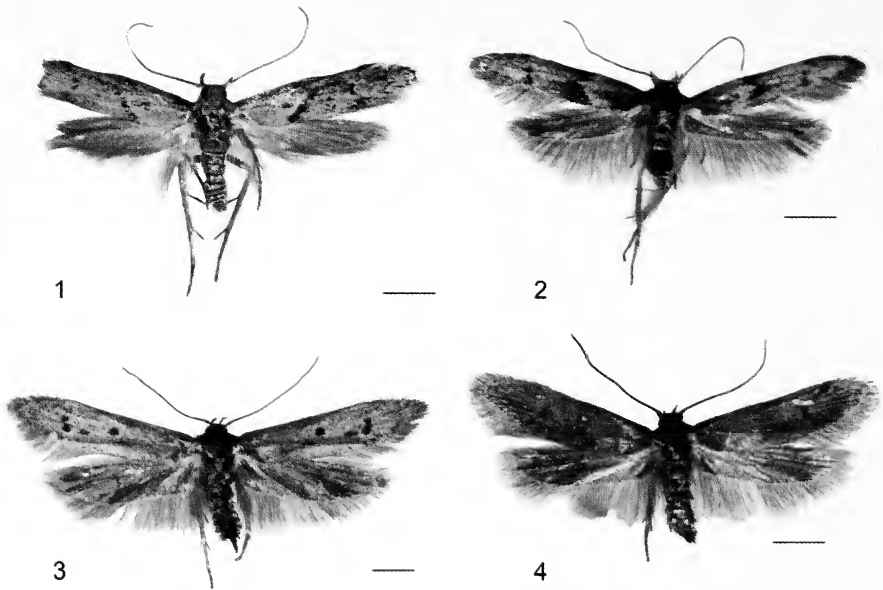
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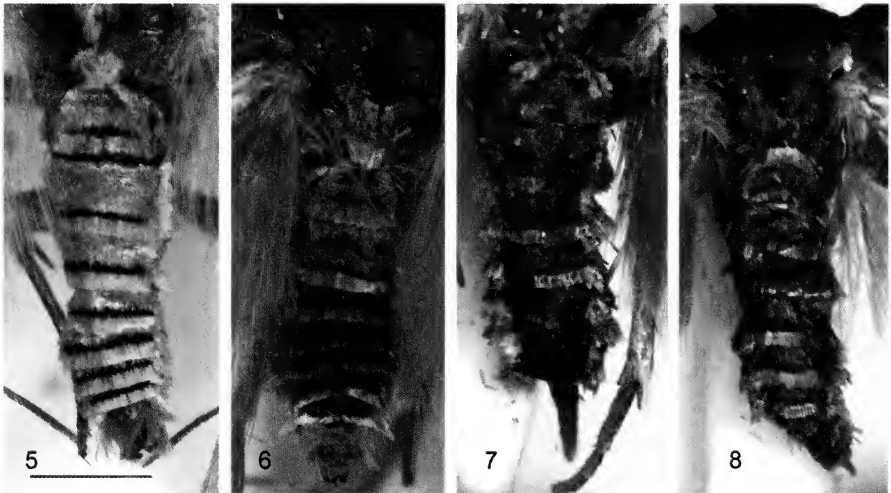
On 25 July 2008 a single, rather worn specimen of *Blastobasis adustella* Walsingham, 1894 was caught in a light trap in a suburban garden at Merksem (Prov. of Antwerpen, Belgium), leg. G. De Prins (fig. 1). This is the first record of this species for the Belgian fauna. The genus *Blastobasis* was hitherto represented in Belgium only by *Blastobasis phycidella* (Zeller, 1839) of which only a few records are known from the provinces of Antwerpen and West-Vlaanderen. This species was first recorded from Belgium already in 1864 from Ostend, 1 specimen on 20 July 1864, leg. E. Fologne (Fologne 1864). The first record from the Province of Antwerp dates from 05 June 2004, Merksem, leg. G. De Prins. The species is known from two other localities in the same province: Berchem and Mortsel, six specimens in June–early July, leg. G. De Prins, L. Janssen (De Prins & Steeman 2009). It is widespread in Europe (Sinev 2007) but almost nowhere taken in large numbers.

In Europe, 33 species of *Blastobasis* are known, most of which are endemic in Madeira (Karsholt & Sinev 2004, Sinev 2007a). Some of these species show an important individual variability which has invoked the description of several variations and individual forms, sometimes even species, leading to a complicated synonymy.





Figs. 1–4. Belgian species of Blastobasinae. 1.– *Blastobasis adustella* Walsingham, 1894, ♂, Belgium, Province of Antwerp, Merksem, 24 July 2008, leg. G. De Prins; 2.– *Blastobasis phycidella* (Zeller, 1839), ♀, Belgium, Province of Antwerp, Merksem, 08.vi.2004, leg. G. De Prins; 3.– *Hypatopa binotella* (Thunberg, 1794), ♀, Belgium, Province of Antwerp, Kalmthout, 29.vii.1984, leg. G. & W. De Prins; 4.– *Hypatopa inunctella* (Zeller, 1839), ♀, Belgium, Province of Antwerp, Kalmthout, 29.vii.1984, leg. G. & W. De Prins. Scale 2 mm.



Figs. 5–8. Abdomens of *Blastobasis* and *Hypatopa*, showing the rows of small spines on the tergites. 5.– *Blastobasis adustella*; 6.– *Blastobasis phycidella*; 7.– *Hypatopa binotella*; 8.– *Hypatopa inunctella*. Same faunistic data as the specimens in figs 1–4. Scale 2 mm.



This is the more apparent while in some important, and universally used textbooks (e.g. Dickson 2002), the wrong names have been applied to the species treated and figured. Almost all internet pages found with the keyword "Blastobasis lignea" in fact write about *B. adustella*. A complete treatment of all these names is given in the checklist by Karsholt & Sinev (2004). Because of the confusion in the synonymy, the same name has been applied to different species and vice versa.

### **Geographical distribution**

*B. adustella* has been described from Madeira (Walsingham 1894), from where it probably was introduced unintentionally to Ireland in the beginning of the 20<sup>th</sup> century (Poulton 1928, Bond *et al.* 2006). It occurs there mainly in coastal areas (Anonymous 2008). Later on, it turned up in Great Britain, adventitious either from Ireland or directly from Madeira (Mansbridge 1922, Meyrick, 1928). Unfortunately, the spread of this species in Great Britain has not been measured, but it is now well established in suburban gardens throughout the country, from Wales to Scotland, with a preference for coastal areas (Agassiz 1996, Bosanquet 2008). The first record from the European continent dates from 2002 when a specimen was found at Den Helder (province of Noord-Holland, The Netherlands) on 20 July 2001, leg. K. Kaag (Huisman *et al.* 2004). *B. adustella* is adventitious in Australia already from the beginning of the 20<sup>th</sup> century (Meyrick 1928). It is widespread and often common there, especially in Queensland and New South Wales (Herbison-Evans & Crossley). The species has furthermore doubtfully been recorded from the Azores (Sinev 2007).

### **Biology**

First instars of the phytophagous and saprophagous larvae mine the needles of *Picea* spp. and *Taxus baccata* (Mansbridge & Wright 1939, Hering 1957, Thomas & Polwart 2003). Later on they feed on a variety of food including mainly decaying vegetable matter (Meyrick 1928, Ellis 2007, Herbison-Evans & Crossley 2009, Kimber 2009). In Australia also on dry skins, bird droppings, the catkins of *Agathis robusta*, fruit of the palm tree and *Syzygium paniculatum* and dead leaves of *Eucalyptus* spp. are recorded as food for the larvae (Mansbridge & Wight 1939, Herbison-Evans & Crossley 2009).

The larva is whitish with a light brown head capsule. The larval stage lasts from April till June (Hering 1957).

The flight period extends from early July to mid October with a maximum in August. The moths come freely to light and are often found in light traps (Herbison-Evans & Crossley 2009, Kimber 2009).

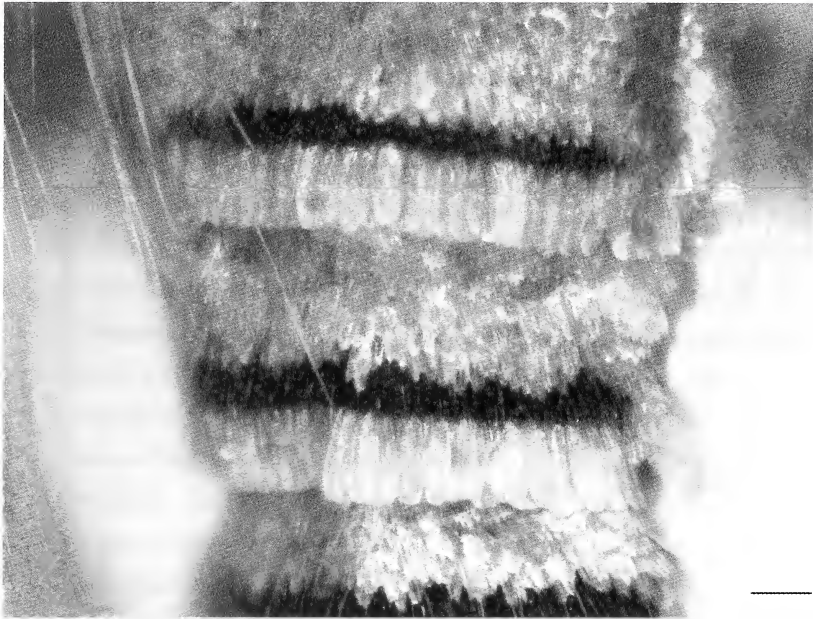


Fig. 9. Central tergites of the abdomen of *Blastobasis adustella* Walsingham, 1894, showing the row of small, black spines at the posterior margin of the central tergites. Scale 0.2 mm.

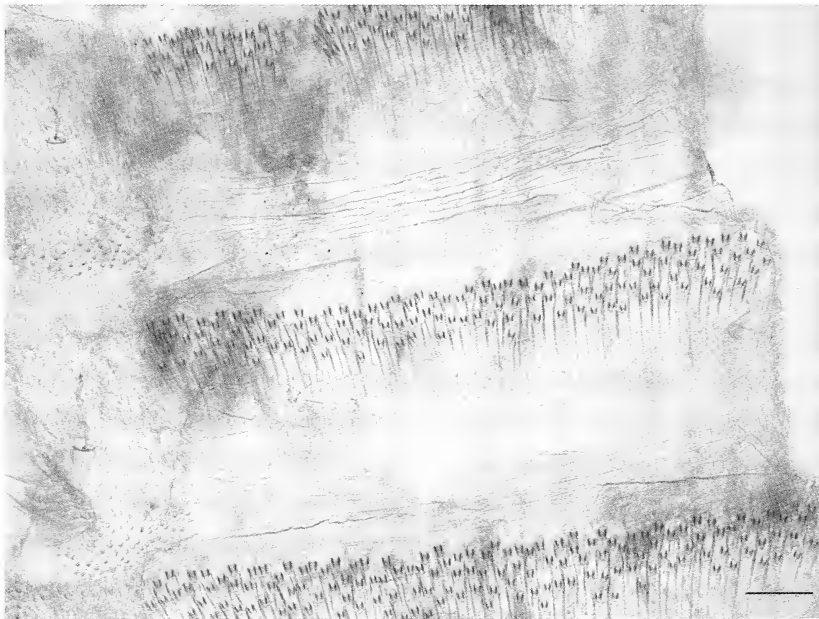


Fig. 10. Descaled abdomen of *Blastobasis adustella* Walsingham, 1894, showing the row of small, black spines at the posterior margin of the central tergites. Scale 0.1 mm.

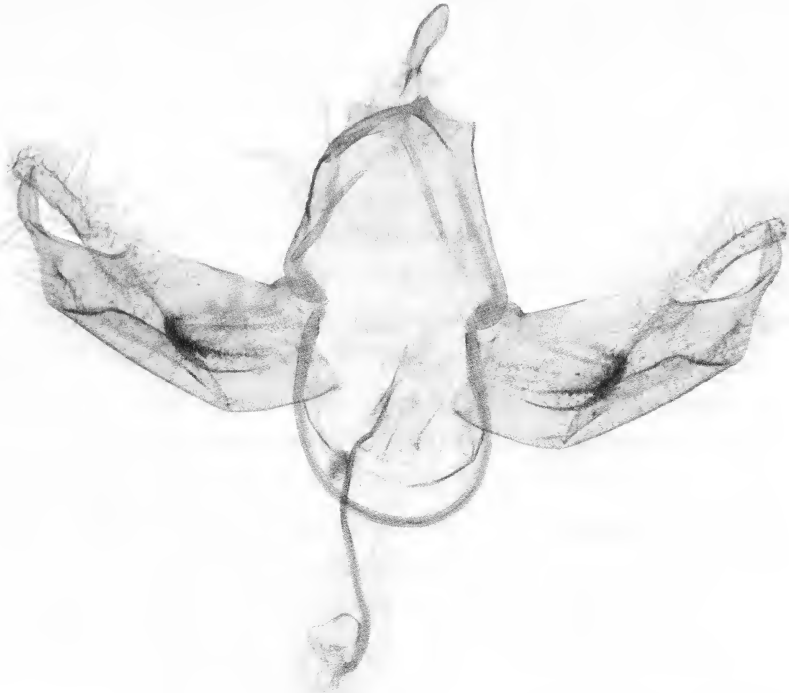


Fig. 11. Male genitalia of *Blastobasis adustella* Walsingham, 1894, Belgium, Prov. of Antwerp, Merksem, 25 July 2008, leg. G. De Prins, Gen. prep. J. De Prins 3762. Scale 0.5 mm.

### **General remarks on the Blastobasinae in Belgium**

Formerly, the group was considered as a separate family, but some synapomorphies relate it to the Coleophoridae of which it is considered a subfamily in the Handbook of Zoology (Hodges 1999). There are four species in this subfamily occurring in Belgium:

***Blastobasis adustella*** Walsingham, 1894

= *Blastobasis lignea* var. *melanella* Mansbridge & Wright, 1939

= *Blastobasis lignea* var. *pallidella* Mansbridge & Wright, 1939

= *Blastobasis xantographella* Rebel, 1940

= *Blastobasis lignea* sensu auct.

***Blastobasis phycidella*** (Zeller, 1839) [*Oecophora*]

= *Oecophora roscidella* Zeller, 1847

*Hypatopa binotella* (Thunberg, 1794) [*Tinea*]

= *Tinea mouffetella* sensu Hübner, 1799, nec Linnaeus, 1761

*Hypatopa inunctella* (Zeller, 1839) [*Oecophora*]

= *Hypatima haliciella* Klemensiewicz, 1898

= *Hypatima fuscella* Klemensiewicz, 1898

*Blastobasis sarcophaga* Meyrick, 1902, formerly considered a synonym of *B. phycidella*, is now regarded as a synonym of *B. marmorella* (Wollaston, 1858), occurring in Madeira, France, and Spain (mainland and Canary Islands), and it was introduced to Australia (Karsholt & Sinev 2004).

*Blastobasis magna* Amsel, 1952, formerly considered a synonym of *B. phycidella*, is regarded as a separate species by Sinev (2007b) with its range extending throughout the western Mediterranean.

Blastobasinae are recognized most easily by the presence of a transverse row of small spines at the posterior margin of each tergite, a distinctive character of this subfamily (figs. 5–8). The genera and species have a wing pattern and coloration of various shades of brown and grey, mixed with whitish scales, but this pattern is not diagnostic because individual variation is rather important and it can overlap interspecifically (Adamski & Brown 1989). Therefore, reference has to be made to genitalic structures in many cases, especially in the case of worn specimens. The Belgian species, however, can be identified with external characters in most cases.

1. – Forewing ground colour ochreous to brownish..... *H. inunctella*  
– Forewing ground colour whitish, greyish to almost blackish..... **2**
2. – Forewing ground colour unicolorous grey, without fascia but with 3–5  
black dots ..... *H. binotella*  
– Forewing ground colour not unicolorous, with a fascia before middle of  
wing ..... **3**
3. – Fascia angulated, always reaching costa; base of forewing darkened  
..... *B. phycidella*  
– Fascia linear, mostly not reaching costa; base of forewing not darkened  
..... *B. adustella*

All Belgian Blastobasinae species have rarely been recorded. This is perhaps due to the lack of interest of entomologists for these rather dull-colored specimens, but also in most of the neighbouring countries records of Blastobasinae seem to be rather scanty.

*Blastobasis phycidella* has only been recorded from the coastal region (locality: Ostend) and from the provinces of Antwerp (localities: Berchem,

Merksem, Mortsel) and Limburg (Diepenbeek). Flight period from mid May till mid August. The larva lives among decaying vegetable matter, fallen leaves of e.g. *Quercus*, needles of pines trees, etc.

*Hypatopa binotella* occurs mainly on the sandy soils of the Kempen in the provinces of Antwerp and Limburg (localities: Kalmthout, Schoten, Turnhout, Kinrooi). There is one old record from the province of Oost-Vlaanderen (locality: Melle). Flight period from the end of May till mid August. The larva feeds on fallen needles of several species of pine trees.

*Hypatopa inunctella* has hitherto only been recorded from the provinces of Antwerp (localities: Antwerpen-Linkeroever, Kalmthout, Schoten) and Limburg (Kinrooi). Flight period from mid May till late August. *H. inunctella* is most often connected with warm swamps with old growing of *Alnus glutinosa*.

There are some Blastobasinae species which might be expected to arrive to Belgium as well, since they have been recorded from adjacent areas:

*Blastobasis lacticolella* Rebel, 1940: Madeira (originally endemic), introduced and established in the British Isles where it is now widespread in southern England and recorded from Scotland and Sweden.

*Blastobasis rebeli* Karsholt & Sinev, 2004: Madeira (originally endemic), very recently unintentionally imported to England and recorded there in 1998 and again in 2001. It is the species mentioned in Dickson (2002) as *Blastobasis* sp.

For identification of these species, please refer to Karsholt & Razowski (2004).

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We would like to thank Dr. Ole Karsholt (Copenhagen) and Dr. Sergey Sinev (St. Petersburg) for providing valuable literature and Jurate De Prins (Tervuren) for photographing the specimens, their abdomens and preparing the genitalia slide of *Blastobasis adustella*.

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# Agressief gedrag bij *Xestia xanthographa* (Lepidoptera: Noctuidae)

Guido De Prins

**Abstract.** Aggressive behaviour of *Xestia xanthographa* (Lepidoptera: Noctuidae)

Twice, on 6 September 2008 at Bléharies (Province of Hainaut) and on 13 September 2008 at Oostham (Province of Limburg), aggressive behaviour was observed in *Xestia xanthographa* while the specimens were licking sugar on tree trunks. The specimens ran towards specimens of the same species or of *N. pronuba* or *A. ipsilon* and pushed them away.

**Résumé.** Comportement agressif de *Xestia xanthographa* (Lepidoptera: Noctuidae)

Le 6 septembre 2008 à Bléharies (Hainaut) et le 13 septembre 2008 à Oostham (Limbourg), un comportement agressif de *Xestia xanthographa* fut observé quand des exemplaires se nourrissaient du miellat sur des troncs d'arbres. Les exemplaires se précipitaient vers les autres *X. xanthographa*, mais aussi vers *N. pronuba* ou *A. ipsilon* et les chassaient.

**Key words: Behaviour – *Xestia xanthographa*.**

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Op 6 september 2008 te Bléharies (Rongy) in Henegouwen en op 13 september 2008 te Oostham in Limburg heb ik een opmerkelijk gedrag van een paar exemplaren van *X. xanthographa* ([Denis & Schiffermüller], 1775) waargenomen.

Het smeer (rode wijn met suiker) werd aangebracht op boomstammen een paar uur voor het donker was. Bij het nakijken van de smeerplekken werd vastgesteld dat telkens één exemplaar *X. xanthographa* per boom agressief uitviel naar andere *X. xanthographa*'s maar ook naar *Noctua pronuba* Linnaeus, 1758 en *Agrotis ipsilon* (Hufnagel, 1766). De agressieve exemplaren waren smeer aan het zuigen en als er een andere vlinder in de buurt kwam, ging de "aanvaller" er telkens één à twee cm op af en joeg het andere insect echt weg van "zijn/haar" plaats. Bij mijn weten is een dergelijk gedrag zeker niet de gewoonte bij nachtvlinders. Het was dan ook de eerste keer dat ik zo iets waarnam en ik vond het vermeldenswaard.



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## Boekbespreking

**Zeegers, T. & Heijerman, T.:** *De Nederlandse boktorren (Cerambycidae).*

16,5 × 24 cm, 120 p., 297 figuren waarvan de meeste in kleur, Entomologische tabellen 2, Supplement bij Nederlandse Faunistische Mededelingen, paperback, 2008. Te bestellen via [www.naturalis.nl/et](http://www.naturalis.nl/et) of [www.nev.nl/et](http://www.nev.nl/et), 15,00 € (ISSN1875-760x).

In dit tweede deeltje uit de reeks "*Entomologische tabellen*" worden de Nederlandse boktorren (Cerambycidae) behandeld. Doel is een determineerinstrument aan te bieden voor het op naam brengen van alle Nederlandse boktorren en dit in het veld. Daarvoor is in sommige gevallen wel een loep (10×) nodig, maar het klassieke verzamelen is dus geen noodzaak. Zelfs goede foto's kunnen in de meeste gevallen volstaan voor het op naam brengen. De platen met foto's van collectie-exemplaren van alle Nederlandse soorten zijn daarbij een grote hulp, maar ook de determineertabellen zelf, met talrijke tekeningen van morfologische details, zijn uiterst geschikt en gemakkelijk te gebruiken. Naast de Nederlandse soorten worden trouwens nog enkele buitenlandse soorten afgebeeld die eventueel in het gebied zouden kunnen opduiken, daarbij zijn er heel wat Belgische.

Elke soort uit Nederland, België en het aangrenzende gebied in Duitsland wordt kort besproken (in totaal 128 soorten): naamgeving, beschrijving, waar te vinden, verschillen met gelijkende soorten, voorkomen, vliegperiode. Dit tekstdeel bevat vele kleurenfoto's van boktorren in de natuur.

De tabel is zeer keurig uitgegeven en de kleurenillustratie zijn van uitstekende kwaliteit. Achteraan volgt nog een checklist van de Nederlandse soorten, een beknopte literatuurlijst en een alfabetische index van de behandelde soorten. Het is een aanrader voor iedereen die in boktorren geïnteresseerd is.

Willy De Prins

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