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MOTHS CAUGHT IN PHEROMONE TRAPS FOR AMERICAN WHITE MOTH (*HYPHANTRIA CUNEA* DR.) (ARCTIIDAE, LEPIDOPTERA) IN LITHUANIA DURING 2001

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Abstract. In Lithuania, the quarantine species *Hyphantria cunea* was not caught in pheromone traps during investigations in 2001. Moths of 80 species belonging to 16 families were caught in pheromone traps for *H. cunea*. One new for Lithuania species *Elachista unifasciella* was recorded. Some rare for Lithuania species (*Denisia luticiliella*, *Cnephasia pasiuana*, *Eana incanana*, *Cnephasia incertana*, *Scoparia basistrigalis*, *Eupithecia denotata*, and *Mesapamea didyma*) were trapped, and their new distribution localities were detected. Moths caught in pheromone traps most frequently were described.
Key words: quarantine species, American white moth, distribution, recording

Introduction

The American white moth (*Hyphantria cunea* Drury) had been included in the European Union Plant Protection Organization [EPPO] quarantine list (CAB 1997) and removed from it in 1999 (EPPO RS 1999). *H. cunea* was registered in quarantine lists of Lithuania (MoA 2000), Russia and Belarus (EPPO RS 1999; Nikritin *et al.* 1995). This species was once (8 June 1986) caught in Lithuania near the Klaipėda port (Ivinskis *et al*. 1988). The aim of this work was to search for *H. cunea* in Lithuania and identify moths caught in pheromone traps for this species.

Material and methods

One hundred and eleven Delta traps with pheromones for *H. cunea* made by the Trifolio-M Gmbh company (Germany) were used in Lithuania during 2001. Durability of pheromone attractivity was guaranteed for one month after the placement of dispensers. One dispenser was used in each trap. Pheromone traps were fixed by inspectors from the Lithuanian State Plant Protection Service in plantations, parks, gardens, nurseries and at forest edges. Some of them were checked from the last decade of June until the last decade of July another – from the first decade of July until the beginning of August. The plants examined for the above moth species included the following: *Acer*, *Aesculus*, *Betula*, *Corylus*, *Crataegus*, *Fraxinus*, *Malus*, *Prunus*, *Pyrus*, *Salix*, *Syringa*, *Tilia*, and some other ornamental trees.

Traps were set in 73 localities of 37 administrative districts. They are abbreviated as follows: Alt – Alytus, An – Anykščiai, Ig – Ignalina, J – Jonava, Jn – Joniškis, K – Kaunas, Kd – Kėdainiai, Kl – Klaipėda, Kr – Kretinga, Kš – Kaišiadorys, L – Lazdijai, M – Marijampolė, Ml – Molėtai, Pl – Plungė, Pn – Panevėžys, Pr – Prienai, Ps – Pasvalys, Rd – Radviliškis, Rk – Rokiškis, Rs – Raseiniai, Šl – Šiauliai, Šlč – Šalčininkai, Šll – Šilalė, Šlt – Šilutė, Šr – Širvintos, Šv – Švenčionys, Tl – Telšiai, Tr – Trakai, Trg – Tauragė, Uk – Ukmergė, Ut – Utena, V – Vilnius, Vlk – Vilkaviškis, Vr – Varėna, and Z – Zarasai.

About 20 abdomens of each group of similarly sized moths were taken from insert if catches were abundant. Genitalia were prepared by the standard method (Komarova *et al*. 1983; Ivinskis 1996). Moth species were identified by special keys (Błeszyński 1960, 1965, 1966; Bradley *et al*. 1979; Calle 1982; Kostrowicki 1956, 1959, 1983; Zagulyaev *et al*. 1978, 1986; Gershenzon *et al*. 1981; Merzheevskaya 1971; Razowski 1990; Tchurajev 1962). The list of species is adduced in the same order as in Karsholt and Razowski (1996). Relative species frequency (%) was calculated as a ratio of the number of localities where a certain species was recorded to the number of all the localities investigated.

Results and discussion

Moths were caught in 93 traps from 61 locality of 36 administrative districts. The list of species with a refer-

ence number of specimens, districts, localities, and the total number of traps fixed on the same crop is presented in *Annex I*.

The highest relative species frequencies were recorded for *Eupithecia vulgata* (57.4%), *Spilosoma lubricipeda* (45.9%), and *Noctua pronuba* (37.7%), whereas for the other species they were low (1.6–14.7%). *Elachista unifasciella*, a new species for Lithuania (Ivinskis 1993, 1999; Sruoga 1998), was recorded (Fig. 1).

New distribution localities were detected for very rare for Lithuania species: *Denisia luticiella* – 1 and *Cnephasia pasiuana* – 1, *Eana incanana* – 1, *Cnephasia incertana* – 1, *Scoparia basistrigalis* – 1, *Eupithecia denotata* – 1, *Mesapamea didyma* – 1 (Kazlauskas 1984; Ivinskis 1993, 1999; Ivinskis & Mozūraitis 1995; Dapkus 1995; Švitra 1995; Sruoga 1998; Ostrauskas 2001a, b, 2003; Ostrauskas *et al*. 2002).

Conclusions

1. The quarantine pest *Hyphantria cunea* was not recorded in Lithuania during the investigations in 2001.
2. Relative frequencies of *Eupithecia vulgata*, *Noctua pronuba*, and *Spilosoma lubricipeda* caught in pheromone traps for *H. cunea* were high in Lithuania.
3. *Elachista unifasciella*, a new species for Lithuania, was recorded.
4. The following very rare species were trapped in Lithuania during 2001: *Denisia luticiella* (recorded also in one new distribution locality), and *Cnephasia pasiuana* (1).
5. The following rare species were trapped in Lithuania during 2001: *Eana incanana* (recorded also in one new distribution locality), *Cnephasia incertana* (1), *Scoparia basistrigalis* (1), *Eupithecia denotata* (1), and *Mesapamea didyma* (1).

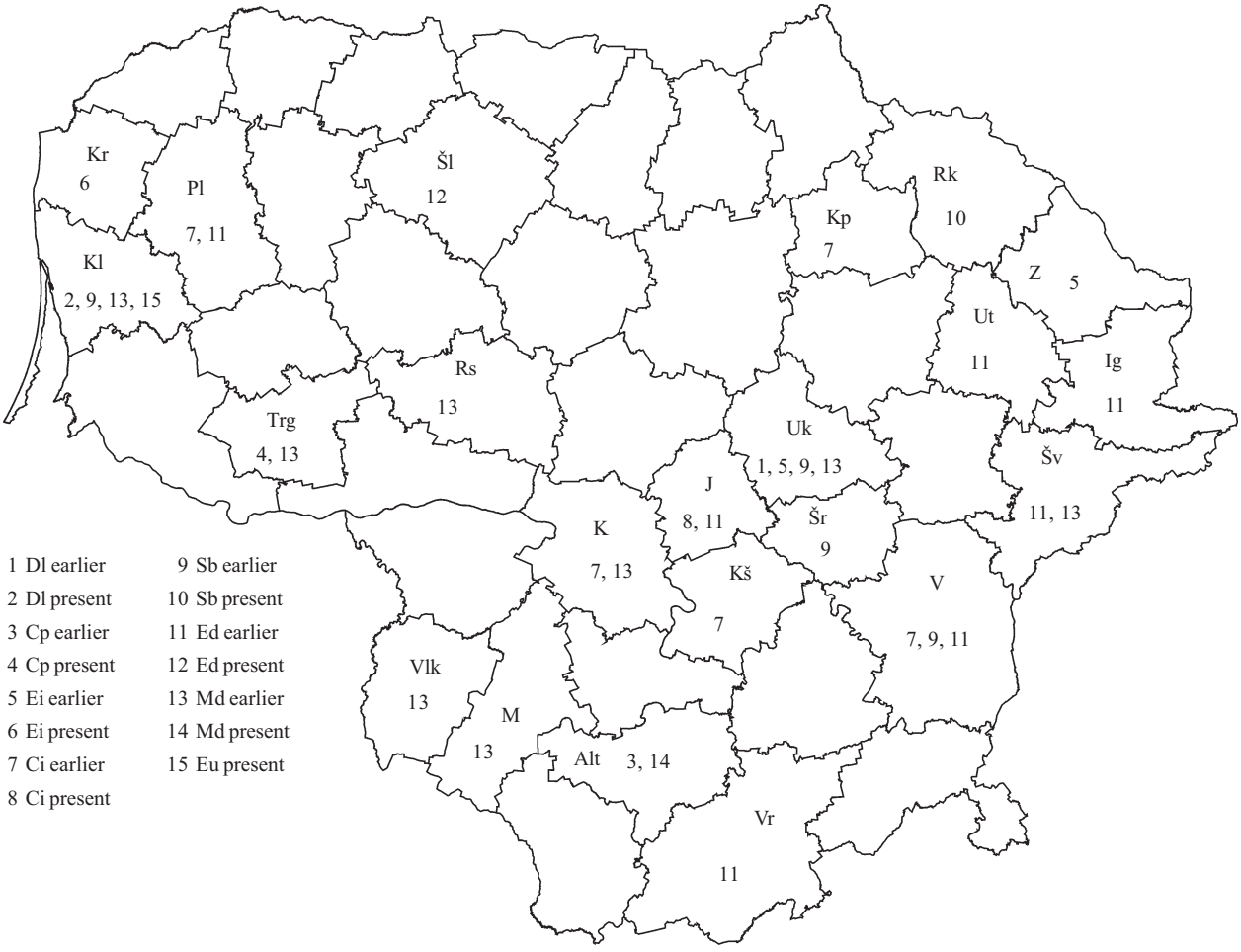

Figure 1. Distribution of *Denisia luticiliella* (Dl), *Cnephasia pasiuana* (Cp), *Eana incanana* (Ei), *Cnephasia incertana* (Ci), *Scoparia basistrigalis* (Sb), *Eupithecia denotata* (Ed), *Mesapamea didyma* (Md), and *Elachista unifasciella* (Eu). The data include both earlier publicised findings (Kazlauskas 1984; Ivinskis 1993, 1999; Ivinskis & Mozūraitis 1995; Dapkus 1995; Švitra 1995; Sruoga 1998; Ostrauskas 2001a, b, 2003; Ostrauskas *et al*. 2002) and the results obtained from the present study. Abbreviations of district names are presented in the text.

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Amerikinės meškutės (*Hyphantria cunea* Dr.) (Arctiidae, Lepidoptera) feromonų gaudyklėmis sugauti drugiai Lietuvoje 2001 metais

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Santrauka

Karantininė rūšis *Hyphantria cunea* Lietuvoje 2001 metais nesugauta. *Elachista unifasciella* – nauja registruota Lietuvos drugių faunos rūšis. Gaudyklėmis su amerikinės meškutės feromonais sugautos retos mūsų krašto drugių rūšys (*Denisia luticiliella*, *Cnephasia pasiuana, Eana incanana*, *Cnephasia incertana*, *Scoparia basistrigalis*, *Eupithecia denotata* ir *Mesapamea didyma*). Jų paplitimas nustatytas naujose vietovėse. Nurodytos dažniausios drugių rūšys, pakliuvusios į tirtas gaudykles.

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Annex I. The list of moth species caught in pheromone traps for *Hyphantria cunea* in Lithuania during 2001. Abbreviations of district names are presented in the text.

Family, species	Number of specimens	District	Locality	Date	Number of traps
Tineidae					
Haplotinea insectella F.	1	M	Kalvarijos	18 June–23 July	2
Tinea semifulvella Hw.	1	M	Kalvarijos	18 June–23 July	2
Nitidinea fuscella L.	1	Kš	Kleboniškis	23 June–23 July	1
Monopis monachella Hb.	1	Ps	Saločiai	23 June–23 July	2
Gracillariidae					
Phyllonorycter rajella L.	1	Kl	Klaipėda	31 July–2 August	2
Yponomeutidae					
Argyresthia albistria Hw.	1	Kš	Žiežmariai	18 June–23 July	1
	1	Rd	Mankiškiai	18 June–19 July	2
	1	Rk	Miegonys	21 June–7 August	2
	3	Šl	Bubiai	18 June–19 July	2
	1	Šl	Šiauliai	18 June–19 July	2
	9	Šl	Vijoliai	18 June–19 July	2
	2	V	Savičiūnai	20 June–25 July	1
	1	V	Medininkai	20 June–25 July	1
	5	V	Kalviai	25 June–25 July	1
Plutellidae					
Plutella xylostella L.	1	M	Kalvarijos	18 June–23 July	2
Depressariidae					
Agonopterix heracliana L.	1	Ut	Utena	18 June–23 July	1
Elachistidae					
Elachista albifrontella Hb.	1	Šr	Družai	18 June–23 July	1
Elachista unifasciella Hw.	1	Kl	Klaipėda	31 July–2 August	2
Oecophoridae					
Denisia luticiliella Ers.	1	Kl	Klaipėda	31 July–2 August	2
Cosmopterigidae					
Limnaecia phragmitella St.	1	Vlk	Šiaudiniškiai	23 June–24 July	2
Gelechiidae					
Metzneria lappella L.	1	Kl	Klaipėda	31 July–2 August	2
Bryotropha terrella D. et S.	1	Kl	Klaipėda	31 July–2 August	2
	1	Šl	Šiauliai	18 June–19 July	2
Gelechia rhombella D. et S.	1	Kr	Kluonaliai	2 July–16 August	4
	1	Pl	Vatušiai	25 June–18 July	2
	1	Pr	Medžionys	18 June–15 August	1
	1	Rd	Radviliškis	18 June–18 July	1
	4	Rk	Miegonys	21 June–7 August	2
Chionodes distinctella Zll.	1	Uk	Barboriškis	18 June–23 July	1
Scrobipalpa atriplicella F. v. Rsl.	1	Rk	Miegonys	21 June–7 August	2
Tortricidae					
Tortrix viridana L.	2	Tl	Berkinėnai	25 June–18 July	2
Eana incanana Stph.	1	Kr	Kluonaliai	2 July–16 August	4
Cnephasia incertana Tr.	1	J	Batėgala	18 June–4 August	1
	1	Tl	Berkinėnai	25 June–18 July	2
Cnephasia stephensiana Dbl.	1	M	Kalvarijos forestry, quarter N26	19 June–24 July	2
	2	Rk	Miegonys	21 June–7 August	2
	1	Trg	Trepai	28 June–9 August	2

Annex I continued

Family, species	Number of specimens	District	Locality	Date	Number of traps
Cnephasia pasiuana Hb.	2	Trg	Trepai	28 June–9 August	2
Cnephasia chrysantheana Dp.	1	Pl	Vatušiai	25 June–18 July	2
	1	Rd	Mankiškiai	18 June–19 July	2
	1	V	Savičiūnai	20 June–25 July	1
Pseudargyrothoza conwagana F.	1	Rk	Bajorai	21 June–7 August	2
Archips podana Sc.	1	Tr	Alešiškės	23 June–24 July	1
Choristoneura diversana Hb.	2	Pl	Vatušiai	25 June–18 July	2
Pandemis heparana D. et S.	1	Alt	Alytus	25 June–30 July	1
	1	L	Lazdijai	18 June–23 July	2
Pandemis dumetana Tr.	1	Šlt	Vilkyškiai	20 June–25 July	2
Hedya nubiferana Hw.	1	Pl	Vatušiai	25 June–18 July	2
	1	Pl	Vatušiai	25 June–18 July	2
	1	V	Medininkai	20 June–25 July	1
	6	V	Kalviai	25 June–25 July	1
Rhopobota naevana Hb.	1	Kd	Beržai	18 June–30 July	1
	8	Kr	Kluonaliai	2 July–16 August	4
	1	Rk	Miegonys	21 June–7 August	2
Epinotia tenerana D. et S.	27	Kl	Klaipėda	31 July–2 August	2
Epiblema foenella L.	1	Alt	Panemuninkai	25 June–30 July	2
Cydia pomonella L.	2	Ig	Dūkštas	18 June–23 July	1
Choreutidae					
Choreutis pariana Cl.	22	Kr	Kluonaliai	2 July–16 August	4
Pterophoridae					
Geina didactyla L.	1	Šlč	Žagarinė	25 June–27 July	1
Emmelina monodactyla L.	1	Z	Gražutė	18 June–23 July	1
Pyralidae					
Scoparia basistrigalis Kngs.	1	Rk	Miegonys	21 June–7 August	2
Chrysoteuchia culmella L.	1	Vlk	Kybartai	20 June–25 July	2
Udea lutealis Hb.	1	M	Kalvarijos	18 June–23 July	2
Geometridae					
Cabera pusaria L.	1	Kl	Klaipėda	31 July–2 August	2
Plemyria rubiginata D. et S.	2	Kl	Klaipėda	31 July–2 August	2
Perizoma alchemillata L.	1	Vlk	Kybartai	20 June–25 July	2
Perizoma albulata L.	1	L	Lazdijai	18 June–23 July	2
	1	Šlt	Vilkyškiai	20 June–25 July	2
	2	Šv	Švenčionys	23 June–23 July	2
	1	V	Kalviai	25 June–25 July	1
Perizoma flavofasciata Thn.	1	Rk	Miegonys	21 June–7 August	2
Perizoma didymata L.	2	Šlč	Žagarinė	25 June–27 July	1
Eupithecia vulgata Hw.	1	Alt	Alytus	25 June–30 July	1
	2	J	Batėgala	18 June–4 August	1
	2	K	Kaunas	23 June–1 August	1
	4	Kd	Beržai	18 June–30 July	1
	4	Kd	Nociūnai	20 June–28 July	1
	21	Kl	Klaipėda	31 July–2 August	2
	1	L	Lazdijai	18 June–23 July	2
	1	L	Leipalingis	23 June–23 July	1
	5	M	Kalvarijos	18 June–23 July	2
	1	M	Kalvarijos forestry, quarter N26	19 June–24 July	2

Annex I continued

Family, species	Number of specimens	District	Locality	Date	Number of traps
Eupithecia vulgata Hw.	1	Pl	Vatušiai	25 June–18 July	2
	1	Pn	Ragainė	26 June–30 July	1
	1	Pr	Medžionys	18 June–15 August	1
	2	Rd	Aukštelkai	18 June–18 July	1
	7	Rd	Mankiškiai	18 June–19 July	2
	7	Rd	Radviliškis	18 June–18 July	1
	3	Rk	Bajorai	21 June–7 August	2
	13	Rk	Miegonys	21 June–7 August	2
	13	Rs	Žaiginys	29 June–2 August	1
	4	Šl	Bubiai	18 June–19 July	2
	1	Šl	Šiauliai	18 June–19 July	2
	5	Šl	Vijoliai	18 June–19 July	2
	1	Šll	Šiauduva	28 June–8 August	2
	5	Šr	Družai	18 June–23 July	1
	4	Šv	Švenčionys	23 June–23 July	2
	5	Tl	Berkinėnai	25 June–18 July	2
	2	Trg	Trepai	28 June–9 August	2
	4	Tr	Alešiškės	23 June–24 July	1
	5	Uk	Barboriškis	18 June–23 July	1
	1	V	Medininkai	20 June–25 July	1
	3	V	Vilnius	25 June–26 July	2
	1	V	Vaidotai	18 June–23 July	2
	2	V	Kalviai	25 June–25 July	1
	2	Vlk	Gudkaimis	23 June–24 July	2
Eupithecia denotata Hb.	1	Šl	Šiauliai	18 June–19 July	2
Eupithecia innotata Hb.	1	V	Medininkai	20 June–25 July	1
Eupithecia pusillata D. et S.	1	Ig	Dūkštas	18 June–23 July	1
Rhinoprora rectangulata L.	1	V	Vilnius	25 June–26 July	1
Euchoecia nebulata Sr.	1	Šlč	Žagarinė	25 June–27 July	1
Asthena albulata Hfn.	1	M	Kalvarijos forestry, quarter N26	19 June–24 July	2
Hydrelia flammeolaria Hfn.	1	M	Kalvarijos forestry, quarter N26	19 June–24 July	2
	1	M	Kalvarijos	18 June–23 July	2
	1	Šr	Družai	18 June–23 July	1
Noctuidae					
Euclidia glyphica L.	1	Kr	Kluonaliai	2 July–16 August	4
Hypena proboscidalis L.	1	Alt	Alytus	25 June–30 July	1
	1	Z	Gražutė	18 June–23 July	1
Parascotia fuliginaria L.	3	Kl	Klaipėda	31 July–2 August	2
	1	V	Vilnius	25 June–26 July	1
	1	V	Vaidotai	18 June–23 July	2
Eublemma minutata F.	1	L	Lazdijai	18 June–23 July	2
Amphipyra tragopoginis Cl.	1	Ut	Utena	18 June–23 July	1
Apamea sp.	1	Trg	Griežpelkiai	28 June–8 August	2
Oligia strigilis L.	1	Pn	Ragainė	26 June–30 July	1
Mesapamea secalis L.	1	Alt	Panemuninkai	25 June–30 July	2
	1	Ig	Dūkštas	18 June–23 July	1
Mesapamea secalis L.	2	Rk	Miegonys	21 June–7 August	2

Annex I continued

Family, species	Number of specimens	District	Locality	Date	Number of traps
Mesapamea secalis L.	1	Trg	Trepai	28 June–9 August	2
Mesapamea didyma Esp.	1	Alt	Panemuninkai	25 June–30 July	2
Lacanobia oleracea L.	1	Ps	Saločiai	23 June–23 July	2
Mamestra suasa D. et S.	1	Alt	Panemuninkai	25 June–30 July	2
Hada plebeja L.	1	M	Kalvarijos forestry, quarter N26	19 June–24 July	2
Hadena luteago D. et S.	1	Alt	Alytus	25 June–30 July	1
Mythimna ferrago L.	1	Tr	Alešiškės	23 June–24 July	1
	1	Trg	Trepai	28 June–9 August	2
Mythimna pallens L.	1	Uk	Barboriškis	18 June–23 July	1
Tholera cespitis D. et S.	1	Šl	Bubiai	18 June–19 July	2
Noctua pronuba L.	1	Alt	Alytus	25 June–30 July	1
	1	Alt	Daugai	25 June–30 July	1
	2	Alt	Kriauniai	25 June–31 July	1
	1	Alt	Simnas	18 June–20 July	1
	1	An	Vėjeliškiai	18 June–23 July	1
	1	K	Kaunas	23 June–1 August	1
	1	Kd	Nociūnai	20 June–28 July	1
	2	Kr	Kluonaliai	2 July–16 August	4
	1	L	Lazdijai	18 June–23 July	2
	1	L	Leipalingis	23 June–23 July	1
	1	Ml	Juodiškės	18 June–23 July	1
	2	Pl	Vatušiai	25 June–18 July	2
	1	Ps	Gulbinėnai	26 June–9 August	2
	1	Rd	Mankiškiai	18 June–19 July	2
	1	Rk	Bajorai	21 June–7 August	2
	1	Šl	Šiauliai	18 June–19 July	2
	1	Šlč	Pabarė	20 July–9 August	1
	1	Šlč	Šalčininkai	20 July–10 August	1
	3	Šll	Šiauduva	28 June–8 August	2
	1	Šlt	Vilkyškiai	20 June–25 July	2
	1	Uk	Barboriškis	18 June–23 July	1
	2	Ut	Radeikiai	18 June–23 July	1
	3	V	Vilnius	21 June–5 July	1
Mythimna comma L.	1	Pl	Vatušiai	25 June–18 July	2
	1	Šl	Bubiai	18 June–19 July	2
Eurois occulta L.	1	Tr	Šventininkai	18 June–27 July	1
Graphiphora augur F.	1	Kr	Kluonaliai	2 July–16 August	4
Xestia c-nigrum L.	1	Pl	Vatušiai	25 June–18 July	2
	1	Šlč	Šalčininkai	20 July–10 August	1
	2	Šlč	Pabarė	20 July–9 August	1
	1	Ut	Utena	18 June–23 July	1
	1	V	Vilnius	25 June–26 July	1
Xestia triangulum Hfn.	1	Kr	Kluonaliai	2 July–16 August	4
Xestia sexstrigata Hw.	1	An	Ažuožeriai	18 June–23 July	1
Agrotis exclamationis L.	1	Ig	Dūkštas	18 June–23 July	1
	1	M	Kalvarijos	18 June–23 July	2
	1	Šll	Šiauduva	28 June–8 August	2
Agrotis clavis Hfn.	1	Šl	Bubiai	18 June–19 July	2

Annex I continued

Family, species	Number of specimens	District	Locality	Date	Number of traps
Agrotis segetum D. et S.	1	Jn	Mindaugiai	23 June–23 July	2
	1	Tr	Šventininkai	18 June–27 July	1
Agrotis vestigialis Hfn.	1	Pn	Ragainė	26 June–30 July	1
	1	Šv	Švenčionys	23 June–23 July	2
Arctiidae					
Spilosoma lubricipeda L.	1	Alt	Alytus	25 June–30 July	1
	2	Alt	Luksnėnai	25 June–31 July	2
	2	J	Batėgala	18 June–4 August	1
	1	K	Kaunas	23 June–1 August	1
	1	Kd	Beržai	18 June–30 July	1
	4	Kl	Klaipėda	31 July–2 August	2
	5	Kr	Kluonaliai	2 July–16 August	4
	1	L	Lazdijai	18 June–23 July	2
	1	L	Leipalingis	23 June–23 July	1
	1	M	Kalvarijos forestry, quarter N26	24 July	2
	2	M	Kalvarijos	18 June–23 July	2
	2	Pl	Vatušiai	25 June–18 July	2
	2	Pl	Vatušiai	25 June–18 July	2
	2	Pr	Medžionys	18 June–15 August	1
	2	Rd	Aukštelkai	18 June–18 July	1
	2	Rd	Radviliškis	18 June–18 July	1
	3	Rk	Bajorai	21 June–7 August	2
	1	Šl	Vijoliai	18 June–19 July	2
	2	Šlt	Vilkyškiai	20 June–25 July	2
	1	Šr	Družai	18 June–23 July	1
	8	Tl	Berkinėnai	25 June–18 July	2
	2	Tr	Varnikai	25 June–16 August	1
	1	V	Kalviai	25 June–25 July	1
	1	V	Vaidotai	18 June–23 July	2
	1	V	Vilnius	25 June–26 July	1
	1	V	Vilnius	25 June–26 July	1
	5	V	Vilnius	21 June–5 July	1
	5	Vlk	Gudkaimis	23 June–24 July	2
	10	Vlk	Šiaudiniškiai	23 June–24 July	2