4th European Moth Nights,

11th – 15th October 2007, a scientific evaluation (Lepidoptera: Macrolepidoptera)

Ladislaus REZBANYAI–RESER, Mihály KÁDÁR & Harald SCHREIBER (translation)

(Many thanks to Antony R. JAMES, Helston, Cornwall, who devoted much of his time in proof-reading the translation.)

Abstract

On behalf of the "József Szalkay Lepidopterological Society of Hungary" and the "Entomological Society of Luzern" (Switzerland), the first two authors for the most part organized the international event "4th European Moth Nights" ("4.EMN") between 11.–15.10.2007. On the given days, lepidopterists were invited to collect or observe nocturnal moths (Macroheterocera) simultaneously for the fourth time at any European location of their choice, and report to EMN Headquarters the results obtained. The event set itself the basic goal of establishing contacts between moth-collectors in Europe, creating a geographically wide-ranging snapshot of the moths flying in the same period and drawing attention to moths in general, as well as to the high ratio they represent in the system of nature and their present protection requirements.

A total of 549 persons from 29 countries took an active part in the event, which is clearly more than at the three EMN, carried through so far. The highest numbers came from the countries of Great Britain (87), Austria (46 – this high number was only achieved due to participation of 24 Austrian pupils at an Hungarian EMN-event), Germany (44), Portugal (35), Belgium (34) Finland (32), Hungary (31), Switzerland (28) and France (27). – Of the numerous "prominent" Lepidopterists, which participated in the 4th EMN, we would like to emphasize the participation of Patrice LERAUT (FR) and his son Guillaume this time and to welcome them with great pleasure.

The number of localities from 33 countries totalled 621 altogether, which is clearly more than at the three EMN carried through so far. The highest numbers came from Great Britain (105), Spain (Catalonia especially) (57), Germany (54), Switzerland (51), France (43), Finland (41), Belgium (37) and Austria (30). The localities cover Europe from Ireland to the Ukraine and from Malta to Finland, and range in altitude between -2.5 m and 2300 m.

546 Macrolepidoptera species (including some important subspecies) were able to be recorded by this method within five days, in spite of the collecting days being in the autumn. By comparison, 1.EMN in the middle of August 2004 recorded 850 species, 2.EMN at the beginning of July 2005 recorded 975 species, and 3.EMN at the end of April 2006 recorded 553 species). The result of the 4.EMN contains about 20% of the total number of known nocturnal moth species (Macrolepidoptera) of whole Europe. Of the 546 taxa (sp. and ssp.) 168 (30.8%) were reported for the first time since the beginning of EMN. The total number of taxa for the four EMN recorded and evaluated so far amounts to 1495 species (about 55% of the fauna of Europe concerned).

Attention is drawn to several species complexes whose specimens can not be determined from their appearance alone, thus not being identifiable unmistakably from "observations" or from a photograph. Species recorded from almost all localities and of almost all countries are listed, as are those recorded as very common in at least one locality (more than 100 specimens) or recorded as relatively common (30-99 specimens) were recorders have reported quantitative data.

We report in some more detail about *Pseudocoremia suavis* (BUTLER, 1879) which appears to have been introduced from New Zealand, and is a new species for Great Britain and Europe. This publication contains a subchapter which might be cited as a separate publication as well:

– JAMES, A. R.: The Puzzle of a Geometrid Recorded in Cornwall, GB, *Pseudocoremia suavis* (BUTLER, 1879) (Lepidoptera: Geometridae). – In "REZBANYAI-RESER, L., KÁDÁR, M. & SCHREIBER H. (transl.): 4th European Moth Nights, 11th – 15th October 2007, a scientific evaluation (Lepidoptera: Macrolepidoptera)".

Other comments concern the following 38 species or subspecies:
- HEPIALIDAE: *Triodia sylvina* (LINNAEUS 1761) (new for Portugal?),
- SPHINGIDAE: *Hyles sammuti* EITSCHBERGER, DANNER & SURHOLT, 1998,
- DREPANIDAE: *Watsonalla uncinula* (BORKHAUSEN, 1790) (new for Switzerland), *Cilix glaucata* (SCOPOLI, 1763) & *hispanica* DE-GREGORIO et al., 2002,
- GEOMETRIDAE: *Odontopera bidentata* (CLERCK, 1759), *Hylaea fasciaria* (LINNAEUS, 1758) & *fasciaria prasinaria* (DENIS & SCHIFFERMÜLLER, 1775), *Nebula salicata* (DENIS & SCHIFFERMÜLLER, 1775) & *ablutaria* (BOISDUVAL, 1840) together with ssp.*probaria* (HERRICH-SCHÄFFER, 1852), *Pennithera ulicata* (RAMBUR, 1834), *Thera variata* (DENIS & SCHIFFERMÜLLER, 1775) & *britannica* (TURNER, 1925), *Epirrita dilutata* (DENIS & SCHIFFERMÜLLER, 1775) & *christyi* (DENIS & SCHIFFERMÜLLER, 1775) & *autumnata* (BORKHAUSEN, 1794) together with ssp.*altivagata* HARTIG, 1938,
- NOCTUIDAE: *Amphipyra pyramidea* (LINNAEUS, 1758) & *berbera svenssoni* FLETCHER, 1968, *Hoplodrina octogenaria* (GOEZE, 1781), *Agrochola nitida* (DENIS & SCHIFFERMÜLLER, 1775) & *pistacinoides* (D'AUBUISSON, 1867), *Trigonophora flammea* (ESPER, 1785) (new for the Northern Alps and to the north of the central chain of the Alps altogether), *Aporophila lutulenta* (DENIS & SCHIFFERMÜLLER 1775) & *lueneburgensis* (FREYER, 1848), *Allophyes alfaroi* AGENJO, 1951, *Mythimna sicula* (TREITSCHKE, 1835) & *sicula scirpi* (DUPONCHEL, 1836), *Diarsia brunnea* (DENIS & SCHIFFERMÜLLER, 1775), *Orthosia gothica* (LINNAEUS, 1758), *Orthosia cerasi* (FABRICIUS,1775), *Noctua janthina* (DENIS & SCHIFFERMÜLLER, 1775) & *janthe* (BORKHAUSEN, 1792), *Xestia triangulum* (HUFNAGEL, 1766), *Xestia castanea neglecta* (HÜBNER, 1803),
- ARCTIIDAE: *Eilema caniola* (HÜBNER, 1808) & *caniola torstenii* MENTZER, 1980.

The authors are grateful to all of those who have participated so far, and we draw attention to a further five anticipated European Moth Nights **(5.EMN: 24.-28.7.2008 – 6.EMN: 21.-25.5.2009 – 7.EMN: 9.-13.9.2010 – 8.EMN: 25.-28.8.2011 – 9.EMN: 31.5.-4.6.2012)**. Please mark in your calendar now! The 5.EMN, 6.EMN and 7.EMN have taken place already.

The most important addresses for further information are to be found at the end. The list of participants, localities and species observed, are given in tables. The complete table of results of the 4.EMN (table 6) and a total list of all species reported for EMN so far and of all previous EMN-participants ("EMN-Checklists") are only available at the given internet-addresses in Excel format only.

INTRODUCTION

Following the events of the first three European Moth Nights (EMN) from 12.–16.8.2004, on 30.6.–4.7.2005, and 27.4.-1.5.2006 respectively, experts on nocturnal moths had been asked to take part for the fourth time in summer 2007, crossing all European borders. This international collaboration in research of Lepidoptera, organized in the name of the "Szalkay József Hungarian Lepidopterological Society" and the "Entomological Society of Luzern" (Switzerland) mainly by the two authors, and supported also by several national „ambassadors" (see further down), has been a success already in 2004 as well as in 2005 and 2006.

At this event, taking place once a year, all possible experts on moths (scientists, collectors, picture taking people) should – on the nights of a given period of 5 days, at any place in Europe chosen by them-selves – make observations of moths, summarize the data, and send them to a central data-base. For several important reasons however, already discussed in the evaluation of the 2.EMN, only Macrolepidoptera are considered. The aims that the EMN hopes to achieve, are: to promote the establishment of contacts and joint work of European researchers on moths, to present wide-ranging snapshots of the moths flying in a given period of time within Europe, to collect the locality data and findings obtained in a data bank to make them available to the general public and to further research respectively, and to draw attention to the needs of protection of moths once more.

Results of four EMN held so far, lists of the participants and of the recorded nocturnal moths as well as scientific analyses of them, are to be found on the internet at the following addresses:
http://lepidoptera.fw.hu or **http://euromothnights.uw.hu**

The original German version of the evaluation and the smaller summarizing tables of the 1.-3. EMN (tables 1-5) have also been published in the journal "Atalanta" (Germany) (the publication of the material of the 4.EMN and possible that of the following EMN, is likewise intended to be published there):

REZBANYAI-RESER, L. & KÁDÁR, M. (2005): 1. Europäische Nachtfalternächte ("1st European Moth Nights"), 13.-15.VIII.2004, eine wissenschaftliche Bilanz (Lepidoptera, Macrolepidoptera). – Atalanta, 36 (1/2): 311-358.

REZBANYAI-RESER, L. & KÁDÁR, M. (2007): 2. Europäische Nachtfalternächte ("2nd European Moth Nights"), 1.-3. 7. 2005, eine wissenschaftliche Bilanz (Lepidoptera, Macrolepidoptera). – Atalanta, 38 (1/2): 229-277 + 309.

REZBANYAI-RESER, L. & KÁDÁR, M. (2008): 3. Europäische Nachtfalternächte ("3rd European Moth Nights"), 27.IV.-1.V.2006, eine wissenschaftliche Auswertung (Lepidoptera, Macrolepidoptera). – Atalanta, 39 (1-4): 173-224 + 424-428.

The 4.EMN had been announced for a period from 11.-15.10.2007 to include and investigate the autumn fauna. Unfortunately, in some places the weather in Europe was much colder than expected, so because of this nocturnal moths numbers recorded were less than expected. In spite of this, it has still been possible to collect enough records in these areas to document the total numbers of species and more important sub-species (546) well. Several "brave" colleagues tried to set up a light somewhere in the field without success in those 5 days, but their lights attracted only a few or no moths at all. Those who reported that their hopeless attempt has been a total failure have still been recognized as EMN-participants this time again. This is meant as a due reward for their loyalty and efforts.

The deadline for handing in the records was 1.1.2008, but it was later postponed until 28.2. Between November 2007 and February 2008, the organizers received varying lengths of lists of species from many colleagues, but some lists were received still later. Some lists contained doubtful or missing information which had to be laboriously checked. This considerably delayed the evaluation of the results and also caused much additional unnecessary work.

FOR THAT REASON ALL FUTURE PARTICIPANTS ARE HEREWITH EXPRESSLY ASKED AGAIN, **TO KEEP TO THE DEADLINES IN QUESTION.**

The EMN is taking place only once a year. It shouldn't therefore be too much of a burden to handle the results with priority and to process them promptly to meet the deadline, to determine specimens which can only be identified at home, or photographed, in time to compile the data for transmission to EMN-Headquarters or to the EMN-Ambassadors well before the deadline.

Some e-mailed tables were received accurate and completely filled in, whilst many others arrived incomplete and so had to be, as far as possible, corrected and filled in subsequently. Several tables were received by regular mail, and had to be fed in by the organizers themselves. This was a lot of work, which could have been partially avoidable if participants had taken the effort to use and complete the designed EMN-basic table, distributed and also published via the internet. Nevertheless the organizers have not rejected any data received and are personally grateful to all colleagues who have participated to the best of their ability!

FOR THAT REASON ALL FUTURE PARTICIPANTS ARE HEREWITH EXPRESSLY ASKED AGAIN POSSIBLY **TO USE THE OFFICIAL EMN-BASIC TABLE IN QUESTION** AND TO FILL IN **ALL "OBLIGATORY" DATA WITHOUT BEING SPECIALLY REMINDED.**

The following data elements are extremely important for registration and evaluation of the results and therefore "obligatory" (please, all of them in separate columns!), though incomplete records will still be accepted and considered:
genus name – species name (please, Macrolepidoptera only!) – X=determined by investigation of genitalia – country – part of country – name of the village nearest by – name of exact place of collecting/observing (if possible) – position above sea level in meters (approximately at least, rounded to 10 to 100m) – method of collecting/observing (type of light bulb, brightness of light bulb, trap, bait, and so on) and duration in hours – number of recorded specimens (exactly in figures or approximately, using number of x-symbols, given in the EMN-basic table) – day – month – year – name of participant (surname first, followed by full Christian name!) (if several participants work together, then list one behind the other) – name of determiner (surname first, followed by all first names!) (if several experts together, then all, one behind the other).

In the end the lists, which had been prepared as well as possible, were put together into a summarized table. This table is published in totality at the two web sites cited below and is available for all lepidopterists to use for any further research or utilization, with the source of data indicated only (see "EMN-Copyright" in internet).

We have to emphasize here that all senders were personally responsible for the data they sent, including those of localities as well as species determination. The two authors and the national "ambassadors" solely limited themselves to ask for additional information in specific problematic cases. Any question that might occur should be addressed to the various contributors of the data; the authors will be pleased to mediate whenever necessary.

ACKNOWLEDGEMENTS

We acknowledge in the first place naturally the colleagues who took an active part in the 4.EMN, by collecting, photographing or observing and submitting data on localities (see table 1).

Further special thanks go to the EMN-ambassadors, who are listed in a separate chapter further on. Their engagement in the organization and collection of records in a first instance has supplemented the work of EMN-Headquarters and has made it considerably easier.

The following colleagues were active as translators of different material for the 4.EMN above all: Claudio FLAMIGNI (IT), Dick GROENENDIJK (NL), Krzysztof JONKO (PL), Eduardo MARABUTO (PT), HARALD SCHREIBER (DE), Antoine SIERRO (CH), Bjarne SKULE (DK), Pekka TOKOLA (FI), Dragan VAJGAND (RS = Republic of Serbia), Tibor Csaba VIZAUER (RU) and Petr HEŘMAN (CZ).

According to the reports received, the following 11 experts, who have otherwise not participated actively in the 4.EMN, have helped some participants to some extent, with determinations and so were indirectly participants in the event (see table 6: column "det."): Franck ARCHAUX (FR), Daniel BARTSCH (DE), Hermann BLÖCHLINGER (CH), John CHAINEY (GB), Axel HAUSMANN (DE), Harri JALAVA (FI), Ali KARHU (FI), Toni MAYR (AT) Rolf MÖRTTER (DE), Rossana PITONI (IT) and Axel STEINER (DE).

Among further colleagues who helped the two organizers in some way with different minor things, advice, ideas or with coordination work in their own country, the following above all shall be mentioned here with special thanks this time: Sandro CASALI (SM), Yves GONSETH (CH), Karl KISER (CH), Nicole LEPERTEL (FR), Tone LESAR (SI), Attila PÁL (HU), Colin J. PLANT (GR), Erwin SCHÄFFER (CH), Andrea SUZZI-VALLI (SM), Ludger WIROOKS (DE).

EMN-AMBASSADORS

We are still looking for partners to be responsible for EMN (**"EMN-Ambassadors"**) for some countries, or parts of a country, where this has not been achieved so far, to encourage their local colleagues and to organize the collection and checking of locality data as a first instance and to transfer them to EMN-Headquarters. Several colleagues have already agreed to take part as EMN-Ambassadors and some of them have already performed as such at the occasion of the 2.EMN and of the 3.EMN. At the time of the drawing up of this statement (December 2008) no EMN-ambassadors were available to us, or nobody had definitely promised to take part, from the following countries (cp. from southwest to east): Spain + Andorra + Gibraltar (with the exception of Catalonia and Central Spain), Italy, Croatia, Bosnia-Herzegovina, Montenegro, Albania, Greece, Cyprus, European Turkey, Latvia, Lithuania and Russia.

EMN-Ambassadors, already in office (December 2008) and their e-mail-addresses are given in a special table:
http://www.euromothnights.uw.hu/emn_ambassadore_2008.xls

Their names are listed here too with special thanks for their collaboration:

Jérome BARBUT (France), Stoyan BESHKOV (Bulgaria), Jordi DANTART (Spain: Catalonia), Ron ELLIOT (Great Britain: Wales), Dick GROENENDIJK (the Netherlands), PETR HEŘMAN (CZECH REPUBLIC - new), Norbert HIRNEISEN (Germany), Antony R. JAMES (Great Britain: Cornwall), Matjaž JEŽ (SLOVENIA – new instead of Stanislav GOMBOC) Krzysztof JONKO (Poland), Mihály KÁDÁR (Hungary), Gareth Edward KING (Central Spain – new), Igor KOSTJUK (Ukraine), Anatolij KULAK (Belorussia – new) Michael KURZ (Austria), Eduardo MARABUTO (Portugal), Marc MAYER (Luxembourg), Ladislaus REZBANYAI-RESER (Switzerland, Liechtenstein and Republic of San Marino), Paul SAMMUT (Malta), Bjarne SKULE (Denmark), Pekka TOKOLA (Finland, as well as Sweden and Norway, provisionally), Dragan VAJGAND (Republi of Serbia), Jaan VIIDALEPP (Estonia), Tibor Csaba VIZAUER, (Romania) and Wim VERAGHTERT (Belgium - new instead of Willy DE PRINS).

All kind of questions or problems, concerning EMN, may also be directed to the ambassadors, at any time, from the countries listed, besides to EMN-Headquarters.

THE PARTICIPANTS OF THE 4th EMN

A total of 549 persons took part in the event (table 1a-c), some of them completely on their own, others in pairs or threesomes, while in some cases several colleagues were present together on the same day. (As mentioned above, some amongst them tried to set up a light, but didn't record anything at all due to weather conditions.) With this the total number of participants of the 4.EMN is distinctly higher than at the three previous EMN events carried through and evaluated (154, 400 and 392 respectively).

With regard to the nationality of the participants, 29 countries are represented (map 1, table 1c) (the number of the 1st, 2nd and 3rd EMN 2004, 2005 and 2006 from the same countries in brackets):

AT = Austria 46 (3, 13, 13), BE = Belgium 34 (2, 3, 19), BG = Bulgaria 2 (3, 1, 2), CH = Switzerland 28 (9, 28, 19), CZ = Czech Republic 11 (0, 0, 4), DE = Germany 44 (23, 46, 30), DK = Denmark 23 (3, 0, 20), EE = Estonia 10 (5, 8, 4), ES = Spain 23 (11, 5, 32), FI = Finland 32 (4, 31, 39), FR = France 27 (8, 15, 14), GB = Great Britain 87 (11, 28, 49), HU = Hungary 31 (15, 30, 47), IE = Ireland 14 (0, 0, 0), IT = Italy 19 (11, 8, 6), LU = Luxembourg 1 (0, 0, 0), LV = Latvia 1 (0, 1, 1: Lithuania error!), MT = Malta 11 (12, 9, 19), NL = the Netherlands 12 (16, 139, 11), NO = Norway 3 (1, 1, 3), PL = Poland 12 (2, 8, 8), PT = Portugal 35 (2, 3, 23), RO = Romania 13 (10, 15, 16), RS = Republic of Serbia 2 (0, 0, 4), SE = Sweden 4 (2, 2, 5), SI = Slovenia 19 (0, 0, 0), SK = Slovakia 1 (1, 1, 3), SM = Republic of San Marino 2 (0, 3, 2), UA = Ukraine 2 (0, 2, 2).

It should specially be noted, that in the text of the evaluation of the 2nd and 3rd EMN (2005 and 2006) with respect to the participants, the country LT = Lithuania was mentioned by mistake where LV = Latvia was concerned. While the tables of the 2.EMN 2005 correctly read "LV = Latvia", the tables of the 3.EMN 2007 read "LT = Lithuania" by mistake too. – Unfortunately no lepidopterists from Lithuania have participated in EMN so far.

Three new countries have shown up among the participants of the 4.EMN: Ireland, Luxembourg and Slovenia, Ireland and Slovenia have started with quite considerable numbers of participants (14 and 19, respectively). – The number of participants in some countries were clearly higher than at the 3.EMN 2006: Austria (+33), Belgium (+15), France (+13), Great Britain (+38), Italy (+13), Portugal (+15), Switzerland (+9). Great Britain specially stands out with 87 participants this time. The high number of (46) with respect to Austria does not mean that so many Austrian Lepidopterists participated in the 4.EMN. This high number came about due to the circumstance that an Austrian school class of 24 pupils participated actively in an evening of light trapping in Hungary. – The number of participants in some countries decreased a bit more than expected, which is very unfortunate: Spain (-9), Finland (-7), Hungary (-16), Malta (-8).

The most participants came from Great Britain again (87), followed by the countries Austria (46 – see comment above), Germany (44), Portugal (35), Belgium (34), Finland (32), Hungary (31), Switzerland (28) and France (27).

No-one has yet participated in the 4.EMN from the following countries: Albania, Andorra, Bosnia-Herzegovina, Gibraltar, Greece, Iceland, Croatia, Liechtenstein, Lithuania, Macedonia, Moldavia, Monaco, Russia, European Turkey, Belo Russia and Cyprus. In some of these countries perhaps nobody is busy with nocturnal moths but surely not in all of them. We hope that this list can be a bit reduced in the course of EMN-events to follow.

It is of special significance to point out that 51 of the participants collected, or collected in addition, beyond the frontiers of their own countries in those days (see table 1a-b). So it should not be forgotten that it is possible to participate in this event in any country of Europe, even if somebody is abroad, on holiday, on some business trip or in transit on the given days.

Numerous "prominent" lepidopterists are among the participants again this year. We would like to emphasize the participation of Patrice LERAUT (author of the list of Lepidoptera of France, Corsica and Belgium) and his son Guillaume this time, and to welcome them with great pleasure.

PLACES OF INVESTIGATION OF 4TH EMN

The number of localities sampled totals 621 (table 2a-c). This is not identical with the number of participants, as in some places several persons were present together, others, in turn, collected using light in several localities during those five nights. The number of the countries recorded in this time (33) is also higher than that of the participant's home countries, since in Liechtenstein, Greece, Croatia and Macedonia only foreigners were active, and not native lepidopterists. The localities cover Europe, looked at horizontally, from Ireland to the Ukraine and from Malta to Finland and range in alti-

tude from –2,5 m (NL Zuid Holland, Pijnacker, Ackerdijkse Plassen) up to 2300 m above sea level (ES Catalonia, Berguedà, pas de la Roca Plana) (but unfortunately for some localities no altitude was reported this time again).

The breakdown of the 621 places of investigation by countries (33) is as follows (map 2, table 2b) (number of the 1st, 2nd and 3rd EMN 2004, 2005, 2006 from the same countries, in brackets):

AT = Austria 30 (3, 20, 15), BE = Belgium 37 (2, 4, 14), BG = Bulgaria 1 (4, 3, 3), CH = Switzerland 51 (11, 15, 25), CZ = Czech Republic 12 (0, 0, 6), DE = Germany 54 (17, 53, 33), DK = Denmark 16 (3,0, 17), EE = Estonia 12 (6, 9, 4), ES = Spain 57 (18, 14, 59), FI = Finland 41 (5, 17, 46), FR = France 43 (9, 24, 21), GB = Great Britain 105 (10, 13, 71), Greece 1 (0, 0, 3), HR = Croatia 6 (1, 1, 2), HU = Hungary 24 (19, 17, 34), IE = Ireland 23 (0, 0, 0), IT = Italy 19 (13, 7, 6), LI = Liechtenstein 2 (0, 0, 0), LU = Luxembourg 1 (0, 0, 0), LV = Latvia 1(0, 2, 2: Lithuania error!), MK = Macedonia 1 (0, 0, 1), MT = Malta 9 (9, 5, 15), NL = the Netherlands 8 (10, 139, 10), NO = Norway 4 (2, 2, 2), PL = Poland 14 (3, 10, 10), PT = Portugal 17 (2, 2, 7), RO = Romania 6 (9, 12, 12), RS = Republic of Serbia 2 (0, 0, 3), SE = Sweden 5 (1, 3, 6), SI = Slovenia 9 (0, 0, 0), SK = Slovakia 2 (1, 1, 2), SM = Republic of San Marino 4 (0, 3, 4), UA = Ukraine 4 (0, 4, 3).

It has to be especially mentioned here again, like in connection with the participants above, that in the text of the evaluation of the 2nd and 3rd EMN (2005 and 2006), with regard to localities, the country LT = Lithuania was mentioned by mistake while LV = Latvia was concerned. Whilst the tables of the 2.EMN 2005 correctly read "LV = Latvia", the tables of the 3.EMN 2007 read "LT = Lithuania" by mistake as well. – From Lithuania unfortunately no lepidopterists have participated in EMN so far.

Four new countries were represented amongst the localities sampled: Liechtenstein, Luxembourg, Ireland and Slovenia, and records were also received from Northern Ireland (GB), Sardinia (IT), and the Balearic Islands (ES) for the first time. – The number of localities in some countries are clearly higher than in the 3.EMN 2006: Austria (+15), Belgium (+24), Czech Republic (+7), Germany (+21), Estonia (+8), France (+22), Great Britain (+34), Italy (+13), Portugal (+10), Switzerland (+26). Of these Great Britain especially stands out with 105 localities altogether. – The number of localities decreased in two countries: Hungary (-10), and Malta (-6).

The highest number of localities again came from Great Britain (105), followed by the countries Spain (57, most of them from Catalonia!), Germany (54), Switzerland (51), France (43), Finland (41), Denmark (17), Belgium (38) and Austria (30).

In four countries (Macedonia, Greece, Liechtenstein, Croatia) only foreign lepidopterists have collected (see table 1a-b).

Finally, let us mention the countries and areas from which no data whatsoever have been received in 2007:
Albania, Andorra, Bosnia Herzegovina, Gibraltar (GB), Iceland, Corsica (FR), Latvia, Moldavia, Monaco, Russia, Turkey (European part), Belo Russia and Cyprus. – We hope that some of the gaps will be filled in the course of the next European Moth Nights (see below)! Rather distressingly, the list of non-participating countries includes, for the first time, Bosnia Hercegovina, Corsica, the Greek Isles and once more Russia.

PROBLEMS OF DETERMINATION AND THE METHOD OF COLLECTING

Several general remarks were pointed out in the evaluation of the 1.EMN 2004 concerning problems of determination and the methods of collecting. Naturally numerous species have again been reported this time which are hard to determine, and only identifiable by their genital organs. Often, senders made no mention about the determination of such species. For that reason correspondents are especially asked to indicate species identified on the basis of genital preparation in the submitted lists, using the separate column provided in the EMN basic table.

The following pairs or groups of species, reported at the 4.EMN (table 4), appear to be the most problematic at first sight:

DREPANIDAE: *Watsonalla binaria/uncinula, Cilix glaucata/hispanica*; GEOMETRIDAE: *Tephronia* spp., *Charissa* spp., *Dyscia* spp., *Chlorissa* spp., *Cyclophora* spp., *Scopula* spp., *Idaea* spp., *Scotopteryx luridata/mucronata, Nebula salicata/ablutaria/achromaria, Epirrita spp., Eupithecia* spp., NOCTUIDAE: *Dysgonia algira/torrida, Cryphia* spp., *Abrostola* spp., *Cucullia* spp., *Amphipyra pyramidea/berbera, Paradrina* spp.; NOLIDAE: *Nola* spp., *Nycteola* spp..

Here again, we would like to emphasize: If special, unusual, but not verifiable records (locality, date of recording) enter literature or a data base, it is really impossible ever to delete them from knowledge, which is thus permanently falsified. Examples of unusual species or dates (e.g. an autumn moth recorded in July) should always be kept (which however

makes it necessary unfortunately to recognize the "unusual"). If no examples of them can be presented, data should rarely be stored in a data base or should be indicated there with a question mark. Possible wrong data would otherwise be permanent, which unfortunately is frequently the case today. In case of species hard to determine, methods of "observing" and "photographing" are unfortunately totally unsuitable, though the accurate and exact research of such species would be important. For further thoughts on these topics see respective chapters of "evaluations" to the 1st and 2nd EMN.

DISCUSSION OF RESULTS

Systematics, taxonomy and nomenclature

We have based our list of species (systematics, taxonomy, nomenclature and numbering of species) again on the checklist of Europe by KARSHOLT and RAZOWSKI 1996 ("KARSHOLT, O. & RAZOWSKI, J. 1996: The Lepidoptera of Europe. A Distributional Checklist. – Apollo Books, DK-Stenstrup"). Although we and also other workers, don't agree with, nor are satisfied with, all details of this system, we do consider K & R to be the most practical one until a better comprehensive European list is published. However, it may never be possible to compile such a list of Lepidoptera for Europe, which is going to please everyone concerned with systematics, taxonomy and nomenclature.

However, in the list of species of the.EMN some divergence from K & R 1996 is to be found:
– Such names of species of any taxon, which were validated only after 1996, and which are known by the authors, are listed as synonyms, marked here however as "valide sp.-name" (=the present valid species name).
– Names of new genera, installed since the catalogue of KARSHOLT & RAZOWSKI 1996, or when a species was put into another genus since then, have not been taken into account, or mentioned at the EMN, since genus names are more or less subjective and are practically not to be taken for "valid", apart from certain exceptions for a single species.
– Species missing from the catalogue of KARSHOLT & RAZOWSKI 1996, have been integrated and characterized with tenths to the number (e.g.: 9929.1 *Aetheria weissi* DRAUDT, arranged after No 9929 sensu K & R 1996).
– An attempt was made to list separately the particularly important subspecies taxons which are not listed in K & R 1996. These have been characterized with hundredths to the number (e.g. nominal subspecies: 8048.00 *Scopula submutata submutata* TR., a further ssp. of the same species: 8048.01 *Scopula submutata nivellearia* OBTH.).

The "Macrolepidoptera" species reported

Although weather conditions were suboptimal in many places and the dates for the 4.EMN had been chosen for autumn, which is poorer in species, the 549 collaborators were able to record 546 "Macroheterocera" species altogether (some special subspecies included) from 621 localities (table 4, map 3) (1.EMN 2004: 850 spp., 2.EMN 2005: 985 spp., 3.EMN 2006: 553 spp.). In the course of only five calendar days in autumn, this amounts to not less than 20.0% of the about 2730 "nocturnal Macrolepidoptera" species given for the whole of Europe in the 1996 checklist of KARSHOLT & RAZOWSKI! The table of results this time contains 9.204 series of data (Excel-table lines) compared to 1.EMN 2004: 6.825, 2.EMN 2005: 16.079, and 3.EMN 2006: 6.971.

The total number of species recorded over the four EMN evaluated so far is 1495, made up from 1464 species (about 53.6% of the fauna of Europe concerned) and 29 further important subspecies. The number of species and subspecies occurring in all four years is 142 (9.5%) which is surprisingly quite high considering the different periods recorded (end of April, beginning of July, middle of August, and middle of October). Of the 1495 recorded species and subspecies, 122 (8.2%) have only been found at the 1.EMN, 221 (14.8%) only at the 2.EMN, 114 (7.6%) only at the 3.EMN and 168 (11.2%) only now at the 4.EMN. The big increase in the EMN total number of species is due to the circumstances that after two events in summer (2004 and 2005) the EMN had been arranged in spring 2006, and in autumn 2007. Presumably, a further clear increase in the number of species recorded can be expected from the 5.EMN (24.-28.7.2008).

– The species reported from the highest number of places (more than 40) at the 4.EMN were the following (in systematic order following K & R 1996):
LASIOCAMPIDAE: *Poecilocampa populi;* DREPANIDAE: *Cymatophorina diluta;* GEOMETRIDAE: *Colotois pennaria, Erannis defoliaria, Peribatodes rhomboidaria, Xanthorhoe fluctuata, Chloroclysta siterata, Chloroclysta truncata, Pennithera firmata, Thera obeliscata, Thera variata, Thera britannica, Epirrita dilutata, Epirrita autumnata, Operophtera brumata;* NOCTUIDAE: *Hypena proboscidalis, Rivula sericealis, Autographa gamma, Amphipyra pyramidea, Diloba caeruleocephala, Helicoverpa armigera, Paradrina clavipalpis, Phlogophora meticulosa, Xanthia togata, Xanthia aurago, Xanthia icteritia, Agrochola lychnidis, Agrochola circellaris, Agrochola lota, Agrochola*

macilenta, Agrochola helvola, Agrochola litura, Omphaloscelis lunosa, Eupsilia transversa, Conistra vaccinii, Aporophyla nigra, Allophyes oxyacanthae, Dichonia aprilina, Dryobotodes eremita, Ammoconia caecimacula, Trigonophora flammea, Eumichtis lichenea, Rhizedra lutosa, Mythimna albipuncta, Mythimna vitellina, Mythimna l-album, Mythimna unipuncta, Noctua pronuba, Noctua comes, Paradiarsia glareosa, Xestia c-nigrum, Xestia xanthographa, Agrotis puta, Agrotis ipsilon, Agrotis trux, Agrotis segetum; ARCTIIDAE: *Eilema caniola.*

– The species reported from most countries were the following (see also table 5):
Agrochola circellaris (25), *Colotois pennaria* (24), *Autographa gamma* and *Agrochola helvola* (23 each), *Chloroclysta siterata, Pennithera firmata, Phlogophora meticulosa, Agrochola macilenta* and *Conistra vaccinii* (22 each), *Agrochola lota, Noctua pronuba, Xestia c-nigrum* and *Agrotis ipsilon* (21 each), *Eupsilia transversa* and *Agrotis segetum* (20 each). Most of all noctuids are concerned, typical autumn noctuids namely (6) and migrating species (4) as well as three autumn geometrids.

– The following 12 species (2.2%) are reported very common (100 or more specimens) from at least one single locality (in systematic sequence):
LASIOCAMPIDAE: *Poecilocampa populi;* GEOMETRIDAE: *Thera obeliscata, Operophtera brumata, Operophtera fagata, Eupithecia ericeata;* NOCTUIDAE: *Schrankia costaestrigalis, Helicoverpa armigera, Agrochola lychnidis, Agrochola circellaris, Conistra vaccinii, Mythimna unipuncta;* ARCTIIDAE: *Eilema caniola.* These are either species present in autumn only or those which have in autumn their second or eventually even third generation (the migrating species *H.armigera* and *M.unipuncta*).

– The following 41 species (7.5%) are reported fairly common (30 to 99 specimens) from at least one single locality (in systematic sequence):
DREPANIDAE: *Cymatophorina diluta*; GEOMETRIDAE: *Petrophora convergata, Agriopis aurantiaria, Erannis defoliaria, Peribatodes rhomboidaria, Scopula marginepunctata, Scopula minorata, Chloroclysta citrata, Chloroclysta truncata, Thera variata, Thera britannica, Epirrita dilutata, Epirrita christyi, Epirrita autumnata, Chesias legatella;* NOCTUIDAE: *Asteroscopus sphinx, Diloba caeruleocephala, Platyperigea germainii, Hoplodrina ambigua, Xanthia ocellaris, Agrochola macilenta, Omphaloscelis lunosa, Conistra rubiginea, Conistra erythrocephala, Leucochlaena oditis, Aporophyla nigra, Meganephria bimaculosa, Dryobotodes eremita, Ammopolia witzenmanni, Trigonophora flammea, Polymixis xanthomista, Mythimna albipuncta, Mythimna l-album, Noctua pronuba, Noctua comes, Noctua fimbriata, Xestia c-nigrum, Xestia xanthographa;* ARCTIIDAE: *Lithosia quadra, Eilema caniola torstenii, Cymbalophora pudica*.

– The highest total numbers of species are to be found in the following countries (table 3, map. 3):
Spain (271), Italy (188), Portugal (163), France (156), Switzerland (147), Great Britain (131), Germany (92), Austria (87), Croatia (83), Hungary (82) and Slovenia (75)

Faunal novelties

One target of our event is to find any novelties or other peculiarities in the fauna of Europe, of single countries or even greater parts of countries. Not all kind of minor details, but "true" peculiarities really are the salt in the soup! To achieve this, we need more engagement and pleasure to communicate with our colleagues in lepidopterology, who know their own area much better than we do. Please, don't forget: The participants should complement their record lists with short comments, if necessary. The "EMN-ambassadors" should also be particularly watchful and active in this respect.

K & R Nr.63 *Triodia sylvina* (LINNAEUS 1761) (Hepialidae)

New for the fauna of Portugal (?). – This widespread species was recorded by MARABUTO and CARDOSO on a day of the 4.EMN (12.10.2007) in Portugal supposedly for the first time (CORLEY et al., 2008). But it is noted here that the marked area on the distribution map of this species in DE FREINA & WITT 1990 intrudes into East Portugal as well, though the occurrence in Portugal is not explicitly mentioned in the text of the book (a. o. only that much: "throughout Central Europe up to South Spain"). It may very well be that the occurrence of the species in East Portugal has only been anticipated by these authors at that time.

Literature: **1)** CORLEY, M.F.V., MARABUTO, E., MARAVALHAS, E., PIRES, P. & CARDOSO, J.P. (2008): New and interesting Portuguese Lepidoptera records from 2007 (Insecta: Lepidoptera). – SHILAP Revista. Lepid., 36 (143): 283-300. – **2)** DE FREINA, J.J. & WITT, TH.J. (1990): Die Bombyces und Sphinges der Westpalaearktis, Band 2 – Verl. Forschung und Wissenschaft, München, pp.140 + 10 Taf..

Nr.7504 *Watsonalla uncinula* (BORKHAUSEN, 1790) (Drepanidae)

New for the fauna of Switzerland (REZBANYAI-RESER 2007). – Widespread in southern Europe, but rarely seen, even in the valleys of the South Alps. The species could be found nowhere in South Switzerland, even though searched for in several places potentially suitable for the species, in spite of thorough collecting. One male arrived at light on

14.10.2007 in South Ticino, by Chiasso-Pedrinate near the Italian border. Another specimen has been found in the same locality on 2.10.2008, which can be taken as obvious proof for the occurrence in South Switzerland.

Literature: REZBANYAI-RESER, L. (2007): *Watsonalla uncinula* (BORKHAUSEN, 1790) neu für die Fauna der Schweiz und einige weitere besonders bemerkenswerte Fänge in den Jahren 2006-2007 (Lepidoptera: Drepanidae, Geometridae, Noctuidae). – Entomologische Berichte Luzern, 58: 159-164.

Nr.7665.1 *Psuedocoremia suavis* (BUTLER, 1879) (Geometridae)

New for Europe and for Great Britain. – A species obviously introduced from New Zealand, which had been recorded in Cornwall several times in 2007. No further records however became known in 2008 so far. – In more detail see below.

Nr.9716 *Trigonophora flammea* (ESPER, 1785) (Noctuidae)

New to the North of the Alps, that means to the north of the central chain of the Alps at all. – This autumn noctuid, widely distributed in southern Europe, has surmounted the Alps for the first time, to our knowledge. Several specimens arrived at light in a valley of the North Alps in Central Switzerland in three localities, close together (CH Kanton Uri, Isleten, 12.10.2007).

Literature: REZBANYAI-RESER, L. (2007): *Watsonalla uncinula* (BORKHAUSEN, 1790) neu für die Fauna der Schweiz und einige weitere besonders bemerkenswerte Fänge in den Jahren 2006-2007 (Lepidoptera: Drepanidae, Geometridae, Noctuidae). – Entomologische Berichte Luzern, 58: 159-164.

There is a further considerable number of species again, new from the Republic of San Marino, which have not been investigated much so far, or which were reported from some parts of other countries for the first time.

Taxonomic remarks and further important comments

(with a separate publication of another author)

A) First in detail here about an important topic, about *Pseudocoremia suavis* (Geometridae):

A1) Nr.7665.1 *Pseudocoremia suavis* (BUTLER, 1879) (Geometridae) (Fig. 1-3)

Systematic remark: This species from New Zealand has provisionally been ranked with no 7665.1 after *Angerona prunaria* L. (Ennominae) in the list of KARSHOLT & RAZOWSKI 1996 after consultations with Axel HAUSMANN (DE-München).

The Puzzle of a Geometrid Recorded in Cornwall, GB, *Pseudocoremia suavis* (BUTLER, 1879) (Lepidoptera: Geometridae).

Author: Antony R. JAMES
County Recorder, Cornwall Moth Group
"Manzil", Trewithen Terrace, Greatwork, Ashton, Helston, Cornwall, TR13 9TQ UK
E-mail: records@cornwallmothgroup.org.uk

(Original text by the author)

European Moth Weekend was the culmination of a problem that I, and a number of other entomologists, have been puzzled about through 2007. A species of Moth I have been finding occasionally through the year appeared again in my trap on the 12th October, making it the fourth specimen recorded so far.

The UK has a long history of amateur and professional interest in Entomology, and the range of Lepidoptera present here is well catalogued, with good reference books covering identification, so it is unusual not to be able to identify a species quite quickly. Cornwall is also a very good location for unusual or rare species for the UK, and much of the local recorders' interests here are focussed on what species come into the county from Mainland Europe as immigrants annually, so we are quite used to knowing what might be around at various times of the year.

The puzzle began when a moth appeared in April 2007 on the outside of my overnight moth trap. It was a dark brown Geometrid, which at a glance I thought was either *Chloroclysta truncata*, or a slightly large *Thera britannica*, both species being common here. As a routine procedure, I decided to take a photograph of it, and this was where my problems started. The insect was certainly not either of the species I had thought, and searching through my reference books proved unsuccessful for me to gain its identification. In our Moth Group we have a number of members considered very experienced "experts", so the picture was circulated to them with a request for help, but again no identification could be

made. The next stage, inevitably, was to consider it as a possible immigrant, so I decided to enlist help from my European Moth Weekend friends, and contacted Ladislaus RESER, to see if he could find anyone who could help identify it.

Fig.1: *Pseudocoremia suavis* (BUTLER, 1879) (Geometridae), males, GB-Cornwall, 2007.

Fig.2: *Pseudocoremia suavis* (BUTLER, 1879) (Geometridae), females, GB-Cornwall, 2007.

To my surprise, the species could not be placed as "European", but Axel HAUSMAN (of the Zoological State Collection, Munich) suggested that it might be a tropical African Ennominae species. It was similar to species he had seen from there, but also added that this group is not known to be migrants. An additional consideration was that I always record weather conditions when trapping, and looking back over the previous month's records, the wind direction was predominantly North, veering from East to West through the period. This would suggest that the moth, if an unintentional migrant, would source from that direction rather than tropical areas, and, considering the cryptic colouration, I felt that it was more likely to be a Northern Palearctic species, perhaps from the Scandinavian region. There are also very occasional reports in the UK of Nearctic species being brought across the Atlantic by strong winds, so I began exploring the possibility of the insect coming from Canada, but, although there were some good reference lists of Ennominae species around, nothing conclusive could be found.

Three months later, in early July 2007, whilst again recording the catch in my garden trap, I discovered another insect which created yet another puzzle. A light grey Geometrid was in the trap which initially looked like a variety of the common *Hydriomena furcata* species, but with close inspection and checking I could not match the wing patterns to the many varieties of that species. We have two other *Hydriomena* species in the UK, *H. impluviata* and *H. ruberata*, but these did not match either. It was then that the wing patterns observed triggered a memory, so I compared it to the first unidentified specimen from April, now in my reference collection. Although obscure, the patterns were present, so this was a second very differently coloured specimen, and the fact that the antennae were thread-like this time suggested that this was a female. Two other specimens came in subsequently, including the European Moth Weekend specimen. I must admit, as it was still unidentified, I was unsure whether to include it in the EMN results, but as Ladislaus RESER already knew of this species, I did include it with a referring note.

Shortly after this event, I was again in communication with one of our local moth experts, Mark TUNMORE, who is also editor of the "Atropos" entomological publication, and he suggested that I contact Martin HONEY in the Natural History Museum, London. I sent the information and pictures to him, and a few months later I had a return from one of his colleagues, John CHAINEY, Curator of World Ennominae, who finally came up with the identification. My "puzzle" was certainly out of place. *Pseudocoremia suavis* is a common Ennominae in New Zealand, but has never before been recorded outside of its home location before. The only likely way it could get to the UK then is via importation of speci-

mens on plants, possibly through plant importers. As we live in a fairly isolated moorland / farmland location in Cornwall, options are rather limited, but we do have a small plant nursery behind us which, I feel, is the most likely source somehow. They do not, however, import plants, but may have obtained hedging plants from a supplier elsewhere in the UK who does. We have tried trapping there a number of times with the owners' permission, but have no supporting results yet. In 2008 we will be closely monitoring for this species, as results so far indicate the possibility of an establishing population.

According to the article BERNDT et al. 2004 the species has a flight season mid-November to mid-March in its own environment, with most instars being present throughout the period indicating no clearly synchronized generations. Endemically, their foodplants are known to be a wide range of trees and shrubs, including *Notofagus* sps. (Southern Beeches), *Podocarpus* sps. (Yew trees) and *Kunzea ericoides* (Kanuka), but was not known as a significant pest of native species. However, a number of local outbreaks of serious defoliation have been recorded at some introduced exotic plantation forests, particularly of *Pinus radiata* (Douglas Pine) and *Pseudotsuga menziesii* (North Island Douglas-fir) in the 1950's, 1960's and 1970's, particularly in dry seasons. As well as the above mentioned foodplants, this species was also found on introduced *Ulex europeaus* (GORSE), (which is very common in Cornwall).

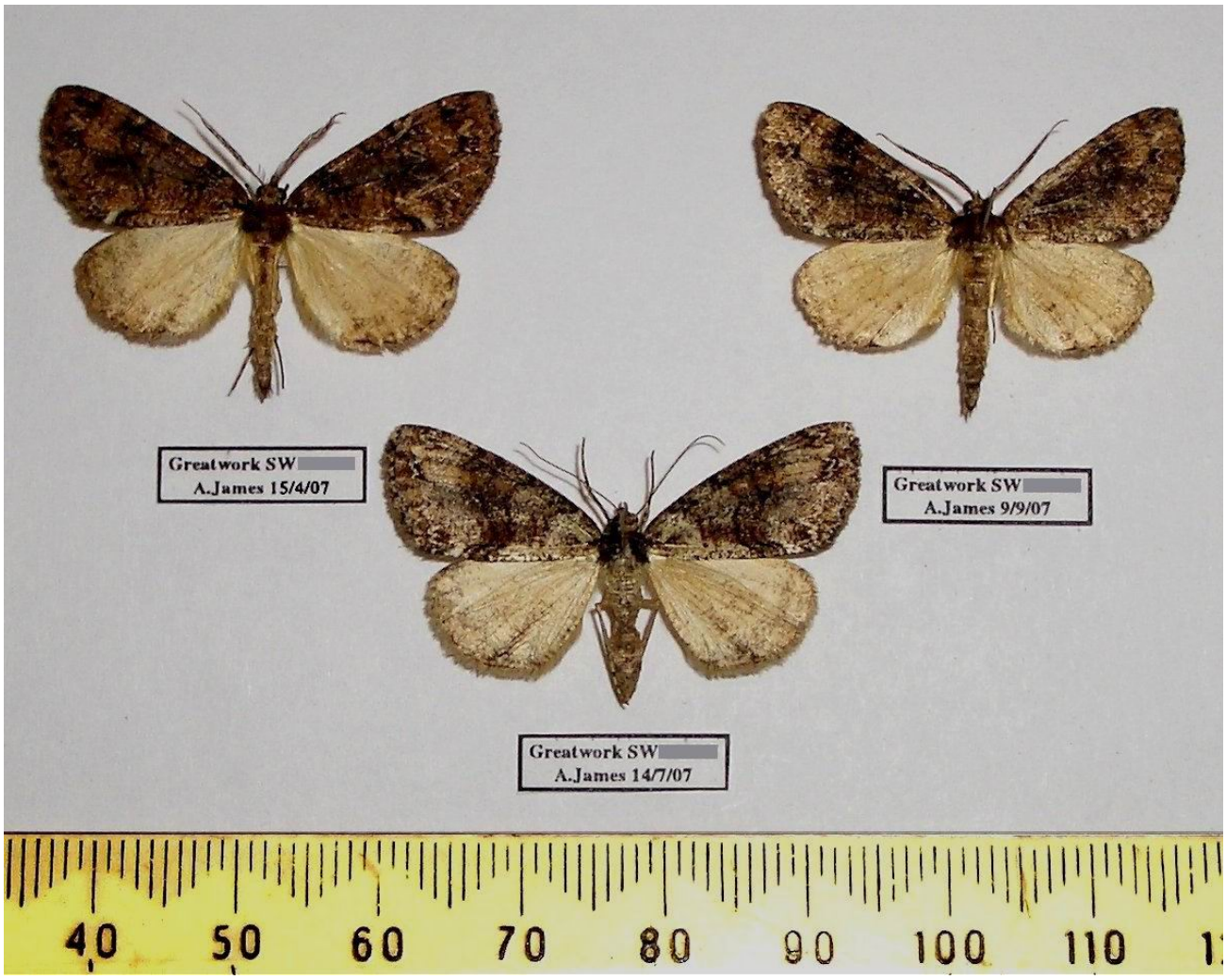


Fig.3: *Pseudocoremia suavis* (BUTLER, 1879) (Geometridae), the first three mounted specimens from GB-Cornwall, 2007.

One other thought, however. I wonder how often this species has already been seen before, but just counted as variation of the local common species. It is quite easy to do, if viewed casually and quickly, so all I can suggest is that recorders take just that little bit longer to look at any "common" species in their traps, just in case!

I must thank everyone who helped in finally getting a determination of this species, and hope that this report will stimulate closer checking of common species records. Who knows what else is flying around in our areas yet to be discovered?

Additional comments (December 2008): A fifths specimen has later been identified in the results of light-trapping from October 1st 2007, though it looked quite different again from those recorded before. No further records of this species from Cornwall from the year 2008 however were received so far.

Literature: **1)** BERNDT, L., BROCKERHOFF, G. E., JACTEL, H., WEIS, T. & BEATON, J. (2004): Biology and rearing of *Pseudocoremia suavis*, an endemic looper (Lepidoptera: Geometridae) with a history of outbreaks on exotic conifers. – New Zeeland Entomologist, 27: 73-82 (http://www.ento.org.nz/nzentomologist/free_issues/NZEnto27_1_2004/Volume%2027-73-82.pdf) – **2)** JAMES, T. (2007): Common forest looper *Pseudocoremia suavis* (BUTLER): a new species to Britain. – Atropos, 33: 13-16.

B) Further short comments to single species (in systematic sequence after K & R 1996):

B 1) Nr.6853.1 *Hyles sammuti* EITSCHBERGER, DANNER & SURHOLT, 1998 (Sphingidae) (Fig. 4-6)

Since this species was only described in 1998 (in DANNER, EITSCHBERGER & SURHOLT 1998), it is naturally still missing in the checklist of K & R 1996. We have arranged it now with the no. 6853.1 after *Hyles euphorbiae* (Linnaeus, 1758). Attention: The species bears the name of our EMN-Ambassador for Malta, Paul SAMMUT.

Fig.4a-b: *Hyles sammuti* EITSCHBERGER, DANNER & SURHOLT, 1998 (Sphingidae), Malta, male, Holotype and the labels, belonging to it.

Fig.5: *Hyles sammuti* EITSCHBERGER, DANNER & SURHOLT, 1998 (Sphingidae), Malta, female.

Fig.6: *Hyles sammuti* EITSCHBERGER, DANNER & SURHOLT, 1998 (Sphingidae), Malta, female, underside.

H. sammuti could possibly be another *Hyles*-species, *tithymali* (BOISDUVAL, 1834), according to a new opinion, not occurring in the area of Europe, up to our knowledge (see at present e.g. PITTAWAY in "Internet"-Homepage http://tpittaway.tripod.com/sphinx/list.htm). Ulf EITSCHBERGER (in litt.) sees *sammuti* as a "bona fide species" all the time, more closely related to *euphorbiae* actually than to *tithymali*. – Yet another comment about the author names of *H.sammuti*: Though the species has been described in a publication of „DANNER, EITSCHBERGER & SURHOLT", the sequence of author names has officially been fixed there as "EITSCHBERGER, DANNER & SURHOLT". – Cordial thanks to Ulf EITSCHBERGER (DE-Marktleuthen) for letting us have the four photographs in this publication.

Literature selected: DANNER, F., EITSCHBERGER, U., & SURHOLT, B. (1998): Die Schwärmer der westlichen Palaearktis. Bausteine einer Revision. - Herbipoliana (Marktleuthen), 4 (1): 368 pp.

B 2) Nr.7512-7512.1 *Cilix glaucata* (SCOPOLI, 1763) & *hispanica* DE-GREGORIO et al., 2002 (Thyatiridae)

We have already reported in the evaluation of the 2.EMN about the Drepanidae-species *Cilix hispanica*, discovered only a few years ago, which very much resembles *Cilix glaucata* in appearance, and also included the most important relevant literature references. Both species were recorded again in the course of the 4. EMN, but *hispanica* in Portugal and *glaucata* in the Republic of Serbia only.

Literature selected: ZAHM, N. (2007): Der aktuelle Stand unseres Wissens über *Cilix hispanica* DE-GREGORIO, TORRUELLA, MIRET, CASAS & FIGUERAS, 2002 mit einem Hinweis auf *Cilix asiatica* (BANG-HAAS, 1907) (Lepidoptera: Drepanidae). – In "REZBANYAI-RESER, L. & KÁDÁR, M. (2007): 2. Europäische Nachtfalternächte ("2nd European Moth Nights"), 1.-3. 7. 2005, eine wissenschaftliche Bilanz (Lepidoptera, Macrolepidoptera). – Atalanta, 38 (1/2): 229-277 + 309.", as well in Internet: http://euromothnights.uw.hu.

B 3) Nr.7647 *Odontopera bidentata* (CLERCK, 1759) (Geometridae)

- GB Wales, Maesteg, 11.10.2007, P. PARSONS
The October-record from Great Britain of a specimen of this species, normally flying in early summer, is very interesting. The utmost accurateness of determination has specially been confirmed on our inquiry but proof seems obviously not to exist. There are instances of this species occurring as occasional 2nd generation in Cornwall in September and October.

B 4) Nr.7839.00-7839.01 *Hylaea fasciaria* (LINNAEUS, 1758) & *prasinaria* (DENIS & SCHIFF., 1775) (Geometridae)

It has repeatedly been discussed in the evaluation of results of the 3.EMN that the green *prasinaria* may not just be looked at as an individual form of the flesh-coloured *fasciaria* but as its subspecies, since both of them partially have their own area of distribution. However, where they met due to their postglacial extension in area, far ranging hybrid populations do exist today, in which both taxa, together with different transit forms, seem to appear as infra-specific forms indeed. – In the course of the 4.EMN *fasciaria fasciaria* has been reported from the countries Germany, Finland and France, and *fasciaria prasinaria* from the countries Germany and France.

Literature selected: REZBANYAI-RESER, L. (2007): Stellungnahme zum taxonomischen Status von *Hylaea fasciaria* (LINNAEUS, 1758) und *prasinaria* (DENIS & SCHIFFERMÜLLER, 1775) (Lepidoptera: Geometridae). – Atalanta, 38 (1/2): 243-246 + 309. – In: REZBANYAI-RESER, L. & KÁDÁR, M. (2007): 2. Europäische Nachtfalternächte ("2nd European Moth Nights"), 1.-3. 7. 2005, eine wissenschaftliche Bilanz (Lepidoptera, Macrolepidoptera). – Atalanta, 38 (1/2): 229-277 + 309.", as well in Internet: http://euromothnights.uw.hu.

B 5) Nr.8321-8321.1 *Nebula salicata* (DENIS & SCHIFFERMÜLLER, 1775) & *ablutaria* (BOISDUVAL, 1840) (Geom.)

It has been reported in detail in the evaluation of results of the 3.EMN (2006) a. o. about the fact, that *salicata* and *ablutaria* are most likely two "bona fide species" and that the light grey *probaria* (HERRICH-SCHÄFFER, 1852) must be a ssp. of *ablutaria*. – In the course of the 4.EMN too, these three taxa could be recorded (*salicata* in Switzerland and in Germany, *ablutaria* in Italy, *probaria* in South Switzerland and in Croatia). However, the 2nd generations are concerned this time.

Literature selected: REZBANYAI-RESER, L. (2008): Zur Problematik des Taxonpaars *Nebula salicata* (DENIS & SCHIFFERMÜLLER, 1775) und *Nebula ablutaria* (BOISDUVAL, 1840) bona sp. (Lepidoptera: Geometridae). – In „REZBANYAI-RESER, L. & KÁDÁR, M. (2008): 3. Europäische Nachtfalternächte ("3rd European Moth Nights"), 13.-15.VIII.2004, eine wissenschaftliche Auswertung (Lepidoptera, Macrolepidoptera). – Atalanta, 39 (1-4): 173-224 + 424-428 (Taf.), as well in Internet: http://euromothnights.uw.hu.

B 6) Nr.8354.1 *Pennithera ulicata* (RAMBUR, 1834) (Geometridae) (Fig.7)

This taxon is not mentioned in the checklist of K & R 1996 since it had been treated as ssp. of *Pennithera firmata* (HÜBNER, 1822) before. But some investigations point to the fact (MAZEL, 1998) that two separate species are concerned. – *Ulicata* has only been reported from Spain (Catalonia) in the 4.EMN.

Fig.7: *Pennithera firmata* (HÜBNER, 1822) and *ulicata* (RAMBUR, 1834) (Geometridae), male, CH-Gersau and ES-Rosas.

Literature selected: MAZEL, R. (1998): *Thera firmata tavoilloti* ssp. nova and *Thera ulicata* (RAMBUR, 1834) bona species (Lepidoptera, Geometridae). - Linneana Belgica, 16 (6): 253-258.

B 7) Nr.8357-8358 *Thera variata* (DENIS & SCHIFFERMÜLLER, 1775) & *britannica* (TURNER, 1925) (Geometridae)

Both species have been recorded from several countries, but the number of wrong determinations is difficult to estimate in this case. – The males of *variata* and *britannica* must absolutely be determined according to the shape of the middle antennae segments. These are rectangular and uniformly hairy in *variata*, whilst being trapezoid-shaped in *britannica* resulting in significant gaps in the hair in the notches, which make the antennae look tooth-like (Fig.8). This is easily visible even with a simple magnifying glass. Other methods of determining these species are uncertain, although it might be possible to decide whether *variata* or *britannica* is concerned in some individuals on appearance only.

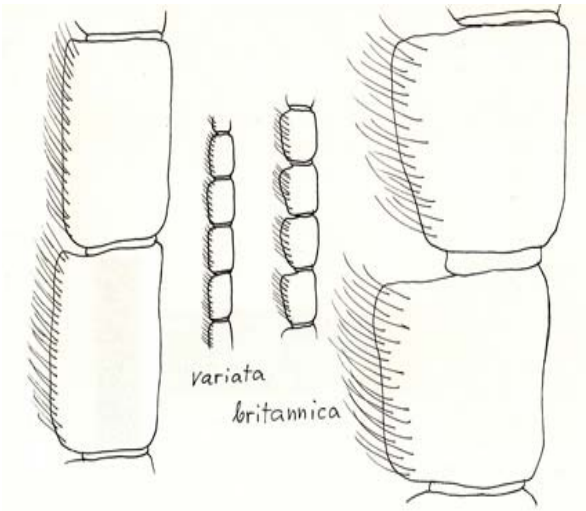


Fig.8: *Thera variata* (DENIS & SCHIFFERMÜLLER, 1775) (left) and *britannica* (TURNER, 1925) (right) (Geometridae), middle segments of male antennae in lateral look (after REZBANYAI-RESER).

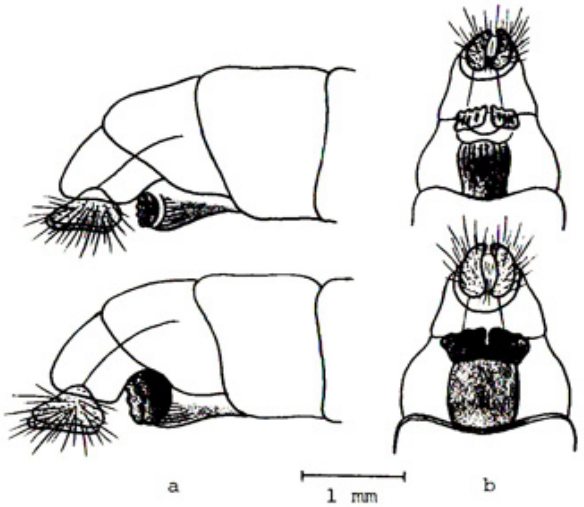


Fig.9: *Thera variata* (DENIS & SCHIFFERMÜLLER, 1775) (above) and *britannica* (TURNER, 1925) (below) (Geometridae), end of abdomen of female with ante-vaginal plate lateral (a) and seen from below (b) (after REZBANYAI-RESER).

The accurate determination of females is certainly more difficult. Their antennae show no usable characters of differentiation. The appearance of some individuals is likewise somewhat typical of the species which however allows a rough determination only. There are small differences in the genitalia around the ante-vaginal plates, which should be made visible externally by brushing off some of the hairs at the lower end of the abdomen (in *variata* the genitalia are rather light brown and less strongly sclerotized, and in *britannica* mostly darker brown and strongly sclerotized) (Fig.9).

B 8) Nr.8442-8444 *Epirrita* spp. (Geometridae) (Fig.10-11)

We find numerous shorter to longer reports in scientific literature about the three European *Epirrita*-species *dilutata* (DENIS & SCHIFFERMÜLLER, 1775) (syn. *nebulata* THUNBERG, 1784), further *christyi* (ALLEN, 1906) and *autumnata* (BORKHAUSEN, 1794) together with ssp. *altivagata* HARTIG, 1938 (Alps). For that reason this review is presented here without the usual list of literature references.

Investigation of such widespread species is generally very difficult since they cannot be characterized completely because of geographic variability in appearance, in their phenology, or even by their biology and eventually in their biochemical characters also (enzymes? pheromones?). The following important characters can be summarized in general:

- Imago appearance (Fig.10): The imagines of the three species, especially those of *dilutata* and *christyi*, resemble each other so much in appearance and are also variable as well, that a firm determination, based on external features alone, is often impossible. “Obvious” characters of differentiation, based on external features, sometimes published in scientific literature, are likewise not always helpful. Specimens of *autumnata* are still the most frequently recognized externally, even though some occasionally, do not look typical at all. Likewise, among the imagos of *dilutata* and *christyi* are some specimens typical for the species, but, on the one hand morphologic overlapping, caused by variability is much too intense, whilst on the other hand some *dilutata* may look like typical *chtistyi* and vice versa.
- Males: The males of the three species have firm characters of differentiation on the thorns of their 8th sternite (last segment of abdomen, immediately before the genitalia – see fig.11). They are relatively easy to investigate. One only has to take off a bit of the hairs from the end of the abdomen (it is not at all necessary completely), no matter whether the dead specimens are still soft or already dry, namely with movements of a brush from in front to behind in order not to let the thorns at the rear of the sternite break off. This may be done using a stereoscope but brushing off is possible too without a magnifying glass. Those with very good eyes recognize the thorns even without magnifying, but they are best to observe with a stereoscope or a simple magnifying glass. These thorns are even clearly recognizable with a magnifying glass in live specimens. – *E.autumnata*: Both thorns are present either as tiny protrusions only or in form of a very short spine, which are relatively distant from each other. – *E.christyi*: Distinctly

longer thorns present. The distance between them is smaller than the length of the thorns. Two types seem to exist, either with thorns somewhat longer, stronger and straight or with shorter thorns, still closer to each other and slightly forceps-like bend. It should perhaps even be investigated, whether these two types might be two different species. – *E.dilutata*: Thorns very strong, straight and long, more distant from each other (distance at least similar or rather larger usually than length of spine). – However, some experience usually is necessary for a determination based on these characters and one can discover specimens also, in some rare cases, in which the spines might be assignable to some transition form (species hybrids?).

Fig.10: *Epirrita*-male (Geometridae) from Switzerland (all genitalia determined). Right, three *dilutata* (DENIS & SCHIFFERMÜLLER, 1775) (1 Ticino, 2 Luzern), in the middle, three *christyi* (ALLEN, 1906) (Luzern), left above, two *autumnata* (BORKHAUSEN, 1794) (Jura) and left below, one ssp.*altivagata* HARTIG, 1938 (The Grisons).

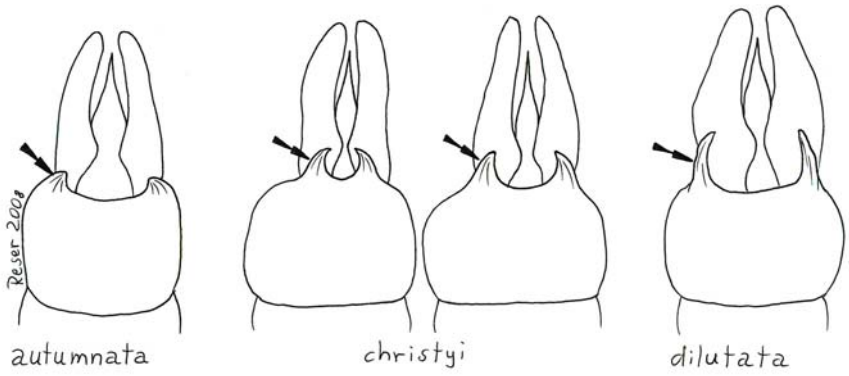


Fig.11: Thorns on the 8th sternite (last abdominal segment below) of the three *Epirrita*-species *autumnata*, *christyi* and *dilutata* (after REZBANYAI-RESER).

- Females: The accurate differentiation of the females of the three species is not even possible based on the genitalia, up to our present knowledge. *Autumnata* most likely again, can be recognized at the earliest from external features with few exceptions. There are examples likewise in *dilutata* and *christyi*, typical to the species but some also, which can make the determiner feel uneasy. An accurate determination based on the genitalia of males, collected at the same time, is helpful here as a rule, since both species do not often occur side by side.

- Phenology in Central Europe: It is possible to ascertain the flight or main flight period of a species more or less accurately in a given place, though certain fluctuations, due to climate, may even occur in the same locality from year to year. However, it is mostly impossible to quote the phenological data of a species for larger areas, like, for instance, a whole country or even Europe in total. It is about possible to state when the flight period of *autumnata* begins at the earliest (August-September), followed by *christyi* (September-October) and *dilutata* (October-November) at the end, and there are areas, where *dilutata* only occurs at the end of November. These differences particularly refer to the main flight periods, while single specimens may occur at unusual times in all three species.
- Ecology in Central Europe: Moist to mesophytic deciduous forests and brushwood landscapes at the colline and lower montane level are the favoured habitats of the nominate form *autumnata*. The ssp.*altivagata* occurs predominantly in montane-subalpine mixed forests and brushwood landscapes; *E.dilutata* occurs in rather warmer xero- to mesophitic deciduous and mixed forests of the colline and sub-montane level; and *E.christyi* occurs also in warmer, xerophitic deciduous forests but predominately in cooler meso- to hygrophytic deciduous and mixed forests (red-beech forests predominately) of colline and montane level. Very sporadic only in sub-alpine brushwood landscapes.
- Conditions of sympatry in Central Europe: There are few habitats only, where all three species occur sympatric (beside each other), though they scarcely fly there at the same time, and of which one is very rare at least. More often *dilutata* and *christyi* or *autumnata* occur sympatric together, yet there are often some differences in flight periods in these cases too, especially with regard to main flight periods (as already mentioned above) and little overlap. Thus *autumnata* flies a bit earlier than *christy* and when they meet together as imagines, *autumnata* usually looks visibly worn and *christyi* still fresh. *Dilutata*, compared with *christyi* flies a bit later, thus, besides worn c*hristyi*, nice fresh *dilutata* can occur at the light at certain times. However, many such habitats obviously exist also, where *autumnata* only, respectively *autumnata altivagata*, *christyi* only or *dilutata* only occurs.
- Warning: It is very likely altogether that faunistic scientific literature and data banks are full of wrong records of these three species since they are, respectively were, determined by many lepidopterists on appearance only. Collected or observed *christyi*-specimens namely were simply taken for *dilutata*, because of which this species name is more frequently shown in faunistic surveys than that of the widespread and often very common *christyi*. This is evidently the case in the 4.EMN too, since few recorders only made use of genitalia investigation. Correct research of distribution, phenology, abundance and ecology of the three *Epirrita*-species, especially that of *dilutata* and *christyi*, is made difficult or almost impossible because of this circumstance.
- Recommendation: It is strongly recommended therefore to determine *Epirrita*-males from the thorns of the 8th sternite and to then adjust determining of the females, after thorough consideration, to that of the males, flying at the same time, especially in areas, where not only *autumnata* (or *autumnata altivagata*) also occurs, or is to be expected.

B 9) Nr.9307-9308 *Amphipyra pyramidea* (LINNAEUS, 1758) & *berbera* RUNGS, 1949 (Noctuidae) (Abb. 12-15)

We have doubts once and again with regard to most of the records of these two species, since many lepidopterists do determine them upon appearance of the imagos only. Faunistic literature and data banks are most probably full with wrong records and mistakes of both of these taxa. Though certain species-characters in the pattern of the forewings might be present, they are not reliable enough, following experience, to identify the specimen accurately without mistake and because of this, possible photographs too (Fig.12). Thus, a *pyramidea*- or *berbera*-photograph is, from our knowledge, never identifiable without a possible mistake, and that an "observation" can likewise not be reliable. An investigation of the genitalia is necessary to guarantee accurate determining and this is not as difficult, as many lepidopterists believe, especially in still soft condition of the animals. This has already been thoroughly treated already in numerous publications (e.g. REZBANYAI 1978 or REZBANYAI-RESER 1998):

- In the male (Fig.13-14): One has to grab with a pair of tweezers into the end of the abdomen of the still soft animal and carefully draw out the genitalia (but not tear them out!). One of the most important characters of differentiation becomes visible on the end of the uncus (= the upper long spine on the genitalia) (if the uncus is bent at the end into the interior like a penknife, it must first be folded out carefully with a pin or a pair of tweezers – Fig.14). The uncus in *pyramidea*, by comparison, seen from the side, is suddenly strongly vaulted at the end, like a Roman helmet, at which the otherwise sharp edge before the uncus tip shows a forehead-like flattened long spot. The uncus of *berbera* against, looked from the side, is regular vaulted like a hat and ends as a small point, in which its edge stays sharp up to the tip. Those with good eyes can even recognize all of this even without a magnifying glass, since the uncus of these species is really quite big. But these characters are especially easy to see with a magnifying glass. However, if the animal is mounted already, that means dry, a maceration of the abdomen is unavoidable, and then the tip of the uncus does not stand out. Other features characteristic of the species will become visible in the genitalia after maceration (form of valvae and cornuti first of all).

Fig.12: *Amphipyra pyramidea* (LINNAEUS, 1758) (left) and *berbera svenssoni* FLETCHER, 1968 (right) (Noctuidae), female from Central Switzerland (all of them genitalia determined).

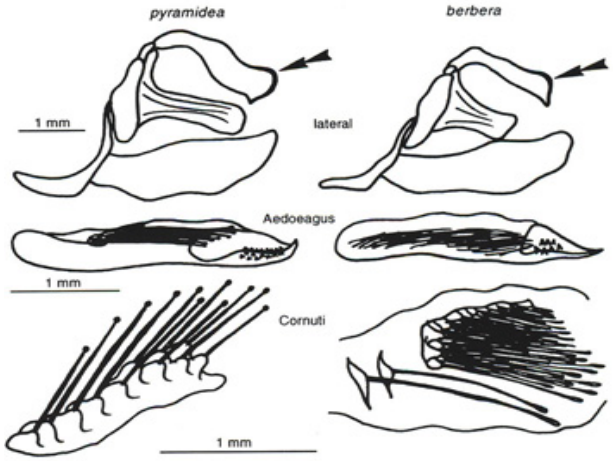


Fig.13: Key characters of male genitalia from *Amphipyra pyramidea* and *berbera* (after REZBANYAI-RESER).

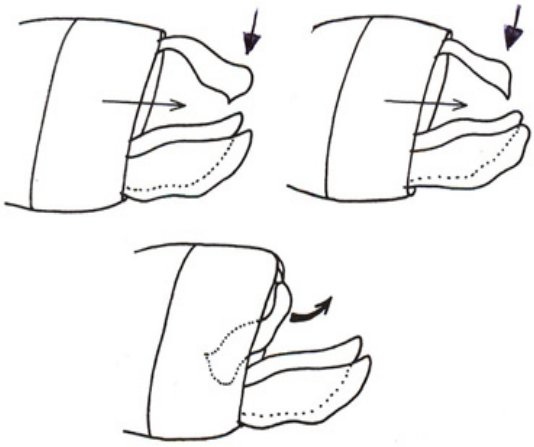


Fig.14: If the uncus of *Ampipyra pyramidea* (left and below) or from *berbera* (right) is bend into the interior of the body, one has to fold it out carefully with a pin or a pair of tweezers as long as animals are still soft (after REZBANYAI-RESER).

- In the female (Fig.15): One has to grab with a pair of tweezers into the end of the abdomen of the still soft animal, to take hold of the ovipositor and to draw it out wide (but not tear it out!) to make the first ring of the genitalia visible. The fine hairiness on it is irregular in *pyramidea* and persists partly in longer, partly in shorter loose and confused arranged hairs. Hairiness in *berbera* is more dense and consists uniformly in regular short hairs only. These characters are visible with a magnifying glass only. But maceration of the abdomen is unavoidable if the animal has already been mounted, that means dry. In this case other features, characteristic for the species, become visible in the genitalia too (especially the form of the small sclerotine plates in the ductus bursae). The form of the last lower segments of the abdomen (sternite) by the way, is likewise different in the females of the two species (Fig.15, above).

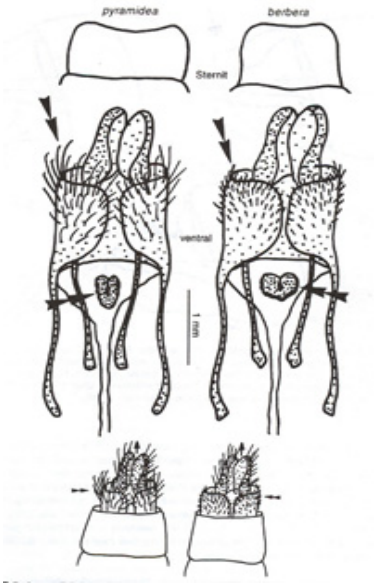


Fig.15: Key characters of the female genitalia of *Amphipyra pyramidea* and *berbera* (after REZBANYAI-RESER).

Another taxonomic remark finally: Though the name *svenssoni* FLETCHER, 1968 has been defined as a synonym to *berbera* in FIBIGER & HACKER 2007, we consider it once again as a precaution, as subspecies name for the European populations of the species at the EMN.

Literature selected: **1)** FIBIGER, M. & HACKER, H. (2007): Amphipyrinae - Xyleninae. – Noctuidae Europaeae, Volume 9. – Entomological Press, Soro, pp.410. – **2)** REZBANYAI, L. (1978): Ein gutes äusseres Merkmal zur Trennung der Arten *Amphipyra pyramidea* L. und *A. berbera* RUNGS, sowie zwei neue Schweizer Fundorte der letztgenannten Art. - Mitt. Entomol. Ges. Basel, 28: 5. – **3)** REZBANYAI-RESER, L. (1998): *Amphipyra berbera svenssoni* FLETCHER, 1968, und ihr Vorkommen in der Schweiz, nebst taxonomischen und systematischen Bemerkungen zur Art (Lepidoptera, Noctuidae). - Atalanta, 28 (3/4): 291-307.

B 10) Nr.9449 *Hoplodrina octogenaria* (Goeze, 1781) (Noctuidae)

- GB Walles, Caldy Island and Loveston, 13.10.2007 (1 specimen each), R. DOBBINS and Lesley CRAWLEY
This species flies in one generation annually only, namely in the first half of summer (June-July). But representatives of an incomplete second generation do occur in many places singularly, or a bit more regularly, in the second half of summer (August-September). But records from the month October, like from Great Britain this time, are very unusual.

B 11) Nr.9573 & 9577 *Agrochola nitida* (DENIS & SCHIFFERMÜLLER, 1775) & *pistacinoides* (D'AUBUISSON, 1867) (Noctuidae)

Populations of *Agrochola nitida* from Southwest Europe were separated by DUFAY 1976 because of genitalia morphologic differences first of all under the name of "*dujardini*" as "bona fide species". Population from Southeast Europe were left at this with the name "*nitida*". But it was discovered only later that "*dujardini*" obviously had an older valid name of priority, namely "*pistacinoides*" (D'AUBUISSON, 1876). – It had been pointed out, however, in REZBANYAI 1983 that in Switzerland, apart from "*dujardini*" (that means "*pistacinoides*" today) the "correct" eastern *nitida* occurs. But they are separated geographically from each other and obvious forms of transitions do occur in the intermediate areas. At this *nitida* occurs in Switzerland north of the Alps and otherwise in a valley of the South Alps only, in the extreme southeast (Val Müstair in the Grisens, this is the continuation of Vintschgau, respectively of South Tyrol in Switzerland), *pistacinoides* against, occurs in further valleys of the South Alps of Switzerland and in Southwest Switzerland (Valais, Geneva, South Jura). However, populations do occur between Lake Constance and South Jura in the South West, where different transition forms of genitalia are to be found. It has been suggested for that reason, to recognise that "*dujardini*" (that means *pistacinoides* today) is a subspecies of *nitida* only, but this has been ignored in scientific literature completely since then (except in faunistic publications of REZBANYAI-RESER) and both taxa are treated, once and again, as separate species everywhere. Incomprehensibly, they are not even listed beside each other of K & R 1996 (see species number). We believe *pistacinoides* once again is a subspecies of *nitida* only, but cross-breeding tests, for example, will certainly be necessary to clarify these problems accurately. We follow here K & R 1996 for this reason, only and provisionally, to list *pistacinoides* as a "bona fide species". – Taking for granted, that determinations are correct, *nitida* has been recorded in the course of the 4.EMN in the countries Austria (= Lower Austria and North Tyrol), Switzerland (= North Switzerland), Germany, Croatia and Hungary, whilst *pistacinoides* has been recorded in the countries Switzerland (= South Switzerland), Spain, France, Italy and San Marino. These records represent our present knowledge about the allopatric distribution of both taxa and are no proof again for a possible sympatric occurrence.

Literature selected: REZBANYAI, L. (1983): *Agrochola dujardini* DUFAY 1976 bona species oder nur subspecies von *nitida* D. & SCH. 1775? Wissenswertes über die beiden Taxa sowie ihre Verbreitung in der Schweiz (Lep., Noctuidae). – Nota lepid., 6: 137-174.

B 12) Nr.9649-9650 *Aporophila lutulenta* (DENIS & SCHIFFERMÜLLER 1775) & *lueneburgensis* (FREYER, 1848) (Noctuidae)

Representatives of this pair of taxa have been reported from the following countries in the course of the 4.EMN: Germany, Spain, France, Great Britain, Croatia, Hungary, Italy, Slovenia and San Marino. – In former times the taxon *lueneburgensis* was seen as a separate species or a *lutulenta*-subspecies, living in Northern Germany only. The imagines look a bit different indeed from those of *lutulenta* in East Europe. According to new statements (RONKAY, YELA & HRABLAY 2001), based upon the genitalia of both species, *lueneburgensis* is thought to be a separate species with certainty, and all West European representatives of "*lutulenta*" are thought to belong to *lueneburgensis*. Thus, the records from the countries Hungary, Croatia and Slovenia should therefore belong to *lutulenta* on account of the most probably theoretically assumed distribution map of the two taxa in RONKAY, YELA & HRABLAY 2001, but those from Germany, Spain, France, Great Britain, Italy and San Marino should belong to *lueneburgensis*. – This taxonomic assumption however must be thoroughly examined once more and not based only upon genitalia morphology alone. Most West European representatives of this circle of taxa don't look like *lueneburgensis* at all in external appearance, but more like *lutulenta*. We are not allowed to leave similarities or differences in appearance of the imagines totally aside because the supposed differences in genitalia (see RONKAY, YELA & HRABLAY 2001) are rather marginal and perhaps not even wholly constant. We therefore place this pair of taxa, now as before, as a single species for the time being, namely as "*lutulenta* (DENIS & SCHIFFERMÜLLER 1775)".

Literature selected: RONKAY, L., YELA, J. L. & HREBLAY, M. (2001): Hadeninae II. - Noctuidae Europaeae, Volume 5. – Entomological Press, Soro, pp.452.

B 13) Nr.9684 *Allophyes alfaroi* AGENJO, 1951 (Noctuidae)

MAZEL 1991 points to the fact, that forms of transition do occur between the genitalia of *A. alfaroi* (Iberia) and *A. oxyacanthae* (the rest of Europe) and belong therefore possible to the same species. Both taxa are alloptaric indeed, which would rather point to a status of subspecies. However, in RONKAY, YELA & HRABLAY 2001, *alfaroi* is again treated as a separate species. Certainly, a problem is concerned here for sure, still not sufficiently solved, which should further be investigated, e.g. with cross-breeding tests.

Literature selected: **1)** MAZEL, R. (1991): Éléments pour une étude de la spéciation dans le genre *Allophyes* TAMS (Lepidoptera, Noctuidae). - Nota lepid., 14 (3): 279-287. – **2)** RONKAY, L., YELA, J. L. & HREBLAY, M. (2001): Hadeninae II. - Noctuidae Europaeae, Volume 5. – Entomological Press, Soro, pp.452.

B 14) Nr.0028-10029 *Mythimna sicula* (TREITSCHKE, 1835) & *sicula scirpi* (DUPONCHEL, 1836) (Noctuidae)

Representatives of both of these taxa with uncertain status were reported this time again, namely *sicula* from Spain, Italy and Malta against *scirpi* from Spain and Portugal. Rather certain, noteworthy third generations are concerned here. – Both are treated as separate species in literature in some places, as subspecies in other places and recently (HACKER, RONKAY & HREBLAY 2002) as infra-subspecific forms of the same species *sicula*. The publication of REZBANYAI-RESER 2008, cited below, supports the opinion that *scirpi* might neither be a separate species nor an infra-subspecific form of *sicula* but is a subspecies of *sicula*, meeting the latter in large areas today and creating hybrid populations of subspecies there. Numerous obvious transitional forms with regard to imaginal morphology speak against the fact, that *scirpi* is a separate species, and separate distribution areas, where *sicula* does not occur along with *scirpi*, suggest against only an infra-subspecific form is concerned (for an important correction to REZBANYAI-RESER 2008, concerning the occurrence of *sicula* in Valais, Switzerland, reported by mistake, see further below). – It shall be pointed out here explicitly again, that presence or obvious absence of morphologic differences between *sicula* and *scirpi*, taken out from the genetic environment, no matter in which state of development, can not produce a decision about the taxonomic status. This is perhaps not even possible with DNA-analyses, but these questions might sufficiently be clarified, first of all with morphologic analyses of offspring of several females, possibly rich in individuals, and with experiments of hybridisation (or these combined with DNA-analyses, if possible).

Literature selected: **1)** HACKER, H., RONKAY, L. & HREBLAY, M. (2002): Noctuidae Europaeae. Vol. 4. Hadeninae I. – Entomol. Press, DK-Soro. – **2)** REZBANYAI-RESER, L. (2008): Stellungnahme zum taxonomischen Status von *Mythimna sicula* (TREITSCHKE, 1835) und *Mythimna sicula scirpi* (DUPONCHEL, 1836) bona ssp., stat. rev. (Lepidoptera: Noctuidae). – In „REZBANYAI-RESER, L. & KÁDÁR, M. (2008): 3. Europäische Nachtfalternächte („3rd European Moth Nights"), 13.-15.VIII.2004, eine wissenschaftliche Auswertung (Lepidoptera, Macrolepidoptera). – Atalanta, 39 (1-4): 173-224 + 424-428., as well in internet: http://euromothnights.uw.hu.

B 15) Nr.10038 *Orthosia gothica* (LINNAEUS, 1758) (Noctuidae)

- IE Wicklow, Cronykeery, 15.10.2007, Angus TYNER

The record of a species from Ireland, normally flying in spring, is extraordinary. We were not able to check the correctness of the record, but this date of recording is not impossible since early hatched autumn imagos of several *Orthosia*-species have occasionally been recorded before as well (see also below: *O.cerasi*).

B 16) Nr.10044 *Orthosia cerasi* (FABRICIUS, 1775) (Noctuidae)

- GB Cornwall, Trethowel, St.Austell, 12. and 13.10.2007 (1 specimen each), Roger & Ann FLEET
Two autumn locality-data from Great Britain were submitted of this spring-species likewise, similar to the record about *O.gothica*. The correctness of these data has specially been confirmed upon our inquiry.

B 17) Nr.10092 *Diarsia brunnea* (DENIS & SCHIFFERMÜLLER, 1775) (Noctuidae)

- CH, Ticino, Brusino-Arsizio, Camana, 11.10.2007, Heinrich VICENTINI (photo det. by L. REZBANYAI-RESER)
Though, this species flies in the first half of summer above all, it may occasionally still occur in late summer (representative of a very incomplete second generation). Records from October, like in South Switzerland now, are rather unusual. The photograph presented, shows unmistakably a specimen of *D. brunnea*.

B 18) Nr.10102-10103 *Noctua janthina* (DENIS & SCHIFFERMÜLLER, 1775) & *janthe* (BORKHAUSEN, 1792) (Noct.)

It has specially been pointed out in the „evaluation“ of the 2.EMN and 3.EMN that we understand these two taxa as conspecific for the time being, in the EMN and therefore list them under the name “*janthina*”. Nothing has changed about this to date. The reasons for that are the following:
- Both taxa obviously show transition forms (hybrids?) in the morphology of the imagines in many places which can’t be assigned unmistakably to *janthina* or *janthe*. Thus, determinations, and respective reports can’t always be completely correct at all.
- When we receive reports about “*janthina*”, we can never be sure whether the reporter of records really means *janthina* or *janthe* or respectively, doesn’t know this taxon at all.
- It turned out for the author, as well as for other German lepidopterists also (PLONTKE et al. 2005), that in the offspring of *janthe*-females, apart from typical *janthe,* unmistakable *janthina* do occur as well, together with other different transition forms. This is why we assume, that with *janthina* and *janthe* two former subspecies of the same species *janthina* are concerned, which were formerly separated from each other geographically and then met in postglacial times on a large scale and which create hybrid populations of the subspecies in many places today. *Janthina* as well as *janthe* do occur as “infra-subspecific forms” in these populations.
- It was reported in publications or by letter several times already, that *janthina* is to be recorded in some areas or *janthe* only. This ascertainment, then, is constantly taken as evidence that both taxa are two separate species, but this is a wrong assumption. This phenomenon is rather typical for two subspecies of the same species and the absence of a taxon in a certain area can never be made totally safely about it since this is not provable but assumable only. – It has to be pointed out however, that once again, that cross-breeding tests would be necessary to clarify these problems accurately.

Literature selected: PLONTKE, R., FRIEDRICH, E., GRAJETZKI, K., HÜNEFELD, F., MÜLLER, R. & HEINICKE, W. (2005): Zweifel an der Artberechtigung von *Noctua janthe* (BORKHAUSEN, 1792) und *Noctua tertia* (V. MENTZER, MOBERG & FIBIGER, 1991) im Komplex „*janthina*“ (Lep., Noctuidae). - Entomologische Nachrichten und Berichte, Dresden, 49 (1): 33-38.

B 19) Nr.10201 *Xestia triangulum* (HUFNAGEL, 1766) (Noctuidae)

- GB Wales, Manorbier Newton, 11.10.2007 and Somerton, 11. and 14.10.2007, Ron ELLIOT
The report about three specimens from Great Britain of this species, normally flying in summer, is extraordinary. The correctness of determination has specially been confirmed upon request. Obviously an unusual second generation of this species is concerned.

B 20) Nr.10207.02 *Xestia castanea neglecta* (HÜBNER, 1803) (Noctuidae)

The taxa *Xestia castanea* (ESPER, 1798) (redbrown) and *neglacta* (HÜBNER, 1803) (yellow grey) are most probably a similar case as *Mythimna sicula & scirpi* (see above). The taxon *neglecta* can neither be regarded as a separate species nor simply be seen as an infra-specific form since it obviously creates transition forms to *castanea* in some areas on the one hand, however partially it has a separate distribution area on the other. We recognise *neglecta* as a subspecies of *castanea* for this reason in the EMN and try to find out each time whether in reporting “*Xestia castanea*”, the correct *castanea* or *neglecta* is concerned. – “*X. castanea*” has been reported from 7 countries at the 4.EMN and all of these cases were supposed to be *neglecta*.

B 21) Nr.10493.01-02 *Eilema caniola* (HÜBNER, 1808) & *caniola torstenii* MENTZER 1980 (Arctiidae) (Fig. 16-17)

Eilema torstenii (Type locality: Majorca, Balearic Isles, Spain) has been separated from *canicola* as a new species and island endemic, primarily because of distinct differences in the male genitalia (Fig.17). We recognise the taxon as a subspecies here.

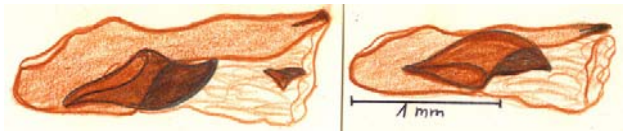


Fig.16: *Eilema caniola* (HÜBNER, 1808) (left) and *caniola torstenii* MENTZER 1980 (right, clearly smaller) (Arctiidae) from South Switzerland, respectively from Majorca (Spain).

Fig.17: Differences in the aedoeagus of male genitalia of *Eilema caniola* (HÜBNER, 1808) (left), always with a big and small cornutus and *caniola torstenii* MENTZER 1980 (right) with a single big cornutus only as a rule, though occasionally a very tiny second cornutus might be present here too (after REZBANYAI-RESER).

However, it has been pointed out in REZBANYAI 1981 (see also REZBANYAI-RESER 1991), that the true *caniola* obviously does not occur in Majorca, which means that it shows no sympatry with *torsteni*. But different transition forms with regard to the genitalia of *caniola* had been discovered in a larger series of *torstenii*. It had been suggested for that reason to acknowledge *torstenii* as a subspecies of *caniola* only. This has been accepted afterwards without discussion by DE FREINA & WITT 1987. Most probably because of this, *torstenii* finally did not enter the checklist of K & R 1996 too. We continue to keep to this opinion since no objection seemingly came up against this taxonomic decision, but it has particularly to be mentioned that proof is a bit speculative here like in so many other similar cases. Cross-breeding tests at least should be undertaken for an accurate taxonomic decision. Success at that only, would be the unmistakable proof to show, that *torstenii* is con-specific with *caniola* indeed. – We received several "*caniola*"-records, namely from the Balearic Isles in the 4.EMN, as well as from Majorca and Ibiza. Though these specimens were not genitalia investigated, up to our knowledge, we arranged them unseen and theoretically, provisionally at least, to ssp. *torstenii* with the number 10493.02.

Literature selected: **1)** DE FREINA, J. J. & WITT, T.J. (1987): Die Bombyces und Sphinges der Westpalaearktis, Band 1 – Verl. Forschung und Wissenschaft, München, pp.708 + 46 Taf. – **2)** MENTZER, E. VON (1980): *Eilema torstenii* n. sp. and *E. iberica* n. sp. from Spain, with notes on *E. pseudocomplana* (DANIEL). – Ent. Scand., 11: 9-16. – **3)** REZBANYAI, L. (1981): Neue Kenntnisse über die vor kurzem erkannte endemische Flechtenbär-Art von Mallorca, *Eilema torstenii* V.MENTZER 1980, Lep., Arctiidae. - Entomol. Ztschr. (Frankf.), 91: 129-138. – **4)** REZBANYAI-RESER, L. (1991): Zwölf Tage Lichtfallenfang in Calas de Mallorca (Mallorca: Balearen, Spanien), Ende September 1980 (Macrolepidoptera). - Entomol. Ztschr. (Frankf./Essen), 101 (10): 173-192.

CORRECTIONS TO EMN-DATA, REPORTED BEFORE

In projects like the EMN that involve large amounts of data, it is probable, that some reported records, and those already published, are found to be erroneous later. Such corrections may never reach EMN-HQ, but reported mistakes are also difficult to eradicate effectively. No alteration is actually allowed in the tables already published, or the numbers of species, and not even in spite of the fact, that the internet would allow "actualisation" at any time.

We would still like to see any reports about such cases, at least briefly. The worst mistakes, especially, should always be pointed out. All participants are therefore asked **to let EMN-HQ know of essential mistakes which have been discovered afterwards.**

New data however, which were reported to late, or had been forgotten, can't now be considered under any circumstances.

Listed here now are the following important corrections with regard to evaluation and tables of the 3rd EMN 2006 which have to be communicated:

1) *Charissa ambiguata* DUP., IT Sicily, Catania, Taormina, 30.4.-1.5.2006, leg. Marko TÄCHTINEN = correctly *Charissa onustaria* H.SCH. (genitalia det. and rev. Claudio FLAMIGNI 2008). – *Ch.ambiguata* does not occur of course in Sicily.
2) *Eupithecia venosata* F., IT Sicily, Catania, Taormina, 30.4.-1.5.2006, leg. Marko TÄCHTINEN = correctly *Eupithecia schiefereri* BOCH. (genitalia det. and rev. Claudio FLAMIGNI 2008). – The animal is shown in the evaluation of the 3.EMN on photograph 20. – In so far that the *Eupithecia* with this early date of collecting was determined, with reservation, as *venosata* on the basis of a photograph at that time, it has since been proved to be *schiefereri*, even though from Sicily. Of the two species eventually considered, *schiefereri* only flies that early in the year, as pointed out in the evaluation of the 3.EMN. Finally, "*venosata*" from Andalusia (Casares) and unfortunately observed on the occasion of the 3.EMN only, is left as a question mark, since proof by genitalia investigation is not possible any more in this case.
3) Another rather inexact and irritating series of errors, made by mistake, has already been mentioned above (with regard to Lithuania and Latvia). It shall be mentioned here, once again, that colleague Guntis AKMENTIŅŠ (Latvia) has been asked for pardon. The reason was that the abbreviations of the two countries look a bit similar (LT for Lithuania and LV for Latvia, respectively).
   a) "Evaluation" of 2.EMN 2005: Both countries were mistaken for each other in the text of the chapter about the participants as well as in the chapter about the localities. In the tables 1a, 1b, 1c, 2b, 3 and 4 "LV" (Latvia) is correctly mentioned, but in table 2 instead of "LV", "LT" (Lithuania) was entered in error. The three maps are without mistakes.
   b) "Evaluation" of 3.EMN 2006: Here again, both countries were mistaken for each other in the text of the chapter about the participants, and in the chapter about the localities. "LV" (Latvia) is mentioned correctly in the tables 1a, 1b and 4, but "LT" (Lithuania) is used in error instead of "LV" (Latvia) in the tables 1c, 2a, 2b and 3. Yet it is worst of all, that instead of Latvia, Lithuania has been marked in colour in the three maps because of this.
   - We shall correct these mistakes on the internet page of the EMN but they will unfortunately remain in the samples already printed and in the German publication of the journal "Atalanta 2008".
4) Yet, another irritating slip of the pen is in the evaluation of the 3.EMN in the chapter about the taxa *Mythimna sicula/scirpi*: "With *sicula* TREITSCHKE a clouded form occurs primarily in the Valais (Switzerland)". S*cirpi* really is related with the Valais and not *sicula*, which does not occur in Switzerland! We shall correct this mistake on the internet page of EMN but it will unfortunately remain in the printed samples and in the German publication of the journal "Atalanta 2008".

"EMN" AND PROTECTION OF NOCTURNAL MOTHS

This event was invented to attract wide-scale attention to nocturnal moths. We want to make the general public aware of the very existence of these creatures and their mass scale presence in natural ecosystems. Several participants were accompanied on their collecting by friends and acquaintances interested in nocturnal moths and their world. This possibility should be exploited even more in the future. If that is realized, a concrete report on that achievement should be sent to EMN HQ each time.

With regard to the most important remarks and suggestions about measures of protection of nocturnal moths, belonging to these topics, we refer to the texts in the "scientific evaluation" of the 1.EMN 2004.

Many small and large meetings of lepidopterists which included other interested people have been organized at the occasion of the 4.EMN, as far as we know, in the following countries above all: Finland, Germany, France, Great Britain, Ireland, Portugal, San Marino, Switzerland, Slovenia, Spain (Catalonia particularly), Romania and Hungary. Reports in newspapers have been published about the EMN in some places as well and it has been reported by radio or by television. All of this has certainly contributed something, once again, to increased understanding and interest of the public towards nocturnal moths, and at the same time also in nature as a whole.

PLANS CONCERNING THE FUTURE OF "EMN"

It is intended to carry on EMN at different periods of time once a year in the future. For the next three events the following dates have been chosen (we ask all interested persons to make a note in their calendar already now!):

5.EMN	6.EMN	7.EMN	8.EMN	9.EMN
24.-28.7.2008	**21.-25.5.2009**	**9.-13. 9.2010**	**25.-28. 8.2011**	**31.5.-4.6.2012**

The following factors have been considered important for these dates:

1) a suitable good phase of the moon for light-trapping,
2) at a weekend (Thursday-Friday-Saturday-Sunday-Monday),
3) periods of time with distinctly different communities of nocturnal moths to allow a certain change and to increase the EMN total list of species („EMN-Checklist“) more effectively.

Since this evaluation has only been completed in spring 2009, the event of the 5th (24.-28.7.2008) belongs to the past already, but took place with great success.

NOCTURNAL MOTH COLLECTORS! – WHERE ARE YOU? (FOR THE SEVENTH TIME!)

Though, as many participants (549) as never before, could be counted at the 4.EMN, we have to repeat this provocative question once again. On the one hand, the high number is somewhat misleading, as quite a number of the participants could not be taken as “real” lepidopterists (though the participation of “real” lepidopterists gradually became higher in the course of the four events). It is quite certain on the other hand that quite many active European experts on moths have perhaps never learned of the EMN at all, or have stayed away for other reasons.

We herewith refer to the remarks, made in the same chapter of the “scientific evaluation” of the 1.EMN, and hope that the number of “real” lepidopterists among the EMN-participants will somewhat rise in the future. This is addressed especially to lepidopterists of such countries, of which not a single participant has been registered so far.

The higher the number of participants, and of the quantity of recorded data, the more work is to be expected at EMN-Headquarters and the more laborious the evaluation that will have to be carried out. But this event for the whole of Europe, carried out only once a year, will only be really interesting, exciting and useful with many participants, localities and recorded data.

APPEAL

We invite all European nocturnal moth collectors and specialists who read these lines:
1) to take an active part in the planned events,
2) to fill in the data, as completely as possible, in the given tables,
3) to inform the colleagues they know of EMN in good time, and
4) to try and convince other colleagues of the importance of participation in this event.

THE MOST IMPORTANT ADDRESSES

Here we list the most important addresses of both centres of “European Moth Nights”, where different kinds of information may be found or ordered:

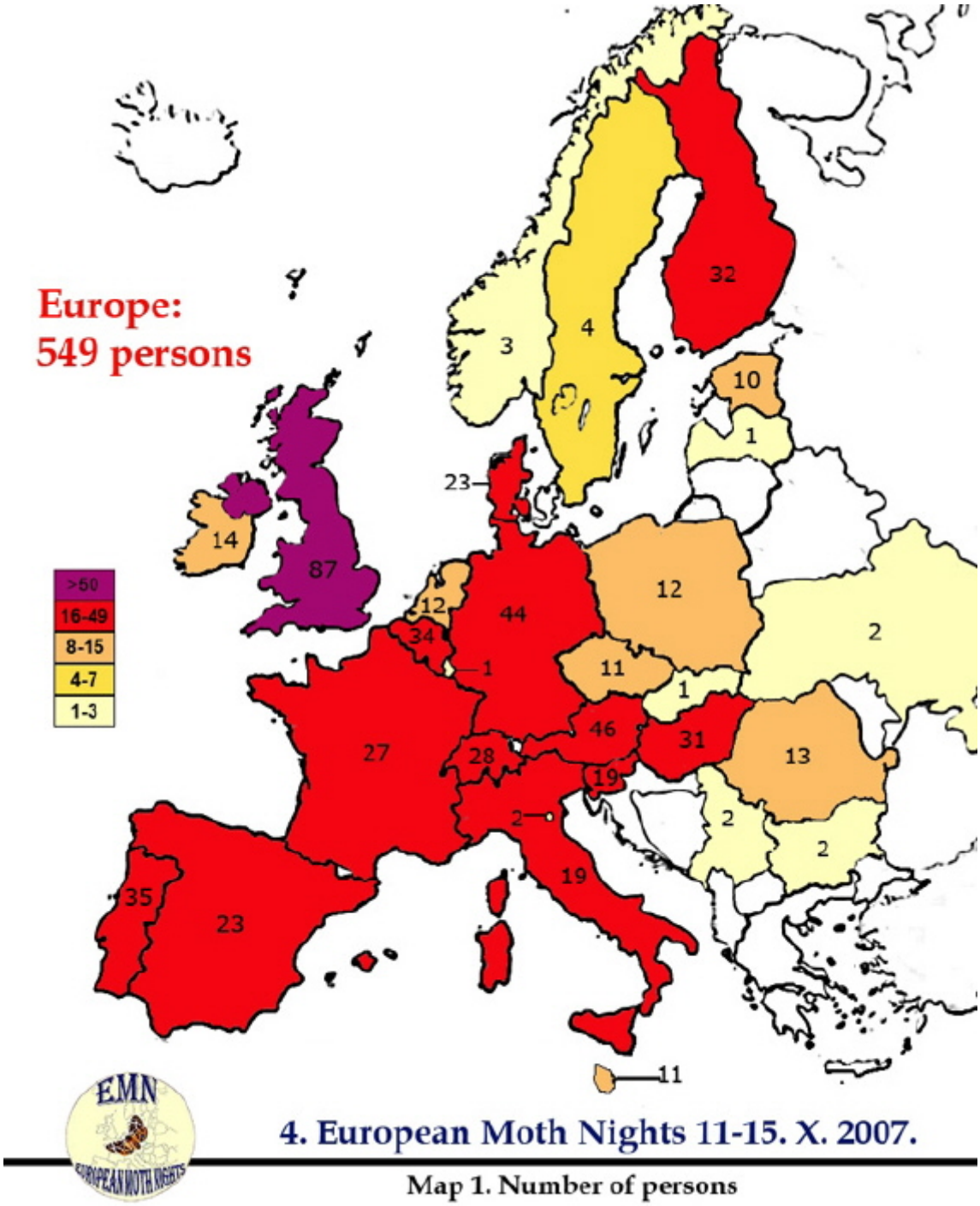
“European Moth Nights / Europäische Nachtfalternächte”
http://euromothnights.uw.hu

“Szalkay József Magyar Lepkészeti Egyesület” = “Szalkay József Lepidopterological Society of Hungary”
http://lepidoptera.fw.hu

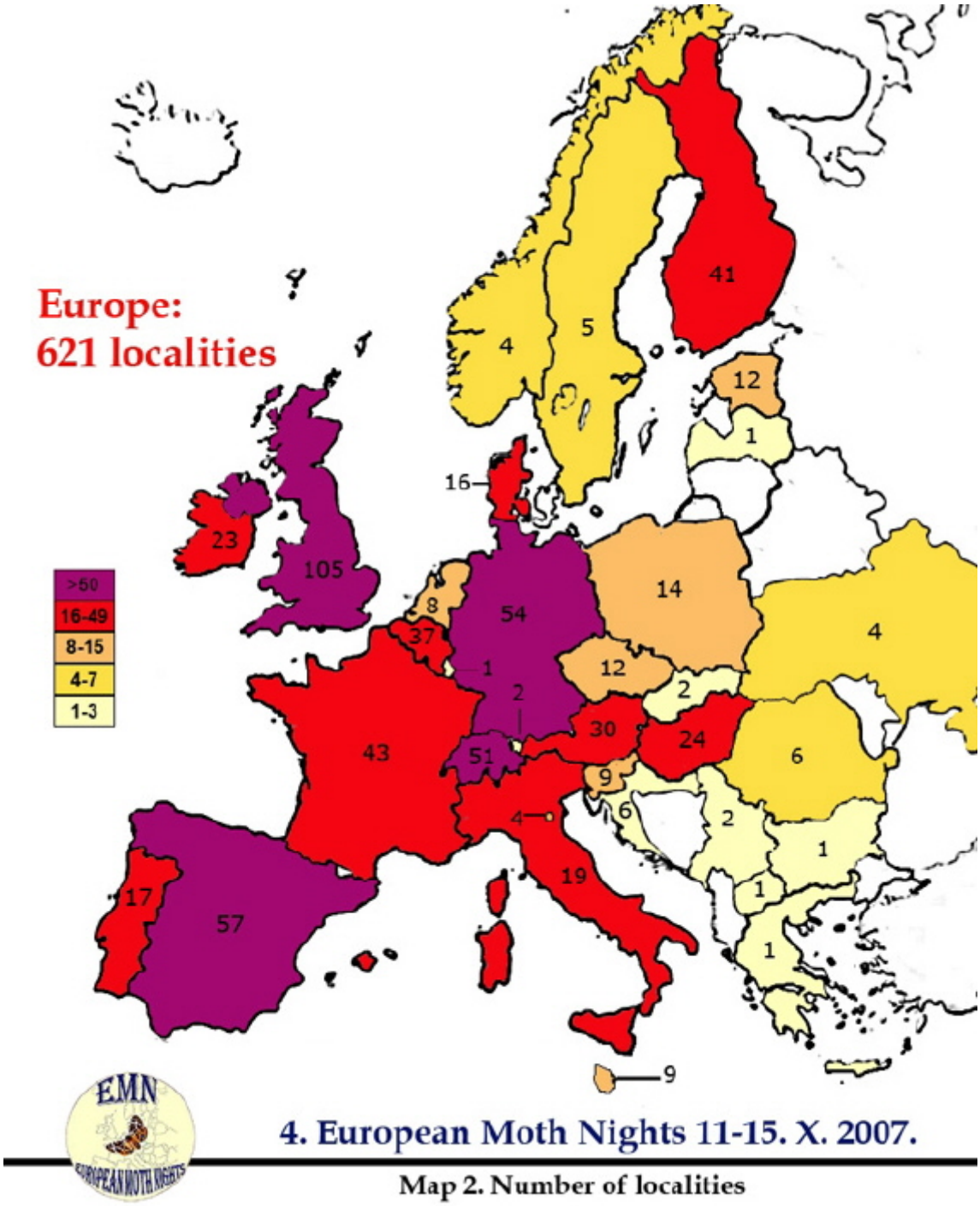
Ladislaus RESER (REZBANYAI)
(Please prefer the following mail and postal address for correspondence and reports in the future!)
Nature-Museum Luzern, Kasernenplatz 6, CH-6003 Luzern (Switzerland)
ladislaus.reser@lu.ch
http://www.com/reser_entomologie

Mihály KÁDÁR
(These addresses are reserved for Hungarian participants for the time being or to be used in case of emergency only!)
Zoványi J. u. 19/B/9, H-4033 Debrecen (Hungary)
inachis@t-online.hu

Map 1: The number of participants of the "4th European Nocturnal Moth Nights 2007" by countries.



Map 2: The number of localities by countries reported in the course of the "4th European Moth Nights 2007".



Map 3: The number of Macroheterocera species reported from each country in the course of the "4th European Moth Nights 2007".