



European Forum on
Nature Conservation
and Pastoralism

Butterfly monitoring Romania

A report on a workshop held in Sighisoara

16-18 November 2012

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General information

From 16th-18th November 2012, a workshop on establishing a butterfly monitoring scheme in Romania was held in the Seminar building of Josef-Haltrich Lyceum, Sighisoara, Mures, Romania. In total, 23 persons from Romania, Hungary, Germany and Great Britain actively participated in discussions, group works and lectures on how to foster the establishment of butterfly monitoring in Romania.

The workshop was organized by Jacqueline Loos (Leuphana University Germany) and Paul Kirkland (Butterfly Conservation Scotland), with expertise and support from Dr Martin Wiemers (UFZ Germany) and Dr Martin Warren (Butterfly Conservation UK).

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Background

A great deal of scientific research and recording of butterflies has been and is currently conducted in Romania. Personal observations of professional and amateur Lepidopterists have noted many changes in species presence and species composition over the last decades. Among other factors, this might be due to ongoing land use changes like intensification of agriculture and grazing patterns, or to the abandonment of traditionally-managed hay meadows. Climate change may also be having an effect.

However, few if any of these personal and organisational databases are integrated or fully accessible, or suitable, for investigating long term trends in butterfly populations within Romania. A proper Butterfly Monitoring Scheme (BMS), where data are collected over a

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period of time with a simple, reproducible and standardized method, could allow the identification of scientifically valid species population trends.

Monitoring is also a very good way of getting people involved in identifying and recording butterflies, and appreciating their diversity and beauty, so it can help gain broader support for protection of nature.

The idea of this workshop was to:

- (i) begin to create a network of people keen to undertake butterfly monitoring;
- (ii) draw up a work plan of how to initiate butterfly monitoring, and
- (iii) find ways to support and expand butterfly monitoring in Romania in the future.

In this report, we present the main ideas and the suggested strategy to establish a BMS in Romania, which were developed by the people attending this workshop. The participants consisted of a mixture of professional butterfly experts and researchers, "hobby-Lepidopterists", and interested people with no background in butterfly activities. They all shared their thoughts and enthusiasm, and offered their wide-ranging skills to support butterfly monitoring in Romania.

Program points

Butterfly monitoring activities in Europe

Throughout the workshop, we used examples from other European countries, mainly Germany, the Netherlands, Great Britain and Switzerland as examples for establishment and organization of butterfly monitoring, data collection, data analysis and recruitment of volunteers. These examples show that butterfly monitoring established differently in different countries - sometimes a long time ago, and sometimes just recently.

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When there are many years of data, such as in the UK, butterfly population trends can be detected at a country and even regional level. Statistically sound trends have also been produced for different habitats, and to show the effects of agri-environment schemes. The ability to do this in Romania will be many years away, as very large amounts of long-term data are needed. But the sooner we start, the sooner we will have the data!

However, as environmental changes affect species over large areas, the combining of data from different countries is increasingly considered to be a powerful and scientifically sound method of detecting species trends. Thus data from Romania could be used straight away at a European level. Butterfly Conservation Europe has developed a Grassland Indicator, based on 17 species and using data from several European countries. It is also working on a Climate Indicator. Indicators are powerful ways of communicating with the public and politicians.

Finally, it is believed that an inclusive and systematic approach to collecting butterfly data will support the long-term protection of these sensitive and beautiful species in Romania.

Current butterfly activities in Romania and the need for monitoring

The knowledge of butterfly species richness and abundance varies in different parts of Romania. This is also the case for other countries in Europe and should not hinder a systematic approach to survey butterfly populations in different locations. For Romania, a variety of historical observation data exists, and during the workshop many persons offered to feed their personal observations into a public database.

The compilation of observations can be very helpful for a nation-wide inventory (see point "database online"), which can be used as a baseline for future monitoring in the respective areas.

We saw that observations of butterflies have also been made with the standard transect method in a few areas (e.g. for some red-listed species, and for pastures and meadows in the Ghimes area). However, during this workshop we agreed that monitoring should be

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implemented for all (not only endangered) butterfly species, and for as many areas as possible.

Butterfly monitoring techniques, e.g. Pollard walk

To enable comparisons of relative butterfly abundance at different places and over many years, it is important to have a standardized method, which can be applied by different people and at different times.

We presented the standard “Pollard walk” as the most suitable standard method for butterfly monitoring. Pollard walks are used in many European countries, and analysis of long-term data has been successfully conducted with data that has been collected this way.

Pollard walks are transects, which are placed systematically throughout the landscape. These transects serve as fixed routes which are walked regularly (ideally once per week) with a constant, slow pace in good, sunny weather. While walking this transect, every butterfly is counted when it is closer than 5 m in front of the observer, closer than 5 m above the observer and closer than 2.5 m to each side of the observer.

Transects should ideally be separated into sections of 50m, and each section should only cover one biotope. However, in the real world it is sometimes not possible to fulfil all requirements of this technique, but this should not prevent someone walking or choosing a transect. For example, it is possible to adapt the lengths of the sections. What is important is that the route is fully documented so that future transect walkers will be able to walk the same transect. Basically, walking transects should be interesting and fun!

More information on the transect method can be found in the **manual for butterfly monitoring**:
http://www.bc-europe.org/upload/Manual_pentru_monitorizarea_fluturilor.pdf

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Data collection and data entry

We discussed the usefulness of dividing the transect into 50 m sections, if possible. Noting the butterfly species' presence and abundance for each of these units separately facilitates later analysis. Species and individuals which are observed outside the transect can be noted in an extra category (+ symbol in the datasheet).

A simple datasheet, which can be used for data collection in Romania can be found here:

<https://sites.google.com/site/monitorizareafluturilor/datasheet-butterfly-count>

It is not yet finally decided which interface for data entry we might use for Romanian butterfly monitoring: Online data entry was thought to be best. One idea would be to use the Lepidopterological Society Romania (LSR) website with a data entry system. If this proves not to be possible, then UFZ Germany might help to obtain and to run such a system. Another possibility will be to use the Butterfly Conservation Europe platform, which will be finalized over the next 12 months. Alternatively a new website for Romanian butterflies could be established.

Data from earlier observations and publications that were not collected in transect walks can be entered in an excel sheet in the following format: species, date (or year if exact date not known), locality, x-coordinate, y-coordinate. With this information, new maps, which are connected with google maps, can be created. The identification of the observer, the date and the place will enable the validation of the data by professionals. This site could also be a section of the LSR website and could be used as a basis for monitoring butterfly distribution for these localities.

Organization of butterfly monitoring scheme in Romania

During this workshop, we learned that butterfly monitoring in Germany has started without leadership of a lepidopterological organization. Instead, butterfly monitoring started with a campaign of the UFZ (center for environmental research) in collaboration with the NGO

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BUND (Friends of the Earth Germany) and the public-service German television broadcaster ZDF.

Since then, butterfly monitoring has become organised in a hierarchical system in Germany, with volunteers being the basis for action. This system was considered suitable during the workshop for Romania as well; volunteers are supported by local coordinators (e.g. in one city), which may in turn be supported by regional coordinators (e.g. per county).

During this workshop, the suggestion was made that the function of state coordinator is the LSR. Our central contact person for butterfly monitoring will be Tibor Csabo Vizauer (vizauercsaba@gmail.com). Furthermore, we decided that it would be good to share information about butterfly monitoring (e.g. contact persons and addresses, general information about transect walks etc.) via the LSR website.

The following persons volunteered to be local coordinators and local contact persons for volunteers:

- Galati: Mahaila Cristescu
- Bistrita: Doru Rusti
- Sighisoara (butterflies & moths): Kuno Martini
- Bucharest: Mihai Stănescu
- Sibiu: Marilena Vacariu
- Cluj (& central contact person): Tibor Csaba Vizauer

Additionally, the following persons agreed to recruit volunteers in:

- Hunedoara: Catalina Dragoi (National Park and Pupils)
- Sibiu: Marilena Vacariu (Museum and University)
- Galati: Mahaila Cristescu (Museum, visitors, pupils and public)

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Recruitment and support of volunteers

Butterfly monitoring is dependent on volunteers. Specialists are often very busy with their scientific work, and therefore cannot cover monitoring in large areas of Romania. However, the expertise of professional lepidopterists is very helpful to support interested beginners, to survey butterfly fauna in places that can be monitored afterwards, and their help is crucial for the identification of more difficult species. This means we need to find volunteers, teach them how to choose and walk transects, help them to learn the local species (e.g. by regional species lists and identification guides in Romanian language, and by an online forum, where people can post photographs of species which they could not identify). One example of such a forum is www.lepiforum.de

Internet as an exchange platform

To put these points into action, we decided during this workshop to create a discussion forum in a Yahoo Group. This group would enable volunteers to post photographs and ask for identification help. The advantage of a Yahoo group is that topics can be filed under different categories. The Yahoo Group has already been created by Cristi Sitaru and can be found here:

You can become a member of the discussion forum in a **Yahoo group**:

<http://tech.groups.yahoo.com/group/monitorizareafluturilor/>

A parallel platform to promote butterfly monitoring can be a Facebook page. This page can also provide general information, advertise events (e.g. competitions and meetings) and connect and recruit volunteers throughout Romania.

Field training for volunteers and awareness raising

Some volunteers will offer help for field training during their transect walks. These persons can be contacted and accompanied by interested persons (see Section "Establishment of the first transects").

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During this workshop, the idea arose to organize a national butterfly camp in Piatra Craiului National Park, near Brașov (www.pcrai.ro). The camp would be open to specialists, non-specialists and volunteers, and would help survey the butterfly fauna in the National Park. Simultaneously it would include training in the use of the transect method and in species identification.

The central location of Piatra Craiului was considered ideal for a national camp. The camp could take place during the second half of July, when University students and school children have holidays. To realize this butterfly camp, some financing is required for the transport of experts and volunteers to the park, for identification material (butterfly nets and literature) and to cover the costs for food (Piatra Craiului National Park can provide accommodation).

Some suggestions of activities during the camp are a Butterfly Count competition (with the identification guide as prize?) and moth trapping. It was emphasized that various ideas will be needed to keep the kids and students interested. Furthermore, proposals to create posters, badges, postcards and T-Shirts, and provide talks came up to raise public awareness and recruit volunteers.

Materials & resources needed to realize butterfly monitoring

The first obstacle for people that are new to butterfly identification often is the variety of species in identification literature that exists for butterflies Europe wide. To make identification easier, an identification key for the Romanian species is needed. Sergiu Mihut told us that he is currently working on a book, which will be published in 2013. Furthermore, the working group of LSR provides species information on their species database, which can be used to get to know the Romanian Lepidoptera.

Moreover, regional species lists (e.g. on a county level) can be compiled and provided for new volunteers, which again will facilitate identification. In regions where such lists do not yet exist, specialists could help to do this.

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Establishment of transects in 2013

We are planning to establish several long-term transects next year. Additionally, the regular walks can serve as field training for new volunteers. The transect walker can advertise this opportunity in their area and offer their help to let other people learn the transect method and the identification of species. The following people already decided to volunteer and to walk transects in 2013:

- Kuno Martini & Jacqueline Loos: Breite Sighisoara + teaching
- Jörg Steiner: survey Sebes Râpa Rosie + teaching
- Marilena Vacariu: steppic island Sibiu
- Barbara Knowles: Pagany Havasz/ Ghimes
- Mihai Stănescu: Herastrau-Park Bucharest (?)
- Tibor Csaba Vizauer: Cheile-Turzii Cluj + teaching
- Catalina Dragoi: Gradistea Muncelului Cioclovina Nature Park

Discussion points

During our meeting we had questions and discussion point arising that still have to be answered in the future. Some of them will be:

- We need to find a good structure to keep monitoring going on after starting.
- Though monitoring should not be dependent on funding, it might be helpful to find some funding to facilitate excursions with school kids and to provide material.
- Which data-entering system would be most suitable for Romanian butterfly monitoring?

Action points and next steps:

- Create Facebook page: Kinga and Agnes
- Create subsection for butterfly monitoring on the existing LSR website: Cristi

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- Create section on LSR website for historical data collection (maybe also Cristi?)
- Enter historical data into excel to feed into historical database (who?)
- Design posters to advertise butterfly monitoring: Catalina & Cristi
- Design T-Shirts & badges for transect walkers: (still needs someone creative to do this!)
- Put butterfly monitoring on agenda for annual meeting of LSR: Doru/Cristi
- Organize competitions (e.g. butterfly drawing competition in school classes, during the butterfly camp). Still needs a volunteer
- Prepare and give talks for students and other places (e.g. businesses): Still needs a volunteer – Marilena?
- Discuss results of workshop at LSR meeting in April: Jacqueline
- Provide (online) identification literature specified for Romanian species: Doru will ask Sergiu Mihut and Laszlo Rakosy if this can be freely available for volunteers.
Otherwise: translate identification key from existing literature
- Provide regional species lists: Doru will start for Bistrita area
- Plan 1st annual national meeting in 2nd half of July 2013 in Piatra Craiului National Park (and organize some funding for this): Ionut & Paul
- Provide certificates for volunteers that walk transects and attend trainings: Csaba
- Walk transects and collect data from April-September 2013.
- Think about funding (?Marilena)
- Meet again in November 2013: Jacqueline & Paul to organize, everybody: come and bring ideas, data and new volunteers! ☺

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Appendix I: List of participants with email addresses

Bordea	Ionuț	(bordeaionut@yahoo.com)
Cristescu	Mihaela	(miih100@yahoo.com)
Demeter	László (Laci)	(domedve@gmail.com)
Dragoi	Catalina	(chetutz_86@yahoo.com)
Kastal	Agnes	(kastalagi@gmail.com)
Kirkland	Paul	(pkscotchargus@gmail.com)
Knowles	Barbara	(barbara.knowles@yahoo.co.uk)
Kurzeluk	Daniel	(kurzelukdaniel@yahoo.com)
Loos	Jacqueline	(loos@leuphana.de)
Martini	Kuno	(martinikuno@yahoo.de)
Mihut	Sergiu	(smihut2000@yahoo.com)
Moga	Cosmin	(cosmin.moga@gmail.com)
Muntean	Iulia	(iulia_hcc@yahoo.com)
Popa	Razvan	(poparazvand@yahoo.com)
Rusti	Doru	(nemeobius58@gmail.com)
Sitaru	Cristian	(cristian_sitaru2007@yahoo.com)
Stănescu	Mihai	(mihaist@antipa.ro)
Steiner	Jörg	(nikolaus.steiner@yahoo.de)
Szabadfalvi	Andras	(a.szabadfalvi@mail.datanet.hu)
Timea	Kinga	(ckingat@yahoo.com)
Vacariu	Marilena	(vacariumarilena@yahoo.com)
Vizauer	Tibor Csaba	(vizauercsaba@gmail.com)
Wiemers	Martin	(martin.wiemers@ufz.de)

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from left to right: Paul Kirkland, Jörg Steiner, Mihai Stănescu, Agnes Kastal, Kinga Timea, Martin Wiemers, Barbara Knowles, László Demeter, Tibor Csaba Vizauer, Doru Rusti, Andras Szabadfalvi, Cristian Sitaru, Mihaila Cristescu, Catalina Dragoi, Jacqueline Loos, Daniel Kurzeluk, Marilena Vacariu, Kuno Martini, Ionuț Bordea, Iulia Muntean

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Appendix II: Useful literature & links

For butterfly identification:

Books:

Szekely Levente (2008): The butterflies of Romania / Fluturii de zi din România

Tristan Lafranchis (2004): Butterflies of Europe (with identification key)

Tom Tolman & Richard Lewington (several editions, e.g. 2012): Butterflies of Europe

Internet-Links:

Lepidopterological Society Romania: www.lepidoptera.ro

Identification Forum for butterflies (mostly in German): www.lepiforum.de

European butterflies: www.butterflies.de & www.eurobutterflies.com

Butterfly Conservation Europe: www.bc-europe.eu

Instructions/ guidelines for butterfly monitoring

BC Europe website Romanian version:

http://www.bc-europe.org/upload/Manual_pentru_monitorizarea_fluturilor.pdf

Datasheet for monitoring

<https://sites.google.com/site/monitorizareafluturilor/datasheet-butterfly-count>

other projects

Harta Verde (contact Doru Rusti):

www.harta-verde.ro

Pogany Havas (contact Laszlo Demeter & Barbara Knowles)

<http://poganyhavas.hu/main.php>

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Mosaic project (contact Iulia Muntean & Cristi Sitaru):

<http://www.proiect-mozaic.com/>

Muzeul Național de Istorie Naturală Grigore Antipa (contact Dr. Mihai Stănescu):

www.antipa.ro

Piatra Craiului (contact Ionut Bordea):

www.pcrai.ro

Gradisteaua Muncelului Cioclovina Nature Park (contact Catalina Dragoi)

www.gradiste.ro

Butterfly Monitoring Germany (contact Dr. Martin Wiemers):

www.tagfalter-monitoring.de

European Forum for Nature Conservation and Pastoralism: www.efncp.org

Butterfly Monitoring Scheme UK: www.ukbms.org

Butterfly Conservation UK: www.butterfly-conservation.org

Big Butterfly Count: www.bigbutterflycount.org