



Uniting the efforts of Romanian bat conservation

Implemented in frame of the
Klaus Toepfer Fellowship Programme

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1. Summary

Romania is home to some of Europe's largest and most diverse bat populations. Despite legislation and a great number of conservation projects (often including public awareness activities), bat conservation still faces the classical challenges. Habitat fragmentation, roost destruction, pesticide use, intensive tourism endanger local colonies. But what also needs to be recognized is that these challenges cannot be addressed in a systemic manner without a united and vibrant bat research community. Communication is slim to non-existent inside our community, with sporadic meetings, a long overdue national bat conference, and negligible online presence. The leading figure of non-governmental bat conservation, the Romanian Bat Protection Association (RBPA), has neglected this role for years. We also lack guidelines for ethical bat research.

The current project's purpose has been to strengthen conservation efforts for the Romanian bat fauna. We set out to establish communication elements that would revitalize professional discussions inside the professional community, and that would enable us to start unifying approaches to bat research and conservation. Initially, objectives included standardization of bat monitoring, but this was later deemed unfeasible. The modified project

objectives were finalized by January 2017: (1) bat researchers from Romania agree on standard and ethically correct bat research protocols and public recommendations; (2) a complex online portal is activated to aid the Romanian bat research community and public visibility.

The project started with informing the Romanian bat research community about the project, and by highlighting the need of professional input. The project also initiated an intensive crowdfunding and sponsoring campaign, yielding 2400+ EUR in donations. This sum represented only 60% of the initially planned budget, but enabled us to successfully implement the project. By consulting European protocols (especially EUROBATS resolutions), and by periodical reviews made by the bat research community, we have created the guidelines for ethical bat research, and the recommendation list for the public. A professional programmer was hired to create the online bat portal, under the guidance of the KTF Fellow. In October 2016, after a ten year intermission, we organized the 2nd National Bat Research Conference. During and after the conference, intensive talks took place among local bat researchers, and new communication channels established and used (Google Group, Facebook Group). The bat portal at www.lilieci.ro was launched in December 2016, representing by far the most complex and diverse online resource about Romanian bats. It also represents a diverse and modern way in which bat researchers can share their results with the public, bringing the two sides closer together.

Communication is essential for effective conservation, and the project was successful in resurrecting talks inside the Romanian bat conservation. Ethical guidelines in Romanian bat research are now available to all local and European bat researchers (through EUROBATS). The bat portal will continue to function, representing a significant link between the bat research community and the public, and also being important for the research community *per se*. Future challenges remain (ex. standardization of the national bat monitoring system and of ringing activities), but these will be gradually addressed, through the input of seasoned bat experts.

2. Acknowledgements

I am grateful to Arbeitskreis Fledermäuse Sachsen-Anhalt, Pettersson Elektronik AB, Bund Freunde der Erde, Warwickshire Bat Group, Daisler Print House, Renee Palmer, The CryptKicker, KTF Vilm Team, Kitty Harvill, Jon Russ, Keith Cohen, Ani Binet, Laurence, Adrian, Marion Schön, Tricia Scott and anonymous donors, for sponsoring the project.

My project mentors Tomasz Postawa and Csaba Jére, and the Romanian bat research community provided feedback throughout the project. Ferenc Kölcsei's programming skills created the portal www.lilieci.ro. I couldn't have done this project without the support of my family and close friends. KTF organizers and all fellows, thank you for your support.

3. Project goal, purpose and objectives

The project's goal is to improve the conservation status of the Romanian bat fauna. The project's purpose is to strengthen conservation efforts for the Romanian bat fauna.

Objective 1: By January 2017, the bat research community from Romania jointly creates and implements standard and ethically correct bat research protocols and creates recommendations also for the public.

Objective 2: By January 2017, a complex online forum about Romanian bats is activated, and is used by the local bat research community, aiding in communication and public visibility.

4. Activities and timetable

Table 1. Activities and timetable of the project.

Activity	Year/month	2016											
		01	02	03	04	05	06	07	08	09	10	11	12
A1. Informing the Romanian bat research community about the project													
A2. Gathering information on European systems and protocols of bat research													
A3. Creating preliminary version of national protocols for bat research and public recommendations													
A4. Establishing key elements of the online platform aimed at Romanian bat researchers													
A5. Organizing national bat conference in autumn 2016													
A6. Incorporating feed-back received at the national conference into online platform and national protocols													
A7. Publishing final form of project outputs, informing stakeholders, and reporting.													

In January 2016, members of the Romanian bat research community were informed about the project, timetable, outputs and potential impact. Inquiries were made about possible contributions. Informing the bat community involved gathering contacts, sending emails, and direct information exchange at various events, including scientific conferences. In February - March 2016 we had begun gathering the information on European systems and protocols of bats research. We took into account European protocols, especially the EUROBATS agreement and in particular:

- Resolution 4.3. (Eurobats 2003a) and 7.6. (Eurobats 2014), about guidelines in the protection and management of underground roosts identified as important for bats;
- Resolution 4.6. (Eurobats 2003b) and 5.5. (Eurobats 2006), with regard to the capture and research of bats;
- Resolution 6.5. (Eurobats 2010), regarding the guidelines on ethics for research and field work practices.

In July - August 2016 we created the structure of the online platform (Table 2), outlined content requirements, and hired the programmer of the portal. Besides the elements specifically created for bat researchers, the structure included also several sections aimed at raising awareness in the public. We took inspiration from existing conservation websites (e.g. the Fauna & Flora International website), and asked also several well established bat researchers / photographers to contribute with photos or content. The portal logo and slogan ("Discover, Learn, Share", Figure 1.) was created by the KTF Fellow, along with all design elements.

Table 2. Main menus, submenus, access level and contribution possibilities of the online portal at www.lilieci.ro.

Main menu	Submenu	Access type	Contribution possibility	
			Public	Researcher
Home	News	Public		X
	The colony (blog)	Public	X	X
	Events	Public		X
World of bats	Bat origins	Public		
	Myth-o-logic	Public		
	Benefitting mankind	Public		
	Bats of Romania	Public		
	The playground	Public		
Bat protection	Why bat protection?	Public		
	Around bats	Public		
	Responsible tourism	Public		
	Laws and legislation	Public		
	Protection of roosts	Public		
	Protection of habitats	Public		
Multimedia	Photos, illustrations	Public		X
	Wallpapers	Public		X
	BEX - bat dictionary	Public		X
	Informative materials	Public		X
	Batvids	Public		X
	Infographics	Public		
	Newsletter	Public		
	Useful links	Public		X
Bat research	Researchers in Romania	Public		X
	Organizations in Romania	Public		X
	History of bat research in Romania	Public		X

Main menu	Submenu	Access type	Contribution possibility	
			Public	Researcher
	Ethics in bat research	Public		
	Bat projects	Public		X
	Scientific article database	Registration		X
	Bat species	Registration		X
	Species identification (photos)	Registration		X
	Species identification (ultrasound)	Registration		X
	Bat monitoring	Registration		
About the portal	Contact	Public		
	Our purpose and vision	Public		
	Our team	Public		
	Sponsors / Contributors	Public		
	The bat emissaries	Public	X	X
	Donations	Public	X	X
	General site rules	Public		
	Sitemap	Public		

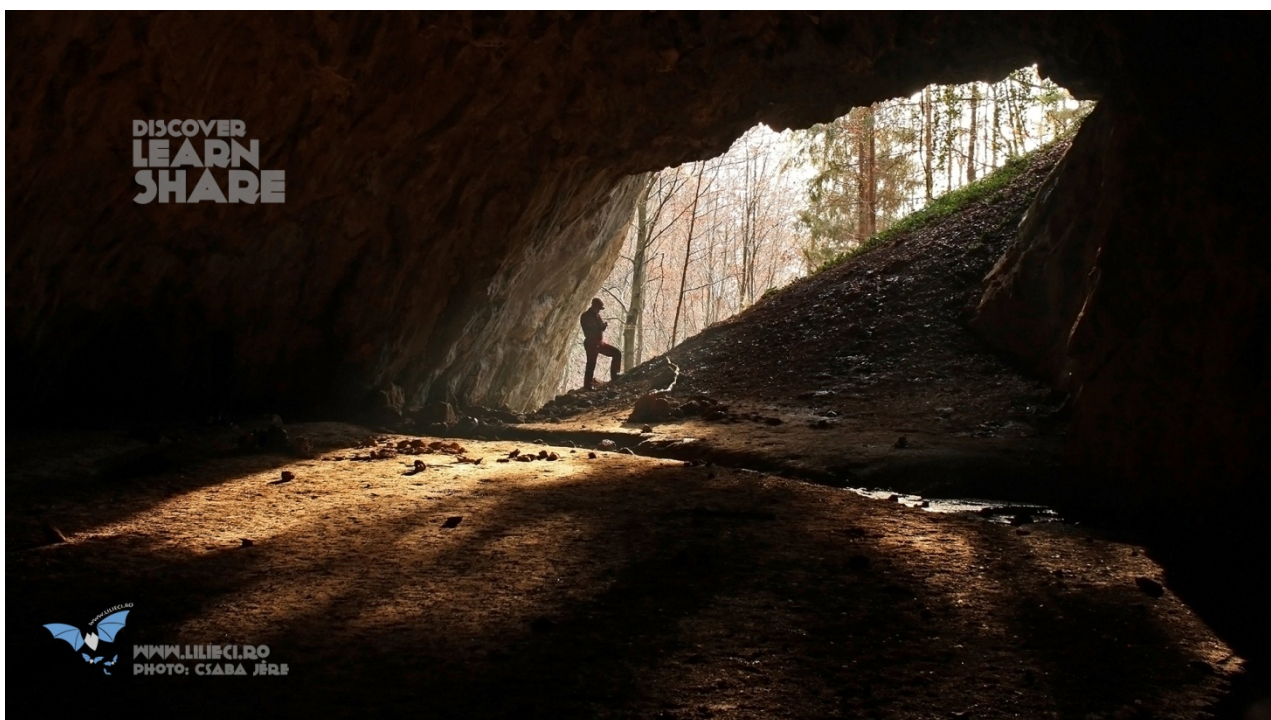


Figure 1. Example of downloadable wallpaper on www.lilieci.ro, with the slogan of the portal. Photo: Csaba Jéré (Romanian Bat Protection Association), source: www.lilieci.ro.

We acquired a versatile website theme (Enfold) and add-ons from www.kriesi.at. The creation of the basic structure was done with regular online and live discussions with the programmer. The main elements aimed at bat researchers are the scientific article database (400+ PDF's), detailed description of local bat species, including sensitive information, and aid in species identification based on photos or recorded ultrasounds. Bat researchers, who register as users of the portal, can contribute to several sections (Table 2). All submitted content

undergoes a review process, to ensure the meeting of site rules, content quality and copyright. In parallel we also created the Facebook equivalent of the bat portal at <https://www.facebook.com/lilieci.ro/>. The team creating the online platform included, besides the KTF Fellow and the programmer, also two bat experts, three language correctors (for Romanian, Hungarian and English), and two volunteers working in the field of marketing and SEO (Search Engine Optimization).

In the period of 28-30 October, we organized the 2nd Romanian National Bat Research Conference, after a ten year intermission. The conference included 13 oral and 6 poster presentations (Table 4), and three thematic debates about (1) ethics in bat research, (2) reestablishing communication in our community and (3) human - bat conflicts in cities. The conference resulted also in the decision to create communication channels on (1) Google Groups, and (2) Facebook. All participants agreed on the need to organize the national conference more often, and also on more frequent, smaller meetings on specific issues. At the end of the conference prizes were given to the best oral and poster presentations (Table 4).

Table 3. List of participants of the 2nd Romanian National Bat Research Conference.

Nr.	Participant name	Affiliation, city
1.	Alexandra Corduneanu	University of Agricultural Sciences and Veterinary Medicine
2.	Alexandra Telea	Ovidius University, Constanța
3.	Ana Stamatescu	Techsoup Romania, Bucharest
4.	Antoaneta Opreșan	Romanian Ministry of Environment, Bucharest
5.	Barti Levente	Romanian Bat Protection Association, Sfântu Gheorghe
6.	Daniela (Borda) Cociuba	Emil Racoviță Speleological Institute, Cluj-Napoca
7.	Dóczy Annamária	Environmental Protection Agency, Harghita
8.	Dragoș Bălășoiu	Independent bat researcher, Constanța
9.	Farkas Szodoray-Parádi	Romanian Bat Protection Association, Satu Mare
10.	Georgiana Mărginean	University of Bucharest, Bucharest
11.	Gönczi-Vass Ildikó	Romanian Bat Protection Association, Cluj-Napoca
12.	Ioan Coroiu	Babeș-Bolyai University, Cluj-Napoca
13.	Ionut Crețu	Foundation Conservation Carpathia, Brașov
14.	Irina Pocora	Romanian Bat Protection Association, Iași
15.	Jére Csaba	Romanian Bat Protection Association, Odorheiu Secuiesc
16.	Marius Cicoănău	University of Agricultural Sciences and Veterinary Medicine
17.	Marius Vlaicu	Romanian Ministry of Environment, Bucharest
18.	Oana Chachula	National History Museum, Bucharest
19.	Olimpia Stan	Romanian Bat Protection Association, Cluj-Napoca
20.	Ovidiu Roșu	Luana Animal Rehabilitation Centru, Bucharest
21.	Szántó László	Romanian Bat Protection Association, Miercurea Ciuc
22.	Szilárd Bücs	Romanian Bat Protection Association, Cluj-Napoca
23.	Teodora Sinculeț	Semenic - Cheile Carașului National Park, Reșița
24.	Viorel Pocora	Romanian Bat Protection Association, Iași

The verbal feedback received during the thematic debates of the conference was incorporated during November in the draft of documents regarding (1) ethical bat research and

(2) public contact with bats in nature. Both documents were submitted for final revision during the second half of November, on the newly created communication channels of the bat community. After receiving the last feedbacks in late November on standard documents, these were finalized and shared on the communication channels of the Romanian bat research community. Also, they were incorporated into specific sections of the bat portal. The documents are given in English in Annex 2 and 3.

Table 4. Oral and poster presentations of the 2nd Romanian National Bat Research Conference. OP - oral presentation, PP - poster presentation, W - winner of category.

Nr.	Authors, name of presentation	Note
1.	Marius-Alexandru Ciocănașu , Dragoș Ștefan Măntoiu, Stelian Baraitareanu, Doina Danes: The necessity of integrating the concept of „One health” among bat workers.	OP
2	Alexandra Corduneanu , Andrei Daniel Mihalca, Kristýna Hrazdilová, David Modry, Sándor Hornok, Attila D. Sándor: Detection of canine pathogens in bat tissues.	OP
3.	Irina Elena Pocora , Viorel Pocora: Study about the identification and mapping of Annex II bat species in the Natura 2000 site ROSCI0069 Domogled - Valea Cernei.	OP
4.	Adrian Done, Oana Mirela Chachula , Gheorghe Romașcan: 15 years of monitoring in the Natura 2000 site Rarău - Giuamalău.	OP
5.	Daniela (Borda) Cociuba , Raluca Uricariu, Janez Mulec: Bat caves and guano in Romania - a potential biohazard?	OP
6.	Szilárd Bücs , Csaba Jére, István Csósz, Levente Barti, Farkas Szodoray-Parádi, Annamária Dóczy, László Szántó: Cave-dwelling bats of Romania: current status and challenges of durable protection.	OP
7.	Tatiana Done, Adrian Done, Oana Mirela Chachula : “The European Bat Night” from 2001 to present - participation of the Bucovina Speleological Foundation.	OP
8.	Csaba Jére , István Csósz, Szilárd Bücs, Levente Barti, Farkas Szodoray-Parádi, Csaba Bartha, Endre Jakab: Aspects regarding bat activity in the swarming period at underground roosts in the Apuseni Mts.	OP, W
9.	Ioan Coroiu , Ferenc Forray, Corina Ițcuș, Alin David, Bogdan Onac, Traian Brad, Alexandru Nicolae Stermin, Alexandra Negruț: Zidită de la Mada Cave – an important bat roost.	OP
10.	Oana Mirela Chachula , Irina Elena Pocora: 10 years after the death of Prof. Nicolai Valenciuc.	OP
11.	Ioan Coroiu , Regina Klüppel, Sever Covaciu-Marcov, Anda Culișir: Roost fidelity in case of bats.	OP
12.	Szilárd Bücs : The Lilieci.ro portal - a necessary tool for Romanian bat protection.	OP
13.	Oana Mirela Chachula : Cave exploration and research in NE India, Meghalaya.	OP

Nr.	Authors, name of presentation	Note
14.	Levente Barti , Csaba Jére, István Csósz, Attila D. Sándor, Szilárd Bücs: Cases of leucism in some Barbastelle (<i>Barbastella barbastellus</i>) populations from Romania.	PP, W
15.	Dragoș Bălășoiu , Alexandra Telea: Forest dwelling bats and wind farms: case study in a wind farm of Dobrogea.	PP
16.	Oana Mirela Chachula , Ioan Coroiu, Georgiana Mărginean: The Humor Monastery - between the conservation of patrimony and colonies, new data about the <i>Myotis myotis/blythii</i> colony.	PP
17.	Oana Mirela Chachula , Cătălin-Răzvan Stanciu, Dragoș Ștefan Măntoiu, Georgiana Mărginean: Aspects about the bat population of the Natura 2000 site Pădurea și Valea Canarua Fetii - Iortmac (ROSCI0172), Constanța county, Romania.	PP
18.	Daniela (Borda) Cociuba , Ruxandra Năstase-Bucur, Marius Kenesz, Alex Petculescu: The Tăușoare cave – a hibernacula of national importance.	PP
19.	Dragoș Ș. Măntoiu , Ionuț C. Mirea, Ruxandra Năstase-Bucur, Daniela (Borda) Cociuba, Oana T. Moldovan: Bats from tourist caves: spatial models of optimal habitat selection based on microclimate.	PP



Figure 2. Participants of the 2nd Romanian National Bat Research Conference, held in the period of 28-30 October 2016, Plaiul Foi, Brașov County, Romania. Photo: Szilárd Bücs.

The online portal was activated in December at www.lilieci.ro, and any relevant feedback received in the future will be incorporated into its structure and content. Currently the Romanian version is active, with the Hungarian and English versions being activated till February 2017. The final report was prepared and sent in December to KTF. Sponsors and contributors are acknowledged in a dedicated section of the portal, in printed materials and

throughout the conference. Main outputs, especially the document of ethical guidelines and the online portal's address were send also to EUROBATs, from where it will be distributed to the European bat research community.

5. Financial analysis

Table 5. Funds received from different source types throughout the project, in EUR and national currency. Donations total 2.400 EUR.

Fund types received	Price (EUR)	Price (RON)
Direct sponsorships	1700.00	7653.00
Crowdfunding	568.00	2557.00
Indirect sponsorships by price reduction	133.00	598.00
Conference registration costs of participants	1200.00	5400.00
Total:	3601.00	16208.00

Table 6. Expenditures throughout the project.

Expenditure	Price (EUR)	Price (RON)
Buying website template and add-ons from Kriesi.at	140.00	630.00
Hiring professional programmer for creating online bat portal	700.00	3150.00
Communication costs throughout the project	300.00	1350.00
Scouting possible conference locations	200.00	900.00
Printing conference volume of abstracts	46.00	206.00
Printing educative materials	475.00	2140.00
Contribution to conference registration (12 EUR / participant)	288.00	1295.00
Venue reservation	689.00	3100.00
Food for conference participants	767.00	3452.00
Total:	3605.00	16223.00

In frame of the project we created and printed a series of educative materials that also feature logos of sponsors. Educative materials, printed in order to publicize the www.lilieci.ro bat portal, are:

- 1 X-banner for future events (in Romanian)
- 25 www.lilieci.ro badges
- 35 A6 size notebooks
- 4 bat puzzles
- 2 bat mugs
- 30 high quality A2 bat posters (10 in each language, RO, HU, EN)
- 1200 stickers of various design (400 for each language, RO, HU, EN)

Also, In order to maintain the functionality of the bat portal, future updates, and consultations with the programmer, to disseminate further printed materials, to organize bat related events, and to be able to give telephonic advice in case of stress caused by bats, we started a continuous fundraising campaign: <https://gogetfunding.com/doneaza-pentru-lilieci/>

6. Outputs

6.1. Ethical guidelines for the research of the Romanian bat fauna

Elaborated by the Romanian bat research community, the guidelines (Annex 1) detail ethical and scientifically correct approaches in studying Romanian bats. For the first time in the history of Romanian bat work, aspects about correct ringing and marking of bats, seasons of zero disturbance and details about correct handling of bats have been described and summarized. The use of published or unpublished data, creation of public databases, and collaboration with foreign bat researchers is in the process of being cleared up. The guidelines contain also certain aspects regarding the need of communication in case of influencing bat colonies of national and continental importance during scientific research.

6.2. Best practices in contact with bats in nature, for the Romanian public

Since public behaviour can greatly influence bat conservation, especially in caves, we created a simple 10 point list of recommendations (Annex 2). These best practices (ex. Figure 3) are recommended to be applied when encountering bats in Nature (caves, tree holes, mines). Combined with other sections of the bat portal (legislation, responsible tourism, physiological effects of human presence on bats) it will supply a great amount of information to the public about adequate behaviour.



Figure 3. One important message aimed at the public, present also on stickers. Bat illustration: Georgiana Mărginean (University of Bucharest).

6.3. 2nd Romanian National Bat Research Conference

This event came after a ten year break in the organization of national bat research conferences, and gathered to one table the key figures of the Romanian bat research community. We were able to present current research results, to discuss the establishment of new communication channels (Google Group, Facebook group) and to agree on the need of ethical aspects of bat research. The event had 24 participants, 13 oral and 6 poster presentation, and three thematic debates.

6.4. Online platform about bats, for the public and the research community

The bat portal at www.lilieci.ro is by far the most complex and diverse online resource in Romania about bats, bat conservation and research. It contains public sections, restricted user-based sections, awareness articles, call-to-action, and several other elements, including an ever growing media library. Both the public and registered users have the chance to contribute with

own experiences, thematic articles, photos (Figure 4), or information about ongoing projects and upcoming events (Table 2). With all three language packs activated by February 2016, the bat portal can draw in also the public and bat researchers of surrounding countries like Hungary, Bulgaria and Ukraine.



Figure 4. Example of a bat photo (*Myotis mystacinus*) received from a Hungarian bat researcher, to be used in the public sections of www.lilieci.ro. Photo: Dénes Dobrosi.

6.5. Bat emissaries

Social media or other communication channels cannot reach a wide audience without constant posting and sharing. One Facebook post reaches only 17% of followers. Hence, we created the term “bat emissary” for members of the public who are willing to receive and share information published by the portal. Currently we have 28 bat emissaries, who are sharing all posts of the bat portal and of its Facebook equivalent, multiplying the reach of our publications. The work of bat emissaries is rewarded at the end of each year, with printed materials created in limited numbers.

6.6. Communication channels of the Romanian bat research community

Within the framework of the national bat conference, we agreed to establish two communication channels. The Google group email list is used to communicate about issues that require in-depth detailing or a more official setting (liliecarii@googlegroups.com), while the closed Facebook group (<https://www.facebook.com/groups/Liliecarii/>) is used to communicate simpler or urgent issues. The need of two communication channels is explained also by the fact that the older generation is not necessarily using Facebook. The Google group email list was already used to finalize the ethical guidelines and the public document, and is

currently being used to discuss threatened colonies, the future of ringing activities in Romania, as well as the creation of joined databases about bat distribution in Romania.

6.7. Printed materials for publicizing the bat portal

A part of sponsorships and private contributions were used to create a series of bat related informative printed materials (Figure 5), including stickers, posters, badges, and other items. These materials will help to spread the information about the existence of the bat portal, and will draw the public to access it.

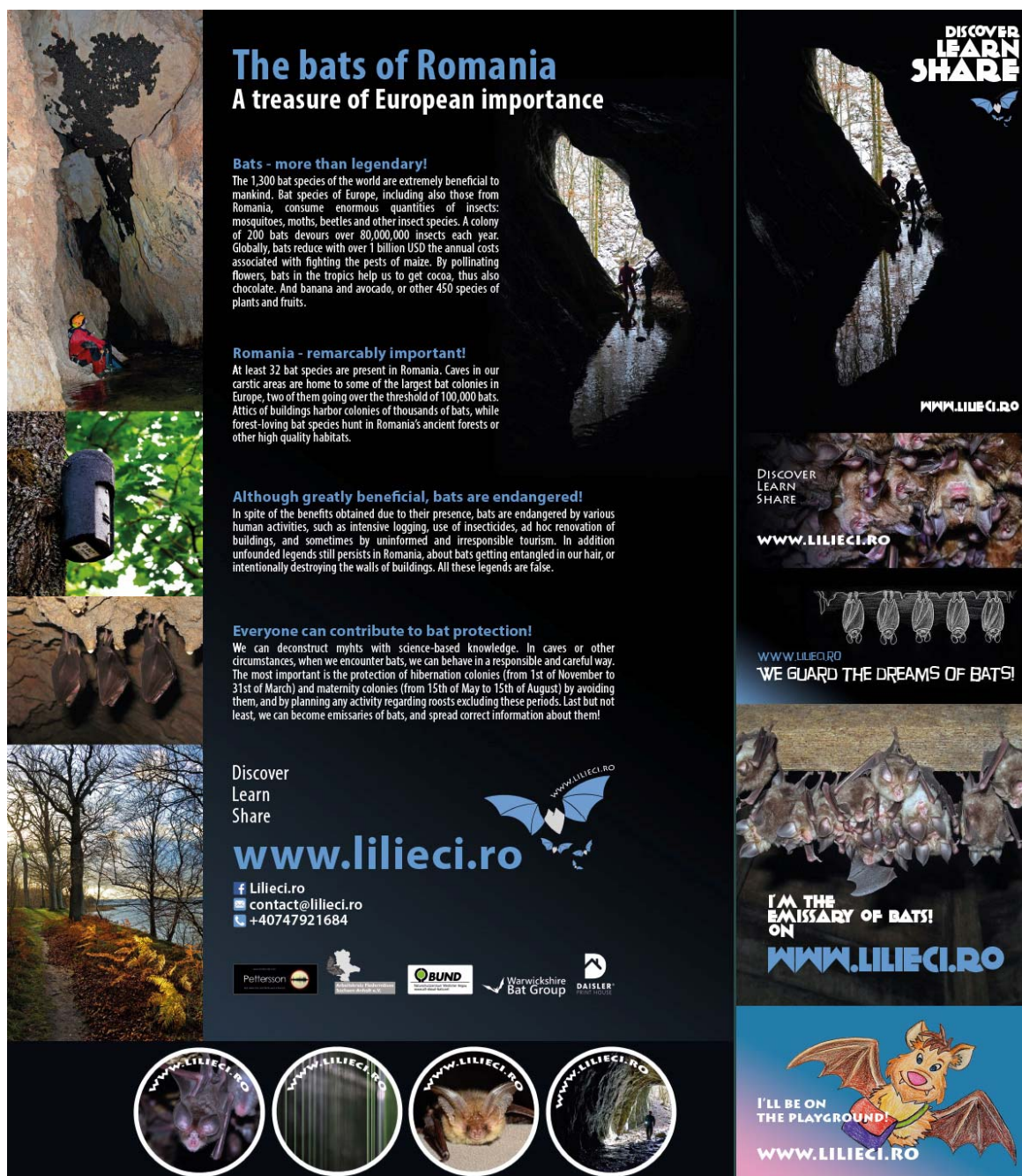


Figure. 5. Examples of printed materials created to publicize the online bat portal: poster, notebook, and various stickers. Photos: Szilárd Bücs (Romanian Bat Protection Association). Bat illustration: Georgiana Mărginean (University of Bucharest).

7. Impact and sustainability

At the start of the project, we expected that the communication inside the Romanian bat research community will be restored to a certain degree. This was achieved by the project, through new communication channels, regular consultations and also using a somewhat “pushy” attitude throughout the project. Different generations of bat researchers had the chance to size up each other in frame of live and online conversations, with the revived communication activating also some silent members of our bat research community. All this can have a positive effect on future relations inside our community.

Several of our community members now recognize that communication and joined efforts are vital for efficient conservation work. We will maintain constant communication by periodic emails, reminders, even joint field work, and will rely on the help of those colleagues who are willing to share their opinion more easily. Also, there will be periodic calls to contribute with content to the bat portal, engaging bat researchers to share their views, experiences or results with the public. All this will make our efforts more visible to the public, contributing in the long run to a better bat conservation in Romania. However maintaining communication and openness will be hard, due to the reluctance of key members of our community to get involved, and also due to professional rivalries expressed in non-inclusion and denial. The past few years have left a significant mark on our community, reinforced by the absence of general communication. Also, a somewhat pessimist atmosphere looms over our community, due to legal and governmental uncertainty, corruption of people in power positions and backdoor decisions. We will try to counter these behaviours and atmosphere by transparency and optimism.

The ethical guidelines of bat research, created by the project, will form the baseline for a potential future legal document, which would officialise these aspects. However, this depends largely on Romanian political / ministerial will. In any case, the document stands ready, and needs only adjustments from the point of view of legislative terminology. Also, ethical guidelines will reach also the European bat research community, through EUROBATS. Our organization will use the outputs of the project to reinforce and underline the protection of bats, and establish itself again as the leading organization of Romanian bat research and conservation.

Once activated, the online portal needs some financial input, which will be secured by donations on the portal and by applying for media grants. Regular updates and new content will be published with the help of bat researchers and the public. Since the online platform includes automated processes, registered users will be able to easily upload new content (ex. new articles, news, photos), facilitating their participation. An ever increasing number of “bat emissaries” will help in spreading correct conservation messages to a large audience. But the real impact of the project will start to be visible only after a few months of communication inside the bat research community and after all language packs of the portal are activated.

Annex 1.

Ethical guidelines of Romanian bat research

Art. 1. Any kind of research or monitoring which involves elements of the Romanian bat fauna requires permits from authorized bodies (if the work includes capturing bats and/or access to caves), and/or permits from administrators or custodians of those protected areas, in which the mentioned activities take place.

Art. 2. Any kind of research or monitoring of the Romanian bat fauna should have a well-defined purpose and timeline, a well established, scientifically and ethically correct methodology, and the activities must yield such scientific data, as to be useful in better understanding aspects of the Romanian fauna, and/or contribute to a durable protection, without having negative effects on studied bats.

Art. 3. Bat research, which can artificially alter the results of the national bat monitoring in key roosts (ex. additional visits or studies above the standard of two visits/season) must be communicated to the Romanian bat research community, by electronic mail to liliecarii@googlegroups.com, before starting the project.

Art. 4. Bat research and/or visits undertaken on the territory of Romania, which is conducted in collaboration and in the presence of foreign researchers, must be communicated to the Romanian bat research community, by electronic mail to liliecarii@googlegroups.com, before starting the project.

Art. 5. Research or monitoring involving elements of the Romanian bat fauna must take into account the following:

- a) Intentional waking of bats during the hibernation period (November 1 - March 31) must be avoided;
- b) The handling of bats during the hibernation period (November 1 - March 31), including their removal from their hibernation position or location hibernation must be avoided, with the exception of rescuing bats that are in imminent danger, where there is no other possible measure of protection;
- c) Photographing bats or bat colonies during the hibernation period (November 1 - March 31) and the maternity period (May 15 - August 15) for longer periods than 1 minute, or with more than 1 light source, and for purposes unrelated to the issued authorization or activity must be avoided; It is recommended that preparations for photographing bats (installing speedlight, tripods, etc.) in order to document specimens or subsequent colony counts on computers, be done away from the colony;
- d) Stopping below colonies during the hibernation period (November 1 - March 31) and the maternity period (May 15 - August 15) must have the shortest duration possible, and must not exceed 5 minutes;
- e) Camping and bivouacking in caves must be done at a distance greater than 100 meters from the nearest bat colony;
- f) Capturing bats or any kind of sample collection from bats must be avoided in the period of hibernation (November 1 - March 31), with the exception of collecting dead animals or guano samples from underneath colonies;

- g) Capturing bats with any kind of method must be avoided during the maternity period (May 15 - August 15) at entrances and inside of roosts that are known to harbour maternity colonies, and within a radius of 200 meters around the roost;
- h) In case of any roost, it is mandatory to immediately release, without any kind of intervention, sampling or marking, those female bats that are pregnant;
- i) Researching and capturing bats with improvised methods and equipment must be avoided;
- j) Avoid keeping bats in captivity for more than 30 minutes;
- k) The ringing of bats in Romania must follow a national plan, with centralized data, standard rings and unique national code, which makes possible the exact identification of the recaptured bat, as well as done only by experts who have obtained the right to ring bats;
- l) The right to ring bats can be obtained by successfully completing specialized trainings organized for this purpose, that are organized at the national level by experts who already obtained the right to ring bats;
- m) It is prohibited to ring bats with improvised rings, or with rings that are not manufactured by authorized companies;
- n) The species *Rhinolophus hipposideros*, *Rhinolophus mehelyi*, *Rhinolophus blasii*, *Rhinolophus euryale* and *Plecotus* species must not be ringed;
- o) Juvenile or injured specimens, as well as specimens who have an obvious bad physical condition (ex. below average bodyweight, large numbers of parasites, etc.) must not be ringed;
- p) Females captured during the maternity period (May 15 - August 15) must not be ringed;
- q) Research methods that present a high level of disturbance to bats (radiotelemetry, sample collection, etc.) but which do not have a clear goal, have small chances of resulting in scientific data, that contributes to a better understanding of the Romanian bat fauna of Romania and/or a durable protection, must be avoided;
- r) Permanent collection of live bats must be avoided;
- s) The use of carbide based light sources is prohibited in Romania by Decision nr. 1 of the Speleological Heritage Commission from 12.09.2012;
- t) The use of bright lights to facilitate research in the area of influence of bat colonies (at less than 100 m), and/or in the hibernation (November 1 - March 31) and maternity periods (May 15 - August 15) must be avoided;
- u) Genetic, virological or parasitological sampling in the pre- and post-hibernation periods (2 weeks before and after hibernation), as well as during hibernation (November 1 - March 31) and from pregnant and nursing females must be avoided, and also genetic, virological or parasitological sampling from newborns in maternity colonies;
- v) The capture of bats to conduct laboratory experiments must be avoided.

Art. 6. The process of elaborating scientific and/or educational articles, that uses chiropterological data collected by Romanian researchers, must care into account the following:

- a) Unpublished data can be used to develop scientific and/or educational articles, or distribution maps only with the agreement of the author(s) of the data, and/or where

appropriate, with the agreement of the data owner, and only by clearly referencing the source of the data;

- b) Data from existing publications may be used in the development of scientific and/or educational articles, or distribution maps without consulting the original authors, but only by clearly referencing the source of the data; It is recommended to contact authors directly, to inform them about the intention of data use;
- c) The materials and methods section of scientific papers dealing with chiropterological data from Romania must contain details about the authorizations/permits obtained to carry out the activity (issuing authority, number, year, etc.), or arguments about why an authorization/permit was not necessary to carry out the work;
- d) In case of creating public databases, using published and unpublished data related to colonies of national importance, the initiators must consult to the Romanian bat research community, by electronic mail to liliecarii@googlegroups.com, before starting the project.

Art. 7. In case of bats collected in urban settings due to public distress, these specimens can be set free in the wild (at caves, potholes, etc.), but not at sites which are categorized as nationally or continentally important for Romanian bat populations.

Art. 8. In the event of abusive and/or unauthorized research, unintentional or intentional destruction, significant disturbances, or activities that result in high bat mortality, or which do not comply with the conditions imposed in authorizations/permits, the penalties are based on the provisions entailed in existing legislation of animal protection, referring to:

- a) Law nr. 13/1993 for ratifying the Convention on the Conservation of European Wildlife and Natural Habitats in Europe;
- b) Law nr. 13/1998 on the Conservation of Migratory Species of Wild Animals;
- c) Law nr. 90/2000 for ratifying the Agreement on the Conservation of Bats in Europe (EUROBATS);
- d) Directive 2008/99/EC on the protection of the environment through criminal law (Habitats Directive);
- e) Law nr. 49/2011 approving Government Emergency Ordinance no. 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna;
- f) Law nr. 205/2014 on the protection of animals;
- g) De lege ferenda.

Note: Authorizations/permits for research or access into Romanian caves are obtained from the Speleological Heritage Commission. Permits to access and undertake research activities in Romanian protected areas are obtained from administrators or custodians of those protected areas.

Annex 2.

Recommendations for the public in case of contact with bats in nature

1. The access into caves or other roosts should be done in order, silence and calm, in compliance with safety requirements, and without disturbing bats, by staying on marked trails or existing tourist routes, and by using only electric light sources (the use of carbide powered light sources in Romanian caves is prohibited by Decision nr. 1 of the Speleological Heritage Commission, from 12.09.2012).
2. Proceed on trails without illuminating or photographing bats;
3. Do NOT touch or deliberately knock down bats;
4. Do NOT capture or try to hit bats in flight;
5. Stay as little as possible (less than 1 minute) in the vicinity of bats;
6. Avoid camping in the underground; if camping in caves is strictly necessary (ex. for safety reasons), camp only at distances greater than 100 meters from bats;
7. Do NOT create smoke inside caves or other shelters, or at their entrances;
8. At caves or other shelters, or at their entrances avoid installing and/or using equipment that produces constant and excessive noise and/or light; Exception are the personal light sources, used for staying safe;
9. Do NOT organize events (ex. concerts, festivals, fairs, religious activities, liturgies, etc.) involving light, noise or other kinds of pollutions inside caves, or at less than 200 m of their entrances;
10. Do NOT install infrastructure which can cause disturbance to bats, or which can cause changes in the microclimate of roosts (ex. gates, artificial walls, ditches), or which can prevent the access of bats to caves or other roosts.