

**NATIONAL REPORT ON THE IMPLEMENTATION
OF THE AGREEMENT ON THE CONSERVATION OF
BATS IN EUROPE
(EUROBATS)**

ROMANIA

2004 – 2005

**„Grigore Antipa” National Museum of Natural History
Ministry of Environment and Waters Management**

April 2005

A. General information:

- *Name of the Party:* Romania
- *Date of report:* April 2005
- *Period covered:* March 2004 – March 2005
- *Competent Authority:* Ministry of Environment and Waters Management
Directorate of Biological Diversity Conservation and Biosafety
MSc. Atena Adriana Groza
Address: Bd. Libertății 12, sector 5, Bucharest, Romania
Tel: ++ (401) 410 05 31
Fax: ++ (401) 410 02 82
e-mail: atena@mappm.ro

- *Prepared by:* **Dr. Dumitru Murariu**
“Grigore Antipa” National Museum of Natural History
Member in the Advisory Committee of EUROBATS
Address: Sos. Kiseleff 1, sector 1, 79744 Bucharest, Romania
Tel: ++ (401) 312 88 86
Fax: ++ (401) 312 88 63
e-mail: dmurariu@antipa.ro

B. Status of Bats within the Romanian Territory

1. Summary details of the resident species:

In the reported period (March 2004 – March 2005) the efforts were focused to organize better the research activities, educational programmes and public awareness in the field of the Romanian Chiropterology.

Having already a national bat monitoring programme shared between academic institutions, NGOs and volunteers, practically all the Romanian territory was covered with larger or smaller teams with trained people to provide correct information on bat species, estimation of populations and evolution tendencies of these populations. The main goal of this programme is to implement an efficient conservation of bat species and of their habitats.

Referring to the species identification the most implied people are familiar in correlating the results of visual observations with photos, places, high, flight type and silhouette of active bats as well as the frequencies recorded with bat detectors and even mist netting at the entrance of the caves, tree hallows, garrets, creviced buildings and cellars for direct examination, identification, proof of reproduction, marking and to release individuals, and eventually to recapture.

Estimation of populations and tendencies of their evolution was a difficult task because counting could be erroneous and it is not possible to start and develop the checking of all roosts simultaneously. Especially summer surveys are under intensive movement of bats around the roosts.

However, as a general estimation for all 30 reported species from the Romanian bat fauna is decreasing (in some cases alarming decreasing) of population size. In previous report we

presented a list with total number of species, with estimated different status: vulnerable – three species of Rhinolophids and five of Vespertilionids; with lower risk near threatened – other two Rhinolophids and four Vespertilionids; lower risk least concern – 16 Vespertilionid species.

Between the bat species with alarming decreasing populations it can be mentioned: *Miniopterus schreibersii*, *Rhinolophus bechsteinii*, *Myotis emarginatus*, *Barbastella barbastellus*.

A special status is that of *Rhinolophus mehelyi*, already mentioned in the last report. This species has small populations (e.g. 150 – 160 individuals in Gura Ponicevei cave) but now it is with a larger distribution on the Romanian territory. Up to 2004 it was reported only from Dobroudja and Bucharest; recently it was identified in a cave on the left shore of the Danube River, in south-west part of the country. It is true that the distribution was not yet extended on the latitude so that southern part of Romania should be the northern limit of *R. mehelyi* range.

The reason of a new report on *R. mehelyi* in new places can be better organized/surveyed more systematically, mainly the underground roosts from Romania, during last few years.

2. Status and trends:

In relation to the above mentioned point (1) it is necessary to continue and extend the National Bat Monitoring Programme in order to appreciate the status and trends of bat populations in Romania. During the last year, three caves in Moldavia (eastern part of Romania), 15 caves in Transylvania and 17 caves in southern part of the country: Dobroudja, Muntenia, Oltenia and Banat were investigated. The general conclusion is all identified bat species need to be protected because of continuous decreasing number of individuals.

Some caves (Rarău in Moldavia; Huda lui Păpără and Peștera cu Apă from Valea Leșului in Transylvania; Limanu, Cloșani, Avenul lui Adam, Bistrița, Șura Mare, Gura Ponicevei – in southern part) were investigated 4 – 5 decades before and after the last year results. They still have important colonies of bats. Some of the species are common: *Pipistrellus pipistrellus* (45 kHz), *P. pygmaeus* (55 kHz) from “Șura Mare” cave - with colonies counting about 34,000 individuals. *Miniopterus schreibersii* was represented by colonies with about 2,000 individuals. The total number of individuals of the 9 identified species in “Șura Mare” cave was approximately 40,000 individuals.

On the other hand, *Miniopterus schreibersii* was found in fewer roosts and its colonies are much smaller (e. g. in Bistrița cave, this species was represented by 1,200 individuals only in prehibernation period, while nursery and hibernation colonies do not count more than 900). On the whole, the Bistrița cave hosts only 1,000 – 3,000 individuals today, while 4 decades ago only *Miniopterus schreibersii* was represented by a larger colony (approx. 5,000 ind.).

According to this continuous decreasing number of individuals, the status of species is changing toward the threatened category for most of them. In the Romanian bat fauna, *Nyctalus noctula* and *Pipistrellus pipistrellus*/*P. pygmaeus* can be considered common species; in January 2005, I found individuals of these species hibernating in a heap of corn cobs, in Buzău County – southern part of Romania. This means that *Nyctalus noctula* and the two species of *Pipistrellus* are very competitive, roosting anywhere in buildings, annexes, hay cocks, tree hollows, wall and stone crevices, in subterranean shelters.

Myotis myotis has a large distribution all over the country, but the colonies are not at all numerically impressive. For this reason this species is not considered a common one.

According to the Tab. 1, from a total of 30 bat species reported on the Romanian territory 16 species can be considered endangered and only 2 are common. Maybe not only one species (*Rhinolophus blasii*) has the status of critical endangered as it is shown in the table.

From a total of 11 species with deficiency data status, *Rhinolophus euryale* from Western and Southern Carpathians (in Banat), *Myotis capaccinii*, *M. dasycneme* and *Eptesicus nilssonii* also only in Banat or at the most in the Western Carpathians on one hand and *M. emarginatus* with larger distribution but having small populations on the other one could be considered with a status of critical endangered, too. The last 5 species are classified in category with deficiency data and their stability in populations is only due to the lack of information.

A special remark should be done for *Rhinolophus euryale* with still relatively good populations but only in restricted area: Huda lui Papară and Cheile Turzii caves (with summer and hibernating colonies – approx. 200 individuals in each), Cloșani cave (with 1,500 individual in hibernating colony), Izverna cave (approx. 300 individuals in summer colony), Topolnița cave (approx. 3,000 ind. in hibernating colony), Avenul lui Adam (with 4,500 ind. in summer colony), Gura Ponicevei cave (with 1,500 ind. in nursery colony). These roosts are mostly in Banat (south-west part of Romania) and fewer in Transylvania.

Table 1:

Status and trend of bat species from the Romanian fauna.

S p e c i e s	Status*	Trend**	Observations
<i>Rhinolophus ferrumequinum</i>	En	D	Hibernates only in underground roosts.
<i>Rhinolophus hipposideros</i>	En	D	Demisynanthropic species but hibernates like previous one.
<i>Rhinolophus euryale</i>	Dd	S	Prefers underground cavities.
<i>Rhinolophus blasii</i>	Cr	D	Troglophilic species; large garrets and cellar are mainly used in summer time.
<i>Rhinolophus mehelyi</i>	En	D	Troglophilic species.
<i>Myotis myotis</i>	En	D	Mainly synanthropic.
<i>Myotis blythii</i>	En	D	Anthropophilic and troglophilic species.
<i>Myotis capaccinii</i>	Dd	S	Typical troglophilic.
<i>Myotis dasycneme</i>	Dd	S	Anthropophilic and forests.
<i>Myotis daubentonii</i>	En	D	Forest and parks with rivers or water spots.
<i>Myotis emarginatus</i>	Dd	S	Warm caves and garrets and cellars with 6 - 9°C in winter
<i>Myotis mystacinus</i>	En	D	Forests and houses.
<i>Myotis nattereri</i>	Dd	S	Tree hollows, garrets and underground roosts.
<i>Myotis bechsteinii</i>	Dd	S	Tree hollows; caves occasionally.

<i>Myotis brandtii</i>	Dd	S	Tree hollows and caves. (Recently reported from the Western Carpathians).
<i>Plecotus auritus</i>	En	D	Tree hollows, cellars and caves.
<i>Plecotus austriacus</i>	En	D	Tree hollows, garrets, cellars and caves with 2 - 9°C.
<i>Vespertilio murinus</i>	En	D	Garrets, cellars, wall crevices
<i>Eptesicus serotinus</i>	Dd	S	Forests, parks, hauses.
<i>Eptesicus nilsonii</i>	En	D	Hauses, crevices and caves.
<i>Nyctalus noctula</i>	Cm	S	Tree hollows, hauses, crevices.
<i>Nyctalus lasiopterus</i>	En	D	Ibidem.
<i>Nyctalus leisleri</i>	En	D	Ibidem.
<i>Pipistrellus pipistrellus</i>	Cm	S	Hauses, artificial nests, caves
<i>Pipistrellus pygmaeus</i>	Dd	S	Ibidem
<i>Pipistrellus nathusii</i>	En	D	Tree hollows, hauses, crevices.
<i>Pipistrellus kuhlii</i>	Dd	S	Hauses and caves.
<i>Hypsugo savii</i>	Dd	S	Hauses and tree hollows.
<i>Barbastella barbastellus</i>	En	D	Garrets, tree hollows, crevices.
<i>Miniopterus schreibersii</i>	En	D	Troglophilic species.

*En – endangered; Cr – critical endangered; Dd – deficiency data; Cm – common. ** I – increasing; D – decreasing; S – stationary.

However a certain fact is that no bat species registered an increasing number of individuals during the last 5 years. Those 11 species with deficiency data status were considered with stable populations, but their status should be reconsidered after special surveys will be initiated. The other 19 species registered different degrees of decreasing number of individuals in their populations.

As we have already mentioned in previous report, to improve results on distribution, the estimation of bat populations and to understand better the trend of them, the national bat monitoring program should be continued, implying academic institutions in close relations with NGOs and volunteers who are organized in different associations which deal with important bat roosts as caves are in their underground trips.

3. Habitats and Roost Sites

Fortunately, Romanian Government decided (Law 230/2003) to increase the number of protected areas. Today, these protected areas increased already from 5% to 6% from all Romanian territory. From a total of 844 protected areas, there are 11 National Parks, 6 Natural Park (other 6 with documentation to be declared), 3 Biosphere Reserves, 52 Scientific reserves, 228 Monuments of Nature (including many caves as underground roosts for bats), 537 Natural Reserves (other 42 with documentation to be declared).

Within this context, there is a hope for Romanian bat fauna to protect their roosts on one side and on the other one – their foraging habitats. Those 844 protected areas are distributed all over the country, starting with Danube Delta up to Retezat, Piatra Craiului, Vânători-Neamț and other National Parks or smaller scientific reserves.

One example from Piatra Craiului National Park refers to a list of caves which need to be protected. In this Mountain (Piatra Craiului – a limestone mountain) there are over 500 caves and crevices. The Administration of Park received a list with 16 caves to be included in its own management plan as protected areas (inside the National Park) for their scientific importance: faunistic, geological and inside (in caves) landscape. Their protection and conservation should be done mainly by restricting access (with metallic gates, appropriate for bat access).

These sorts of measures were taken in many other places: Bistrița cave, Cloșani cave, Limanu cave etc.

4. Threats

The above mentioned increase of protected areas in Romania did not solve the main threats of bat fauna, yet. Deforestation still continues and old trees disappeared, pastures are overexploited, in underground roosts still enter devastating tourists for karstic structures but for bat colonies, too (at least disturbing them), public awareness being only at the beginning.

The uses of chemicals in agriculture and for pest control in forests on one side reduce the main food for bats and on the other side affect the health of bat populations.

5. Data Collection, analysis, interpretation and dissemination.

Starting with National Bat Monitoring Program methods of work with bats were standardised: observations, use of bat detectors, mist netting, examining and release of bats, visiting periods in different roosts and accesses regulation, etc.

In Monitoring Programme young people as volunteers (mainly students), some of them working for their graduate or master degree were included. Three Ph. Degree theses on bats from Romania are in preparation.

In May 2004 and January 2005, „Grigore Antipa” National Museum of Natural History organized temporary exhibitions on bats, their roosts and need of protection. In order to familiarize the visitors with bats, in addition to posters they were presented some naturalized specimens. The last exhibition ended with a press conference, attended by the representatives of the Romanian Ministry of Environment and Management of Waters.

Two booklets about bats, as optional disciplines were accepted by Scholar Inspectorates in three counties from south-western part of the country.

Even if it was not recorded infections with virus of rabies, a deficiency remained because of lack of specialists: gather biopsy samples, lab examination, and interpretation of results.

C. Measures taken to implement Article III of the Agreement

6. Legal measures taken to prevent the deliberate capture, keeping or killing bats, including details of enforcement actions used to support such measures.

Romanian bat fauna is protected by national laws, but to implement all regulations in territories it is necessary a continuous effort, starting with research programmes, followed by dialogs with local communities.

The aim of all cultural and educational activities was to improve relations between people and bats, understanding their role in nature and the need to protect them. These topics were underlined in booklets, lectures, temporary exhibitions, workshops etc.

An important role in implementation the Romanian legislation in territories belongs to NGOs which already increased their number of members and volunteers and presented some useful suggestions to the government to prevent destruction of habitats, to reduce complex forms of pollution, to improve educational activities.

7. Sites identified and protected which are important to bat conservation

In Piatra Craiului National Park from Southern Carpathians there are about 500 underground cavities. One of them is of 500 m deep and hosts an important colony of *Myotis myotis*. In addition 16, caves and tunnels (Bat cave, Large and Small Prepeleac caves, Dobrești cave, Up and Down Bad Valley caves, Stanciului and Wolf caves) are with an important number of 14 identified bat species, in all this protected area.

8. Consideration given to habitats which are important to bats

Specific habitats for bats are not only caves. Some species prefer tree hollows in forests and parks, garrets and attics and cellars or old buildings. In the meantime all Romanian projects were focused only to the underground roosts. Unfortunately a project at national level to identify all kind of specific habitats for different species of bats was not accepted, yet.

9. Activities carried out to promote the awareness of the importance of the bat conservation

In addition to the last report mentioned activities (lectures in schools and cultural institutions, temporary exhibitions, workshops and booklets), to use these social opportunities to organize conference-press with public assistance, NGOs and governmental representing was a step ahead. The presence of political authorities increased the credibility in bats' conservation policy.

10. Responsible bodies nominated for the provision of advice on bat conservation and management

Romanian Ministry of the Environment and Management of Waters is the governmental authority in charge with nature conservation and environmental problems. A special Department or Directorate concerns with Conservation of Biological Diversity and Biosafety.

The Department of Forestry in the Ministry of Agriculture, Forests and Rural Development.

Institutions:

- „Grigore Antipa” National Museum of Natural History;
- „Emil Racovitza” Institute of Speleology;
- Institute of Biology of the Romanian Academy;
- Faculties of Biology (Universities of Bucharest, Cluj and Iassy);
- Counties Agencies of the Environment;
- NGOs: Romanian Federation of Chiropterology; Romanian Bat Protection Association; Transylvanian Museum Association etc.

11. Additional action undertaken to safeguard population of bats

No actions were taken under this point.

12. Recent and ongoing programs (including research and policy initiatives) relating to the conservation and management of bats

Some NGOs was implemented different projects financed by foreign Companies and NGOs, dealing with conservation of biodiversity and National Bat Monitoring Program.

13. Consideration being given to the potential effects of pesticides on bats and their food sources and efforts to replace timber treatment chemicals which are highly toxic to bats

No actions were taken under this point

D. Functioning of the agreement

14. Co-operation with other Range States

In November 2004, participation to the 4-th Seminar dedicated to Bats from Carpathians, in Krakow – Poland.

NGOs and academic institutions continued their co-operation with specialists from neighbouring countries in research and conservation topics.

15. Measures taken to implement Resolutions adopted by Meeting of Parties

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