

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

ROMANIA

2003 – 2004

„Grigore Antipa” National Museum of Natural History

Ministry of Environment and Waters Management

April 2004

A. General information:

- *Name of the Party:* Romania
- *Date of report:* April 2004
- *Period covered:* March 2003 – March 2004
- *Competent Authority:* Ministry of Environment and Waters Management
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A. Status of Bats within the Romanian Territory

1. Summary details of the resident species:

Starting from the Black Sea shore, continuing with the Danube Delta and the Romanian Plain along the Danube river, hilly and montaneous regions provide various habitats (tree hollows, garrets, cellars, crevices and caves) for 30 bat species with different status: *Rhinolophus euryale*, *R. hipposideros*, *R. mehelyi*, *Myotis bechsteinii*, *M. capaccinii*, *M. dasycneme*, *M. eemarginatus* and *Barbastella barbastellus* are vulnerable species; *Rhinolophus blasii*, *R. ferrumequinum*, *Myotis myotis*, *Nyctalus lasiopterus*, *N. leisleri* and *Miniopterus schreibersii* are species with a lower risk near threatened; *Myotis blythii*, *M. daubentonii*, *M. brandtii*, *M. mystacinus*, *M. nattereri*, *Vespertilio murinus*, *Eptesicus nilsonii*, *E. serotinus*, *Pipistrellus nathusii*, *P. pipistrellus*, *P. kuhlii*, *P. pygmaeus*, *Hypsugo savii*, *Nyctalus noctula*, *Plecotus auritus*, *Plecotus austriacus* are species with a lower risk least concern.

The large diversity of habitats does not mean enough habitats for foraging for bats. Anthropogenic influences, especially habitat destruction, use of pesticides and fertilizers for forests and agricultural ecosystems are the main causes of the unequal distribution of these mammals in the territory and explain the continuous decrease of the number of individual in populations of each species.

Efforts continued in 2003 and at the beginning of 2004 to organize a bat monitoring program to put into place an efficient conservation of bat species and their habitats.

2. Status and trends:

Improving the existing Romanian legislation for biodiversity conservation, for protected areas and for bat protection should be possible only developing scientific surveys, starting with the inventory of species, identification of hibernating and nursery colonies as well as foraging habitats close by all type of roosts.

As in the previous report we mention the role played by NGOs and youth Associations with programmes connected by natural capital/heritage, to extend their programmes for bat protection, too. This is because, visiting caves, taking field trips and not knowing the need of bats, these Associations can disturb bat colonies either hibernating or nursery. Some of roosts are most important places with large monospecific or mixed colonies: Gura Dobrogei cave, Bistrita cave, Sura Mare cave, Adam cave, Huda lui Papara cave, Rarau cave etc.

In such roosts mixed colonies of 40,000 – 60,000 bats can be present, with *Miniopterus schreibersii*, *Pipistrellus pipistrellus*, *Myotis myotis* as dominant species, reported today with smaller colonies, in comparison with the situation from 4 – 5 decades ago and in a fewer roosts.

Fortunately, the chiropterological movement in Romania increased in the last 2 – 3 years with young volunteers associated to different academic institutions and NGOs, involved in bat conservation. The mentioned monitoring programe should conduct to a sustainable conservation of bat species and their roosts and foraging habitats.

One common example of decreasing number of bat individuals in known large colonies is shown in the *Table 1*.

On the other hand, even these roosts with smaller colonies comparing with previous periods, are still valuable offering optimum conditions to some species restricted in their distribution. This is the case of *Rhinolophus mehelyi* reported up to now only from south-eastern part of Romania and today extended in south-western part. The population of *R. mehelyi* is not very large but it is important the extension of its distribution. This example shows the need of surveys to up-date status and distribution of bats as well as the need of actions to develop the appropriate management programmes for conservation of bat roosts and foraging habitats.

Table 1:

Bat species structure in hibernating and nursery colonies in the Bistrița cave from where a collony of more than 5,000 specimens of *Miniopterus schreibersii* was reported in the 60's.

Genus, Species	OBSERVATION DATES				
	Maternity 12.07.2002	Prehibernation 7.11.2002	Hibernation 22.12.2002	Hibernation 21.03.2003	Maternity 22.06.2003
<i>Myotis blythii</i>	700				700
<i>Myotis myotis</i>	1300	29	39	28	1500
<i>Miniopterus schreibersii</i>	700	1200	900	300	700
<i>Myotis emarginatus</i>	7				
<i>Myotis capaccinii</i>	50				20
<i>Myotis dasycneme</i>	200				120
<i>Rhinolophus ferrumequinum</i>		32	47	7	
<i>Rhinolophus hipposideros</i>		17	12	2	
TOTAL OF BATS	2957	1278	998	337	3040

Table 2:

Structure of hibernating and nursery bat colonies in Gura Ponicevei cave.

Genus, Species	PERIOD		OBSERVATION		DATES
	Maternity 11.08.2002	Prehibernation 26.10.2002	Hibernation 20.12.2002	Hibernation 13.03.2003	Maternity 11.06.2003
<i>Pipistrellus p./P.pygmaeus</i>		10			
<i>Miniopterus schreibersii</i>	1100	30	1450	1300	1500
<i>Rhinolophus ferrumequinum</i>	32	30	572	150	19
<i>Myotis myotis/M.blithii</i>	3000		80	80	2500
<i>Myotis capaccinii</i> 1	(1+2+3) 2000	5	(1+2+3)2000	(1+2+3)2000	(1+2+3) 1700
<i>Myotis dasycneme</i> 2		5			
<i>Myotis daubentonii</i> 3		3			
<i>Rhinolophus mehelyi</i>	60		162	150	
<i>Rhinolophus euryale</i>	900				1500
<i>Rhinolophus hipposideros</i>		9	130	40	
<i>Plecotus auritus/P.austriacus</i>			6	2	
<i>Nyctalus noctula</i>			20	20	
TOTAL INDIVIDUALS	7092	92	4420	3742	7219

3. Habitats and Roost Sites

About 25 foraging habitats (approximately 8 sqkm each), situated closely by important roosts (caves and crevices, mining galleries and tunnels, tree hollows and buildings) with more than 300 bat individuals were surveyed.

Forests are mostly with beech and resinous mixed forests where the tree layer is with *Fagus sylvatica*, *Alnus viridis*, *Fraxinus*, *Betula*, *Populus tremula*, *Quercus petraea*, *Acer platanoides*, *Tilia tomentosa*, *Carpinus*, etc., and the shrubs layer is formed of *Alnus*, *Sambucus nigra*, *Evonymus europaea*, *Crataegus monogyna*.

Between 600 – 1,400 m altitude the prevalent species is *Fagus sylvatica*, associated with fir or spruce fir trees (or both), *Fraxinus excelsior*, *Carpinus betulus*.

Oak forests lay over the Romanian sub-Carpathians, in the high piedmonts and are formed, almost exclusively, of *Quercus petraea polycarpa*, to which *Prunus avium*, *Acer campestre*, *Tilia*, *Acer platanoides*, *Fraxinus*, *Carpinus orientalis*, *Crataegus*, *Ligustrum vulgare*, *Cornus sanguinea*, *Cornus mas*, *Cotynus coggygria* are added.

Shrubs include *Syringa vulgaris*, *Fraxinus ornus*, *Cotynus coggygria*, *Crataegus monogyna*, *Rosa canina*, *Cornus mas*, *Corylus avellana*, *C. colurna*, *Pinus nigra banatica*, *Juglans regia*, *Ligustrum vulgare*, *Viburnum lantana*, *Rhamnus tinctoria*, *Acer monosperulanum*.

However the phytodiversity is large and displayed in mosaic, with dominant deciduous forests, lawns and mixed hayfields, offering a large variety of hunting areas for bats: tree clusters, shrubs,

bushes, forest belts, lawns, riparian forests, tree and shrub line, natural and artificial passages, wet habitats.

4. Threats

Shelters should be protected but this is not enough. The protection of the feeding habitats are also necessary and especially the estimation of the trophic potential of these habitats. Using pesticides in forests and agroecosystems, and destroying shelters, bats suffer alarming decreasing of their populations.

Therefore, a project is under construction to collect the night entomological fauna (with light and ground traps) and to establish the bat feeding regime on the basis of the remains (wings, mandibles, legs) of the preys. Another project refers to the study of guano, collected especially from the bats whose food was experimentally known.

Free entrance in caves and disturbing of the nursery and hibernating colonies, total deforestation in different areas, demolish of many buildings with suitable roosts for bats and modern constructions without access in garrets and attics, cellars and basements, as well as the use of different chemical pollutants are the main threats for bats in Romania.

5. Data Collection

As in the previous report, adding the improvement of the controle in some protected areas (e.g. in national parks) with personnel as rangers, guardians and volunteers. These structures should be consolidated and extended to main roosts for bats, too.

C. Measures taken to implement 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.*

In this year will end the LIFE-Nature project LIFE 00 NAT/RO/7187 „**Conservation Program for Bat's Underground Habitats in SW Carpathians**”, proposed by the Green Cross Romania in partnership with the Speleological Institute, the Group for Underwater and Speleological Exploration and the „Grigore Antipa” National Museum of Natural History. The project overall objective was to put into place an effectively conservation management plan in order to safeguard the species of bats, conserve their underground habitats and incorporate biodiversity conservation as an integral part of sustainable human development in the Southwestern Carpathian region. This management plan was agreed by the ministry and will be a model for the other protected areas for bats conservation. The main goal of the management plan is to create the instrument for ensuring long term conservation of the caves and protection of bats through a unitary management, taking into account the scientific data and the results of the socio-economic assessment.

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

In addition to the 2003 Romanian report it should be mentioned the survey in Sura Mare cave from Hunedoara County, with large colonies of different species of bats. *Pipistrellus pipistrellus* and *P. pygmaeus* colonies count about 40,000 specimens. The smaller populations of other bat species (*Rhinolophus ferrumequinum*, *Myotis myotis*/*M. blythii*, *Nyctalus noctula*, *Barbastella barbastellus*, *Miniopterus schreibersii*) increase the total number of bats to approximately 60,000 specimens.

Those caves with a total length of 11,123 m and 425 m positive difference of level were investigated only 1/10 and the survey should be continued.

8. Consideration given to habitats which are important to bats

As in the 2003 Romanian, with extension to the detailed study at the beginning of 2004 in the Piatra Craiului National Park.

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

Lectures, temporary exhibitions in natural sciences museums and in schools, meetings with local authorities, printing of books and leaflets about bats (distributed free of charge, especially in the schools) and to the museum's visitors were main activities to promote the awareness of the importance of the bat conservation. In the frame of the above mentioned LIFE project, was edited the handbook „The world of Bats” used for training courses. Also was edited the „Chiropters in Romania”, that comprises an important chapter regarding bats' protection.

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

At the national level, the Ministry of the Environment and Water Management, through the Directorate of Biological Diversity Conservation and Biosafety is the governmental authority in charge with nature conservation.

Institutions assisting the Ministry with scientific data are:

- „Grigore Antipa” National Museum of Natural History;
- „Emil Racovitza” Speleological Institute;
- Institute of Biology from the Romanian Academy;
- Faculties of Biology (Universities of Bucharest, Cluj and Iasi);
- NGOs: Romanian Federation of Chiropterology, Romanian Bat Protection Association, Green Cross Romania, Group for Underwater and Speleological Exploration Transylvanian Museum Association etc.

11. International Co-operation

In June 2003 – a Workshop for training in use of Bat detectors. Lectureres – Mr. Herman Limpens and Mr. Collin Cato. Attendants from Romania, Ukraine, Germany and Slovenia.

In August 2003, two persons from The Romanian Association for Bat protection invited by BCT, in England for documentation, to share their experience working with bats in Romania and obtaining field work equipement (especially Bat detectors).

In November 2003 – two specialists from two Romanian academic institutions (“Emil Racoviță” Institute of Speleology” – Bucharest and „Grigore Antipa” National Museum of Natural History) attended the 3-rd Seminar for Atlas of Bats from Carpathians, in Krakow - Poland

Some other smaller international co-operation projects (e.g. on the behalf of Speo Club Bucovina), especially in the first part of 2004.

D. Functioning of the Agreement

12. Co-operation with other Range States

NGOs and academic istitutions continued their co-operation with specialists from Poland, Hungary, Bulgaria, Ukraine, Republic of Moldova.