

MACEDONIAN NATIONAL REPORT

- UPDATE TO THE YEAR 2004/2006 -

For remind, actions of the Ministry of Environment and Physical Planning and Macedonian Committee of the conservation of migratory species (MBC) for the activities of the bats conservation is described in the our National Report of the 3^t and 4th Meeting of the Parties: Bristol, UK, July 2000; Sofia, BG, September 2003 (see: [http://www.eurobats.org/Party Reports/ Macedonia.htm](http://www.eurobats.org/Party_Reports/ Macedonia.htm)), reports of AC 7, AC 8, AC 9, AC 10 and AC 11.

Macedonian Committee of the CMS (MBC) has consider following directions:

- Protect the nature ecosystems and habitats important of bats conservation,
- Protection of the buildings (in urban and rural complexes),
- Promoting important ruts of the bats population on biodiversity conservation,
- Preparing texts (Macedonian) and printing the brochure “Bats in Forest”,
- Organizing The 7th Bats Night’s (26 August 2004) in Skopje (Museum of Natural History and Park in Skopje) and in several places in Macedonia,
- Organizing The 8th Bats Night’s (2 August 2005, 8 September 2005, 11 October 2005) in Skopje (Museum of Natural History and Park in Skopje) and in seven different places in Macedonia,
- Created Work Program of activities for organizing The 9th Bats Night (August/September 2006) in Macedonia.

A. General information

- Party: **Republic of Macedonia**
- Date of report: **August 2006**
- Period covered by Report: **August 2004- August 2006**
- Charges regarding:
- Competent Authority: **Ministry of Environment and Physical Planning**
- Appointed Member of the Advisory Committee:
- Membership of other committees/working groups:

B. Status of Bats within the Territory of the Party

1. Summary Details of the Species

Situation similar to the last report (2005). See Annex I.

2. Status and Trends

Situation similar to the last report (2005). See Annex II (table 1).

3. Habitats and Roost Sites

The majority of data has been collected from the traditionally examined areas, which are also considered as the key sites of bat diversity. Currently bats are known in 52 localities in the Republic of Macedonia. The territory of Macedonia has been unequally studied. See Annex III.

Most of the data originate from the Vardar River valley, while the greatest gaps are in the Northeast. Collectors also sampled mainly at lower altitudes, while the mountains were neglected. For the majority of them, nursery or pregnant females and juvenile specimens were found in caves or other underground spaces.

This is in accordance with the origin of most of the Museum Specimens, which were collected by hand in such underground galleries. Bats not roosting in caves were mainly overlooked, or were collected only occasionally.

Consequently, further investigations on the bats in Republic of Macedonia are necessary in as certain improved information as a primary basis of their future conservation.

4. Threats

Human activities in Macedonia over the last 55 years have been apparently large in the lowland areas, as constant draining of wetlands, steady reduction of forests, urbanization of large areas, uniformity in the arrangement and landscaping of farmland, continuing and increasing use of chemicals to eliminate unwanted insects.

The higher altitude habitats are less exposed to human activities.

5. Data Collection, analysis, interpretation and dissemination

The source of data is;

- the Macedonian Museum of Natural History, Boulevard Ilinden 86, 1000 Skopje,
- the Faculty of Natural Sciences, Gazi Baba, p.box.162, 1000 Skopje.

C. Measures Taken to Implement Article III of the Agreement

6. Legal measures taken to protect bats, including enforcement actions

Not with standing the fact that law does not specially protect bats, traditionally they never have been a subject of capture, keeping or killing.

This mater is include on the New Framework Law for Nature protection. In our Biennial Program (2006/2007) is include preparation the New Law for Animal Protection. Situation of the other legislative is similar to the last report (2004). In next triennium many of laws will be harmonized with the EU Habitat Directives.

7. Sites identified and protected which are important to the conservation of bats

Hitherto, 136 localities are protected in Macedonia, with different protection rank, with total surface of 260.882 ha.

Of them, especially important are: 4 Strict Natural Reserves: Ezerani, on the Lake Prespa, Tikvesh, Lokvi, Golemo Konjari and Ploce-Litotelmi (12.855 ha), 3 National Parks: Pelister, Mavrovo and Galicica (110.000 ha), 10 Scientific Reserves, 27 Natural Monuments (rivers, lakes, forests and caves), etc.

The Macedonian Committee of the Bonn Convention (MBC) has promoted actions to make the Macedonian list of SCI (important to the conservation of bats). This action is coordinated and instructed of experts from sciences institutions of nature conservation: Macedonian Academy of Sciences and Arts (MANU), Faculty of Natural Sciences (PMF), Macedonian Museum of Natural History (PNMM), Speleological Society "Peoni", National Agency "Naturopa" and Department of Biological Diversity on the Ministry of Environment and Physical Planning (MOEPP)

8. Consideration given to habitats which are important for bats

Also MBC, in 22 April, 22 May, 5 June, 2 August, 8 September and 11 October 2004/2005, and 22 April, 22 May and 5 June 2006 has promote several very important actions for research about feeding habitat use by bats in Macedonia. This action coordinate experts from Zoological Department on Faculty of Sciences, Macedonian Museum of Natural History, Department of Biological Diversity (DBD), Speleological Society "Peoni" and National Agency "Naturopa" on the MOEPP.

9. Activities to promote the awareness of the importance of the conservation of bats

In reporting period the Macedonian Environmental Info-Center (MEIC) on the MOEPP has make with his activities to promote this awareness of the importance of conservation of bats population and their habitats. Many of data, information and pictures has been include on our web-site and on printing material (prospects, brochure, posters, catalogs, calendars etc.).

Also MEIC has realized Joint Education Program for journalist's from Macedonian Eco-Press Center.

In accordance to Resolution 4.4, paragraph 7, the UNEP/EUROBATS Secretariat has prepared information for forest managers and forest workers, advising on bat conservation in forest ecosystems. Result of this activity is the booklet "Bats in Forests" (pub. by GAL/FANC).

In 2005, our departments and sectors (DBD, NCA "Naturopa" and MEPC on the MOEPP), with co-operation and assistance of the MBC, ZD/FS, MMNH and coordinate of the Secretariat of the UNEP/EUROBATS have collected information and printed brochure "Bat in Macedonian Forests". This activities are correspondent to the Pan-European Project "Bats in European Forests". Also, has been collected data and information of the second project "Under-ground Habitats in Macedonia" on the framework of UNEP Trans-boundary Program "Underground Habitats: Data Compilation". The Campaign of the Macedonian Bat Night 2004 and 2005 has start on 21 March (European Ecological Day) and continue of 22 April (International Day of Planet), 22 May (International Day of Biological Diversity), 5 June (World Day of Environment), 25 August, 8 September and 11 October has been organize many manifestation with education of the ecological sections and NGO-s.

This year many of activities from our Program will be implement in cooperation of our partners in Macedonia, Contracting Parties in Balkan Peninsula, CEE, EU and international organizations, in coordination of the UNEP/EUROBATS Secretariat.

10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management

Macedonian Museum of Natural History (MMNH)
Boulevard "Ilinden" 86, 1000 Skopje Macedonia
Faculty of Natural Science (PMF),
Gazi Baba, p. box 162, 1000- Skopje Macedonia

11. Additional action undertaken to safeguard populations of bats

- Created concept of priority for next triennium (2007-2009);
- Preparing application of important projects.

12. Recent ongoing programs (including research and policy initiatives) relating to the conservation and management of bats. In the case of research, summaries of completed projects should be provided, giving references where possible and acknowledging the sources of funding

Project for Macedonian Emerald- Network (MEN) in co-operation with the Secretariat of the Bern Convention (BC) of the Council of Europe and European Environmental Agency (EEA) has include new tree ASCI and tree potential areas.

Experts has evaluated nature habitats and animal species. On the List of fauna species has been include species of the Mammals, (Micro-mammals/ CHYROPTHERA):

- RHINOLOPHIDAE: Rh. blasii, Rh. euryale, Rh. ferrumequinum, Rh. hipposideros, Rh.mehelui;
- VESPERTILIONIDAE: Myotis blythii, Barbastella barbastellus, Miniopterus schreibersi, Myotis capaccinii, Myotis emarginatus, Myotis myotis

13. Considerations 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

In 2005, DBD and Department of Environment Impact Assessment (D-EIA) of the MOEPP, in cooperation whit State Inspectorate of Environment (SIE) has been organize many actions for elimination potential effects of pesticides on biodiversity, (including populations of bats).

D. Functioning of the Agreement

14. Cooperating with other Range State

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

Annex I

Status of Bats within the territory of the Republic of Macedonia

1. Summary details of the Species

Twenty-four species of bats are currently known to occur within the territory of Macedonia. On the basis of the available data from the adjacent regions (Bulgaria, Greece and Serbia) and habitat diversity in Macedonia, the presence of four additional species could be expected. The majority of specimens and information are from spring; summer and early autumn, while winter visits to caves were exceptional. Consequently, only five species (*Rhinolophus ferrumequinum*, *Rhinolophus hipposideros*, *Myotis myotis*, *Nyctalus noctula* and *Miniopterus schreibersi*) were found in hibernation. For nine species we have evidence of their reproduction in the region: *Rhinolophus ferrumequinum*, *Rhinolophus euryale*, *Myotis myotis*, *Myotis blythi*, *Myotis emarginatus*, *Myotis capaccinii*, *Eptesicus serotinus*, *Pipistrellus pipistrellus* and *Miniopterus schreibersi*.

2. List of threatened bat species in Macedonia

Rhinolophus blasii *Rhinolophus euryale* *Rhinolophus mehelyi*
Rhinolophus hipposideros *Rhinolophus ferrumequinum* *Barbastrella barbastrellus*
Miniopterus schreibersi *Myotis capaccinii* *Myotis emarginatus*.

Table 1. Threatened status of Bat species (Mammalia: Microchiroptera) in Macedonia

	NATIONAL AND SCIENTIFIC NAME OF SPECIES	TREAT STATUS (CATEGORY) (2000)	TREAT STATUS (CATEGORY) (2004)
1	2	3	4
Rhinolophidae			
1 .	<i>Rhinolophus blasii</i>	VU	VU
2 .	<i>Rhinolophus euryale</i>	VU A2c	VU
3	<i>Rhinoloph. ferrumequinum</i>	LR:nt	VU
4 .	<i>Rhinolophus hipposideros</i>	VU A2c	VU
5 .	<i>Rhinolophus mehelyi</i>	VU A2c	VU
6 .	<i>Barbastella barbastellus</i>	VU A2c	VU
7 .	<i>Miniopterus schreibersi</i>	LR:nt	VU
8 .	<i>Myotis capaccinii</i>	VU A2c	VU
9 .	<i>Myotis emarginatus</i>	VU A2c	VU

Source: IUCN/SSC CSG (2001), Hudson. M.A. et al./ Global Status and Conservation Action Plan

MOEPP (2003), Petkovski S. & V. Sidorovska/ Country Study of Biological Diversity in Macedonia
 National Biodiversity Strategy and Action Plan, MOEPP 2005.
 IUCN World Status: VU- vulnerabl; LR:nt- Lower Risk:near threatened.

Annex II

Table 2. The distribution and estimated found status of the bat species known in Macedonia

	SPECIES	DISTRIBUTION STATUS	ESTIMATED FAUNAL STATUS	HIBERNATION SITES	SUMMER ROOST
1.	<i>Rhinolophus hipposideros</i>	widespread	common	mines	buildings, caves
2.	<i>Rhinolophus ferrumequinum</i>	widespread	common	mines	caves
3.	<i>Rhinolophus euryale</i>	widespread	common		caves
4.	<i>Rhinolophus blasii</i>	restricted	rare		
5.	<i>Rhinolophus mehelyi</i>	restricted	rare		caves, mines
6.	<i>Myotis mystacinus</i>	widespread	rare		
7.	<i>Myotis myotis</i>	widespread	numerous	caves	caves
8.	<i>Myotis daubentonii</i>	restricted	rare		
9.	<i>Myotis blythi</i>	widespread	common		caves, mines
10.	<i>Myotis emarginatus</i>	restricted	common		caves
11.	<i>Myotis capaccinii</i>	widespread	common		caves, mines
12.	<i>Myotis nattereri</i>	restricted	rare		
13.	<i>Nyctalus noctula</i>	widespread	rare		hollow trees
14.	<i>Nyctalus leisleri</i>	restricted	rare		
15.	<i>Eptesicus serotinus</i>	restricted	rare		caves
16.	<i>Vespertilio murinus</i>	restricted	rare		
17.	<i>Pipistrellus pipistrellus</i>	widespread	common		buildings, caves
18.	<i>Pipistrellus nathusii</i>	restricted	rare		
19.	<i>Pipistrellus kuhlii</i>	restricted	rare		
20.	<i>Hypsugo savii</i>	restricted	rare		
21.	<i>Plecotus austriacus</i>	restricted	rare		
22.	<i>Barbastella barbastellus</i>	restricted	rare		
23.	<i>Miniopterus schreibersi</i>	widespread	common	caves	caves
24.	<i>Tadarida teniotis</i>	restricted	rare		

Annex III

Localities in Macedonia where bats were collected

01	Bader, on the Pcinja river (240 m)	27	Nov Dojran, on Lake Dojran (150 m)
02	Ajvatovsko Ezero, near Ajvatovci (230 m)	28	Rabrovo, near Valandovo (160 m)
03	Pobozje, on Skopska Crna Gora Mts. (600 m)	29	Anska Reka, 2,5 km W of Valandovo (165 m)
04	Banjane, 8 km NW of Skopje (480 m)	30	Rezvik, near Bansko, Strumica (280 m)
05	Rashce, approx.10 Km W od Skopje (325 m)	31	5 km SW of Strumica (550 m)
06	Skopje (250 m)	32	5 km S of Suvi Laki (1300 m)
07	Nerezi, Skopje (307 m)	33	Demir Kapija, near Negotino (95 m)
08	The Manst. "Sv.Andreja", Matka (340 m)	34	Trifunovo Brdo, near Pepeliste (400 m)
09	Volkovija, on the Bistra Mts. (1035 m)	35	Stip (330 m)
10	Ubavica (a cave), near Gosivar (840 m)	36	Kocani (345 m)
11E	Slatina, near Makedonski Brod (600 m)	37	Bela Voda (a cave) Demir Kapija (95 m)
11b	2 km E od Slatina, near M. Brod (600 m)	38	Sar Planina Mts. (1450 m)
12	Belica, near Makedonski Brod (580 m)	39	Drenovska Klisura (george), Drenovo(110 m)
13	3 Km E of Velmej (850 m)	40	Dracevo, near Skopje (300 m)
14	Javorec (a cave), near Velmej (1010 m)	41	A part on Vodno, near Skopje (370 m)
15E	Meckina Dupka (a cave), near Ohrid (900 m)	42	Gazi Baba, PMF, Skopje (300 m)
15b	Ohrid (760 m)	43	OHIS, Skopje (250 m)
16	Trpejca, near Lake Ohrid (700 m)	44	Tunel, Drenje, near Kriva Palanka (670 m)
17	Leskoec, Otesevo, Lake Prespa (1000 m)	45	Ljuboten, Sar Planina Mts. (1600 m)
18	Kubrinovo, Asamati, Lake Prespa (1000 m)	46	Gipsana Pester (a cave), Mavrovo (650 m)
19	Golem Grad (island), Lake Prespa (900 m)	47	Marena, Kavadari (130 m)
20	Pesterica (a cave), Oreovec, Prilep (880 m)	48	Sopot, Kavadarci (120 m)
21	Petrani, near Veles (380 m)	49	Dolno Lisice, Skopje (240 m)
22E	Makarovec, near Veles (197 m)	50	Staro Vardarishte, Vardar Skopje (240 m)
22b	Markova Kula, near Crkvino (200 m)	51	Golem Chiflik, Vardar Skopje (230 m)
23	Krajnici, 17 Km S of Veles (560 m)	52	Mal Chiflik, Vardar Skopje (230 m)
24	9 Km S of Izvor, near Veles (560 m)		
25	Konopiste, 35km of Kavadarci (680 m)		
26	Asan Cesma, Kozuf Mts. (1350 m)		

Table 3.Species Diversity of the locations: No 33 “Demir Kapija” and 37 Bela Voda (cave)

	Species Diversity	Distribution status	Estimated faunal status	Hibernation site	Summer roost
1.	<i>Eptesicus serotonicus</i>	restricted	rare		cave
2.	<i>Myotis myotis</i>	widespread	numerous	cave	cave
3.	<i>Myotis blythii</i>	widespread	common		cave, mine
4.	<i>Myotis capaccinii</i>	widespread	common		cave
5.	<i>Myotis emarginatus</i>	restricted	common		cave
6.	<i>Myotis mystacinus</i>	widespread	rare		
7.	<i>Pipistrellus pipistrellus</i>	widespread	common		cave
8.	<i>Pipistrellus nathusii</i>	restricted	rare		
9.	<i>Rhinolophus ferrumequinum</i>	widespread	common	mines	cave
10	<i>Rhinolophus hipposideros</i>	widespread	common	mines	cave
11	<i>Rhinolophus euryale</i>	widespread	common		cave
12	<i>Rhinolophus blasii</i>	restricted	rare		-
13	<i>Rhinolophus mehelyi</i>	restricted	rare		cave

14	<i>Barbastella barbastellus</i>	restricted	rare		
15	<i>Plecotus austriacus</i>	restricted	rare		
16.	<i>Nyctalus noctula</i>	widespread	rare		hollow trees
17	<i>Miniopterus schreibersi</i>	widespread	common	cave	cave
18	<i>Tadarida teniotis</i>	restricted	rare		

Source: Evaluation of Biological Diversity in Nature Locality "Demir Kapija" (future Strict nature Reservate)
MOEPP, Agency of Environmen, 2005.

Table 4. Active ingredients

Active ingredient (E-ISO name)	Approved (or available) for use in RTT	Commonly used	Rarely used	Comments
Pentachlorophenol PCP	-			
Dieldrin: HEOD	-			
Lindane: γ -HCH, BHC	-			
DDT	-			
Tributyl tin comp.: TBT, TBTO	-			
Synthetic pyrethroids (Permethrin, Cypermethrin etc)	-			
Boron compounds	-			
Zinc compounds	-			
3-Iodo-2-propynyl-n-butyl carbamate Polyphase/IPBC	-			
Propiconazole	-			
Azaconazole	-			
Tebuconazole	-			

Table 5. Approvals or registration process

Is the supply and use of remedial timber treatment chemicals regulated by a national authority?	Yes. Ministry for Agriculture, Forestry and Water Management, Skopje.
Does the approval or registration process include an assessment of eco-toxicity?	yes Assessment of eco-toxicity.
Are bats specifically included in the eco-toxicological assessment of products to be used to treat structural timbers in the roofs of buildings?	generally (not specially) (toxic impact of wildlife species)
Are the directions or instructions for use (on a label or accompanying document) required to refer to eco-toxicity?	yes
Do the directions or instructions for use (on a label or accompanying document) of remedial timber treatment products refer to the possible hazard to bats? If so, is this a legal requirement or a voluntary agreement?	

Is advice given to the industry on ways in which any hazard to bats as a result of RTT may be minimized?	yes
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Table 6. Types of treatment and size of industry

1. What proportion of treatments of roof voids for wood-boring insects or wood-rotting fungi include the application of RTT biocides?	High (>90%)
	Medium (50-90%)
	Low (<50%) x
2. Please estimate the total number of private dwellings for your country	Is not data for the total number of private dwellings.
3. Please estimate the number of <u>specialist</u> companies carrying out RTT. This does not include general builders or other non- specialist companies.	Is not official data for the number of specialist companies for RTT trade.
4. Please estimate the number of roof voids treated annually by specialist companies for wood-boring insects or wood-rotting fungi.	Is not data for the number of roof voids treated annually (by spec. companies...). It is very difficult.

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