REPORT ON THE IMPLEMENTATION OF THE 'EUROPEAN BAT AGREEMENT' IN HUNGARY

A. General information

Party: Hungary
Date of Report: March 2005.
Period Covered by Report: January 2004 – December 2004
Competent Authority: Ministry of Environment and Water
Appointed Member of the AC: Dr. Zoltán Bihari

B. Status of bats within the territory of the Party

B 1.-4 Summary details of resident species, Status and trends; Habitats and roost sites; Threats

1.Table Bat species and their status in Hungary

1.Resident species	Status	Trend (last 5 years)	Habitats	Summer roost	Winter Roost	Threats
R ferrumequinum	S	decline	M F S	95% A	100% CM	AC, RB
R hipposideros	P	stable	M F	50% A	100% CME	AC, RB
R euriale	S, R	stable	M F W	100% C	100% CM	AC
M emarginatus	S, R	decline	O S	100% A	? C	AC, RB
M bechsteinii	S, R	?	M F	100% H	? CH	AC, LT
M nattereri	P	decline	M F W	100% H	? HC	AC, LT
M dasycneme	S	stable	O S W	60% A	? HC	AC, RB, LH
M daubentonii	P	?	O W F	90% H	? HC	AC, RB, LH
M mystacinus	P	?	M F W	100% H	? HC	LT, AC, LH
M brandtii	P	?	M F	100% H	? HC	LT, AC, LH
M alcatoe			M F	100% H	? HC	LT, AC, LH
M myotis	P	stable	O S	80% A	100% CM	RB, AC
M blythii	P	stable?	O S	90% A	100% CM	RB, AC
N noctula	P	stable	O S F	60% B	100% HB	LT, IK
N lasiopterus	S	stable	M F	100% H	100% H	LT
N leisleri	P, R	?	M F	100% H	100% H	LT
E serotinus	P	stable	O S	80% A	? C B	RB, AC
E nilsonii	P	?	M F	?	C	AC
V murinus	P	?	O S	?	?	RB
P pipistrellus	P	decline	O F S	80% H	90% H	LT

P pygmaeus		?	?	?	?	?
P nathusii	P	?	O W	100% H	100% H	LT
P kuhlii	P	increase	O S F	?H	?HB	?
H savii	P	increase	M F	?	?	?
P austriacus	P	decline	O S	80% A	90% CM	RB, AC
P auritus	P	?	M F	100% H	90% H	LT, AC
B barbastella	S, R	decline	M F	80% H	? CH	LT, AC
M schreibersii	S	increase	M F	100% CM	100% CM	AC

Abbreviations and acronyms:

PROTECTION

P	Protected
S	Strictly protected
R	National Red List

ROOST

A	Attic
B	Block of house
C	Cave
E	Cellar
H	Tree hollow
M	Mine

HABITAT

F	Forest
M	Mountain region
O	All over in Hungary
S	Settlement
W	Wetland

THREAT

AC	Activities in caves
IK	Intentional killing in housing estates
LH	Loss of habitats
LT	Loss of old trees
RB	Reroofing / renovation of building

Mediterranean horseshoe bat (Rhinolophus euryale)

This is a rare, strictly protected species in Hungary. All of the known bigger colonies live in Northern Hungary. Most of the animals live in underground shelters, in warmer mines and the minority lives in caves throughout the year. The largest colony consists of 3000 individuals.

Greater horseshoe bat (Rhinolophus ferrumequinum)

Sporadic, strictly protected species in Hungary. Several colonies live in churches during summer. An average nursery colony consists of 200-250 individuals, but the biggest one involves 400 individuals. 200 individuals form the biggest winter colony.

Rhinolophus ferumequinum summer roost			
UTM	Settlement	Roost type	Number of individuals
EU34A3	Tolcsva	church	400
YM31B2	Bükkösd	castle	380
DU91	Berzék	church	300
ES49B4	Geszt	castle	300
EU23D1	Bodrogkeresztúr	church	250

DU50A4	Eger	school	200
DU64B4	Bánhorváti	church	120
EU45B	Sárospatak	church	120
ET45D3	Mikepércs	church	100
DS82	Mezőhegyes	church	70

Lesser horseshoe bat (Rhinolophus hipposideros)

It is a sporadic species. They hibernate in caves, mines and cellars. The biggest colony counts 112 individuals. Summer colonies roost in churches and mines. The biggest estimated winter colony consisted of 700 individuals.

Rhinolophus hipposideros summer roost			
UTM	Settlement	Roost type	Number of individuals
DU52B5	Bélapátfalva	church	128
DU97B2	Viszló	church	120
DU30C3	Sirok	church	90
DU67D2	Jósvafő	storehouse	80
EU36B3	Nagyhuta	castle	80
EU37D4	Füzérradvány	castle	80
DU97B2	Viszló	church	80
YM21	Almáskeresztúr	wine-press house	79
DU01C4	Mátraverebély	church	70-80
CT15D	Alcsútdoboz	storehouse	60-90
DU77	Színpetri	church	70
DU64	Bánhorváti	castle	56

Bechstein's bat (Myotis bechsteinii)

The Bechstein's bat is a strictly protected, rare species. They live all year in forests. We can find them occasionally in caves, but only in winter.

Lesser mouse-eared bat (Myotis blythii)

It is not a very rare species in Hungary. Summer colonies roost in churches, while they spend winter in caves and mines. The biggest summer colony numbers about 500 bats, while the biggest winter colony involved 400 individuals.

Myotis blythii summer roost			
UTM	Settlement	Roost type	Number of individuals
DU53	Nekézseny	church	500
EU27C2	Pányok	church	400
DU87C3	Hídvégardó	church	350
DU76A4	Szőlősardó	church	250
DU77D2	Szin	church	250
ET66	Vámospércs	church	200
DU65A3	Alsószuha	church	200
DU55C4	Kelemér	church	120
DU86A3	Martonyi	church	115
EU14B2	Monok	church	100

Brandt's bat (Myotis brandtii)

Brandt's bat is a not a rare species in the mountain forests of Hungary. They roost in tree-holes in winter and summer. Only a few specimens hibernate in caves.

Pond bat (Myotis dasycneme)

A rare, strictly protected species in Hungary. It is a sporadic species. We could find only separated individuals in caves during winter.

Myotis dasycneme summer roost			
UTM	Settlement	Roost type	Number of individuals
EU33B2	Tokaj	public building	150
DU87D2	Tornabarakony	church	120
DS35	Mindszent	vicarage	100
DS89	Gyoma	church	30
ES49B4	Geszt	castle	20
ES39	Zsadány	house	20
DS65	Nagymágocs	granary	10

Daubenton's bat (Myotis daubentonii)

This species is attached to water surfaces. It is a frequent species on the wetland areas. They roost in tree holes in summer. It is not known where they stay in winter, because only a few specimens hibernate in caves.

Myotis daubentonii summer roost			
UTM	Settlement	Roost type	Number of individuals
EU16	Miskolc-Garadna	house	20
ES06	Szabadkigyós	castle	10
EU46D2	Sátoraljaújhely	church	3
DU51	Felsőtárkány	house	3

Geoffroy's bat (Myotis emarginatus)

It is a strictly protected species. The most significant colonies of Hungary live in the North-East part of Hungary. Nursery colonies stay in the attics of churches in summer. The highest number of individuals was estimated at about 2000. We don't know notable hibernating colonies.

Myotis emarginatus summer roost			
UTM	Settlement	Roost type	Number of individuals
DU97B2	Viszló	church	2000
FU12A3	Tarpa	church	1500
DU66B4	Ragály	church	1200
EU34A3	Tolcsva	church	900
DU64	Bánhorváti	church	700
EU23D1	Bodrogkeresztúr	church	600
EU65B1	Pácin	church	400
EU45B	Sárospatak	church	450
EU65B1	Pácin	church	400
ES49B4	Geszt	castle	400

Greater mouse-eared bat (Myotis myotis)

It is a frequent species in Hungary. Several big nursery colonies live in churches and also in mines. The biggest one is over 4700 individuals. They hibernate in caves. The largest colony consists of 9000 animals. Some of the bats migrate to Slovakia for winter.

Myotis myotis		summer roost	
UTM	Settlement	Roost type	Number of individuals
DU54D2	Borsodbóta	church	4750
DU41A3	Hevesaranyos	church	3000
XN47	Fertőszentmiklós	school	2500
EU36C4	Kovácsvágás	church	1500
EU37D2	Filkeháza	church	1200
XN56	Cirák	church	750
YM11	Szulimán	church	750
DU42C1	Borsodnádasd	church	700
BS72	Sásd	church	700

Whiskered bat (Myotis mystacinus)

Not rare, but not a very well-known species. Usually they live in wide forests, where they hunt in spring-valleys. We found hibernating individuals in caves only a few times. They roost in tree holes all year round.

Myotis alcathoe

Regularly found in valleys with small brooks in the Bükk Mountains. One occurrence is known from Zemplén Mountains and one from Mátra Mountains. It is probably not a rare species in the mountain woodlands of the area.

Natterer's bat (Myotis nattereri)

Not rare, but not a very well known species. Usually, lives in wide forests. We found hibernating individuals in caves only occasionally. They roost in tree holes throughout the year.

Kuhl's pipistrelle (Pipistrellus kuhlii)

It is a rare, new species in the Hungarian fauna, but specimens have been captured in nearly every regions of Hungary in the last 5 years. Probably lives in attics of buildings.

Nathusius' pipistrelle (Pipistrellus nathusii)

It is a rare, and not a well known species. They roost in tree holes all year round.

Common pipistrelle (Pipistrellus pipistrellus)

It is a common species. They live in forests and in human settlements also. We found hibernating individuals in caves only a few times. They roost in tree holes all year round or sometimes in the bell-tower of churches where the most significant colony was over 100 individuals.

Pipistrellus pipistrellus summer roost			
UTM	Settlement	Roost type	Number of individuals
DS32	Szeged	house	1500
EU93	Vásárosnamény	storehouse	200
ET46	Debrecen	public building	162
X071	Dunasziget	cottage	150
EU37A4	Füzér	church	100
XM75A1	Szőkedencs	church	100
DU50	Eger	panel house	99
DU64B4	Bánhorváti	church	60-100
DT38	Detk	church	25
EU16	Miskolc	house	20

Savi's pipistrelle (Pipistrellus savii)

It is one of the rarest species in Hungary. We have found it only a few times. We do not know its roost.

Pygmy bat (Pipistrellus pygmaeus)

It is a newly described species in the Hungarian fauna. We observed them with the help of a bat detector in a few places. Their roosts are unknown.

Greater noctule (Nyctalus lasiopterus)

A very rare, strictly protected species in Hungary. It lives only in the Northern part of Hungary, in the heart of mountains. All of the captured bats were mist-netted at small ponds and streams. The only known colony was found in a tree hole of a beech forest.

Leisler's bat (Nyctalus leisleri)

It is not a rare forest-dwelling species. Leisler's bats roost in wide forests all year round. They never go to caves and mines.

Noctule (Nyctalus noctula)

The most frequent species in Hungary. It is a forest-dwelling species, but it is very common in bigger towns, in prefabricated panel buildings.

Nyctalus noctula summer roost			
UTM	Settlement	Roost type	Number of individuals
ES08	Mezőberény	church	120
ES06	Szabadkigyós	castle	30
ET89	Nyírvasvári	church	15

Northern bat (Eptesicus nilssonii)

It is the rarest bat species in Hungary. Only two occurrences were reported in the country in the last 20 years. Nothing is known about its roosting ecology.

Serotine (Eptesicus serotinus)

It is the most widespread species in Hungary. It is very common in churches in summer, but we do not know wintering colonies. The biggest nursery colony is over 200 individuals. It's rare in caves, and only a few individuals hibernate under ground.

Eptesicus serotinus summer roost			
UTM	Settlement	Roost type	Number of individuals
DT85	Kunmadaras	church	200
XN28	Fertőrákos	castle	200
DT29D1	Abasár	church	200
DU43B3	Borsodnádasd	church	200
CT47	Solymár	church	150
DU64D1	Nagybarca	church	150
ET21	Darvas	church	130
DU87C2	Bódvalenke	church	120
CS01A2	Pécsvárad	church	120
DU32D4	Fedémes	church	120

Parti-coloured bat (Vespertilio murinus)

The species is known from every part of Hungary, but mostly only one or two individuals from one place. There is only one known colony in Hungary, it roosts in the Mátra Mountains. The known specimens were found in houses, mist-netted at ponds, or found in owl pellets.

Vespertilio murinus			
UTM	Settlement	Roost type	Number of individuals
DU	Mátraszentistván	house	30

Barbastelle bat (Barbastella barbastellus)

It is a strictly protected species in Hungary. It lives typically in the woodlands of mountains. Specimens roost in tree holes both in winter and summer. Only a few specimens hibernate in caves.

Brown long-eared bat (Plecotus auritus)

It is a frequent forest-dweller species. They roost whole year in tree holes. In winter some of them hibernate in caves.

Grey long-eared bat (Plecotus austriacus)

It is a widespread species everywhere in Hungary. Summer colonies stay in attics, the largest one consisted of approximately 100 individuals. In winter they hibernate in cellars and mines.

Plecotus austriacus			
UTM	Settlement	Roost type	Number of individuals
EU45B	Sárospatak	church	100
ES15	Elek	church	60
CT59	Dunabogdány	chapel	60
EU55	Bodroghalom	church	50
EU26B1	Hejce	church	50
EU26B2	Fony	church	50
EU16	Hernádvécse	church	50
XN89	Mecsér	church	50

DS36	Csanytelek	church	45
DU92	Hernádnémeti	church	45
EU11	Tiszadob	church	45

Schreibers' bat (Miniopterus schreibersii)

It is a strictly protected species. Only a few big colonies are known. They stay whole year in caves and mines. The size of its biggest colony reaches 2500 individuals in summer and 3000 individuals in winter.

B.5. Data collection, analysis, interpretation and dissemination

Data collection:

House-dwelling bat database (Hungarian Bat Research Society)
Register of specimens of museums (Hungarian Natural Science Museum)
Hungarian Mammal Database (Nature Foundation)

C. Measures Taken to Implement Article III of the Agreement

C.6. Legal measures taken to protect bats

In Hungary all bat species gained protection by law in 1901. The capture, killing, keeping and disturbance of bats in any way have been prohibited since that time. In 1974 the theoretical value of the animals was also determined as a fine for killing, capturing or illegal trade of them. Now the 28 species living in Hungary are all either protected or strictly protected (7 species) except the two newly discovered species (*M. alcatoe, P. pygmaeus*). So far one official species protection plan has been adopted by the minister for environment and water - for the Greater Noctule species (*Nyctalus lasiopterus*).

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

The lists of the most important underground habitats and the most important buildings are completed. These roosts are visited at least once a year.

All caves are protected by law.

Due to becoming a member to the European Union, Natura 2000 sites have been designated. Ten bat species are listed on Annex II. of the Habitat Directive which occur in Hungary. All together 82 sites (habitats) have been designated under Natura 2000 (see the table below) for the ten species – from which there are overlaps obviously.

Barbastella barbastellus	29
Miniopterus schreibersi	6
Myotis bechsteini	31
Myotis blythii	22
Myotis dasycneme	19
Myotis emarginatus	14
Myotis myotis	44
Rhinolophus euryale	4
Rhinolophus ferrumequinum	11
Rhinolopus hipposideros	22

C.8 Consideration given to habitats which are important to bats

Regarding protected areas nature conservation provisions are identified in management plans. These are compiled by the competent national park directorates, approved by the Office for Nature Protection and finally the so called „C" documentation - indentifying obligations, restrictions and prohibitions for the given protected area – gain legal effect in a form of a ministerial decree.

The management plans for caves contain regulations concerning cave visits, research, and other activities (like filming) potentially causing disturbance or threat. These activities are either prohibited or must be permitted. The management plans also contain provisions regarding the management of the certain habitat. For caves prohibitions concerning bats (e.g. disturbance, closing and protection of entrance) and buffer areas are identified as well.

So far 47 management plans have been completed for caves.

C.9. Activities to promote the awareness of the importance of the conservtion of bats

To encourage bat protection we publish and distribute information booklets, and attempt to convince people of the usefulness of bats and the importance of their protection through TV and radio programmes and newspaper articles. We organise lectures to educate pupils in primary and secondary schools and universities.

We organized the „Bat Night" in several towns, where mainly the youngs were active.

C.10. Responsible bodies, in Accordance with Article III.5 of the Agreement

The Office for Nature Conservation (within the Ministry of Environment and Water) co-ordinates nature protection activities on national level: it sets priorites, adopts the management plans submitted by the national park directorates and approves species conservation plans. The 10 regional national park directorates carry out the nature conservation activities and represent the professional knowledge needed.

C.11. Additional action undertaken to safeguard population of bats

Caves

Several information boards were placed in front of the most important caves.

Mines

It occurs to be a very serious problem that several mine openings are threatened by falling in. In the last year we fixed the most dangerous entrances.

The Office for Nature Conservation financed a project to make a database of the most important mines. The database is ready, and a new law on the protection of mines will be based on this.

Buildings

The members of Hungarian Bat Research Society continously check the most improrant roosts in churches and castles. In Hungary colonies with more than 20 individuals are 'significant' and strictly protected. Several bat-friend reconstructions were carried out.

Panel buildings

In Hungary the noctule bat is the most urbanized bat species. Its main roost type occurs in blocks of houses in panel gaps. In the last fifteen

years they have changed their habitat and nowadays this is the most common species in Hungary. These colonies are very threatened and the local people usually expel them, because of the noise, dirt they make and because they are affraid of them. They fly very often into the rooms. Therefore, it is a very important task to save these colonies.

C.12. Recent and ongoing programmes (including research) relating to the conservation and management of bats.

-Bat boxes (Csaba Fehér, Péter Paulovics, Dénes Dobrosi, Tamás Galgóczy. István Géczi, Péter Gombkötő)
-Monitoring of caves (Miklós Szatyor, Peter Gombkötő, Péter Paulovics, Márton Juhász, Sándor Boldogh)
-Monitoring of mines (Zoltán Bihari, Péter Gombkötő, István Géczi, Sándor Boldogh)
-Forrest-dwelling bat research (Péter Estók)
-Ecological conditions of the hibernacula of Rhinolophus ferumequinum (Miklós Szatyor)
-Monitoring of house-dwelling bats (Zoltán Bihari, Csaba Fehér, Dénes Dobrosi, Isván Géczi, Zoltán Molnár, Péter Gombkötő)
-Taxonomy, systematics and zoogeography of Old World bats (Gábor Csorba)
-Bats of wetlands (Imre Dombi, Noémi Papp, Dénes Dobrosi)
-Rehabilitation of injured and captured bats (Zoltán Molnár, Viktor Molnár)
-Ecology of Myotis nathusii (Csaba Fehér)
-Pathoanatomy and pathophysiology of bats (Viktor Molnár)
-Veterinary treatment of sick and injured bats (Viktor Molnár)
-Endoparasitological (coprological) and ectoparasitological studies of bats (Viktor Molnár)
-Migration of Myotis Daubentonii and M. dasycneme (Imre Dombi)
-Population ecology of bats (Zoltán Bihari)
-Roost selection of Nyctalus noctula, Rhinolophus ferrumequinum and Myotis myotis (Zoltán Bihari)

C.13. Consideration being given to the potential effects of pesticides on bats

We have no information about effects of pesticides on bats. It doesn't seem to be a serious problem.

D. Functioning of the Agreement

D.14. Cooperation with other States

There has been a continous contact for years with Slovakian bat researches in relation to the migratory routes of bats, in particular the Greater Horseshoe bat. The reason for this co–operation is that a significant proportion of the population of this species lives in Hungary, then they migrate to winter to Slovakian caves and mines.

There is a close co–operation with Romanian colleagues to survey the caves and the bat colonies in Transilvania.

D.15 Measures taken to implement Resolutions adopted by MoP

The Department of International Treaties on Nature Conservation reponsible for the implementation of the agreement co-ordinates between the Secretariat and the Office for Nature Conservation, the 10 national park directorates and the bat experts who actually carry out the implementation in Hungary.