

## **AGREEMENT ON THE CONSERVATION OF BATS IN EUROPE**

### **Report on the implementation of the Agreement in Azerbaijan Republic**

#### **A. General Information**

Non-Party Range: Azerbaijan Republic

Date of Report: February 2009

Period Covered: 2008

Competent Authority: Institute of Zoology Azerbaijan National Academy of Sciences, NGO  
“Mammalogists of Azerbaijan” – prof. Rakhmatulina Irina.

#### **B. Status of Bats within the Territory of Azerbaijan**

##### *1. Summary Details of Resident Species*

29 bat species occur on the territory of Azerbaijan. Among them *Myotis bechsteinii*, *M. brandti*, *M. daubentonii*, *Nyctalus leisleri*, *Plecotus austriacus*, *Eptesicus nilssonii* have been recorded only once.

14 species considered as regularly breeding bats. There are both the migrant populations of *Nyctalus noctula* (in the eastern part of the country) and sedentary ones (other territory) in Azerbaijan. *Pipistrellus nathusii* is migrating species according to some signs (findings only from autumn to spring and only males – in the worm period).

10 bat species were revealed on all territory. Of them *Pipistrellus pygmaeus* and *P.kuhlii* are numerous, *Rhinolophus hipposideros*, *R.ferrumequinum*, *Myotis blythii*, *M.mystacinus*, *P.pipistrellus*, *Eptesicus serotinus* are common, *Plecotus auritus* and *Hypsugo savii* are rare. 17 species have restricted areas.

##### *2. Status and Trends*

According to the International Union for Conservation of Nature and Natural Resources (IUCN) Category of Threat there are 22 species with lower risk and 6 vulnerable ones in Azerbaijan (Table 1). The trends are stable for 6 species (*R.hipposideros*, *R.ferrumequinum*, *M.blythii*, *Miniopterus schreibersii*, *Hypsugo savii*, *E.serotinus*). 3 species (*P.pipistrellus*, *P.pygmaeus* and *P.kuhlii*) increase their number and they are abundant in the anthropogenic landscapes. The two former is numerous in mountain regions and the latter - in arid areas.

##### *3. Habitats and Roost Sites*

Various habitat types are characteristic for such widespread species as *R.hipposideros*, *R.ferrumequinum*, *M.blythii*, *M.emarginatus*, *M.mystacinus*, *Pl.auritus*, *P.pipistrellus*, *P.pygmaeus*, *P.kuhlii*, *H.savii*, *E.serotinus*. Mainly mountain steppes and forests are inhabited by *R.blasii*, *R.euryale*, *R.mehelyi*, *M.nattereri*, *M.schreibersii*, *P.auritus*. *N.noctula* and majority *B.barbastellus* were revealed in lowland and mountain forests and in human settlements, attached to these landscapes. *B. leucomelas* and *E. bottae* are met in arid habitats (semi-desert, foothill and mountain steppes or mountain xerophytes).

**Table 1. Status and trends of bat species in Azerbaijan**

Species	Faunal status	IUCN status	Trends
<i>Rhinolophus hipposideros</i>	Common	Vulnerable	Stable
<i>R.ferrumequinum</i>	Common	Lower Risk	Stable
<i>R.blasii</i>	Rare	Lower Risk	Decline
<i>R.euryale</i>	Rare	Vulnerable	Decline
<i>R.mehelyi</i>	Rare	Vulnerable	Decline
<i>Myotis blythii</i>	Common	Lower Risk	Stable
<i>M.bechsteinii</i>	Rare	Vulnerable	?
<i>M.nattereri</i>	Rare	Lower Risk	Decline
<i>M.emarginatus</i>	Rare	Vulnerable	Decline
<i>M.mystacinus</i>	Common	Lower Risk	Decline
<i>M.brandti</i>	Rare	Lower Risk	?
<i>M.daubentii</i>	Rare	Lower Risk	?
<i>Plecotus auritus</i>	Rare	Lower Risk	?
<i>P.austriacus</i>	Rare	Lower Risk	?
<i>Barbastella barbastellus</i>	Rare	Vulnerable	?
<i>B.leucomelas</i>	Rare	Lower Risk	?
<i>Nyctalus noctula</i>	Rare	Lower Risk	?
<i>N.leisleri</i>	Rare	Lower Risk	?
<i>Miniopterus schreibersii</i>	Common	Lower Risk	Stable
<i>Pipistrellus pipistrellus</i>	Common	Lower Risk	Increase
<i>P.nathusii</i>	Rare	Lower Risk	Decline
<i>P.kuhlii</i>	Numerous	Lower Risk	Increase
<i>P.pygmaeus</i>	Numerous	Lower Risk	Increase
<i>Hypsugo savii</i>	Rare	Lower Risk	Stable
<i>Vespertilio murinus</i>	Rare	Lower Risk	?
<i>Eptesicus nilssonii</i>	Rare	Lower Risk	?
<i>E.serotinus</i>	Common	Lower Risk	Stable
<i>E.bottae</i>	Rare	Lower Risk	?
<i>Tadarida teniotis</i>	Rare	Lower Risk, DDD	?

As it is shown in the Table 2, summer roosts are most various (different natural and artificial underground spaces, man-made buildings) in *R.hipposideros*, *R.ferrumequinum*, *M.blythii*, *M.emarginatus*. Shelters of *M.nattereri*, *M.mystacinus*, *B.barbastellus*, *H.savii* are mainly connected with rock and house fissures. *N.noctula*, *P.pipistrellus*, *P.pygmaeus*, *P.nathusii* were found both within buildings and tree cavities. *R.blasii*, *R.euryale*, *R.mehelyi*, *M.schreibersii*, *B.leucomelas* are cave-dwelling bats.

**Table 2. Habitats, summer and winter roosts of bats in Azerbaijan**

<b>Species</b>	<b>Habitats</b>	<b>Summer roosts</b>	<b>Winter roosts</b>
<i>R.hipposideros</i>	Various	Attics, undergrounds, buildings	Underground spaces
<i>R.ferrumequinum</i>	Various	Caves, attics, churches	Underground spaces
<i>R.mehelyi</i>	Arid and forests	Underground spaces	Underground spaces
<i>R.blasii</i>	Mountain step- pes & forests	Underground spaces	Underground spaces
<i>R.euryale</i>	Arid & mountain landscapes	Underground spaces	Underground spaces
<i>M.blythii</i>	Various	Underground spaces, buildings, rock fissures	Underground spaces
<i>M.bechsteini</i>	Lowland forest	Church	
<i>M.nattereri</i>	Mountain step- pes and forests	Buildings, rock fissures	
<i>M.emarginatus</i>	Various	Caves, attics, churches	
<i>M.mystacinus</i>	Various	Rock fissures, buildings, attics	
<i>M.brandti</i>	Lowland forest	Tree hollows	
<i>M.daubentonii</i>	Lowland forest		
<i>Min.schreibersii</i>	Mountain step- pes and forests	Caves	Caves
<i>P.auritus</i>	Various	Buildings, underground spaces	Caves
<i>P.austriacus</i>	Mountain step- pes and forests	Crypt	
<i>B.barbastellus</i>	Forests and mo- untain steppes	Buildings, rock fissures	Buildings, crypt
<i>B.leucomelas</i>	Semi-desert, mountain step- pes	Caves	Caves
<i>N.noctula</i>	Forests	Attics, tree hollows	
<i>N.leisleri</i>	Mountain forests	Tree hollow	
<i>P.pipistrellus</i>	Various	Buildings, tree hollows	Rock fissures, buil-
<i>P.pygmaeus</i>	Various	Buildings, tree hollows	Rock fissures
<i>P.nathusii</i>	Semi-desert, forests	Buildings, tree cavities	Buildings
<i>P.kuhlii</i>	Various	Buildings	Buildings
<i>H.savii</i>	Various	Buildings, rock fissures	Rock fissures
<i>V.murinus</i>	Arid & forest ecosystems	Buildings	
<i>E.nilssonii</i>	Lowland forest		
<i>E.serotinus</i>	Various	Buildings, attics, tree cavities	
<i>E.bottae</i>	Semi-desert	Caves, rock fissures	
<i>T.teniotis</i>	Mountain forest	Rock fissures	

#### 4. Threats

Tree-dwelling bats are in the hard conditions because their roosts disappear together with woods. Till now we have no information about some bats (*R.mehelyi*, *R.hipposideros*, *F.ferrumequinum*, *M.blythii*, *M.schreibersii*) of such big caves, as Azykh, Shusha, Kilit due to occupation of their territory.

#### 5. Data Collection, analysis, interpretation, and dissemination

During last years Azerbaijan chiropterologists study the bat fauna of the south part of Azerbaijan (Nakhichevan Autonomy Republic). 16 species have been found there, of them 4 new – *Myotis mystacinus*, *M.emarginatus*, *Hypsugo savii*, *Pipistrellus pygmaeus*. Main attention was paid to quantity and population structure of *Rhinolophus mehelyi*, *R.ferrumequinum*, *Myotis blythii*, *Miniopterus schreibersii*. It was established that the basic chiropterofauna of this region is formed by 7 species: *R.hipposideros*, *R.ferrumequinum*, *M.blythii*, *Min.schreibersii*, *P.kuhlii*, *P.pygmaeus* and *E.serotinus*. *R.euryale*, *R.blasii*, *Plecotus auritus* are very rare. The number of speleophil bats varied in different seasons in *R.ferrumequinum* from a few to 120, in *R. mehelyi* – to 60, *M. blythii* – more than 500, *Min.schreibersii* – to 500.

Also bats' monitoring of the southern slopes of the Greater Caucasus is realized too.

### C. Measures Taken to Implement Article III of the Agreement

#### 6. Legal measures taken to protect bats, including enforcement action

The Bat Agreement passes all necessary stages.

No specific state measures are aimed at bat protection.

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

One site is identified as an important for bats conservation. It is the Beyuk and Kichik Dash mountains in the Gobustan Hystorical-Architectonic Reserve. 2 caves of the Nakhichevan AR (Bilav cave “Yarasa yuvasy” of the Ordubad National Park and Sirab cave “Dash alty” of the Babek region) have been recommended to protect as the Nature memorials.

#### 8. Considerations given to habitats which are important to bats

In connection with the future second edition of the Red book of Azerbaijan most important bat habitats are recommended for the protection. 10 bat species (*Rhinolophus ferrumequinum*, *R.euryale*, *R.hipposideros*, *R.mehelyi*, *Myotis blythii*, *M.emarginatus*, *M.bechsteinii*, *Barbastella leucomelas*, *Miniopterus schreibersii*, *Tadarida teniotis*) will be included in this book.

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

- Seminars in schools, for journalists, and workers of reserves,
- Posters «European Bat Night», about red-book and rare mammals (including bats), the popular book “Flying mammals of Azerbaijan ” have been distributed in various regions of Azerbaijan.

- Observations of bats are conducted in the frame of the European Bat Night.

#### 10. *Additional action undertaken to safeguard populations of bats*

The National Biodiversity Strategy and Action Plan contain strategic action for conservation of bat species.

12. *Recent and 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 finding*

During 2006-2008 years we studied the contemporary status of protected and prioritize bat species in prioritize territories of Azerbaijan according to the project “Development and Capacity Building of Transboundary Bats Monitoring Network in the Caucasus”. The National Action Plan for the protection of 11 bat species (*Rhinolophus ferrumequinum*, *R.euryale*, *R.hipposideros*, *R.mehelyi*, *Myotis blythii*, *M.emarginatus*, *M.bechsteinii*, *Barbastella barbastellus*, *B. leucomelas*, *Miniopterus schreibersii*, *Tadarida teniotis*) and their main habitats have been worked out and presented in different government organizations.

Since 2008 the Azerbaijan-USA project “Identification of taxonomic status of some doubtful mammal species of Azerbaijan” is realized. The special attention will be paid to the status of the *Myotis mystacinus* complex in Azerbaijan. The systematical study of the whiskered bats will be done using morphological, kariological and molecular methods, which allow us to identify species, their distribution and phylogenetic relationships.

13. *Considerations begin given to the potential effects of pesticides on bats, and their food sources and efforts to replace timber treatment chemical, which are highly toxic to bats*

No considerations are given.

#### **D. Functioning of the Agreement**

#### 14. *Cooperation with other Range States*

Scientific connections are regular with Georgian, Ukraine, Russian, and European bat researches. We are ready for any cooperation with all chiropterologists.

#### **Publications**

ABDURAKHMANOVA N. 2008. To the fauna and distribution of bats (Chiroptera) on the Greater Caucasus // Proceedings of the Azerbaijan Society of zoologists. V I, Baku: 581-585.

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YAVRUYAN E., I.RAKHMATULINA, A.BUKHNIKASHVILI, A.KANDAUROV, I.NATRADZE, S.GAZARYAN. 2008. Bats conservation Action Plan for the Caucasus // Tbilisi: 87 pp.