

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: March 2007

Period Covered: 2006 – 2007

Competent Authority: Institute of Zoology Azerbaijan National Academy of Sciences, NGO
“Mammalogists of Azerbaijan”

B. Status of Bats within the Territory of Azerbaijan

1. Summary Details of Resident Species

28 bat species occur on the territory of Azerbaijan. Among them *Myotis bechsteinii*, *M. brandti*, *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).

9 bat species were revealed on all territory. Of them *Pipistrellus pipistrellus* and *P. kuhlii* are numerous, *Rhinolophus hipposideros*, *R. ferrumequinum*, *Myotis blythii*, *M. mystacinus*, *Eptesicus serotinus* are common, *Plecotus auritus* and *Hypsugo savii* are rare. The status of *Pipistrellus pygmaeus* is defined. This pipistrelle has been found in west and south-eastern parts of the country. 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 20 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*, *H. savii*, *E. serotinus*). 2 species (*P. pipistrellus* and *P. kuhlii*) increase their number and both of them are abundant in the anthropogenic landscapes. The former (and maybe – *P. pygmaeus*) 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*, *P. auritus*, *P. pipistrellus*, *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).

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. nathusii* were found both within buildings and tree cavities. *R. blasii*, *R. euryale*, *R. mehelyi*, *M. schreibersii*, *B. leucomelas* are cave-dwelling bats.

Table 1. Status and trends of bat species in Azerbaijan

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

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

Species	Habitats	Summer roosts	Winter roosts
R.hipposideros	Various	Attics, undergrounds, buildings	Underground spaces
R.ferrumequinum	Various	Caves, attics, churches	Underground spaces
R.mehelyi	Arid and forests	Underground spaces	Underground spaces
R.blasii	Mountain step- pes & forests	Underground spaces	Underground spaces
R.euryale	Arid & mountain landscapes	Underground spaces	Underground spaces
M.blythii	Various	Underground spaces, buildings, rock fissures	Underground spaces
M.bechsteinii	Lowland forest	Church	
M.nattereri	Mountain step-	Buildings, rock fissures	

	pes and forests		
M.emarginatus	Various	Caves, attics, churches	
M.mystacinus	Various	Rock fissures, buildings, attics	
Min.schreibersii	Mountain step- pes and forests	Caves	Caves
P.auritus	Various	Buildings, underground spaces	Caves
P.austriacus	Mountain step- pes and forests	Crypt	
B.barbastellus	Forests and mo- untain steppes	Buildings, rock fissures	Buildings, crypt
B.leucomelas	Semi-desert, mountain step- pes	Caves	Caves
N.noctula	Forests	Attics, tree hollows	
N.leisleri	Mountain forests	Tree hollow	
P.pipistrellus	Various	Buildings, tree hollows	Rock fissures, buil- dings
P.nathusii	Semi-desert, forests	Buildings, tree cavities	Buildings
P.kuhlii	Various	Buildings	Buildings
H.savii	Various	Buildings, rock fissures	Rock fissures
V.murinus	Arid & forest ecosystems	Buildings	
E.nilssonii	Lowland forest		
E.serotinus	Various	Buildings, attics, tree cavities	
E.bottae	Semi-desert	Caves, rock fissures	
T.teniotis	Mountain forests	Rock fissures	

4. Threats

Tree-dwelling bats are in the hard conditions because their roosts disappear together with woods, chopping by people for firewood due to energy crisis. Till now we have no information about 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 2004-2005 Azerbaijan chiropterologists studied the bat fauna of the southeastern part of the Caspian coast (Salyan Plane, the delta of the Kura river). 7 species have been found there. It was established that only P.kuhlii and P.nathusii are numerous (the density of the first was about 100 individuals per one km² and the second – 50-60 ind/km² from autumn till spring). The single specimens of R.ferrumequinum, R.hipposideros, M.mystacinus, V.murinus, and E.serotinus were revealed on this territory. By our data, P.nathusii spend there mainly winter period and only males were found during warm months. 120 individuals of this species have been ringed for the revealing of their summer staying and movements.

Habitations and feeding places of all bats connect with anthropogenic biotopes in studied regions.

6 posters about red-book and rare mammals, including bats, had been published. The popular book “Flying mammals of Azerbaijan ” has been prepared for the publication.

C. Measures Taken to Implement Article III of the Agreement

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

The Bat Agreement has been given to the Foreign Office and passed there all necessary stages. No specific state measures are aimed at bat protection. We do not know

contemporary bats’ situation in most part of our country, especially in Karabakh. We can not realize any field works, except short-term observations.

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.

8. Considerations given to habitats which are important to bats

No considerations are given to habitats important to bats.

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

- Seminars for school and workers of reserves,
- Posters «European Bat Night» were distributed,
- 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

The research work «Fauna and ecology of bats of the Salyan Plain in the contemporary conditions» was done in 2004-2005. This plain occupies an important position along the Caspian Cost, where seasonal migration of some bats take place. The species and number composition of bats, their population structure were studied. Now we are prepared for the future study of the contemporary status of protected and prioritize bat species in the Nakhichevan Autonomy Republic and in prioritize territories of Azerbaijan according to the project “Development and Capacity Building of Transboundary Bats Monitoring Network in the Caucasus”. As the main result of these studies will be a conservation of all globally significant bat species and their habitats in the Caucasian Hotspot.

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.

It is necessary to note that after the land privatization pesticides and other chemicals do not use widely in Azerbaijan and their influence on bats is weak.

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

Rakhmatulina I.K. 2005. Bats of Azerbaijan (Fauna, Ecology, Zoogeography). Baku, 476 pp.

Rakhmatulina I.K. 2006. Flying bats of Azerbaijan. Baku. 99 pp.

Rakhmatulina I.K. 2006. Reproductive peculiarities of pipistrelles (Vespertilionidae: Pipistrellus) as predominant species among bats (Mammalia: Chiroptera) of Azerbaijan. Proceedings of the Azerbaijan Institute of Zoology, vol. XXVIII, Baku, Elm: 770-780.

Rakhmatulina I.K., Hasanov N.A. 2006. Bats (Mammalia: Chiroptera) of the Salyan Plain of Azerbaijan in current condition. Proceedings of the Azerbaijan Institute of Zoology, vol. XXVIII, Baku, Elm: 780-788.