UPDATE TO THE NATIONAL REPORT OF RUSSIAN FEDERATION
on the implementation of the Agreement on the Conservation of Bats in Europe

1. General Information

Non-Party Range State:	Russian Federation
Date of Report:	March 2001
Period Covered:	February 2000 – March 2001
Competent Authorities:	Zoological Museum of Moscow Lomonosov State University; Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences

2. Status of individual species and trends

Recent revision of *Myotis mystacinus* species group (Benda, Tsytsulina, 2000) has shown that *M. mystacinus* sensu lato includes four different species: *M. mystacinus* Kuhl, 1817, *M. nipalensis* Dobson, 1871 (not known from Europe), *M. aurascens* Kuzyakin, 1935, and *M. hajastanicus* Argyropulo, 1939 (vicinity of Lake Sevan, Armenia). Thus, the total number of European bat species increases up to 32, with 28 of them represented in Russian bat fauna. One additional Asian species, *Barbastella leucomelas*, occurs in European part of the country.

Red-Data Book status and that by IUCN have not changed though the latter is to be assessed for *Myotis mystacinus* and *M. aurascens* (Table 1) .

Table 1. Current status and trends of bat populations in Russia

Species	Distributional status	Faunal status	Red-Data Book status*	IUCN status	Trend
Rhinolophus euryale	restricted	rare		R	?
R. mehelyi	restricted	rare?	V	V	?
R. hipposideros	restricted	common	V	V	o/+
R. ferrumequinum	restricted	common	V	V	o
Myotis blythi	restricted	common	V	V	o
M. bechsteini	restricted	rare		R	o
M. dasycneme	widespread	common		NT	o/+
M. daubentoni	widespread	numerous		NT	o/+
M. nattereri	widespread	rare?		NT?	o
M. emarginatus	restricted	common?	V	V	?
M. brandti	widespread	numerous		NT	+
M. mystacinus	widespread	common		N/A	o
M. aurascens	widespread	common		N/A	o
Eptesicus serotinus	widespread	common		NT	+
E. nilssoni	widespread	common		NT	o
Hypsugo savii	restricted	rare		R	?
Pipistrellus pipistrellus	widespread	numerous		NT	o/+
P. nathusii	widespread	numerous		NT	+
P. kuhli	widespread	numerous		NT	+
Nyctalus leisleri	widespread	common		NT	?
N. noctula	widespread	common		NT	-
N. lasiopterus	widespread	rare	R	R	o
Vespertilio murinus	widespread	common		NT	o
Barbastella barbastellus	restricted	common		V	o/+
B. leucomelas	restricted	rare		R	?
Plecotus auritus	widespread	numerous		NT	+
P. austriacus	restricted	common		NT	?
Miniopterus schreibersi	restricted	common	V	V	o
Tadarida teniotis	restricted	rare	R	R	?

* Red Data Book of Russian Federation 1985. M., Rosselkhozizdat, 456 pp. [in Russian].

Changes in population estimates are insignificant or absent (Table 2). Search for new roosts, especially those of big nursing and wintering colonies, gives the majority of new data on species abundance. As an instance – recently (July 2000) discovered supposed winter hibernaculae of *Myotis dasycneme* and *Eptesicus nilssoni* in Tverskaya Region.

Some trends for the range expansion in Europe – eastward for *Eptesicus serotinus*, and northward for *Pipistrellus kuhli*, have been reported (Ilyin, 2000). The survey conducted suggested climatic reasons for that due to considerable overlap in the 30-year dynamics of both processes.

Threats. Some other kinds of human activity appeared to be threatening the prosperity of bat populations in Russia. Surprising information about bats as carriers of radiation was reported from Ural Gorkiy State University (Orlov, 1999). Since some industrial depositories of radioactive wastes and materials in Middle and Southern Ural are easily accessible to insects (generally exposed to radiation while contacting with water from technological reservoirs in such areas), in spite of direct harm to bats consuming those insects, this causes radioactive pollution of bat roosts (which are normally human buildings) due to accumulation of radioactive droppings. This was shown for maternity colonies of *Myotis dasycneme* and *Eptesicus nilssoni*. Pond bats accumulated about 10 times greater amounts of radionucleids (^{90}Sr and ^{135}Cs) in their bodies, forming powerful sources of radiation in the roosts. Food specialisation seems to be the most probable explanation for that difference, resulting in higher vulnerability of *M. dasycneme* with respect to radioactive pollution.

Whilst unorganised caving became less intensive, some trends for more intensive development of commercial tourism at various underground sites in the Northern Caucasus are becoming more obvious nowadays. A glaring example is resent governmental perspective for the development of huge tourist industry in the region of Krasnaya Poliana, in the vicinity of State Caucasus Reserve. The project itself barely threatens major protected areas with all their caves, but may cause additional "pressing" on the rest of cave dwelling bat colonies outside the Reserve. The Northern and the Western Caucasus is unique gathering of large caves inhabited by bats. Some of them require urgent measures preventing any kind of tourist activities. As an instance of success in this area – research work undertaken through 1997-2000 in the Western Caucasus by Suren Gazaryan, which allowed giving some caves the rank of natural monuments.

Table 2. Distribution and population estimates of bats in European part of Russia

Species	Distribution within European part of Russia	Population estimate
Rhinolophus euryale	W. Caucasus	?
R. mehelyi	N. Caucasus	50000*
R. hipposideros	N. Caucasus	80000-100000*
R. ferrumequinum	N. Caucasus	150000-200000*
Myotis blythi	N. Caucasus	500000-900000*
M. bechsteini	N. Caucasus	?
M. dasycneme	southward to 48°N	> 100000
M. daubentoni	southward to 49°N, N.Caucasus	> 300000
M. nattereri	except Lower Volga and Ural Basins	30000-50000
M. emarginatus	W. and Central-N. Caucasus	50000-120000*
M. brandti	southward to 48-52°N, N. Caucasus	> 300000
M. mystacinus	southern and eastern areas for certain	35000-50000
M. aurascens	southward to 51°N, N. Caucasus	35000-50000
Eptesicus serotinus	northward to 51-53°N	> 150000
E. nilssoni	southward to 53-51°N, W. Caucasus	> 150000
Hypsugo savii	N. Caucasus	?
Pipistrellus pipistrellus	northward to 55-57°N	> 1500000
P. nathusii	northward to 57-60°N	> 1500000
P. kuhli	N. Caucasus, Lower and Middle Volga Basin	> 1000000

Nyctalus leisleri	northward to 58°N	> 100000
N. noctula	northward to 60°N	200000-300000
N. lasiopterus	northward to 57°N	17000-27000*
Vespertilio murinus	northward to 61°N	> 200000
Barbastella barbastellus	Kaliningrad region, N. Caucasus	20000-60000
B. leucomelas	N-E Caucasus	?
Plecotus auritus	southward to 50°N, N. Caucasus	> 200000
P. austriacus	Central-N. Caucasus for certain	?
Miniopterus schreibersi	N. Caucasus	50000-60000
Tadarida teniotis	Central-N. Caucasus	300-600*

* after Panyutin K.K. 1985. Chiroptera. – In: Red Book of Russian Federation. M., Rosselkhozizdat: 18-28. Other estimates have been extrapolated from summer and winter data of faunistical works.

3. General

Data-collection. No change.

Publicity Initiatives. A TV talk about bats dwelling inside the country houses was carried out by TNT Channel in the summer 2000. A number of crucial problems regarding monitoring and conservation of synanthropous bat species had been discussed.

Research. No new research exclusively relates to bat conservation, however regional eco-faunistic investigations undertaken assist bat conservation in Russia.

For the first time series of surveys aimed to investigate bat fauna in the cities (Moscow and Moscow Region, Adler, etc.) and their demands for living conditions have been carried out and subsequently reported at a specialized conference held in Moscow in the year of 2000.

Sequential survey of one of the Moscow Region's priority-driven species, the pond bat, continued last summer in the vicinity of Zvenigorod Biological Station of Moscow University, when dispersal routes of bats from their maternity roosts to foraging sites were traced using chemiluminescent tagging.

Some other recent investigations were mentioned above.

Legislation. The State Committee of Russian Federation for the Protection of Environment, recently being the independent institution, has newly been assigned to the Ministry of Natural Resources, which may have negative consequence for the effectiveness of all measures undertaken for nature protection.

Ratification. The text of the Agreement has recently been transferred to the former State Committee of the Russian Federation for the Protection of Environment, which is now a Department to the Ministry of Natural Resources.

International co-operation. INTAS supported research on genetic diversity and population structure in European bats (Germany, Austria, Russia; 1994-present): new data from winter hibernacula in N. Caucasus, and no maternity colonies.

New items of publicity issued. The third issue of Russian bat journal "Plecotus et al." was published in February 2001.