EUROBATS

2nd Session of the Meeting of Parties

Bonn, Germany, 1-3 July 1998

Resolution No. 3

Transboundary Programme: Species Proposals

The Meeting of the Parties

Recalling the Resolution agreed at its first session (18-20 July 1995) on *the Implementation of the Conservation and Management Plan* (Annex K page 45 of the report of the meeting);

Recalling also, under Priority 25 of that Resolution, that the Advisory Committee was charged with the development of a programme proposal for the transboundary research and long-term monitoring of the migration routes and selected bat-populations requiring special attention;

Recognising that, in determining which species to afford attention initially, it is important to identify those species which will reveal as much general information about bat species' movements in Europe as possible;

Recognising also that those species identified should be among the most migratory in the European continent as a whole;

Recognising further that results gained from the pursuit of projects relating to the species identified for action should allow for the development of projects for further species or species groups at a later stage;

Noting the work being carried out in the framework of the Pan-European Biological and landscape Diversity Strategy, in particular towards the establishment of the Pan-European Ecological Network (Action Theme 1) and under the European Action Programme for Threatened Species (Action Theme 11);

Noting also the work being carried out in the framework of the European Habitats Directive, in particular the establishment of the Natura 2000 network;

Recommends that the following two species should be the subject of transboundary co-operation to identify the distribution and migration patterns of the populations concerned: *Myotis dasycneme* and *Pipistrellus nathusii*;

Decides that the project descriptions covering the above-mentioned two species, attached as Annex I and Annex II to this Resolution, may be used as guidelines for the development of detailed projects;

Instructs the Secretariat, with advice from the Advisory Committee, to use available savings from the budget, and seek external funding as appropriate, to encourage the projects to be developed in detail and implemented by an agency chosen in consultation with the Advisory Committee, and to report back on progress to the Meeting of Parties at its third session.

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Transboundary Programme for Bat Conservation

Element 1: Bat Monitoring Programmes

Myotis dasycneme

33. Introduction

The occurrence of the Pond bat in much of its range is still poorly known. This hinders approaches towards efficient international conservation actions for the benefit of the species.

1.1 Distribution

The Pond bat has a Palaearctic distribution from the Netherlands and southern Sweden to central Siberia. Within its range the populations are dispersed into small, more or less isolated areas. In Europe, the species is recently recorded from the Netherlands, Belgium, northernmost France, Southern Sweden, Denmark, Germany, Poland, Czech Republic, Slovakia, Hungary, the Baltic States, Russia, Belarus, Ukraine, Romania and Moldova.

1.2 Status

The Pond bat ranks among the rarest bat species in Europe. A total world population in the 1980s was estimated at about 6,000 individuals. This figure was an underestimate because the population in the Netherlands alone oscillates around 8,000 to 10,000. A strong decline in breeding colonies formerly reported in the Netherlands seems not to have occurred. There has been a slight increase in numbers observed in Central Europe over the last ten years.

34. Habitat requirements

2.1 Winter habitats

The Pond bat migrates relatively short distances (more than 100 km but less than 300 km), and hibernates in natural caves, in subterranean quarries, mines, fortifications, and other artificial subterranean dwellings. In winter the species scatters widely and is therefore not practicable to survey during this period.

2.2 Summer habitats

Summer colonies are found in buildings where attics and other large cavities are used by groups of between 50 and 600.
The species inhabits lowlands characterised by large bodies of water. Lakeland areas are considered to be suitable habitats for the species. Survey studies in the Netherlands have revealed that the Pond bat uses almost exclusively rivers, canals and lakes, lined with rough vegetation, as foraging habitats.

The occurrence of the species in more or less isolated areas, which is uncommon for European bats, could be the result of its specific habitat-requirements. This indicates that habitat conservation is key to the conservation of the species itself.

35. Recommendations

In each of the above-mentioned countries an inventory should be made of areas which meet the habitat characteristics of the Pond bat. Such an inventory has already been prepared for the Netherlands. The selected areas should be surveyed intensively to determine the incidence of the species. The use of ultrasonic detectors is the best and most efficient method of determining the occurrence of Pond bats over large areas. The species is easily detectable using this method. The use of mist nets for surveying potential Pond-bat areas is considerably less efficient and is, therefore, not recommended. In areas where the species appears to be abundant, maternity (summer) colonies can be traced by following bats when they return from their foraging habitats to their roosts.

Sampling should be carried out according to a standardised sampling methodology.

The results of the national surveys would be collated and contribute to the elaboration of a European Action Plan for the Conservation of the Pond bat.

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Transboundary Programme for Bat Conservation

Element 1: Bat Monitoring Programmes

Pipistrellus nathusii

36. Introduction

Although this bat species is not considered to be endangered, it is one of the most migratory species of bat, crossing many national boundaries during its annual migrations.

1.1 Distribution

Pipistrellus nathusii is found from Western Europe and southern Fennoscandia, to the Urals, Caucasus and Western Asia Minor. The species reaches its highest population densities in Central and Southern Russia. In Western Europe, the species is less common than in Eastern Europe, but less rare than has been previously assumed. Most reproduction takes place in Central and Eastern Europe. Maternity colonies are rare in Western Europe, though the species is certainly under-recorded.

1.2 Migration

Recoveries of banded individuals have revealed that *P. nathusii* migrates over long distances, and shows a seasonal migration pattern. Populations from Central and Eastern Europe migrate in the period August to October to Western and Southern Europe. In late autumn, winter and early spring, Central Europe is "empty" of *P. nathusii*. Courtship and copulation take place during the autumn migration. Females, adults as well as juveniles, and juvenile males migrate earliest. At the end of the mating season, adult males lose their territorial behaviour and start to migrate west and southward. During the winter period almost the entire population from Central and Eastern Europe hibernates in Western and Southern Europe. However, the species may be active in the mild winter climate of Southern Europe. In spring, the majority of the females are believed to return to their breeding grounds in Central and Eastern Europe. Only some of the males follow the females to the breeding grounds. The rest stay, or return partially. It is not yet known which of the males return, and which stay. Most of the summer populations of *P. nathusii* in Western Europe appear to comprise males. In autumn this distribution pattern forms a network of territorial males from east to west, passed by migrating females. During the mating season, territorial males advertise themselves to migrating females to attract them into the mating roost. Females stay in these roosts for one or more days. Adult and juvenile females participate in mating. The presence of one or more juvenile males in the mating roosts is tolerated by the territorial males.

37. Open questions relevant to conservation

The status of the species is unknown. There are indications that the population structure is similar to that of *Nyctalus noctula*, having strict philopatry in female colonies by which some genetic isolation takes place. On the other hand, alleles are mixed over large areas by mating with several males of different origin. But this structure has to be proved as there may be very different populations with different reproductive or migratory behaviour, as in *Nyctalus noctula*. It is possible that a distinct population is endangered by specific threats in its breeding, mating, migrating or wintering range. To improve knowledge of the species' ecology the following aspects should be investigated:

- the distribution of *P. nathusii* during breeding time, mating and wintering. A presently open question is where the males stay in the summer. Data from Germany give the impression that migrating and mating are concentrated there along the larger rivers. If this is the case the valleys of the Saba and the Danube, among others, may be of great importance to the bats;

- migration routes and population structure as well as genetic isolation. As it is not realistic or desirable to copy the intensive banding programme from Pape (Latvia) in another place in Eastern Europe the population structure should be analysed using genetic methods. The German research project on the genetics of *Nyctalus noctula* demonstrated that even the migration pattern can be found to some extent using these methods.

- factors of threat from changes to the habitats or human interference during mating and migration. There should be more studies on the species' choice of habitat in different regions of Europe through the seasons. By observing the bats during mating time human-impact assessments can be made of the disturbance to the function of the pan-European populations which have led to threats to the species as a whole.

38. Recommendations

Banding can reveal, beside other methods, substantial additional information to identify migration patterns and population composition. Therefore, banding of *P. nathusii* should be focussed at breeding grounds in Central and Eastern Europe, and in the wintering areas. Bats should be banded only with special high-quality bat-rings. The following banding activities should be carried out:

- banding should be carried out only on a limited basis and within the context of a conservation programme and/or knowledge gaining exercise;

- the banding of wintering individuals should be carried out on as limited a basis as possible, and the disturbance of hibernating bats must be avoided;

- individuals in maternity colonies should also be banded, but again excess disturbance should be avoided. Biometrical data and tissue samples (20 - 30 per colony) should also be collected from these animals;
- the banding of **mating individuals (territorial males and visiting females)** should also be extended, especially in Western Europe;
- for collection of data from the field, an expert team should offer experience to other countries and chiropterologists to find *P. nathusii* colonies and males. This may be achieved by holding training seminars and bat-detector workshops. The aim should be to create a European network of observers who pass their national data to an international compiler. All present investigation projects on the species could be integrated into this section;

- a time parameter should be established (eg five years, followed by a review of progress);

- genetic sampling and biometrical sampling should be integrated in the study;

- general encouragement should be given - specifically in Central and Eastern Europe - to the incorporation of population dynamics into the study;