

**AGREEMENT ON THE CONSERVATION OF
POPULATIONS OF EUROPEAN BATS**
Report on implementation of the Agreement in Portugal
- 10 AC Meeting-

INDEX

A. General information

B. Status of bats within the territory of the party

1. Summary details of resident species.
2. Status and trends.
3. Habitats and roost sites.
4. Threats.
5. Data collection, analysis, interpretation and dissemination.

C. Measures taken to implement Article III of the Agreement

6. Legal measures taken to protect bats, including enforcement action.
7. Sites identified and protected which are important to the conservation of bats.
8. Consideration given to habitats which are important to bats.
9. Activities to promote the awareness of the importance of the conservation of bats.
10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management.
11. Additional action undertaken to safeguard populations of bats.
12. Recent and ongoing programmes (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 funding.
13. Consideration being given to the potential effects of pesticides on bats, and their food sources, and efforts to replace timber treatment chemicals which are highly toxic to bats.

D. Functioning of the agreement

14. Co-operation with other Range States.
15. Measures taken to implement Resolutions adopted by Meetings of Parties.

A. General Information

- ♦ *Name of Party:* Portugal
- ♦ *Date of Report:* 3 March 2005
- ♦ *Period Covered:* March 2004 to February 2005
- ♦ *Competent Authority:* Instituto da Conservação da Natureza

B. Status of bats within the territory of the party

1. Summary details of Resident Species

Situation similar to the last report. A revision of the Portuguese Red Data Book, using the new IUCN criteria is almost completed.

2. Status and Trends

Situation similar to the last report. A revision of the Portuguese Red Data Book is almost completed.

3. Habitats and Roost Sites

Situation similar to the last report.

4. Threats

Situation similar to the last report.

5. Data Collection, analysis, interpretation and dissemination

Situation similar to the last report.

C. Measures taken to implement Article III of the Agreement

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

Situation similar to the last report.

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

The actual list of Portuguese SAC's includes the majority of underground important roosts.

8. Consideration given to habitats which are important to bats

Situation similar to the last report.

9. *Activities carried out to promote the awareness of the importance of the conservation of bats*
Bat Night was organised by the Museum of Natural History of Porto, on 17th July. The event was organised in a park in the centre of the town. During the afternoon, a few dozens of children participated in several activities. After dusk, there was a talk about conservation and a walk in the park with bat detectors.

Seven talks about bat conservation were done in schools, universities and general public.

Several talks and one workshop about bat conservation were presented in Conferences.

One field trip with students from a university was organised.

Several articles about bats were published in magazines and newspapers.

10. *Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management*

This point has not been implemented yet.

11. *Additional action undertaken to safeguard populations of bats*

The destruction of a building that harbours *Tadarida teniotis* is been followed; an artificial roost was built. The promoter paid the roost.

12. *Recent and ongoing programmes (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 funding.*

- a) Monitoring programme of cave-dwelling species. A monitoring programme of the cave-dwelling species is in progress since 1987. This programme involves the estimation of bat numbers present in the most important wintering and parturition roosts. The surveys are carried out annually in most of the roosts. An evaluation of the evolution along the years was published (Section C.12.i). Funded by "Instituto da Conservação da Natureza".
- b) Control of the vegetation in the entrances of some roosts. There has been an effort to cut the vegetation in the entrances of some roosts, which sometimes become blocked. Funded by "Instituto da Conservação da Natureza".
- c) Creation of an Interpretation Centre in a Natural Park. An Interpretation Centre was built in the "Natural Park of Serras de Aire and Candeeiros", near a cave that harbours parturition colonies of several species. The Centre has an observatory, where visitors can observe the bats inside the cave using infrared cameras. Co-funded by "Structural Funds for Environment" and Local Authority ("Câmara Municipal de Alcanena").

The Centre will have a interactive exhibition about bats. The exhibition is still being prepared.

- d) The impact of parasitism on reproduction in bats. Parasites can have a profound affect on their hosts, reducing their fitness in a variety of ways, among which influencing host physiological condition, immune responses, energy budgets and behavior. These organisms can also impose a strong pressure upon the reproductive success of their hosts, thereby affecting one of the most critical aspects of their life histories. So far, the effects of bat ectoparasites and the response of bat hosts have not been well documented. The purpose of this PhD is to gain information about the effects of parasites on bats, using *Miniopterus schreibersii* as a model species. In particular the project intends to focus on the effect of ectoparasitism on several aspects of *Miniopterus* reproductive biology. Funded by “Foundation for Science and Technology”.
- e) Monitoring the impact of agriculture, forestry and live stocking activities on bat populations of Serra de Monfurado (Natura 2000 site), guidelines to the site management plan. (LIFE 03/NAT/P/000018). Between March and October 2004 we monthly monitored bat activity on 40 sites using bat detectors. A new species to the site was discovered, *Nyctalus leisleri*. Results will be related to farming practices on each site in order to identify which practices have lower impacts on bat populations. At the same time, we found 4 new bat roosts, the biggest colony with 30 *Rhinolophus hipposideros*. Co-funded by LIFE Nature, Local Authority (“Câmara Municipal de Montemor-o-Novo”) and “Instituto da Conservação da Natureza”.
- f) Publications
- Rebelo, H. & A. Rainho. 2003. Acções de Conservação de Morcegos na Área de Regolfo de Alqueva + Pedrogão. Relatório técnico final. ICN.
- Lourenço, S.I. & J.M. Palmeirim. 2004. Influence of temperature in roost selection by *Pipistrellus pygmaeus* (Chiroptera): relevance for the design of bat boxes. *Biological Conservation*, 119: 237–243
- Marques, J.T., A. Rainho, M. Carapuço, P. Oliveira & J.M. Palmeirim. 2004. Foraging behaviour and habitat use by the European free-tailed bat *Tadarida teniotis*. *Acta Chiropterologica*, 6(1): 99–110.
- Salgueiro, P., M.M. Coelho, J.M. Palmeirim & M. Ruedi. 2004. Mitochondrial DNA variation and population structure of the island endemic Azorean bat (*Nyctalus azoreum*). *Molecular Ecology*, 13: 3357–3366.

13. *Consideration being given to the potential effects of pesticides on bats, and efforts to replace timber treatment chemicals which are highly toxic to bats*

Situation similar to the last reports.

D. Functioning of the Agreement

14. *Co-operation with other Range States*

No actions were taken under this point.

15. *Measures taken to implement Resolutions adopted by Meetings of Parties.*

Resolution 2.1 - Consistent Monitoring Methodologies

In Portugal, since 1987 we have been monitoring cave-dwelling species (Section C.12.a). We monitor both maternity and hibernation roosts. We try to monitor every year all the underground roosts considered to be of National importance (around 30 each season) and some buildings that harbour important colonies of "cave-dwelling species" such as *R. ferrumequinum* and *R. hipposideros*.

We always make observations inside the roosts, counting the individuals or estimating the area of the colonies (visually and with photographs). We use the methods described for *Myotis myotis/blythii* and *Miniopterus schreibersii* in the resolution approved in 2MoP.

We believe that these methods can be successfully applied to *R. euryale*, *R. mehelyi*, *M. myotis*, *M. blythii* and *M. schreibersii*, that are very faithful to their roosts and hang from the ceiling, making the observations very reliable.

In the case of *R. ferrumequinum* and *R. hipposideros*, we have more problems since they use many roosts to breed, in small numbers. Even during the winter, when there are expected to use only underground sites, they are not so philopatric as the other species.

In the case of *M. nattereri* and *M. emarginatus*, although we only know maternity colonies in underground roosts, since normally they use hidden places (especially *M. nattereri*) very often we can not observe the colonies. In many roosts we only know that there is a maternity colony inside because we catch juveniles flying at the entrance.

Resolution 2.4 – Transboundary Programme: Habitat Proposals

Since underground habitats are particularly important in Portugal, a special attention has been given to them. In the National Conservation Plan of Cave-dwelling Bats (1992), information about the most important roosts is available. A database of all roosts was prepared.

Resolution 2.5 – Geographical Scope of the Agreement

A study of migratory patterns of some cave-dwelling species (*Miniopterus schreibersii*, *Myotis myotis* and *Myotis blythii*) is being conducted in a few roosts.

Resolutions 2.7 and 3.3 – Format of National Reports

The reports have been prepared accordingly to the new formats.

Resolutions 2.8, 3.8 and 4.9 – On the implementation of the conservation and management plan

An effort to implement the Article III of the Agreement has being taken, as presented in this Report.

Resolution 3.7 – Amendment of the Agreement

This point has not been implemented yet.

Resolution 4.3 – Guidelines for the Protection and Management of Important Underground Habitats

Portugal already sent information to the IWG. Several roosts were already protected with fences; other roosts should be protected.

Resolution 4.4 – Bat Conservation and Sustainable Forest Management

This point has not been implemented yet.

Resolution 4.5 – Guidelines for the Use of Remedial Timber Treatment

Remedial Timber Treatment is not done in Portugal.

Resolution 4.6 – Guidelines for the Issue of Permits for the Capture and Study of captured wild Bats

New permits have been prepared taking into consideration these guidelines.

Resolution 4.7 – Wind Turbines and Bat Populations

Impact Studies of wind turbines projected for areas of particular value to bat populations have taken this resolution into account.

.....