

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

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A. General Information

- ♦ *Name of Party:* Portugal
- ♦ *Date of Report:* 30 March 2004
- ♦ *Period Covered:* April 2003 to February 2004
- ♦ *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 in course.

2. Status and Trends

Situation similar to the last report. A revision of the Portuguese Red Data Book is in course.

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. The legislation of protection of caves and mines that harbour important bat populations has not been approved yet.

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 26th 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.

Five talks about bat conservation were done in schools.

One talk about bat conservation was done in a Spelunker's Congress.

One field trip with students from a school was organised.

Six 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 being 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) Fencing of underground roosts. One cave was protected. Funded by "Câmara Municipal de Alcanena".

- d) 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. Funded by "Structural Funds for Environment".
The Centre will have a interactive exhibition about bats.
- e) Identification of the causes of the unusual mortality observed in *Miniopterus schreibersii*.
In summer 2002 several hundreds of juveniles of *Miniopterus schreibersii* were found dead. Four juveniles were analysed in the UK, for bacteriology and histopathology. The laboratory investigations add weight to the opinion, based on macroscopical findings that the animals did not die as a result of an infectious disease. However, one should take into consideration that these were young of the year, which could have starved after their mothers died or deserted the roost. Five juveniles were analysed in Portugal, but the data are not available yet. Some bats were recently sent to a Spanish laboratory.
- f) 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.
- g) Bats in islands. During 2002 a preliminary study was made to evaluate the situation of bat species in the archipelagos of Madeira and Azores. Two species were confirmed in the Azores islands, although the one of them is still not identified to the specific level. Four species were confirmed in the Madeira Island and one in Porto Santo Island. Funded by "Instituto da Conservação da Natureza".
- h) On the presence o *P. pipistrellus* and *P. pygmaeus* in Portugal. Genetic and ultra-sound methodologies were used to identify individuals of this genus. The presence of both *P. pipistrellus* an *P. pygmaeus* was confirmed. Funded by "Instituto da Conservação da Natureza".
- i) Publications

- Rodrigues, L., H. Rebelo e J.M. Palmeirim. 2003. *Avaliação da tendência populacional de algumas espécies de morcegos cavernícolas*. Relatório técnico final. Centro de Biologia Ambiental / Instituto da Conservação da Natureza.
- Rodrigues, L., A. Zahn, A. Rainho, e J.M. Palmeirim. 2003. Contrasting the roosting behaviour and phenology of an insectivorous bat (*Myotis myotis*) in its southern and northern distribution ranges. *Mammalia*, 67(3): 321-335.
- Santos, C.P.N. 2003. *Ultrasound communication in the greater wax moth, Galleria mellonella*. Final Thesis. Biology Course. Universidade de Évora.
- Ramos Pereira, M.J., Rebelo, H., Rainho, A. & Palmeirim, J.M. 2002. Prey selection by *Myotis myotis* (Vespertilionidae) in a Mediterranean region. *Acta Chiropterologica*, 4(2): 183–193, 2002
- Rainho, A, J.T. Marques e J.M. Palmeirim. 2002. *Arquipélago dos Açores*. Pp. 8-28 *In Os morcegos dos arquipélagos dos Açores e da Madeira: Um contributo para a sua conservação*. Relatório Técnico Final. Centro de Biologia Ambiental / Instituto da Conservação da Natureza, Lisboa, 49 pp.
- Rainho, A e J.M. Palmeirim. 2002. *Arquipélago da Madeira*. Pp. 30-49 *In Os morcegos dos arquipélagos dos Açores e da Madeira: Um contributo para a sua conservação*. Relatório Técnico Final. Centro de Biologia Ambiental / Instituto da Conservação da Natureza, Lisboa, 49 pp.
- Salgueiro P., A. Rainho A. e J.M. Palmeirim. 2002. *Pipistrellus pipistrellus* e *P. pygmaeus* em Portugal. Relatório técnico final. Centro de Biologia Ambiental / Instituto da Conservação da Natureza.

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

Luísa Rodrigues participated in a commission to give advice to a Spanish project about roosts conservation (“Estudio da Mina de la Ahumada”).

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.

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