

AGREEMENT ON THE CONSERVATION OF BATS IN EUROPE
Report on the implementation of the Agreement in ITALY

A. General Information

Party Range: ITALY

Date of Report: December 2006

Period Covered: 2004 – 2006

Competent Authority for the Agreement: Ministry of Environment and Protection of Territory and Sea (MATTM)

Report prepared in cooperation with GIRC, Gruppo Italiano Ricerca Chiroterri (Italian Chiroptera Research Group)

B. Status of Bats within the Territory of Italy

1. Resident Species

To date, the bat fauna of Italy includes 33 species currently present in the territory (Table 1). Two taxa, formerly occurring in the country, are not present in Tab. 1. *Myotis dasycneme*, previously included in the check-list of Italian bat species, is regarded as accidental on the Italian territory, because the only record available – a specimen captured in Trento – dates back to 1881. The current presence of another species, *Rhinolophus blasii*, also needs to be confirmed since no recent records are available and it has even been suggested to be extinct. A further species, *Plecotus tenerifae kolombatovici* mentioned by Hutterer *et al.* (2005) for two small southern islands near Sicily (Pantelleria and Lampedusa), deserves further investigation.

In recent years (Kiefer and Veith, 2001; Spitzenberger *et al.*, 2001, 2002; Mucedda *et al.*, 2002), two new *Plecotus* species have been described for Italy: *P. macrobullaris*, found in the north of the country (Chirichella *et al.*, 2003; Trizio *et al.*, 2003), and *P. sardus*, endemic to Sardinia. According to the recently revised (Castella *et al.*, 2000) taxonomic status of mouse-eared bats in Sardinia, *Myotis punicus* (but not *M. blythii*) occurs on the island. Russo and Jones (2000) showed that the cryptic species *Pipistrellus pipistrellus* and *P. pygmaeus* both occur in Italy; and finally, one record of *Myotis aurascens* (*sensu* Benda and Tsytsulina, 2000) concerns the Trentino [but recent molecular analyses by Mayer & von Helversen (2001) does not support the specific nature of this taxon].

A comprehensive report on the different species is provided in the book “Linee guida per il monitoraggio dei Chiroterri” (Guideline for bat monitoring) edited by Environmental Ministry, National Institute for Wildlife Management (INFS) and, GIRC.

Besides presenting an updated picture of bat distribution in Italy, the volume also offers a comprehensive analysis of field methods, legal aspects and data storage principles.

Information on distribution and ecology of Italian bats is also provided in the websites
www.pipistrelli.org (GIRC)

and

www2.minambiente.it/sito/settori_azione/scn/pubblicazioni/multimedia/mammiferi/iconografia_intro.asp
(Environmental Ministry).

List of bat species occurring in Italy [compiled according to Eurobats.MoP4.13]

Taxon, Authority and Vernacular name

1. *Rhinolophus euryale* **Blasius, 1853** Rinolofo euriale
2. *Rhinolophus ferrumequinum* (**Schreber, 1774**) Rinolofo maggiore
3. *Rhinolophus hipposideros* (**Bechstein, 1800**) Rinolofo minore
4. *Rhinolophus mehelyi* **Matschie, 1901** Rinolofo di Méhely
5. *Myotis bechsteinii* (**Kuhl, 1817**) Vespertilio di Bechstein
6. *Myotis blythii* (**Tomes, 1857**) Vespertilio di Blyth
7. *Myotis brandtii* (**Eversmann, 1845**) Vespertilio di Brandt
8. *Myotis capaccinii* (**Bonaparte, 1837**) Vespertilio di Capaccini
9. *Myotis daubentonii* (**Kuhl, 1817**) Vespertilio di Daubenton
10. *Myotis emarginatus* (**Geoffroy, 1806**) Vespertilio smarginato
11. *Myotis myotis* (**Borkhausen, 1797**) Vespertilio maggiore
12. *Myotis mystacinus* (**Kuhl, 1817**) Vespertilio mustacchino
13. *Myotis nattereri* (**Kuhl, 1817**) Vespertilio di Natterer
14. *Myotis aurascens* **Kusjakin, 1935** Vespertilio dorato
15. *Myotis punicus* **Felten, 1977** Vespertilio maghrebino
16. *Pipistrellus kuhlii* (**Kuhl, 1817**) Pipistrello albolimbato
17. *Pipistrellus nathusii* (**Keyserling et Blasius, 1839**) Pipistrello di Nathusius
18. *Pipistrellus pipistrellus* (**Schreber, 1774**) Pipistrello nano
19. *Pipistrellus pygmaeus* (**Leach, 1825**) Pipistrello pigmeo
20. *Nyctalus lasiopterus* (**Schreber, 1780**) Nottola gigante
21. *Nyctalus leisleri* (**Kuhl, 1817**) Nottola di Leisler
22. *Nyctalus noctula* (**Schreber, 1774**) Nottola comune
23. *Hypsugo savii* (**Bonaparte, 1837**) Pipistrello di Savi
24. *Eptesicus nilssonii* (**Keyserling et Blasius, 1839**) Seròtino di Nilsson
25. *Eptesicus serotinus* (**Schreber, 1774**) Seròtino comune
26. *Vespertilio murinus* **Linnaeus, 1758** Seròtino bicolore
27. *Barbastella barbastellus* (**Schreber, 1774**) Barbastello comune
28. *Plecotus auritus* (**Linnaeus, 1758**) Orecchione bruno
29. *Plecotus austriacus* (**Fischer, 1829**) Orecchione meridionale
30. *Plecotus macrotus* (**Kuzjakin, 1965**) Orecchione alpino
31. *Plecotus sardus* **Mucedda et al., 2002** Orecchione sardo
32. *Miniopterus schreibersii* (**Kuhl, 1817**) Miniottero
33. *Tadarida teniotis* (**Rafinesque, 1814**) Molosso di Cestoni

2. Status, threats and trends

So far, no comprehensive national monitoring project to detect trends in bat populations exists. However, historical data highlight a general decrease of cave-dwelling species, with very few exceptions. Regrettably, data are scarce and do not cover the entire national territory. In Italy, bats are mainly threatened by loss of roosting and foraging habitats.

Agricultural and forestry intensification had a strong impact on species relying on agroecosystems or forest for roosting or foraging. Uncontrolled access to roost sites, caving, alteration of roost caves for tourism and renovation of buildings used by house-dwelling species also have a great negative impact on bats. In the last decade, the ever growing importance of bats in current conservation policies led to new studies carried out on different geographical scales and mainly focused on the analysis of distribution and ecology of bats. *Ca* 80 projects were carried out in 1994-2006, mostly funded by local or regional institutions, park authorities, etc. However, for some Italian regions not covered by research activity even the mere distributional data are still scarce. The Italian Ministry of Environment (MATTM) has sponsored a project carried out by the Insubria University, in cooperation with the Italian Chiroptera Research Group (hereafter abbreviated as GIRC), on bat banding and management of

bat colonies in monumental buildings. Final products will include guidelines for bat banding and management of bats in historical buildings, as well as an online database for storing banding information.

3. Habitats and Roost Sites

The Italian Bat Roost Data Base, started in 1998 by GIRC, includes records of bat roosts on a national scale. The geo-database is referred to UTM MGRS 10x10 km cells. Two principal goals can be identified:

- 1) A short term goal is to identify the most important roosts on a nation-wide scale, in order to plan more effective conservation measures; roosts are classified according to species presence and colony size. The national scale coverage will make it possible to assess the importance of each roost in relation to all sites known for the Italian territory;
- 2) A medium term goal is to identify demographic trends, at least for some species; once population data are collected over several years, it will be possible to best define the status of Italian bat species and plan more effectively their conservation.

Over 750 sites are covered in the database. Of these, 37 hibernacula and 67 nursery are regarded as priority sites in terms of species richness and colony size. Because seven such roosts are used for both hibernation and reproduction, such sites correspond to 97 roosts. The vast majority (94%) of roosts identified are potentially threatened by uncontrolled access by people and renovation of buildings. Surveyors judged that in almost two thirds of such cases conservation was not ensured. Only about half of such sites (51.5%) are located within protected areas, including areas proposed as SCI (92/43/EEC Directive). The situation is particularly worrying in Sardinia, where only 29.2% of sites of national importance are within protected areas. Moreover, for north-west Italy, even roosts occurring within protected areas are not ensured sufficient conservation. This probably holds true for many other roosts included in protected areas but too often overlooked. The incompleteness of data coverage urges that further roost surveying is promoted. The project funded by the MATTM on monumental buildings is carried out in cooperation with the Ministero per i Beni e le Attività Culturali (MIBAC), the Italian Ministry responsible for art and culture. Questionnaires are being sent to local authorities managing monumental buildings to collect information on bat occurrence. Several case studies will be selected to develop the best management strategies aimed to ensure long-term persistence of bat colonies at such sites.

C. Measures Taken to Implement Article III of the Agreement

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

Bats are protected by Italian Law since 1939. The Royal Decree “Regio Decreto” of 5 June 1939, n. 1016, “Testo Unico delle norme per la protezione della selvaggina e per l’esercizio della caccia” states that “it is always forbidden to kill or capture bats from any species” (art. 38). Nowadays, Italian bats are protected under the “Legge quadro in materia di fauna e attività venatoria” (L. 11 February 1992, n. 157), as well as under important international conventions signed by Italy (Bern Convention, 1979; Bonn Convention, 1979; Rio de Janeiro Convention, 1992); and, finally, under the “Habitats” Directive EEC/92/43. As part of the environment, bats are also protected by the Italian Law on the ‘environmental damage’ (L. 8 July 1986, n. 349).

According to Italian law, it is forbidden to kill, capture, keep in captivity and trade bats; it is also forbidden to damage or disturb roosts and to bats, especially when hibernating or reproducing. Exceptions to these limitations should be authorised by the MATTM and by the local institutions responsible for the study area (regional, provincial or park administration). Authorisations rely upon the scientific judgement expressed by the National Wildlife Institute (INFS) which will base the judgement on the validity of the scientific project, its conservation relevance, the appropriateness of

methods and the species involved. According to law, MATTM and local institutions are responsible for promoting monitoring of bat conservation status, and regularly report on this to the European Community. As mentioned, the MATTM has funded research work carried out within the EUROBATs Agreement framework to protect bats in historical monuments. The activity matches the requirements of the Bat Agreement and particularly, article III (Fundamental Obligations), resolutions n° 4.9 (Implementation of the Conservation and Management Plan (2003 - 2006), n° 4.3 (Guidelines for the Protection and Management of Important Underground Habitats) and n° 4.5 (Guidelines for the Use of Remedial Timber Treatment).

The guidelines developed as a main product are intended to minimise the impact of building renovation and management on the presence of bat colonies. Specifically, the following project deliverables are pursued:

- Guidelines for conservation of bats in building;
- Database of main colonies in monumental buildings
- Protocol for renovation/management of monumental buildings where bat roost
- Increase in awareness of institutional authorities managing monumental buildings about bat conservation issues

A second main area of activity concerns the development of an adequate set of actions dealing with bat banding, from setting the criteria to issue permits to creating an effective system for storing data. A draft document illustrating the criteria for evaluating proposals on bat banding as well as the best procedures for banding will be prepared and made public

By standardising criteria for banding and developing a bat banding database accessible via the Internet, there will also be more space to implement international cooperation between bat specialists analysing phenomena like long-distance dispersal or migration. Summing up, we plan to obtain the following deliverables:

- A technical manual on bat banding
- A bat banding database
- A “decision support system” software package assisting officers in charge of issuing bat banding permits

7. Sites identified and protected which are important to bat conservation

Projects carried out in protected areas or as part of the European LIFE programme are significantly contributing to the protection of key bat sites. Projects focusing on forest bats are also providing the background information needed to encourage sustainable forest management.

In Italy, 373 Sites of Community Importance (SCI) identified under the provisions of the Habitats Directive (92/43/EC) are reported to be home to bats. The species listed in Annex B occurring at such sites are: *Barbastella barbastellus*, *Miniopterus schreibersii*, *Myotis bechsteinii*, *Myotis blythii*, *Myotis capaccinii*, *Myotis emarginatus*, *Myotis myotis*, *Rhinolophus euryale*, *Rhinolophus ferrumequinum*, *Rhinolophus hipposideros* and *Rhinolophus mehelyi*.

Threats identified at several of such sites include roost disturbance or alteration, forest management or alteration of foraging habitats.

8. Consideration given to habitats which are important to bats

Much of the research carried out in protected areas and SCIs is going well beyond the mere inventory activity. The information obtained on bat foraging or roosting is necessary to further develop conservation and optimize management efforts.

9. Activities carried out to promote the awareness of the importance of the bat conservation

Popularisation activities carried out by GIRC as well as by protected areas or single bat researchers/enthusiasts have the main scope of disseminating information on the importance of conserving bats through several initiatives. “Bat nights” and talks organized in different parts of the country attract an ever growing number of participants as well as attention from the media.

10. Responsible bodies nominated for the provision of advice on bat conservation and management

At national level, the Ministry of Environment is the governmental authority in charge with nature conservation and environmental problems. Different departments are devoted to Biodiversity, Protection and Conservation, Protected Areas and Flora and Fauna. Some aspects such as surveillance are tasks of the Corpo Forestale dello Stato, specialized police corps acting for the Ministry of Agriculture and Forestry.

Institutions providing further scientific expertise to the Ministry of the Environment:

- National Institute for Wildlife Management (Istituto Nazionale per la Fauna Selvatica, INFS)
- Italian Zoological Union (Unione Zoologica Italiana, UZI)
- Museums of Natural History;
- National Speleological Institute;
- Universities;
- GIRC Gruppo italiano ricerca Chiroteri

11. Considerations being 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

Little information is available on the effects of pesticides on Italian populations of bats. However, it is hoped that the increasing attention paid to bat conservation by both researchers and institutional authorities will soon focus more on the issue of toxic chemicals and bats.

D. Functioning of the Agreement

12. Cooperation with other Range States

Italy is co-operating with other Range States and with other Member States of the EU in research and conservation matters, and several international collaborations between Italian researchers and those from other EU countries are in progress.

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