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Image on the cover: Myotis bechsteinii © NABU/Klaus Bogon; image on the next page: Rhinolophus ferrumequinum, Bulgaria, Western Rhodopes Mt., Yubileina cave, November 2004 © Boyan Petrov



*When one tugs at a single thing in nature,
he finds it attached to the rest of the world.*

~ John Muir

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Foreword

15 years of EUROBATS, a moment to reflect on the past and look to the future ...

by Bakary Kante, Director of the Division of Environmental Conventions (UNEP/DEC) and Andreas Streit, Executive Secretary of UNEP/EUROBATS

Dear colleagues and friends,
We are celebrating the 15th anniversary of the EUROBATS Agreement, which is considered to be one of the most successful in the large family of Agreements concluded under the auspices of the global Convention on the Conservation of Migratory Species of Wild Animals (UNEP/CMS) and has been highly successful since it entered into force in 1994. In only a few years the number of Parties has grown to more than thirty which is a clear testimony to the importance that the Agreement plays in the larger context of the conservation of migratory species.

Now, what is it that makes this somewhat „exotic“ looking Agreement so special and successful? First of all and most importantly the contribution of the large number of dedicated people from both within and outside the EUROBATS Secretariat. Their tireless efforts, dedication and commitment to making a difference for bat conservation in Europe have been truly admirable. It has also been extremely rewarding to witness that a majority of the fathers and mothers of the Agreement who were lobbying for its conclusion and who have participated in its drafting remain active in its implementation and further growth. It is equally rewarding to witness that over the years younger generations have started to walk and work in the footprints of dedication and com-

mitment that were marked 15 years ago. The fact that from the first six Signatory States in 1991 the Agreement has so quickly grown to 31 Parties right now (with more still to come), covering the whole continent of Europe demonstrates the importance that countries attach to the protection of bats. The valuable contributions received for this publication from all over the Agreement Area represent the real proof for the necessity, impact and success of the Agreement on the Conservation of Populations of European Bats. As the Parties, UNEP also attaches great importance to the EUROBATS Agreement and is proud to host its Secretariat as part of the larger CMS family. The Division of Environmental Conventions, is particularly pleased to have been able to financially support the production of this Anniversary publication. I thank all those who have contributed to it!

Finally, I extend the warmest congratulations to the EUROBATS Parties, Secretariat and other partners in your outstanding work. Only through you has the Agreement successfully moved further in the conservation of bats throughout Europe.



Andreas Streit welcoming Bakary Kante in the new EUROBATS offices.


Bakary Kante



Dear colleagues and friends,

My dear friend Bakary has expressed many of my own sentiments. I would therefore like to add just a few very personal and heartfelt remarks. The eight years that I have been able to work for UNEP/EUROBATS, have been without any doubt the most rewarding years in my professional life until now. From the first day when I entered this true family of dedicated and unselfish people from all over Europe, I felt at home. Every day, month and year has brought many new challenges and experiences, ensuring the job never becomes routine. Furthermore, through seeing the steady growth and further development of the Agreement and by being able to contribute a little bit to this, a dream has become true for me. In this context the second Amendment to the Agreement adopted at the 3rd Session of the Meeting of Parties (MoP 3) needs to be mentioned, which widened its scope through not only recognising political borders but also bio-geographical ones to define the area to which it should apply. The Amendment also introduced the badly needed Annex to the Agreement, allowing it to remain constantly up to date and in line with latest scientific findings. The Amendment has not only entered into force in the record time of one year along with the many additions and changes already made to the Annex, but the future will also show that it clearly forms a second cornerstone of the Agreement.

At the same time it was another substantial step forward for the Agreement when MoP 3 decided to bring it under the umbrella of the United Nations Environment Programme and to fully integrate it into the UNEP/CMS Family. Without this milestone decision, the Agreement would not have

gained the international recognition, importance and strong support of a big family that it has now.

There are so many other success stories to tell you, not least the formal recognition of the important role of NGOs in the implementation of the Agreement adopted at MoP 4 (I believe that we are still the first and only ones who have done it in such a way), the continuing success and growth of the European Bat Night and so on...the following contributions are testimony to this.

Please allow me to conclude with a few remarks on the future. At the time of writing we are in the fascinating and challenging phase of preparing a Meeting of Parties - the fifth of these meetings. Some of the crucial items on the agenda are the establishment of an implementation mechanism for the Agreement, a new and more economic as well as more efficient structure for Meetings, a more stable budget and staff provisions for the Secretariat. I am convinced that with the adoption of these key decisions, the Agreement will be in a strong position for an even more successful future far beyond the next 15 years.

I would like to express my heartfelt thanks to my excellent staff members Ayhan and Christine, as well as Dessi, Max and Olive who did the major part of the proof-reading on a volunteer basis, and all you dear truly committed friends who have contributed to and inspired this publication. Please allow me to suggest that we collectively dedicate it to the innumerable voluntary bat workers all over Europe and beyond.

Thank you very much,



Andreas Streit



Welcome address by UNEP

by Shafqat Kakakhel

On the eve of the 15th anniversary of the signing of the Agreement on the Conservation of Populations of European Bats (EUROBATS) it gives me pleasure to look back at more than a decade of growth and successful conservation of European bats.

The agreement came into force in 1994 and at its 15th anniversary 31 countries had become Parties to this increasingly important Agreement. These countries, and the ones which are expected to accede in the coming years, are applauded for their efforts, commitment and dedication to sustainable conservation of bats in Europe. Bats migrate across borders, and common goals and concerted efforts among Parties and range states are the foundation for success.

In order to succeed in combating the extinction of endangered bats, countries have recognized the need for stepping-up national and regional efforts to conserve important feeding areas for bats and to share experiences and approaches on how to prevent the increasing loss of roosts. A common approach combined with sufficient human and financial resources is required, not only at the national level but also with the EUROBATS Secretariat, if the Agreement is to implement its mandate.

The EUROBATS Secretariat, in cooperation with Parties and range states, has done out-

standing work in informing the general public about bats and their importance to the ecological chain. The EUROBATS Secretariat has made bat protection a true passion for all culminating in the yearly European Bat Night.

The United Nations Environment Programme (UNEP) is proud to work with and host the EUROBATS Secretariat through the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Since January 2001, the EUROBATS Secretariat and UNEP have increasingly worked together and in recent years our cooperation has flourished even more through regular contacts and involvement of the EUROBATS Secretariat in our work. UNEP looks forward to the next 15th years of cooperation.

I wish the Parties, the range states and the EUROBATS Secretariat a happy 15th anniversary and much success in all your future endeavors for the conservation of European bats.



*Shafqat Kakakhel
Deputy Executive Director,
United Nations Environment
Programme*



Welcome address from CMS

by Robert Hepworth

When I was asked to write a short foreword to this anniversary publication, I decided to go through my old EUROBATS file. I was surprised to discover that I had kept correspondence from 1987, including an invitation to attend a first meeting to discuss an „Agreement on European Species of Chiroptera“, to be held on 18-20 November 1987 in London. My curiosity was aroused, and I ended up reading the minutes of that meeting, including the speech delivered to the gathering by Judith Johnson, my predecessor at the time at the CMS Secretariat.

Her speech now sounds like a prediction. These discussions, she said, were particularly important because, for the first time, an Agreement specified by the Conference of the Parties to the Bonn Convention was to be discussed in detail by potential Range States. The task was not an easy one, because the number of species and Range States involved was considerable, although clearly the problems and the environmental threats were similar for all European bats. The product of these discussions, she continued, might well become a model for similar Agreements under the Convention concerning other animals and other geographic regions, and therefore a careful balance between essential detail, workability and simplicity must be sought.

Almost 20 years later, 15 from the signing of the Agreement, we can say with confidence that this vision has turned out to be an accurate prophecy.

Launching EUROBATS

EUROBATS has been the first fruitful and effective spin-off of the Convention, a first offspring, delivered within the Convention on Migratory Species after a long labour. EUROBATS contributed to the strengthening of the CMS identity among the growing number of Multilateral Environmental Agreements developed before and after the Rio meeting in 1993. In addition, as predicted 20 years ago, EUROBATS became the model for a series of other Agreements under the aegis of the Convention — Agreements that enhance the Convention's role in promoting the biodiversity agenda.

Fifteen years ago, seven countries, currently still very active within EUROBATS, signed the agreement, which came into force in January 1991. Since then, 24 more Parties have joined and a number of activities has been set up. At the first Meeting of the Parties, the Secretariat was established and based in Bonn with CMS. Proximity is however only one of the reasons for the productive partnership between CMS and EUROBATS. In addition, the strong ties between the Secretariats and the good cooperative spirit driving our work constitute a historic alliance, recently energized further by a common vision and a strategy for the CMS Family of Agreements.

The first Meeting of Parties also gave birth to a EUROBATS international Action Plan and an Advisory Committee charged with carrying out the Plan's agenda. This committee is currently busily engaged in



monitoring activities and advising on next steps.

The European Bat Night

With the launch of the first European Bat Night ten years ago, the Agreement brought about a considerable rise in public awareness of the need for bat conservation. Conservation activities that include communities and directly involve the general public contribute to a better understanding of biodiversity and ecosystem issues, thus furthering political acceptance of the need for better, more comprehensive conservation of bats and their habitats.

In August 2002, at Le Havre (France), a proposal at the Ninth European Bat Research Symposium established BatLife Europe as an umbrella NGO, open to all interest groups, for bat conservation throughout Europe. BatLife Europe can also raise funds for transboundary bat conservation projects and contribute to the scientific program of EUROBATS. Such an example of cooperation between governments and NGOs, acting in their varying capacities, is expected to give an essential boost to the fuller implementation of EUROBATS policies.

This latter theme found an echo at the Fourth MOP in Sofia in September 2003. The vital role NGOs can play in bat conservation, not least through their voluntary monitoring and data collection activities, was recognized and highly appreciated.

Through popular events like the European Bat Night held in almost all European countries every year, mainly in August,

the EUROBATS Secretariat has successfully managed to alert the general public to the threats endangering bat populations in Europe, and at the same time to dispel prejudice against these species and give information about the vital biological functions they fulfil with regard to ecosystem stability. The role of human beings in bat conservation is paramount, and goes hand in hand with public awareness and education.

The success of EUROBATS

Our journey in time through the 15 years following the birth of the Agreement has taught us plenty of lessons, inspired new projects and brought us past important milestones. My own assessment at this stage in the life of the EUROBATS Agreement is that it is a productive and effective instrument, which, as indicated 20 years ago, should continue to serve as a model for the development of future agreements. EUROBATS is a practical example of how conservation of selected species can contribute effectively to the achievement of another major target ahead of us — the significant reduction by 2010 of biodiversity loss, which is the goal adopted by the WSSD and the CBD and fully endorsed by CMS and its family.



R G Hepworth

*Robert Hepworth
Executive Secretary of the UNEP
Convention on Migratory Species*



Welcome address on behalf of Germany

by Sigmar Gabriel

In medieval times bats were considered to be horrible creatures which were in league with the devil. Their appearance caused fear and terror among the people. Bram Stoker's "Dracula" fed these superstitions even at a later time. Today, however, bats have become the flagship species of nature conservation. An increasing number of people are fascinated by these swift and soundless nocturnal flyers.

We owe this change in attitude to committed nature conservation associations and individuals. The Agreement on the Conservation of Populations of European Bats EUROBATS was and remains very important. The Agreement was signed 15 years ago on 4th December 1991 particularly on the urging of the United Kingdom. It led, for instance, to the creation of the very committed UNEP/EUROBATS Secretariat with its headquarters in Bonn, Germany.

Germany is one of the founding Parties of EUROBATS and has a special responsibility to protect the only mammals with the ability to fly. Since many species in Germany and Europe are endangered, the Federal Government drew up legislation to protect bats, their roosting sites and habitats at an early stage.

Germany places great focus on promoting international cooperation for the protec-

tion of bats. This is because some bats travel 1500 to 2000 kilometres between their summer and winter roosting sites: some of the Nathusius' pipistrelle bats, for example, give birth to their young in Eastern Germany and migrate to Southern France or Italy to spend the winter. Protecting them in their summer roosts alone makes no sense, as they need food and roosting sites in both locations and during the migration. This calls for transboundary protection efforts.

On the 15th anniversary of the signing of the EUROBATS Agreement I would like to cordially thank all Member States and all other supporters for their commitment to the protection of bats and congratulate them for their achievements. The Federal Environment Ministry will continue to support European cooperation for the protection and study of bats.



Sigmar Gabriel
Federal Minister for the Environment,
Nature Conservation and Nuclear Safety



Welcome address by NABU, Germany

by Claus Mayr

Happy Birthday EUROBATS! NABU, the German Society for Nature Conservation and German partner of BirdLife International, cordially congratulates EUROBATS and the EUROBATS Secretariat on its 15th anniversary!

Originally founded as „Bund für Vogelschutz“ (BfV), Society for Bird Protection, in 1899, today NABU is one of the oldest and largest nature conservation organisations in Germany, with more than 400.000 members, working not only for bird protection, but for nature conservation and a healthy environment in all aspects. Nature, especially migrating animals like birds, but also migratory bat species know no boundaries. Therefore cooperation and fixed rules on the international, regional, EU-wide and national level are an absolute necessity – especially if we want to achieve the ambitious goal agreed on the EU's council in Gothenburg 2001 and on the Earth Summit in Johannesburg 2002: to stop the biodiversity loss by the year 2010!

NABU therefore supports all international conventions, their regional agreements as well as related EU-directives e.g. the Habitats Directive, which can help to reach this aim. The Bonn Convention (CMS), the “mother convention” of the EUROBATS Agreement, as well as EUROBATS itself are therefore important milestones and tools which NABU tries to help for example, by lobbying at the responsible authorities, stimulating research programs, helping to raise public

awareness and carrying out practical conservation action on the ground, mostly organized by NABU's regional voluntary bat-specialist groups.

From its inception, NABU has supported the “European Bat Night” which was launched ten years ago. In recent years more than 200 local groups of NABU all over Germany organised public excursions which often had more than 400 participants, many of which were families and school children. The annual events are announced on a special website www.batnight.de, as well as on NABU's homepage www.NABU.de. The yearly Bat Night event in Bad Segeberg, a town in Schleswig-Holstein with one of the most important wintering sites for bats in Germany, has become THE yearly festival for bat protection in Germany, thanks to NABU's regional group in this state and the support by the Federal Ministry for Nature Conservation and many other sponsors.

NABU therefore cordially invites you all to Bad Segeberg this year and hopes to celebrate the anniversary of EUROBATS with you there!



Claus Mayr

Deputy Head NABU (German Society for Nature Conservation)



EUROBATS – the early days

by Tony Hutson

At the first Conference of Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS or the Bonn Convention) in October 1985, John A. Burton of the Fauna and Flora Preservation Society (FFPS) produced an outline concept for a European Agreement on Bats. After discussion with Michael Ford (of the UK delegation) and Mona Bjorklund (the UNEP representative), a small working group was drawn together, which also included Gyorgy Topal (Hungary), and Carl Edlestam (Sweden). The working group drafted a rationale for an Agreement and drew up a list of species with their general distribution and status. Carl Edlestam, as a Party delegate, presented the proposal to the meeting (CMS/COM 1/1). The Scientific Council recommended the development of an Agreement (CMS/COM 1/II). Germany recommended the inclusion of all European bat species on Appendix II of the convention (see CMS/COM.1/1/Add.1.).

This was the basis for a Resolution adopted by the CoP to develop, *inter alia*, an Agreement for the European Species of Chiroptera (CMS/Res 1.6). John Burton, on behalf of the FFPS, had agreed with the UK Government representatives that FFPS would carry out the preparatory work through its recently commenced bat conservation programme, and organise the initial meetings. The Parties subsequently agreed that the UK should initiate its development. It was to be the first international agreement devoted to the conservation of

bats and the first Agreement of its kind under the Bonn Convention.

I had joined FFPS a year before to develop a bat conservation programme. John Burton returned from that first CoP and dropped a copy of the European Birds' Directive on my desk, saying "can you write something along the lines of one of these for European bats." It stayed in my 'pending' tray for a while. We talked about it and approached Simon Lyster, then a lawyer with the World Wildlife Fund UK. Simon agreed to draft the outline of an Agreement, but as it was the first CMS Agreement, there was no precedent upon which to model it. Drafts circulated for comments to a wide range of people (including Nature Conservancy Council, the Department of the Environment and other sections of government) until an international meeting was convened to discuss the "Elements of an Agreement on the Conservation of European Bats."

This meeting was held at the Linnean Society of London on 19 November 1987. The meeting was chaired by Michael Ford (UK), attended by 27 people from 11 countries, with a good mix of bat specialists and government representation and including representation of the Secretariat to the convention. An extremely long discussion on the title of the proposed Agreement did not bode well, and neither did a discussion about whether a "Gentleman's Agreement" would be more acceptable to some range states than a formal legally binding Agreement. But at the end of the day, the draft of



an Agreement on the Conservation of Bats in Europe as a formal Agreement was concluded. The amendments to the original draft were made overnight and presented to participants the next morning. A few more minor amendments were made and it was left with the UK to clear it with its own government offices and to develop administrative arrangements. The meeting also included initial discussion on the ways of implementing the Agreement. At this stage the bats Agreement was more advanced than the others under discussion (for small cetaceans and white stork).

Before this meeting, we had had a slight problem within the UK when it was raised that, during discussions about rabies, bat conservationists had long been saying that bats do not migrate to and from the UK. The Department of Environment therefore wanted to know if the UK was eligible to sponsor a European bats Agreement under the Convention. We were almost 'hoist with our own petard'. But the government was persuaded that there was plenty of at least circumstantial evidence that bats migrated to and from the UK, and to take a more realistic view of the risk of rabies being introduced to the UK by bats.

Also in 1987, the IUCN/SSC Chiroptera Specialist Group identified the need for the Agreement to have a detailed report on the status of bats in Europe, their threats and an outline overall conservation strategy. This was discussed at the 4th European Bat Research Symposium in Prague in August 1987, when Bob Stebbings was commissioned to compile it, and the manuscript was complete by December 1987. That the production of this manuscript was completed in four months is a great credit

not only to Bob Stebbings, but also to the many members of the Chiroptera Specialist Group, and other experts around Europe, who collected and contributed the information for inclusion. The Conservation of European Bats was published by Christopher Helm in 1988.

During the second Conference of the Parties (1988, Geneva), the UK government delegation called a meeting of range states to cast a more formal "diplomatic" eye over the terms of the agreement drawn up in London the previous year. Despite five years having passed since the Convention came into force on 3 November 1983, the Parties to the Convention had still failed in one of its principle aims: the conclusion of Agreements covering the conservation and management of migratory species. Although the terms of the bat Agreement had been resolved, a number of States had problems with the detailed legal and administrative arrangements (akin to a full international treaty) that seemed necessary for the conclusion of any Agreement.

For the NGOs, things seemed to go quiet around this time. Also at this period, John Burton was no longer with Flora and Fauna Preservation Society (FFPS), FFPS was not represented at CoP2, and there was little follow-up from FFPS to CoP 2. My feeling is that through this period there had been things going on in the background and that it was discussions about the nature of Agreements and related procedural issues that were delaying the process rather than anything specific to the bats Agreement. It also gave the other Agreements under discussion a chance to catch up with the bats Agreement. We did have one alarm: that the issue of the status of CMS Agreements had



been raised again and that it had (unfortunately) been agreed that they should not be formal, despite the fact that many range states said that they could only sign a formal agreement.

In 1991, as CoP3 approached, there was renewed pressure to get the Agreement finalised. I was able to attend that meeting in September 1991, when two of the main issues would be the finalising of the bats Agreement and the small cetaceans Agreement (ASCOBANS – the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas).

I recently attended CoP8 in Nairobi in November 2005 and was reminded of the huge growth of the Convention since that CoP3 in 1991, which by today's standards was a very small meeting. In 1991 there were 37 Parties, compared to the 95 Parties of today.

CoP3 was again in Geneva, in the UN building by Lake Geneva. Much of the first day, 9 September, was taken up with introductory procedural matters, agreement of agenda and general issues – important stuff, but not always of great interest to a bat specialist – plus discussion on the small cetaceans Agreement. But the day did end with a remarkable incident. This UN building is huge, with miles of corridors, and endless meeting and conference rooms, etc. As I left our conference room at about 9.00 in the evening, I noticed a bat flying up and down our corridor. The corridors are wide and perhaps eight metres high, so there was no chance to catch it, but it could well have been a Daubenton's bat (*Myotis daubentonii*). The rest of the conference delegates were also excited to see this bat, and since the next day's business

included the "final" discussion on the bats Agreement, this was taken as an omen.

On the evening of the next day, 10 September 1991, a meeting was held to finalise the text of the bats Agreement, in the knowledge that the UK government was hosting a celebratory reception in the next room as soon as the Final Act had been signed. There were a few last minute problems of wording, mostly resolved fairly easily but one or two deadlocks that threatened completion. Curiously, these difficulties were particularly of issue for the EU, whose relevant competence for such things was unclear at the time and that even 15 years later has not signed the Agreement. Anyway, it was agreed to have a break, to start the reception and then return to the text. A few drinks later the difficulties seemed to have melted away and nine states signed the Final Act that evening, followed by two more the next day. Whether the bat in the building did play any part in that will, of course, never be known.

Perhaps it should be noted that the discussions on the details of the Agreements happened in the margins of the Conference of Parties – they were not part of the business of the main meeting, but clearly the meeting presented the best opportunity to finalise the texts.

The next step was the opening of the Agreement for signing at a ceremony at the Foreign and Commonwealth Office in London on 4 December 1991. I was sorry to miss that, but just had to be doing some bat survey and conservation work in Rwanda at the time. I think Rob Hepworth, from the UK's Department of the Environment (now Executive Secretary of CMS), was also sorry to miss it, since he had done so much



Signing of the Bats Agreement: Rt. Hon David Trippier MP signing (left), Foreign Office Minister Rt. Hon Mark Lennox-Boyd MP (centre), Chairman of the Bat Conservation Trust Paul Racey (right).

to see the Agreement through to this stage. Michael Ford, also so much a part of the development, missed it too. Professor Paul Racey, representing the Bat Conservation Trust, was there to witness Environment Minister David Trippier sign for the UK (and later to wipe the minister's hand when the token bat he was holding for the press call urinated on him). Six range states signed on that day — enough to bring the Agreement into force once their instruments of ratification had been deposited with the UK. The essential 5th ratification was Ireland on 21 June 1993, but delays in getting its paperwork to the UK's Foreign Office meant that in the end it was beaten by Germany and the Agreement came into force on 16 January 1994, with the UK hosting the first Meeting of the Parties in Bristol, 18-20 July 1995.

At this time the IUCN/SSC Chiroptera Specialist Group had established its commitment to assist and support the Agree-

ment in any way it could. Also, by 1991, the FFPS Bat Conservation Programme had evolved into a fully independent organisation, the Bat Conservation Trust, with me as one of its senior executives.

With respect to the included species, an interesting situation arose in that in the original discussions, the family Molossidae for the European free-tailed bat (*Tadarida teniotis*) was accidentally omitted from the list of families that the Agreement would cover, while the Egyptian fruit bat (*Rousettus aegyptiacus*) was deliberately excluded as it is regarded as a pest in some areas and it was considered that this might make it difficult for some range states to join the Agreement. Hence one of the proposed original titles of Agreement for the European Species of Microchiroptera. Without Molossidae being identified on the list this got translated into European species of Rhinolophidae and Vespertilionidae which were included in Appendix II of the convention. The meeting in London in 1987 recognised the omission and attempted to include *Tadarida* in the Agreement, but since it was not included in the CMS appendices it could not be included in the Agreement without reducing the strength of the Agreement. So a full proposal was drawn up and it was added to Appendix II of CMS in 1994, and a proposal to amend the Agreement to include *Tadarida* was adopted at its first MoP. But this turned out to be like creating a new Agreement and caused many complications for Parties. Thankfully the Agreement now has a much more straightforward and internal means of modifying the list of species to which it applies.

It is perhaps the period up to the London signing ceremony that has not been



too well documented. After that the UK established an interim Secretariat and initiated the newsletter Eurobat Chat which documents progress of the Agreement and provided further information about bats and their conservation. A poster was produced in several languages in 1993. The Interim Secretariat held a half-day workshop at the 6th European Bat Research Symposium in Evora, Portugal, in 1993 and involved itself in a number of other bat meetings, both international and national. The Agreement also began to look at some of the wider conservation issues and more 'internal' issues such as the debate on bat ringing. There was also preparation for the first MoP, including the preparation of proposals for collaborative work to be carried out under the Agreement on key habitats and species, the intention to use the meeting to draw up

a Conservation and Management Plan for the Agreement, to define the geographical scope of the Agreement and hence the included species, and a range of administrative matters, including the proposal to establish a permanent Secretariat.

So, the early years were interesting, sometimes frustrating, sometimes exciting, and it took nine years from the first concept to the first Meeting of Parties. But this was pioneer days for the Convention and one hopes that the next bats Agreement will have an easier passage through its development.

With thanks to John Burton and Michael Ford who have other stories to tell.

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The birth of EUROBATS

or how CMS survived after 12 barren years...

by Robert Hepworth

Just over 15 years ago, I got a new job. As a career civil servant in the UK Department of the Environment, I was following the usual pattern of moving to a new post every 4 years or so. I had actually spent the previous 4 and a half years handling the Government's relationship with the main British para-statal body dealing with wildlife, the Nature Conservancy Council (NCC). The relationship had become a stormy one. Ministers at that time decided for various reasons to abolish the NCC and replace it with 3 separate bodies for England, Scotland and Wales. I had been in the eye of the storm, as a civil servant duty bound to carry through policy decided by elected Ministers, which then required an Act of Parliament. The Act took much of 1990 to secure. It was an exciting but bruising experience. As the senior official handling the Bill in its Parliamentary stages, I had to liaise with a wide range of politicians and conservationists. However the Bill was not popular in most of the conservation world. Although we were able to allay some concerns through the creation of the Joint Nature Conservation Committee (JNCC) to provide international and UK-wide expertise, I often found myself as the "man in the middle" on the receiving end of fierce criticism from conservationists and scientists whose viewpoints I personally respected as an official who had intentionally made wildlife and convergence issues my "career anchor." Moreover, much of the

debate about the recognition of the NCC was not about wildlife, but politics and the balance of power between Ministries in late Thatcherite Britain.

Thus it was with a sense of relief that I took over my new post in January 1991 in charge of international conservation policy and zoos — it was a chance to get back to conservation and in my own eyes, perhaps to redeem a slightly guilty conscience about the abolition of the NCC!

Convention on Migratory Species

One of the first issues I began to look at was the future of the Convention on Migratory Species, which was at that time the runt of the "Stockholm" litter of global wildlife conventions, increasingly dwarfed by its big sisters CITES and Ramsar. Despite 12 years of operations, CMS had still failed to negotiate a regional species Agreement designed from the outset to be a tool of the Convention. It was clear to several Parties, including me, that unless CMS made tangible and rapid progress, especially on "Article IV" species agreements, then its very existence would be under review at the COP due in September 1991.

Two factors put me in a unique position to influence the outcome. First I took over half way through the UK's first term as the Chair of the CMS Standing Committee, which gave me an inside track with the Secretariat. Secondly, I soon discovered that quite a lot of negotiations had already taken



place under UK leadership on a European Bats Agreement under Article IV of the Convention. However much of this had been done at a meeting held in London in 1987 and in the following 3 years progress had virtually ground to a halt. Some people felt that another full negotiation meeting would be needed to re-start the process, but there was neither the time nor resources available to do this before the decisive CMS COP due in September. So we decided to take a calculated risk: we swiftly initiated a final negotiation round with range states on the text of the agreement, using the draft (in English) which had attracted good support 3 years earlier, including some changes designed to gain a consensus. In doing so, we also had to develop a French version of the text and resolve a number of “jurislinguist” issues with the French Government. As this was really the first full Article IV Agreement negotiation, we had to rely on normal standards of inter-governmental discussions, minus quite a few corners cut to ensure we kept to a timetable which would allow us to deliver the Agreement by the time of the COP.

In this situation, the role of a few individuals is often crucial. In particular, the commitment of two experienced mammal scientists, Paul Racey and Tony Hutson and their networks with IUCN and beyond was crucial in ensuring that we had a solid and broad foundation from scientists, conservationists and NGOs throughout Europe. Then we gained political support from two key countries — France, whose officers worked hard to reconcile the English and French texts without trying to re-open formal negotiations, and Germany, who understood how important the Bats Agreement would

be in securing a future for CMS itself, which was of course based in the Federal City of Bonn. I also remember the role of the British Minister at the time, David Tripper. The Agreement had caught his imagination, and he was constantly supportive of my efforts to iron out the final wrinkles.

The final breakthrough had been made and we began to collect endorsements of the text from the key range states in Europe. We were then able to move on with confidence to arrange a ‘Final Act’ meeting which was held on 9 September 1991 in Geneva immediately before the 3rd CMS COP. Even then, we had to broker and incorporate some last-minute changes in the text required to satisfy one or two range states; to survive a rather peculiar discussion about the definition of Europe, which I recall being dealt with by a diplomat who talked authoritatively about “tectonic plates”; and finally to endure a breakdown in my portable printer which threatened to delay the actual production of the Final Act text on paper for an important group of diplomats and officials to sign! Eventually we got the signatures. As we strolled triumphantly into the Genevan dark, Tony Hutson looked upwards and spotted a bat* fluttering under one of the lofty coffered ceilings of the UN’s Grand Palais. It seemed like a good omen, and indeed for those of us with religious convictions, a sign of the deity’s approval.

The immediate effect of that Final Act was electrifying. The atmosphere at the 3rd CMS COP, which began on 9 September was transformed. Optimism reigned, and spurred on by the success with Bats, a Swedish led initiative to negotiate an agreement for small whales in the North and Baltic Seas,

* Identified by Tony as a Daubenton’s bat (*Myotis daubentonii*)



was finalised by using part of the COP plenary time for negotiating sessions. At the end of the COP, this, too, culminated in a Final Act and a final signing ceremony. CMS Parties regained confidence in the Convention, and began to take steps towards further regional Agreements on birds, turtles and other migratory species. The existence of CMS as an effective conservation instrument was never subsequently challenged.

The success of EUROBATS

For EUROBATS itself, the rest, as they say, is history: the formation of the interim Bat Secretariat in my division; obtaining the three signatures of the Rt. Hon. David Trippier MP, who was an Environment Minister at the time, the Rt. Hon. Mark Lennox-Boyd, a Foreign Office Minister, and Prof. Paul Racey at the time a Chairman of the Bat Conservation Trust, to bring the Agreement into force; the establishment of the permanent Secretariat in Germany; the subsequent transfer to UN administration; the creation of European Bat Night; and in recent years the growing maturity and influence of the Agreement which now enjoys substantial Governmental and public support throughout Europe. You can read more about all of this by the leading actors in the Secretariat

and the Parties who turned that tiny first Agreement into such a successful example of inter-governmental co-operation on wildlife conservation.

I often wonder what ‘might have been’ if a few more negotiators had been able to adopt a similar approach over the next few months in 1991 and early 1992, when the Convention on Biological Diversity was finalized. As a member of the UK delegation in those negotiations, I have no doubt that a stronger text could have been comfortably attained if there had been as much European solidarity as we had obtained for EUROBATS; and hence to “save” CMS.

The spirit which permeated CMS at the time of its salvation in 1991 has remained strong down the years, and it is something we constantly encourage through the concept of the “CMS Family” of Agreements. In a sense, it is based on a simple premise. Most countries within CMS and the Agreements ask “what can we achieve on behalf of conservation?” rather than “what can I get out of this for myself?”. Long may this spirit survive!

Robert Hepworth

Executive Secretary of the UNEP/CMS



The first triennium of EUROBATS: take-off by a successful Agreement

by Eric Blencowe and Peter Boye

When the EUROBATS Agreement had come into force and the first Session of the Meeting of Parties (MOP1) had taken place in Bristol, August 1994, people who were involved with EUROBATS faced a great challenge. As Parties wanted to implement and promote the new treaty, government politicians were ready to support or even fund appropriate proposals. Experts from science and conservation had the chance to use this period of EUROBATS' take-off for new initiatives to improve national and international conservation and research measures for the benefit of bats in Europe.

Objectives of the Advisory Committee

Shortly after the permanent Secretariat was established in Bonn in January 1996 the Advisory Committee had its first meeting on the small German Baltic Island of Vilm in April 1996. Delegates from 9 Parties and 5 non-Party range-states discussed measures and strategies to implement the EUROBATS Agreement. From the Conservation and Management Plan, which was adopted by MOP1, they identified the points related to population surveys and monitoring of international actions as having priority. It was agreed to start a cooperative population monitoring programme with a limited number of species: Lesser horseshoe bat, Greater or Lesser mouse-eared bat, Bechstein's bat, Long-fingered bat, Serotine or Northern bat and Schreiber's bat. Two years later the

Noctule was added to this list. However, ideas for international cooperation were not yet elaborated and mostly focussed on research activities.

At the second meeting of the Advisory Committee in Krakow, January 1997, standard methods for population surveys of the species identified for a monitoring programme were compiled. The delegates discussed how to implement an internationally harmonized programme and coordinate the evaluation of monitoring data. Due to the small number of field workers, a general solution for the problems connected to the lack of population data on some species (e.g. Bechstein's bat) and from many parts of Europe could not be found.

In Krakow an invited expert, Tony Hutson, presented a background paper and recommended the Committee first consider addressing the problems faced by bats in caves, perhaps initially by developing a list of key cave-sites in Europe. The delegate of the United Kingdom proposed that this list should be accompanied by suggested guidance on site-protection. Secondly, Tony was of the view that bats in forest areas would benefit from the development of guidelines on forestry practices which would protect and enhance the status of bats living in them. The Committee, as well as delegates from 10 Parties and 6 non-Party range-states plus observers, gave support to Tony's recommendations and also to the idea to initiate international cooperation in



the conservation of Schreiber's bat in the Balkans, which was urgently needed.

Mile stones set by the Secretariat

The following year 1997/98 was the time of fixing the fly-way of the EUROBATS Agreement. As the third meeting of the Advisory Committee in Prague, April 1998, had to prepare most documents for the Second Session of the Meeting of Parties the Secretariat wanted to present the appropriate drafts in Prague. The scientific focal points in Germany and the United Kingdom were asked to contribute to the proposals for transboundary projects. Besides the idea of compiling a list of underground sites in Europe, which have a special importance as bat habitats, two items were addressed: recommendations for a cooperative development of guidelines for bat-friendly forestry practices and recommendations for research projects to fill the most significant gaps in our knowledge about bat migration in Europe.

A paper on bat conservation in woodlands was drafted recommending a three step approach. Firstly, basic data on forestry practices, bats in woodlands and related conservation aspects should be collected country by country. Secondly, the data should be summarized and evaluated by experts and thirdly, there should be draft guidelines for the consideration of bats in forestry practices in Europe and further recommend bat conservation measures in woodlands. The authors of the paper expected the time of twelve months and a budget of about 100.000 Euro needed to run such a project.

Investigations of bat migration should be focused on the Pond bat and Nathusius'

bat, which migrate over medium to long distances and accumulate in certain mating areas along their routes. For the Pond bat a gap analysis was proposed to identify the most urgent research needs. For Nathusius' bat a programme was recommended with a combination of field observation and genetic investigations.

All project proposals were combined in two draft resolutions for MOP2, which were considered by the Advisory Committee at its meeting in Prague before. One draft resolution dealt with the species proposals on the Pond bat and Nathusius' bat, the other draft resolution covered the habitat proposals on the list of important underground bat habitats and the development of bat-friendly forestry practices. Both drafts together formed a trans-boundary programme for bat conservation under the EUROBATS Agreement. They were fully agreed by the Advisory Committee after minor amendments.

1997 also was the first year of a European Bat Night, introduced by the EUROBATS Secretariat as a special event to raise public awareness for bat conservation. Since that time the European Bat Night takes place every year all over Europe simultaneously on the last weekend of August.

The same year the Secretariat was additionally active in south-eastern Europe. Following an initiative of bat workers from the Balkans the Executive Secretary gave support to a ground-breaking meeting in Budapest to progress a programme for the conservation of Central and Eastern European populations of Schreiber's bat.

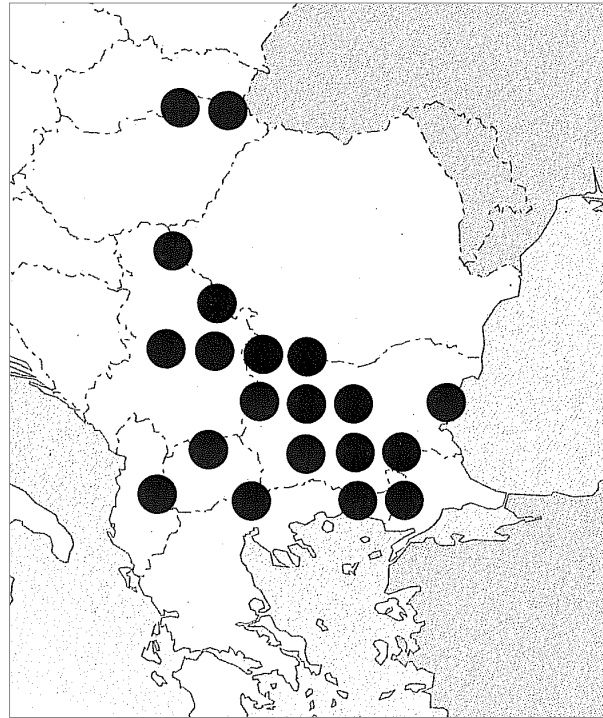
Participants from seven countries were funded to survey roost sites of the species and report back to the Secretariat about

the situation of the sites and the bats using them. Six of them implemented the programme and provided data on 32 caves, 3 mines and 4 other sites which were inhabited by Schreibers' bat (see map). The biggest colonies were observed in Bulgaria in Djavolskoto Garlo Cave (27,000 specimens) and Parnitzite Cave (23,000 sp.).

MOP2 decisions and follow-up developments

The Second Session of the Meeting of Parties (MOP2) took place in Bonn in July 1998. It adopted a number of resolutions, among them one on consistent monitoring methodologies and the transboundary programme with its habitat and species proposals. But the Parties did not provide any financial aid for the activities outlined by the resolutions. Those Parties which were members of the European Union even prevented a link of the habitat proposal on the conservation of important underground bat habitats with the obligations given by the EU Habitats Directive. So the implementation of the initial transboundary programme of EUROBATS was left to national activities or voluntary contributions.

A coordinated survey on the population status of bat populations in Europe is still a challenging target. In many European countries hibernating bats are regularly counted but any other monitoring schemes for bat populations are at best under development. Since 1996 the United Kingdom has had a monitoring programme running and it remains the largest in Europe. Because of new techniques and better knowledge the guidelines on the recommended methodologies to be applied with a EUROBATS monitoring programme will be revised in the near future.



Distribution of roost sites of Schreibers' bat and other bat species which were included in the programme for the conservation of Central and Eastern European populations of Schreibers' bat with support from the EUROBATS Secretariat in 1997 and 1998 (UTM grid).

re. However, the MOP2 resolution on consistent monitoring methodologies was the reason for Germany to fund ten bat detector workshops in eastern European countries and for the United Kingdom to fund the development of monitoring programmes in the same region. It also encouraged volunteers to take part in surveys and organisations to coordinate their monitoring activities. The MOP2 proposals on transboundary programmes on the Pond bat and Nathusius' bat turned out to be less relevant for the EUROBATS Agreement. The resolutions



were adopted with some amendments which made them rather ineffective. The aims of the proposal on the Pond bat were more or less fulfilled by the Action Plan on the Conservation of *Myotis dasycneme* in Europe compiled under the Berne Convention. However, the research project on *Nathusius' bat* became unrealistic due to a complicated procedure of financing it in accordance with the adopted resolution.

For this reason the implementation of this resolution was restricted to an intensification of recording and marking *Nathusius' bats* in the course of voluntary research activities.

The greatest success came from the habitat proposals of the transboundary programme. As a follow-up of the resolution a list of important underground habitats of bats was made with contributions from many countries. Guidelines for the conservation and management of such key sites of the bats in Europe are on the way. Similar attention was given to woodlands as important habitats for bats. Based on an information brochure on bats in forests in Germany many countries produced similar information material or translated the German version into their own language (with financial support from the UK). Today foresters and woodland owners can be provided with printed information on woodland bat conservation needs in Bulgaria, Croatia, Czech Republic, Germany, Luxembourg, Macedonia FYR, The Netherlands, Norway, Sweden,

Romania, United Kingdom and Serbia.

The conservation of *Schreibers' bat* in central and Eastern Europe is still unsatisfying, probably as there was no special resolution on the programme started with the Budapest meeting. There are ongoing activities in Bulgaria and other countries, but the protection of the species and its roost sites remains of national importance.

Conclusions

The priorities for the implementation of the EUROBATS Agreement, which were set during the first triennium by the Advisory Committee and the Secretariat, were a good selection. The follow-up development of bat conservation in Europe showed the significance of EUROBATS as a good instrument to achieve conservation targets.

However, in international nature conservation business one has to think in longer terms. For example, the habitat proposals, which were planned to be implemented within a couple of months, are on the way but still not completely finished after eight years.

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EUROBATS – a highlight of CMS' implementation

by Arnulf Mueller-Helmbrecht

Without the Convention on Migratory Species, not only wouldn't EUROBATS exist, it would have taken much longer to create an international legal instrument for the comprehensive conservation of European chiroptera. One of the first proposals of the Convention on Migratory Species Scientific Council immediately after its establishment by the CMS Conference of Parties in July 1985 was to develop an Agreement for chiroptera and so it was decided by the Conference of the Parties (see Resolution 1.6, para 1. a.)

The former executive director of the United Nations Environment Programme, Mrs. Elizabeth Dowdeswele once asked me "why do we need a Convention to create Agreements?" She said it as a statement rather than a question, since she never gave me the opportunity to explain it to her. Hence, I will do it right here at the occasion of EUROBATS' 15th anniversary.

Klaus Toepfer recently stated that where single or multiple animal species are in the process of becoming extinct the existence of the human species may also be at risk. It is therefore highly necessary (and justified) to look at single species in a careful and comprehensive manner on top of dealing with complex global threats such as loss of biodiversity, climate change and desertification.

Advantages of the CMS-Agreements

Politicians, state authorities and even representatives of non-governmental organisations specialised in environmental issues tend to claim that the task of conserving single species should be dealt with by specialised non-governmental organisations, not by government organisations. However, the task to organise a comprehensive, long lasting and sustainable conservation of chiroptera and their habitat including all aspects of research, monitoring and trans-boundary cooperation would be too big for non-governmental organisations. CMS has proved in recent years that it provides an ideal basis for synergies in the work of national as well as international governmental and non-governmental organisations, scientists and scientific institutions and that international and national scientific and administrative work are all mutually stimulating.

Cyril de Klemm, one of the most reputed environmentalist and legal advisor of the World Conservation Union and the Convention on Migratory Species, once expressed his enthusiasm about the construction of Convention on Migratory Species and its instruments: he stated that these MOE's are providing a stable legal and organisational framework as well as a flexible programmatic tool for comprehensive species-oriented conservation action, whereby the action itself has to be provided by all state



and non-governmental organisations in a coordinated manner.

As to the legal framework it appears self-evident that membership of States is important as it creates a legal commitment to contribute to the implementation and funding of Agreements. It is indeed fundamental to establish in a legal instrument this responsibility of the Range States for the conservation of nature and its components as a prerequisite for the survival and well-being of humankind. As a consequence, it is a strong argument within Governments that funds as well as organisational capacity have to be provided, but must not be left to the discretion of the finance sectors of the state authorities. This does not always help solve financial or organisational problems, however in comparison to a complete lack of such state commitments the Convention on Migratory Species and its Agreements are advantageous.

As to the organisational commitments of the Party authorities, it can be stated in more general terms that the Range States have to contribute to the international transboundary organisation of the conservation work. Furthermore, these commitments provide a chance for more structured and intensive scientific and conservation action. I do not know whether all contracting Parties of EUROBATS have increased the amount being done to conserve bats and their habitats, however in many countries EUROBATS has been an incentive for more conservation work. I suggest that you read through this booklet; it provides ample evidence.

The flexible component — the transboundary programmatic planning and cooperative work — provides an important aspect in addition to any national work. It

should be obvious that for migratory species, scientific, conservation and public awareness work should be planned and coordinated for the entire migration range of a species. This applies to the 45 European bat species covered by EUROBATS as well as to the approx. 1100 bat species globally and to the eight to ten thousand migratory animal species in total.

To my regret, many people in responsible positions of state authorities completely ignored it and therefore are permanent obstacles for effective conservation work. However, the Convention on Migratory Species and its Agreements have already achieved much in educating and convincing such people and I am optimistic that with the continuation of such work those impediments will more or less disappear.

EUROBATS can be proud of the fact that the original Action Plan attached to the Agreement in 1991 has been subsequently implemented and further developed to a sophisticated Conservation and Management Plan. This dynamic development, in collaboration with the work of experts, is the motor for successful conservation.

EUROBATS' Achievements

This academic arguing would be fruitless without some examples and evidence. EUROBATS is best placed for it.

EUROBATS, as with most of the independent Agreements under the Convention on Migratory Species, developed well from the beginning. It took only two years until the minimum number of five of the total of 48 European Range States had ratified it and the Agreement entered into force (16 January 1994). In the late eighties, when EUROBATS was drafted and, scientists be-



lieved to be well informed about the taxonomy and biology of most of the bat species occurring in Europe. However, the progress of genetechonology creating a new taxonomy (or at least an additional tool) and new findings of intensive monitoring and other scientific work have lead to an astounding proliferation of species covered by the Agreement.

The first EUROBATS Executive Secretary, Eric Blencowe, had the splendid idea of creating the "European Bat Night" which turned out to become a real success story, since it generated so much awareness with media and the public that specialised non governmental organisations as well as responsible state authorities contributed to its organisation, and to increase their conservation action. Even in non-Party countries the Bat Night became an attraction and I presume that this was, among other things, one of the incentives for a number of countries to accede to the Agreement.

The second EUROBATS Executive Secretary, Andreas Streit, made the Secretariat the motor of EUROBATS' national and transboundary implementation and further development. As a result, less than 15 years after it began, EUROBATS counted almost two thirds of the Range States as its Parties (31 by October 2005).

ASCOBANS, ACCOBAMS and AEWA are other success stories of the Convention on Migratory Species Agreements. However, EUROBATS is one of the prototypes for instruments to implement the Convention on Migratory Species. Thanks to the convincing results of EUROBATS' implementation,

the Convention on Migratory Species has become successful throughout the world with a total of six independent Agreements and eight Memoranda of Understanding. A second Agreement for the conservation of bats is under development for the African region. EUROBATS has been playing a strong role in furthering the decision-making and will assist in its drafting and negotiation.

I take this occasion to congratulate EUROBATS on its success and great role in the conservation of European bat species, an important component of the global biodiversity, and to thank all those who contributed with dedication to this success. This includes the members of the EUROBATS secretariats and a number of NGOs who have been playing such a vital role. I am happy to note that the collocation of the Secretariats of the Convention on Migratory Species and EUROBATS have generated synergies which have been beneficial for both Treaties and I express optimism that this will continue in the new offices which just recently have been provided by the German Government in Germany's former Parliament building.



*Arnulf Mueller-Helmbrecht
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Migratory Species (CMS)*



Albania as a part of the EUROBATS family

by Ferdinand Bego, Zamir Dedej and Aurora Dibra

Albania has been a Party to EUROBATS since June 2002 and thus able to benefit from the organisation's official meetings, projects and activities. The information contained in the Agreement, in combination with environmental legislation in force in our country and the current international orientation with regard to conservation, greatly facilitates the process of spreading knowledge about bat species and advice on bat conservation.

The major contribution EUROBATS makes to our country and the work of our specialists is the access it provides to relevant literature, models for questionnaires, the consultancy offered by the Agreement's members and advice on the setting up of bat conservation projects.

The importance of conservation

Among the mammals found in Albania, bats constitute a little-studied group. And despite recent progress, knowledge of the species, their rich interest, and their distribution, status and population trends is still limited. At present, 24 bat species are known to exist in Albania, and some three or four other species are expected to be found — this assumption is based on data available from the countries bordering on Albania: Greece, the Former Yugoslav Republic of Macedonia, and Serbia and Montenegro.

The Red Book of Albania includes twelve species of bats: *Rhinolophus blasii*, *R. euryale*, *R. hipposideros*, *Myotis bechsteinii*, *M. daubentonii*, *M. nattereri*, *Nyctalus leisleri*, *N. noctula*, *Plecotus auritus*, *P. austriacus*, *Vespertilio murinus*, and *Tadarida teniotis*.

Albania, as a Mediterranean country rich in limestone and caves, offers a variety of habitats usable as hibernacula and nursery roosts. Almost half of the bat species in Albania are known to be cave-dwellers. Tunnels also represent new potential roosts suitable for bats, and some of them are already occupied by bat colonies.

In our country the condition of bat species and their habitats is in fact not good. Bats are not popular among the general public, and the dearth of projects being carried out to protect them presents another serious problem. Major threats to bats in Albania are: disturbance by humans, roost destruction and habitat loss.

In the last 15 years there has been evidence of an increase in the number of people engaging in outdoor activities that include visiting and illegal exploration of caves. In many caves there are signs of man-made disturbance, such as traces of fires and the presence of dead and burned bats. The incidence of disturbance is particular high during the hibernation and reproduction season. With a predominantly low public



awareness in Albania of environmental issues in general and of bats and their role in nature in particular, the attitude and behaviour of local populations towards bats is still negative. In order to change this state of affairs it is important to undertake awareness-raising campaigns and activities in schools and communities.

The publication and dissemination of popularly aimed material on bats would be a good way to increase knowledge of bats at community level, and also to introduce good bat conservation practices that have been applied in other European countries.

Some caves and military and mine tunnels are blocked and turned to other purposes by the local people. Some caves are used as storage for solid waste produced in urban and rural areas. In summer, most of the easily accessible caves are used by shepherds as shelters, causing direct disturbance to bats and damage to the roosts.

A particular case is that of the cave at Treni, situated at the entrance of Micro Prespa, the smaller of the two interlinked Prespa lakes, which has been filling up with sediments discharged by the deviated river Devolli for the last 20-25 years. As a result the cave has dried up and become smaller, but most importantly it has lost its former importance as a site for important nursery colonies of several bat species, especially for *Miniopterus schreibersii*, *Myotis capaccinii*, *Myotis daubentonii* and *Eptesicus serotinus*.

Another big problem is the loss of bat habitats. This is especially the case with bats that use old forests as feeding and/or roosting sites. Forests that were overexploit-

ed in the past for timber and firewood, and those damaged in recent years by illegal logging, have evidenced a strong negative impact on bat species linked with forests. One path to improving the situation lies in projects for forest rehabilitation and regeneration, especially in locations that have proven significance as bat habitats.

Obstacles to the EUROBATS Agreement

In our country the main obstacle to the implementation of the Agreement's goals is constituted by the economical, political and social situation. People in general are poor, and indifferent towards conservation problems. Also, although some NGOs are working in the field of environmental protection, very few deal with bat conservation.

Moreover, the state does not offer significant support to responsible bodies like the Museum of Natural Sciences and the Universities and Faculties of Natural Sciences throughout Albania.

Raising the public profile of EUROBATS

The best way to promote EUROBATS activities is by the publication of information via leaflets and brochures. In addition, specialists should facilitate the involvement of volunteers in bat conservation projects. International projects and meetings afford us good opportunities to learn about new practices in the field of bat conservation.

The future of EUROBATS

From the perspective of our country, the focus of the Agreement should be on the involvement of Albanian specialists in international training workshops, projects and



bat conservation programs. The Agreement can serve as an agent for transboundary projects bringing together Albania, Greece, FYR Macedonia, and Serbia and Montenegro, as the territories of this group of neighbours possess three or four common bat species.

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Armenia – 15 years with EUROBATS

by Eduard Yavruyan, Mark Kalashyan, Margarita Harutunyan

On the 15th anniversary of the Agreement on the Conservation of European Bat Populations in Europe, EUROBATS, the representatives of Armenia wish to state that they have actively participated in the work of the European community of bat researchers and conservationists. We had the privilege and honor to participate in all the meetings held by the Secretariat of the Agreement, as well as in the intercessional discussions. In addition,

the Armenian specialists regularly submit reports on the situation of the bat fauna and protection in the country.

Although Armenia has not become a Party to the Agreement yet, its impact on the protection and bat research for our country is essential. During the difficult transitional years, our contact with colleagues from other countries which came from our association with EUROBATS, became an important stimulus for the development of research and the legal protection of bats in Armenia. Cooperation during the meetings, coupled with the constant exchange of information between sessions, allowed the Armenian scientists and specialists in nature protection to apply contemporary approaches and methods of research to the protection of bats.



Prof. Eduard Yavruyan in cave “Mageli”

Expanding wealth of knowledge

Prior to the 1990s only 16 species of bats from two families, Rhinolophidae and Vespertilionidae, were known. The research carried out during the last 15 years considerably improved our knowledge about the bat fauna in Armenia. Twelve new species in Armenia have been discovered, including a representative of a family of Molossidae new to Armenia — *Tadarida teniotis*, *Rhinolophus blasii*, *Myotis bechsteinii*, *Pipistrellus pygmaeus*, etc. Thus we have uncovered a remarkable diversity in the bats of Armenia, where more than 65% of the European bat



fauna is represented. At present 28 species of bats are known in Armenia, including:

- Family Rhinolophidae (5 species):
Rhinolophus euryale, *Rh. mehelyi*, *Rh. hipposideros*, *Rh. ferrumequinum*, *Rh. blasii*;
- Family Vespertilionidae (22 species):
Myotis blythi, *M. bechsteinii*, *M. nattereri*, *M. schaubi*, *M. emarginatus*, *M. mystacinus*, *M. hajastanicus*, *Barbastella barbastella*, *B. leucomelas*, *Plecotus auritus*, *Pl. austriacus*, *Nyctalus noctula*, *N. leisleri*, *Pipistrellus kuhlii*, *P. pipistrellus*, *P. pygmaeus*, *P. nathusi*, *Hypsugo savii*, *Vespertilio murinus*, *Eptesicus serotinus*, *E. bottae*, *Miniopterus schreibersii*;
- Family Molossidae (1 species):
Tadarida teniotis.

During the last 15 years more than 800 caves and grottoes inhabited by bats have been discovered and mapped, and more comprehensive research of cave-dwelling bats has been carried out.

Raising public awareness

Thanks to active public education works including dissemination of booklets, posters, regular lectures in educational institutions and programs on TV and radio the population of Armenia has become more aware of the issue of bat protection. A popular scientific film on the bats (Rhinolophidae) of Surenavan cave has been produced.

Improving Conservation

Following the experience of other countries, scientists and Armenian NGOs with the

support of the Ministry of Nature Protection, started regular works on the cleaning of caves and their surroundings of waste materials, and hence generally protecting the caves. Special attention was paid to caves with high levels of biodiversity, and their grilling to hinder “wild tourists,” especially during the periods of reproduction and hibernation.

Thanks to the enthusiasm of the members of ANPU NGO and the local population, the caves with the wealthiest biodiversity – Mozrov, Sand clock, Mageli, Well, have been protected from unauthorised visitors by metal grills.

The future of bat conservation

Armenia initiated serious discussions and a number of cooperation projects to study the caves on the border to Russia, Georgia and Azerbaijan together with colleagues from these countries.

These activities are the result of the enthusiasm and patriotism of a very small but dedicated group of professionals. Therefore if we want the protection of bats to become an issue of recognized importance for the population, it is necessary to adopt a special law on the protection of bats and their roosts. Furthermore, it is essential to inform the population on the importance of protecting bats starting at a very early age.

Currently the issue of utmost importance is the question of joining the Agreement in order to become a Party to EUROBATS. At present the Ministry of Nature Protection is committed to joining the Agreement.

As for the future prospects of EUROBATS, its activities should not be limited to the regular Meeting of Parties, but should increase its assistance to countries in tran-

sition. It should be an important objective to establish regular training courses for bat specialists and it would be desirable if the venues, conditions and subjects of the courses were varied.



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The importance of EUROBATS for Belgium

by Alex Lefevre, Frederic Forget, Ludo Holsbeek and Ben Van der Wijden

In Belgium, as in most European countries, bats are facing numerous threats.

One of the major problems for bats in Belgium is the fragmentation of their habitats by dense transport infrastructures, building developments and the intensification of agricultural methods, all arising from poor landscape planning and organization in the past. Moreover, Belgium is a small country, federally organized into three relatively autonomous regions: Flanders in the north, Wallonia in the south and the centrally located Brussels Capital Region, with each one having its own legislation on bat protection.

On 4 December 1991 Belgium signed the international Bat Agreement. Because of complex policy relationships between the three regions, EUROBATS was only ratified on 14 May 2003. Two fundamental questions arise about the national implementation of the Agreement: 1) How did Belgium use its existing legislation to implement this Agreement? and 2) Did Belgium take extra measures towards bat conservation? First of all it is important to focus on the status of bat species occurring in Belgium and on their status according to the Habitat Directive (Annexe II, IV). To date, 20 different bat species have been found in Belgium, 10 of them rare or very vulnerable (Table 1).

The protection of bats in Belgium

Bat research, and especially bat protection, is mainly based on a network of volunteers

working with the financial and logistic support of the three different governments.

Recently, various hibernation quarters were acquired with funds from the Ministries of the Flemish, Brussels and Walloon communities and through the efforts of our nature conservation organizations Natuurpunt and Natagora. With written authorisation from the owners, cave entrances, ice cellars and bunkers were closed off, with entry/exit points provided by different types of bat-friendly gates and adapted bricks, so

Species	Annex II	Status
<i>Rhinolophus hipposideros</i>	Yes	Extremely vulnerable
<i>Rhinolophus ferrumequinum</i>	Yes	Extremely vulnerable
<i>Barbastella barbastellus</i>	Yes	Extremely vulnerable
<i>Myotis emarginatus</i>	Yes	Very vulnerable
<i>Myotis bechsteinii</i>	Yes	Very vulnerable
<i>Myotis myotis</i>	Yes	Very vulnerable
<i>Nyctalus leisleri</i>	No	Very vulnerable
<i>Myotis brandtii</i>	No	Vulnerable
<i>Myotis dasycneme</i>	Yes	Vulnerable
<i>Plecotus austriacus</i>	No	Vulnerable
<i>Myotis mystacinus</i>	No	Threatened
<i>Myotis nattereri</i>	No	Threatened
<i>Pipistrellus nathusii</i>	No	Threatened
<i>Nyctalus noctula</i>	No	Threatened
<i>Plecotus auritus</i>	No	Threatened
<i>Pipistrellus pipistrellus</i>	No	Common
<i>Eptesicus serotinus</i>	No	Common
<i>Myotis daubentonii</i>	No	Common
<i>Pipistrellus pygmeus</i>	No	Status unknown
<i>Vespertilio murinus</i>	No	Status unknown

Table 1: Bat conservation status in Belgium.

as to ensure microclimatic conditions (see picture below) that allow the bats to hibernate undisturbed.



© Rollin Verlinde

Another interesting point is that bat-worker groups are on traditionally good terms with the Belgian Army. Fortresses that were formerly used for training sessions are now under strict protection and the number of hibernating bats is increasing as a consequence.

Management of foraging areas and roosts

Several studies have shown that woods, edges of woods and lines of trees have a double function for bats. On the one hand, they are important as foraging sites, and on the other, trees are used as quarters by tree-dwelling bats. This also means that the function and importance of forests can be totally different for different bat species: a study of the vital rapports between bats and woods was started in 2003 in Flanders and in 2005 in Wallonia.

Since the implementation of the Agreement, several studies have been set up to

determine the ecological relationships of different forest types with several bat species. Subsequently, small interventions, such as the digging of pools, the planting of bushes at the edge of woods, or deliberate raising of the water-level in one or more specific parts of the forest, have been carried out.

And last but not least the systematic conservation of old trees scattered through woods, together with systematic conservation of old trees in lanes, is an important step toward bat roost protection. In this context we should like to point out that the ongoing, rapid and complete removal of non-native tree species, such as the locust tree and the red oak, can pose a serious and immediate threat to bats, given that a large percentage of all tree cavities are found specifically in these types of soft-wood trees.

Different programs have been started to protect bats in church roofs. Aiming particularly at the Serotine bat (*Eptesicus serotinus*), the Long-eared bat (*Plecotus auritus*), Geoffroy's bat (*Myotis emarginatus*), the Greater horseshoe bat (*Rhinolophus ferrumequinum*) and the Mouse-eared bat (*Myotis myotis*), specific measures have been taken to protect summer roosts. These actions include conservation of wide entrances, avoidance of night-time illumination of buildings, and preservation of the connective function of landscape features situated between colonies and their foraging areas. For such purposes a good relationship with local authorities, as with architects and building contractors, is one of the prime conditions for success.



Monitoring

Bats are extensively studied (especially in the northern region) on their hunting grounds, using bat-detectors and sound-analysis; by the monitoring of hibernation quarters; and by counting the numbers of bats as they leave their roosts. It is clear that bat groups play an important role here.

Before the start of a large-scale program of agricultural landscape consolidation, a study on bat diversity was conducted by the Flemish bat group precisely in order to preserve important landscape features for the use of bats! Such studies are done by counting the animals as they emerge from the sites of their summer colonies and by monitoring them at foraging areas, using transect counts.

During the winter months specific hibernacula included within the framework of the Natura 2000 Habitat Directive are the subjects of continuous monitoring of the hibernating bat population. The Pond bat (*Myotis dasycneme*) and Bechstein's bat (*Myotis bechsteini*), Geoffroy's bat (*Myotis emarginatus*), the Greater horse-shoe bat (*Rhinolophus ferrumequinum*), the Lesser horseshoe bat (*Rhinolophus hipposideros*) and the Mouse-eared bat (*Myotis myotis*) hibernate in large numbers (more than 6,000 bats) in the limestone caves of Southern Limbourg (around Sint Pietersberg), the fortresses around Antwerp (about 5,000 bats) and several natural caves in the Ardennes.

Spreading the word

A technical booklet on the management of roofs for bats was published in 1995 and a technical document about bats and houses in 1996 (over 10,000 copies of each).

In Brussels, several booklets were brought out during the LIFE project (1998-2003). The Flemish Region prepared a short documentary film in 2002.

Educational bat packs have been prepared for schools. They included a bat-detector, a set of slides and a powerpoint presentation on bats, as well as books, lessons, photographs, drawings and even a game. Schools can obtain these educational bat packs free of charge.

For the last seven years we have played a part in the organization of European Bat Night. Over one weekend, between 60 and 80 excursions are arranged, attracting between 6,000 and 10,000 participants.

Summary

Bat conservation in Belgium is clearly based on 4 pillars:

Protection	Management
Monitoring	Raising of Public Awareness

But Belgium's threatened bat populations will only completely recover when current policy on the management of agriculture and forestry is reconciled again with the values of nature. Although research has improved, there is still a lot to be done, especially with regard to carrying through the different management and bat conservation plans. Years of research will be necessary before we can have a reliable picture of Belgium's bat fauna. One thing is certain: the implementation of the resolutions of

**An overview of the key facts about bat conservation in Belgium**

1980: All bats are protected in Flanders.

1983: All bats are protected in Wallonia.

1991: The Brussels Region protects all its bat species.

1991: Signing of the EUROBATS Agreement.

1993: Start of a bat conservation project aimed at the protection of bat roosts, churches and lofts in Wallonia.

1995-1999: As a joint venture between WWF Belgium and the Flemish bat group, a five-year census of summer roosting sites is conducted in the Flemish Region.

1998-2003: Start of Brussels LIFE project on habitat improvement for bats in the SAC of the Brussels Capital Region.

1998: First Belgian Bat Symposium.

1999: Belgium participates for the first time in the European Bat Night, which includes such varied activities as slide presentations, bat-detector excursions, bat-pubs, video sessions, visits to fortresses and ice cellars and even a real bat Party. For more than seven years the European Night has been organized by two bat NGO's, the Vleermuizenwerkgroep of Natuurpunt and Plecotus, the bat group of Natagora, with the financial and logistic support of the three regions via the Division for Nature of the Ministry of the Flemish Community, the Brussels Environment Institute and finally the Environment department of the Walloon Region.

2003: Ratification of the Bat Agreement by the Belgian government.

2003: The Ministry of the Flemish Region of Belgium supports a EUROBATS project set up to produce public awareness leaflets in seven Eastern and South-Eastern European countries.

2003: At the request of the Flemish Ministry's Environment Department, Forestry Section, a study of the importance of forests for bats is carried out by volunteers.

2005: A similar study is carried out in the Walloon Region within the framework of the Xylobios project, which aims at investigating the importance of dead wood for forest biodiversity.



the EUROBATS Agreement, in conjunction with the Natura 2000 guidelines, will have a positive impact on the bat population in the near future.

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EUROBATS for the bats of Bulgaria

by Boyan Petrov

It is a long time now since we, the youngest generation of bat researchers, first decided on a campaign to raise as high as possible the protection status of our beloved fellow-creatures — the bats of Bulgaria! In the early 1990s, soon after the fall of Communism, all 29 bat species then known were legally protected by Directive 1021/1986, but although many activities involving bat disturbance were officially banned, enforcement was poor. No fines were ever collected, nor did the media pay attention when bats were deliberately killed.

In the 1990s, together with Teodora Ivanova and Rumyana Pandurska, Bulgaria's dedicated bat ladies, we started numerous regional bat surveys and got involved in important environmental assessments. Our knowledge of the distribution, breeding habits and hibernation ecology of bats was increasing substantially, yet many bat hot spots needed urgent legal protection. We wished to safeguard the most important underground roosts, but existing regulations did not allow us to apply for stiff management restrictions. At that transitional period, EUROBATS was still far over our horizon, and we did not dream that the Agreement would ever come to south-eastern Europe.

Raising public awareness

In 1997, responding to the growing need to protect Bulgaria's rich biodiversity and

raise public awareness of environmental issues, we established the Bat Research and Protection Group (BRPG, <http://bats-bulgaria.org/>) on a legal footing — it had actually been formed in 1989 as a task force within the Green Balkans movement. BRPG got off to a flying start with the Action Plan for Bat Protection in Bulgaria 1994–1997, funded by the Regional Environmental Centre for Central and Eastern Europe (Budapest), and partly supported by the UK's Bat Conservation Trust. One major contribution to the project was active lobbying of the Ministry of Environment and Waters, aimed at bringing Bulgarian legislation into line with the relevant EU regulations and with the terms of EUROBATS.

In 1998, in order to heighten public and media interest in bats, BRPG organized Bulgaria's participation in the Second European Bat Night (13-21 August). The program of events received strong support from the state nature conservation authorities and the country's scientific institutions. An exhibition "About Bats..." hosted by the National Museum of Natural History in Sofia, was opened personally by the Minister of the Environment and Waters, Mrs. E. Maneva. The governing board of the University of Sofia's Faculty of Biology also supported BRPG, allowing it to use the Ceremonial Hall for the Bat Night.

Since then we can look back on seven successful Bat Nights, hosted each year in



different villages in the Bulgarian countryside. These activities helped us substantially in spreading the notion of bat protection and increasing our influence and popularity.

Joining EUROBATS

Between 1998 and 2000 BRPG took part in two cooperative regional projects, the Central European Miniopterus Protection Program (*Miniopterus schreibersii*) and the Transboundary Park, Western Stara Planina. In 1999 we also ran the project “Adventures in ecological education: from the classroom to the karst,” funded by the Darwin Initiative for Conservation of Species. In September 1999 another notable event broadened our technical skills and provided equipment for BRPG. This was the workshop on the use of ultrasound bat detectors for identifying bats and locating their roosts by. The occasion was funded by the German Federal Agency for Nature Conservation and the Bulgarian-Swiss Biodiversity Conservation Program.

Our intensive research and conservation activities were soon rewarded. In December 1999, the Agreement on the Conservation of Populations of European Bats was published in the State gazette and Bulgaria happily joined the EUROBATS zone! Of course, this law came into force after continuous lobbying, addresses by experts and consultations at the Ministry of Environment and Waters.

It was a great success for us, and also a significant step on the road to the harmonizing of EU legislation. From the conservation perspective, the Agreement became an efficient administrative tool for raising the protection status of bat roosts and gave impetus to the establishment of new protected areas.



Pipistrellus pygmaeus © Boyan Petrov NMNH — Sofia

Thus, between 1999 and 2000 alone, five areas (ca. 800 hectares) were declared protected, with emphasis on conservation of bat roosts. The Agreement enabled us to apply for stricter enforcement of the Biodiversity Protection Act at local and national level. Bats became cornerstones in environmental impact assessments, and their roosts (mostly caves, mine galleries and bunkers) are now considered as landmarks for defining the borders of protected territories. After 2000, all activities concerning bats in Bulgaria had to have a licence from the Ministry of Environment and Waters.

Improving conservation

As effective conservation management must be firmly based on pure research data, we established a closer collaboration with institutions from other range and non-range states. After 2000, Bulgarian bat researchers began the joint projects “Comparative ecology and conservation biology of the European horseshoe bats (genus *Rhinolophus*)”

(with the University of Tübingen), "Ecology, behavior and population genetics of the forest-dwelling Bechstein's bat (*Myotis bechsteini*) in Europe" (with the University of Zürich) and "Biodiversity of bats in managed landscapes: ecological niches, genetic differentiation and conservation measures" (with the University of Uppsala). By introducing new techniques (radio-telemetry, PIT-tagging, ultrasound detectors, etc.) and approaches (molecular, behavioural), these projects broadened our research capacity and initiated studies not performed hitherto on bats in Bulgaria. To enhance the occurrence rate of forest-dwelling bats, in 2001-2002 we hung some 200 SCHWEGLER 2FN bat boxes at six locations in Bulgaria. In September 2003, the 4th Meeting of the EUROBATS Parties took place in Sofia, giving many of the guests their first opportunity to visit our country. There is no doubt that at this high-level meeting governments began to acknowledge the force of bat-power, and all national institutions responsible for implementing the Agreement realised that these unique mammals play a key part in nature conservation in general.

After 2003, as well as taking action at the political level we continued to work practically towards protection and awareness of bats. With support from various National and Nature Parks in Bulgaria (e.g. Rila, Vitosha, Vrachanski Balkan), new printed matter on bats (brochures, stickers, posters, leaflets) appeared. It was circulated among school pupils, students, speleologists, forestry workers, park rangers and other target groups.

We broadened the scope of this material so that its subjects ranged from underground roosts to bat species inhabiting



Rhinolophus ferrumequinum © Boyan Petrov
NMNH – Sofia

forests, mountain areas and wetlands. We drew attention to bat habitats not previously described or examined in detail for conservation purposes. Assessment and legal protection of these habitats are amongst the prime goals of our future work.

In June 2004 we organized the workshop on "Research on bats in forests: sharing the experience from Bulgaria and the knowledge from Central Europe." This meeting initiated the development of regional cooperation for the conservation of and research on forest-dwelling bats in the Balkans.

In 2005, following the decision of MoP4 (Sofia, 2003), all important bat underground habitats (IBUH) in Bulgaria were identified and their descriptions published according to criteria set by EUROBATS. At present, 89 caves and three artificial galleries are recognized as IBUH. Fifty-two of these sites are of national and international importance in conservation policy.



Myotis capaccinii © Boyan Petrov NMNH — Sofia

A major step towards management at population level was the development of the National Biodiversity Monitoring System (April 2006). Thirteen species of bats were selected for monitoring on a national scale. Ten species will be monitored in 26 underground roosts, two species will be monitored in forests with bat boxes, and three species will be monitored in three wetlands also recognised as special bird areas. Thus monitoring of bats at national level has become a long-term objective, supported by the government and carried out by bat researchers.

Bats were also considered in the preparation of the Bulgarian NATURA 2000 network of protected zones, when seven caves were proposed as Sites of Community Importance.

Implementing EUROBATS

We realise now that all the efforts expended on the long trek to join EUROBATS have

paid off! The Agreement lays new obligations on the responsible institutions, but the right way to pursue our common goal, the protection of all species of bats identified in Europe, is just that — by legislation, education, conservation measures and international co-operation. We see EUROBATS as a valuable synthesis of legislation and practical knowledge. However, the implementation of each resolution calls for a dedicated network of officers and local experts.

All Parties, especially those in Eastern Europe, define their own annual priorities under the Agreement's obligations, and will probably have their own ups and downs regarding the implementation of the EUROBATS resolutions. Planned conservation measures are not accomplished at an even rate from year to year, as changes in public attitude need time to take effect, and a constant investment of effort.

In Bulgaria, we shall continue to promote the cause of bats by publishing and distributing new information about them. Our task is a difficult one, but our priority will be the involvement and training of new bat students and volunteers. By enlarging our research capacity and accumulating new field records we intend to steer particular conservation activities to the right place at the right time. We possess a good set of tools now, which, properly used, will continue to produce new benefits and successes and to ensure the wellbeing both of Bulgaria's natural environment and of our bats!

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Bat conservation in the Czech Republic

by Eva Cepakova and Libuse Vlasakova

It can justly be said that among the countries of Europe the Czech Republic has one of the longest traditions of bat research. Modern Czech chiropterology dates back to the 1940s and 1950s, and is associated especially with the names of Jiri Gaisler and Vladimir Hanak. It is a striking fact that extensive bat ringing began in this country as early as 1948, and regular counts in hibernacula have been carried out continuously since 1969, becoming a unique source of valuable long-term data on bat population trends.

While the level of bat research has also been kept high by succeeding generations of scientists at universities, at the Czech Academy of Science and in museums, bat conservation in the Czech Republic has had a less dynamic development. On the one hand, basic legislative protection of bats was endorsed in the 1960s and markedly strengthened in 1992 by the new Act on Nature Conservation and Landscape Protection, which provided general protection to all bat species and special protection to 13 species. However, in actual practice, conservation of bats and their roosts is something that cannot be simply imposed by law. In the wake of legislation, it is the enthusiastic commitment of particular individuals working for governmental authorities and in NGOs that supply the driving force when particular conservation cases need to be solved.

Interestingly, the year 1991, when the EUROBATS Agreement was signed by the first Parties, also witnessed a major step forward by bat conservation in the Czech Republic. In that year, Ceska spolecnost pro ochranu netopyru (CESON, "The Czech Bat Conservation Trust") was established. It was, and still is, the only non-governmental organisation in the country specialising in bats.

The society was founded by a group of professional zoologists, and in the first years of its existence the focus was mostly on research activities such as co-ordination of winter counts, but as the number of CESON members gradually increased over the years, the scope of the organisation has grown accordingly. Nowadays, CESON has



Field trip of CESON members to National Nature Reserve Krive jezero in South Moravia: Professors Hanák and Horáček are preparing a net for bat monitoring.



some 110 associates, including many amateur and 'hobby' bat workers, active in both research and practical conservation of bats. Together with a partner organisation in Slovakia, CESON issues an international journal, *Vespertilio*.

Joining EUROBATS

From its very beginning in the early 90s, Czech chiropterologists considered EUROBATS as a highly important international Agreement, providing essential support to bat conservation efforts at national level. As a result of their activity, as well as the favourable political environment of that period (which saw the collapse of the communist system), the Agreement was accepted by the Parliament without further problems, and in 1994 the Czech Republic became one of the first Eastern European Parties to EUROBATS.

Unlike some other international treaties of a more general nature, EUROBATS has produced noticeable effects in the Czech Republic and resulted in concrete actions. Once EUROBATS became a part of national legislation, it was used as a cogent argument for more consistent bat conservation, e.g. in cases where bat roosts were threatened by plans for infrastructural development or tourism facilities. Moreover, new obligations arising from the EUROBATS resolutions have encouraged research and data collection in some fields where hitherto little information was available.

For example, a new project aimed at studying the use of various types of forests by bats was launched by the Faculty of Science of Masaryk University in Brno with financial support from the Ministry of the Environment. Similarly, the cooperation between

Czech bat workers and veterinary experts on the issue of bat rabies has been strengthened. The German brochure on bat-friendly practices resulting from sustainable forest management, which was made available to EUROBATS Parties, has been translated into Czech and distributed among forest managers throughout the country.

There is one scene of action where the contribution of EUROBATS is especially apparent. The European Bat Night has been organised annually in the Czech Republic since 1999 and has met with surprising success. Non-governmental organisations (including CESON) work together here with the administrations of protected landscape areas and national parks, as well as with natural history museums in the different regions, but the event has also proved to be a great attraction to the media. Currently, the number of EBN locations has reached 20, with a visitor count of about 1,900. Thus the EBN has become one of the country's main enterprises for raising public awareness of environmental issues, beating even the traditional bird-watching events organised by a Czech BirdLife partner.

Expanding the influence of EUROBATS

Viewed overall, the positive influence of EUROBATS can be traced in many areas of bat conservation in the Czech Republic. However, implementation of the Agreement and its resolutions could be made more effective in our country if a larger number of people was involved. Thanks to the initiative of Ms. Libuse Vlasakova, the administrative focal point for EUROBATS, a small working group consisting of representatives from the Ministry of the Environment, the Agency for Nature Conservation and Landscape

Protection, CESON and the universities was established in 2004.



Professors Gaisler, Hanák, Horáček and other members of CESON are discussing the methodologies of monitoring of bats in typical Czech conditions.

The aim of the working group is to discuss how particular resolutions and specific tasks resulting from EUROBATS meetings may best be implemented. The working group has advisory status only, but nevertheless its conclusions can serve as

recommendations for the national nature conservation authorities. Unfortunately, a functioning mechanism which would ensure that the tasks discussed are integrated into the official action plan, plus, of course, actual persons charged with responsibility for their implementation, are still wanting.

We believe that a more effective way of carrying out the resolutions of EUROBATS will be found in the coming years, and that the role of the Agreement will continue to increase in the Czech Republic. At the same time, we want EUROBATS to go on being the constructive and effective Agreement that it is today and to maintain the friendly, family atmosphere of its meetings.

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EUROBATS in Estonia

by Kaja Lotman

Estonia has been a member of EUROBATS for a very short time. However, since the restoration of Estonian independence, Estonian bat experts have participated in EUROBATS meetings and relevant research networks. A non-governmental Estonian Bat Research Workgroup was established in 1992. The leader of the group, Matti Masing, kept in touch with EUROBATS and made attempts to pass the information to the government. In the same year, bat conservation projects were initiated at the Estonian Fund for Nature by Lauri Lutsar.

Long-term contacts and support from the EUROBATS member states resulted in the establishment of a national bat monitoring scheme by means of ultrasound detectors in 1994. Events for the international Bat Night have been organised since 1996. Visits by Peter Lina to Estonia brought about their accession to EUROBATS, which was ratified by Parliament at the end of 2005.

Bat studies in Estonia have been carried out for over 50 years. However the conservation status of many species is still not fully established. Based on the best available knowledge several bat sites have been protected. Indeed, all bat species in Estonia are also protected by law. Nevertheless, several important bat sites are threatened by development. EUROBATS has helped bat conservation in several ways:

- Preparation of the national bat conservation plan was initiated in 2002 and endorsed in 2005. The plan includes an overview of bat conservation status, an analysis of factors influencing it and a detailed action plan. A popular version of the plan is to be published soon. The plan will be the basis for funding bat conservation activities from a range of financial sources.
- The EUROBATS working group for wind energy has facilitated an understanding of the importance of assessing the impact of windmills on bats. EIAs in 6 different windmill sites have included some aspects of bat conservation. Long-term monitoring is currently carried out in Paldiski wind park.
- The EUROBATS publication about bats in forests has facilitated the process of taking into account the importance of forest management, especially in protected areas for the conservation of bats.
- EUROBATS meetings have enhanced relevant cooperation around the Baltic Sea, and Estonian experts have participated in the Baltic working group meeting. The need for more information regarding bat migration in the Baltic has been discussed.
- EUROBATS resolution No 4.6 has initiated a process to establish standards for bat ringing and research in Estonia.



A major practical problem in need of an urgent solution remains the protection of bat hibernation sites from building development and intensive tourism. Legal protection from these activities is included in the national nature conservation legislation and is further strengthened by the need to comply with the EU habitat directive. However, serious problems exist in translating nature conservation law into practice through issuing building permits or law enforcement, including protection from illegal visitation. We hope that networking within EUROBATS will facilitate finding the best practical solutions.

We would like to express our sincere thanks to the EUROBATS members for their cooperation this far. We also hope that cooperation between the relevant experts and officials within EUROBATS will continue to contribute both to scientific and practical issues of bat conservation, including habitat management, public awareness and law enforcement.

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France – 11 years of co-operation with EUROBATS

by Nathalie Lacour and Stephane Aulagnier

France ratified the EUROBATS Agreement in 1995, just before the first Meeting of the Parties in Bristol. This Agreement reinforced the French nature legislation passed in 1976, and the law passed in 1981 that listed all bats as protected species. In accordance with the Agreement a first national Action Plan was elaborated and funded for five years (1999-2003) by the Ministry in charge of the environment (Ministère de l'Ecologie et du Développement Durable). This Action Plan, designed to cover 30 bat species, was prepared by both bat specialists and government officials. It focused on four goals: (i) to make an inventory of and to protect the main underground roosts; (ii) to set up surveillance programs for priority species; (iii) to improve ecological knowledge of priority species in order to conserve their foraging areas, (iv) to inform the public about bats and raise its awareness of them.

A second Action Plan is now in preparation with the involvement of all the Ministries (agriculture, transport, industry) whose functions could involve them with bats at national or regional level. It will also be widely distributed to regional and local communities and to bat specialists. This second Action Plan will focus also on the three new bat species found during the last few years (*Myotis alcathoe*, *M. punicus* and *Plecotus macrobullaris*); their discovery suggests that further surveys are still needed.

Roost protection

The list of the main bat roosts (protected or to be protected), completed by 1995, was revised in 2004, with a new list of roosts to be protected that was particularly useful for the designation of Natura 2000 sites. A total of 608 roosts have been ranked as of international, national, regional or local importance according to the number of species represented (Annex II of the Habitat Directive) and the number of specimens that they shelter as either hibernacula, nurseries or transit roosts. These lists are based on the contributions of more than 300 bat specialists and the help of 40 NGOs. Combining the two lists (number of species and number of specimens), France has been able to produce a provisional selection of 215 underground roosts for the EUROBATS database.

Population surveillance

The surveillance of priority species was finalised during the course of the five-year Action Plan. Eight species were selected for a sample survey of winter and/or summer roosts: *Rhinolophus hipposideros*, *R. ferrumequinum*, *R. euryale*, *Myotis capaccinii*, *M. emarginatus*, *M. myotis*, *Barbastella barbastellus* and *Miniopterus schreibersii*. Yearly reports were written, as well as a critical analysis of the whole program, and their conclusions will help to improve the second Action Plan. A summary of this surveillance



Bat box for monitoring of forest-dwelling species © Nathalie Lacour

program, including methodologies for counting species roosting in large numbers and / or mixed colonies, will be published in the EUROBATS monitoring guidelines (in preparation).

Ecological studies

Ecological studies carried out in preparation for the

conservation of foraging habitats were initiated through the highly useful landscape mapping of 57 sites including 86 breeding colonies of *Rhinolophus hipposideros* in locations ranging from Northern France southwards to Corsica. Two areas have been distinguished: first, a continental area where suitable foraging habitats are situated in deciduous and mixed woodlands, and in pastures edged by copses or lines of trees; and second, a Mediterranean area where these habitats exist in both broad-leaved and mixed woodlands, with supporting vegetation of bushes and heath (garrigue). The guidelines derived from this important work are particularly useful for land managers of Natura 2000 sites.

Soon after the closing stage of the Action Plan, further ecological studies were initiated on three priority species, identified for this purpose by the EUROBATS experts: *Rhinolophus euryale*, *Myotis capaccinii* and *Miniopterus schreibersii*. This program, which also includes protection of roosts and raising of public awareness, is funded

by the European Community as a LIFE-nature project involving five regional agencies of the M.E.D.D. and a larger number of regional and local communities in Southern France. Field activities are conducted with the assistance of Spanish colleagues.

Public awareness

As well as producing and publishing leaflets (Bats in trees, Bats in bridges), the Action Plan supported the organisation of European Bat Nights, comprising some 80 events each year all over the country. As France is a large country, education measures and activities to raise public awareness of bat conservation are set up by a large number of people, organised in local or regional bat groups (most of them created since France signed the EUROBATS Agreement).

This network arranges conferences and exhibitions, and promotes bat-detector assisted field surveys over the whole country. It also acts as a helpline team to answer questions from members of the general public who come into contact with bats or want to learn more about them (the members of the network receive hundreds of calls every year).

The raising of public awareness is also supported by the web-portals of the French Mammal Society (S.F.E.P.M; www.sfepm.org) and of the Natural History Museum of Bourges (www.museum-bourges.net). The two main websites are dedicated to bat knowledge and conservation in France.

Bat migration

With regard to bat migration: France stopped banding bats in the 1970s after observers identified a decline of most species wintering in underground sites and noticed



an unacceptable rate of injuries caused by ringing. However, French data, when available, have been taken into consideration in a recent German publication produced by collaboration within the EUROBATS Working Group on Bat Migration. A summary of French bat banding activity is also provided in this booklet.

Bats and forests

A major field of interest in France is bats' use of forests as either roosting or foraging habitats. Since the beginning of the first Action Plan, the National Forest Office (O.N.F.) has been increasingly involved in bat conservation. This office recently appointed a bat specialist (who is also a member of the EUROBATS Intersessional Working Group) as co-ordinator of a network charged with monitoring bats in national forests. This network, of course, has a particular interest in monitoring bat populations in relation to forestry work, and a booklet containing guidelines for bat-friendly practices in forestry should be published soon.

Conservation practices

The conducting of bat activities, including invasive methods such as netting or ringing, is severely restricted to licensed bat workers. Licences are issued by the regional environment office, with a further input of expertise by a member of the National Council for Nature Conservation, after thorough checking of the ability of the applicant and the relevance of the project. For two endangered species in France, *Rhinolophus mehelyi* and *Myotis dasycneme*, licences are issued by the Ministry of the Environment. State institutions are allowed to issue licences to their staff, provided that



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the ability of the applicant is checked and the planned activity reported to the central authority.

Legislative progress

Bat conservation has recently been reinforced by the Decree of 16 December 2004. According to the European Directives, mainly Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, protected mammal species are under strict legal protection throughout the year over the entire country.

New threats

Two potential sources of danger have recently emerged in France: safety measures in mines and the construction of wind parks. Old unexploited mines, which are often used by bats, mainly as hibernacula, are currently being sealed off or blown up for safety reasons, in accordance with directives from the Ministry of Industry. These directives conflict with central conservation regulations, including the Habitats Directive, and it has not yet been possible to start negotiations on the subject with the



Ministry concerned. The Ministry is afraid of running the risk of accidents to speleologists or bat workers. Furthermore, engineering firms employed on the sites in question do not always inform the regional environment authorities about planned operations and seldom contact bat workers who could provide advice that would reduce potential harm to bats. Future guidelines on this topic produced by EUROBATS, summarising the experience of several countries, should be helpful in solving similar problems in the future.

The increased number of wind parks is also a serious source of concern, mainly during the migration period in Southern France, where some species gather in huge colonies. The French Mammal Society, co-operating with the associated EUROBATS Working Group, has produced guidelines to reduce the potential impact of wind turbines on bat populations. The necessary exchange of information at European level supports the ongoing activities of the EUROBATS Working Group, and France is particularly interested in the EUROBATS guidelines relating to the management of wind parks.

Another obstacle in the path of bat conservation is the delay encountered in obtaining legal protection for roosts or foraging areas. Designating a site as a nature reserve usually takes about ten years. Luckily for the long-term protection of habitats of particular importance for bats, the procedure for designating regional reserves and obtaining bat protection at prefecture level is carried out with fewer constraints (less paper work).

Perspectives

When we examine the outlook for the EUROBATS Agreement three topics deserve attention:

- records of activities of EUROBATS Working Groups that are of particular interest should be more widely and efficiently distributed and should be translated into the three languages of the Agreement (English, French, German);
- the EUROBATS Secretariat should as far as possible promote the knowledge about bats and related conservation issues in international media such as the European or worldwide TV networks;
- finally, France is particularly concerned about bat diversity overseas. For example, French Guiana, with more than 100 species, is a hotspot for bats, and several French islands are inhabited by endemic species (*Myotis martiniquensis*, *Eptesicus guadeloupensis*, etc). The EUROBATS Agreement encompasses the territory of Europe in its geographical scope, but it would be useful to promote the Agreement as a pilot scheme in other parts of the world.

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Effects of the EUROBATS Agreement on local bat conservation in Germany

by Peter Boye

The EUROBATS Agreement is an international political instrument of nature conservation. Access to its bodies, the Meeting of the Parties, the Advisory Committee and the Secretariat, is not as free and open as it is in most institutions of science or field biology. Therefore one may think EUROBATS is a business behind closed doors and has little to do with what goes on in bat conservation practice on the local level. But this is wrong. There exists a direct relationship between the Agreement and the development of bat conservation in Germany which will be highlighted by this report.

Nature conservation in Germany has three Parties involved: the 16 Bundesländer (federal states) which administrate and implement all measures in their regions, and voluntary experts, often united in non-governmental organisations (NGOs), who give advice and support to officials or implement own policies. The third Party is the Federal Government which represents Germany in international affairs and gives guidance to the Bundesländer through federal law, scientific advice and examples of best practices. In bat conservation the legal frame is given by the federal law on nature conservation in accordance with EC legislation and adopted international treaties. All three Parties are involved in the EUROBATS business: the Federal Government is with

the Meeting of Parties and a member of the Advisory Committee, the Bundesländer established a national advisory body and a representative joins the German delegation at the Meeting of Parties, and the biggest German nature protection NGO Naturschutzbund (NABU) has an observer function at all Agreement conferences.

Importance of new information

When EUROBATS came into force an assessment was carried out in Germany for which species or subjects bat conservation action was most urgent. After consultation with experts the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) decided to fund projects dealing with bats in forests, roost protection in buildings and bat migration. It is likely that these subjects would have been dealt with anyway, but the Agreement was the reason for the funding and the beginning of work. Within about a decade, research, data analyses and the publication of reports and guidelines had taken place in all three subjects and others.

The projects stimulated further activities promoted by the Bundesländer and NGOs. For example, the Bundesländer Thuringia, Saxony and Schleswig-Holstein ran regional campaigns for the protection of bat roosts in houses and the NABU organized a conference on bat conservation in



wood-lands. These activities involved many local bat workers. As a result knowledge on the ecology and conservation of bats grew rapidly. Bat workers on the local level used and mutually improved the available information on bats in Germany.

EUROBATS not only pushed these processes but also brought new facts and ideas to German bat conservation practices through the resolutions and guidelines adopted by the Meeting of the Parties after international consultation.

The scientific information on bats, which is available now, has led to an improvement of the recognition of bat conservation demands within landscape planning processes. It is no longer an exception to take bats into account when protected areas are managed, environmental impacts of plans or projects are assessed, or the sustainability of land use practice is evaluated. One significant driving force for this development was the EUROBATS Agreement.

Communication

In Germany there are several areas of media providing information on bats, among them the two scientific journals "Myotis" and "Nyctalus." Communication is good among academic chiropterologists, species conservation administrators and regional bat workers. However, information exchange between these groups is sometimes poor.

Under EUROBATS the situation changes, as all relevant data is considered for the National Reports, which mutually provide the information to everybody. Usually the Bundesländer cooperate with regional NGOs, universities and other institutions when preparing their contributions to the National Report. The Federal Agency for Nature

Conservation (BfN), which compiles the National Report from all regional and national contributions, published German versions to get all interested persons informed about current initiatives and developments in bat conservation in Germany. So after compilation the provided information finds its way back to local bat workers.

The Federal Government further improved communication in bat conservation by the funding of scientific meetings (e.g. on *Myotis dasycneme* and bats in environmental impact assessments), the funding of activities to raise public awareness (e.g. posters and the European Bat Night in Berlin) and the publication of project results (through BfN).

In accordance with the Agreement text, great efforts were made to inform the public about bats and their needs for conservation. A brochure was printed by BMU and achieved very good levels of circulation. It is now available in its fourth edition. Specific information is additionally communicated by special publications from BfN, addressing house owners, architects and foresters. There is also a guideline for bat workers, who like to start their own activities for the promotion of bat conservation (e.g. communication with journalists, school projects or guided tours).

But the most successful aspect aimed at spreading awareness of bat conservation is the European Bat Night, which was introduced by the EUROBATS Secretariat. Every year this event takes place at numerous localities on the last weekend in August. It is a perfect example of EUROBATS bringing together volunteers from all levels of bat conservation to communicate with the general public and the media.



International exchange

If we look across borders and think about passing knowledge to neighbouring countries, or learning about the views of other people, we come to the most important obstacle for the implementation of the EUROBATS Agreement: foreign languages. The continent of Europe is rich in diverse languages. English has developed as the leading language in science and international affairs, and this is true for EUROBATS. But on the local level people frequently don't read or even understand English and stick to their native language. So, all the information on bats and bat conservation, which is relevant for local bat workers and conservationists, should be provided in the locally spoken language. However, translations are time consuming and expensive, which makes international exchange complicated.

In Europe, German publications are widely distributed. But additional versions in English are necessary to really share the information among EUROBATS collaborators. Therefore, the German Federal Government promoted translations wherever possible and welcomes similar initiatives, for example the translation of the German project report on bats in woodlands by French mammalogists and the translation of the German leaflet on bat conservation in forests for several eastern European countries with support from the Belgium government and the EUROBATS Secretariat.

Collaboration in international bat conservation should be improved. EUROBATS already initiated a number of occasions for exchange of ideas and experiences among bat workers from different European countries. Because of the Agreement it became usual to invite colleagues from other

countries to German bat conferences and workshops. Each visit creates new personal relations and even friendships. As a result the European bat worker community grows together and develops common conservation practices through continuous collaboration and exchange. This is one of the aims of EUROBATS.

Future challenges

Future work under EUROBATS should not only promote the collection of new information on bats and bat conservation but also improve communication nationally and internationally. To achieve the Agreement's goals it is vital to translate relevant information into locally spoken languages. In those fields of bat conservation work, which are mentioned in the EUROBATS conservation and management plan as they are relevant all over the continent of Europe, international cooperation should be intensified.

However, the establishment of monitoring schemes to identify population trends, an improvement of knowledge about migration patterns of several bat species, or the development of standards for assessments of the impacts of wind turbines on bats are dependant on people who are prepared to offer their knowledge. All participants of the EUROBATS Agreement are grateful for the contributions of knowledge provided by local bat workers and NGOs from Germany and other countries during the last 15 years!

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The success of EUROBATS – a comment from an NGO's view

by Christine Harbusch

Since the first Meeting of Parties (MoP) in Bristol in 1995, NABU is regularly present as an observer at the MoP and Advisory Committee (AC) meetings, thus being one of the few NGOs participating and contributing to the scientific discussions for a long time. This steady exchange of information appears to be valuable for implementing the different aims of the Bat Agreement as adopted by the four MoPs held until now. On a national level, the NABU federal bat group is involved in adopting guidelines and resolutions, and cooperating with the Federal Agency for Nature Protection (BfN) in implementing these guidelines which hold importance for the voluntary bat workers, or the general public.

As an example, the Resolution regarding bat-ringing guidelines (Res. 4.6.) was widely discussed among the German bat workers and finally led to the approving of national guidelines on ringing and the issuing of permits.

The monitoring programme for *Myotis myotis* is another example of collaboration between the governmental agencies and several German NGOs. Following the resolution 2.5, populations of the greater mouse-eared bat shall be monitored on a national level. In Germany, such a monitoring programme has been initiated in 2002 and has been working since 2003. Around 750 maternity roosts are monitored by vo-

luntary bat workers in Germany, counting up to 216.600 mouse-eared bats. After this test-phase NABU will take over the coordination of the monitoring programme. The implementation of resolutions forms a major part of our work for EUROBATS, but the input of scientific knowledge, data and experience from our members to different guidelines is also vital.

Improving Public Relations

PR relations work has profited greatly from the international European Bat Night event. Held annually in over 300 localities within Germany, local bat groups conduct the Bat Night, and can thus reach several thousands of people. The positive image of bats has greatly improved due to these events and private house owners have become more and more aware of their responsibility towards their "secret lodgers".

The increase in the knowledge, care and degree of sensitive contact with bats has led to an increased demand of experienced bat workers giving advice for different problems related to bats. Although this advice should be given by governmental Agencies, a heavy workload coupled with a lack of specific knowledge has led to this duty being widely taken over by voluntary bat workers. The following passage details a remarkable example of the success of voluntary bat care in collaboration with regional governmental support in Land Baden-Württemberg:



The Bat House

The Bat House was founded in May 1999 near Tübingen by the Bat Conservation Group of Baden-Württemberg in south western Germany. Its main aim



is the rehabilitation of injured bats. The nursing work is done by a team of five bat workers on a voluntary basis. The costs for food and veterinary care are covered by governmental funds; all other costs are funded by voluntary donations.

The Bat House runs a helpline which gives advice and finds local support for people that have found a bat, or have a problem with bats in general. The Bat House receives up to 250 calls per year, and between 120 and 180 bats per year are treated. The bats are housed in two flight cages, a smaller one (6x3x2m) for small bats and a larger one (12x8x3m) for bigger bats. During winter, bats can hibernate in private cellars. Bats that need intensive care are looked after at the private homes of the team, those with fatal injuries are immediately euthanized by the vet.

Most bats brought to the Bat House are pipistrelles (injured by cats, renovation work), noctules (injured by tree cutting) and greater mouse-eared bats. Around 60% of the bats can be rehabilitated. For further details please contact:

Flederhaus c/o Ingrid Kaipf, Keplerstr. 7, 72074 Tuebingen, Fleder(h)mausnottelefon: 0179 4972995, e-mail: flederhaus@web.de, www.flederhaus.de.

PR work, such as the European Bat Night and special nightly boat trips with detectors, and giving advice to architect- and civil-engineer companies are other important and regular parts of the work of this Bat Conserva-

tion Group. These examples of PR work and practical bat conservation emphasise the important role of NGOs in bat conservation, as it is daily done on a local and regional scale. From this experience the NABU supports Resolution 4.11. "Recognising the important role of NGOs in Bat Conservation" and it is strongly in favour of the establishment of a pan-European umbrella organisation, called "BatLife," as it will be able to bring together the knowledge and experience of European bat workers, and to coordinate and support bat conservation projects all over Europe.

The success of EUROBATS

Generally speaking, the EUROBATS Agreement has greatly improved the legal basis for bat conservation and has given a broad input for PR work, such as improving the image and knowledge of bats, with a view to making people more sensitive about the biological and ecological needs of these animals.

However, we should mention that some of the resolutions and aims of the Agreements Action Plan are not yet implemented by all federal states. Although there is a legal obligation some states, as well as the federal government, are not universally



willing to implement the stipulations of the Agreement.

Unfortunately we know of several examples where the protection of important summer and winter roosts is not given adequate priority, or where the protection of important foraging areas and migration routes is not taken into consideration in planning and assessment studies. NABU

therefore asks the responsible bodies to increase their efforts by the implementation of resolutions and articles of the common Action Plan and to give EUROBATS more strength to protect bats and their habitats.

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Bat conservation in the Republic of Ireland

by Conor Kelleher and Ferdia Marnell

The Republic of Ireland is a small nation of four million people. Set as it is off the European mainland it is warmed by the Gulf Stream which originates in the Caribbean and ensures that the climate is mild and damp with few extremes. Much of the countryside is of improved agricultural grassland which supports various livestock but also consists of arable crops and natural habitats in the form of mountain, bog, coniferous and deciduous woodlands, coasts and many lakes and rivers. There are also areas of exposed limestone karst such as the Burren with associated caves. Urban areas include the main cities of Dublin, Cork, Galway and Limerick. Urban areas have become industrialised with much manufacturing especially in the technology sector.

Being an island, the mammal fauna diversity is poor with only 28 species recorded (although a further 24 species of cetacean occur in Irish coastal waters!). Many of the original mammalian inhabitants were lost during the ice age, but subsequently some species managed to colonise before the land bridges to Britain and the continent were severed. Others were introduced by man over the centuries.

Ten bat species are currently known to be resident and two others are suspected but not proven. Three of the resident species have been discovered in the last 10 years as a direct result of the growing interest in bat conservation. Many of these species are at

the northern and western extreme of their European distribution. Two species are especially important: Leisler's bat *Nyctalus leisleri* and the lesser horseshoe *Rhinolophus hipposideros*. The former has its European stronghold in Ireland and the latter's population is second only to that of Wales with an estimated national population of 9,500.

Ireland's bat friendly habitats have suffered throughout history as ancient broad-leaved woodland was decimated for ship building, leather production and other reasons. The national area under woodland was reduced to less than 1% by the 19th Century. This has recovered to 8% in the present day, but this is mainly made up of non-native coniferous species for commercial forestry. Loss of native woodland has resulted in extinctions of important bird species whose presence would have been beneficial for bats e.g. woodpeckers.

The History of Bat Research

Bat research in Ireland was initially undertaken by rich Victorians in the latter half of the 19th and into the early 20th Century but then declined until the 1970s when it was resurrected by universities. In 1976, the Wildlife Act was enacted which ensured protection for all bat species in the Republic. A national bat survey was subsequently undertaken by the government during the mid 1980s. The first bat group was then



launched in the capital city in 1989 by interested amateur naturalists. Ireland signed the EUROBATS Agreements in June 1993 and became fully ratified members two years later in June 1995.

Since then the interest in bats has blossomed. The changing face of bat conservation in the UK had a beneficial effect on the Irish bat scene and the UK Bat Conservation Trust (BCT) was (and is) supportive of new initiatives to raise awareness of bats and educate the public in Ireland. Providing various resources to the emerging Irish bat groups, BCT lent speakers for detector workshops and educational material for roost owners and schools etc.

Various interested Parties have come to the fore in the conservation of Irish bats over the past 15 years, in particular, The Vincent Wildlife Trust (VWT) the National Parks and Wildlife Service (NPWS), Bat Conservation Ireland (BCIreland), the Heritage Council and bat groups and universities.

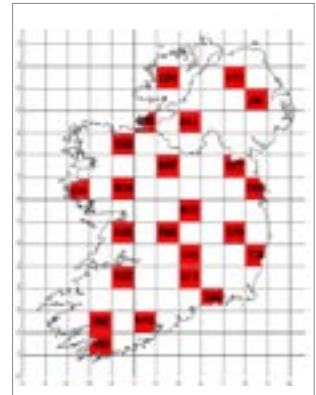
The VWT has devoted much funding towards surveys for the lesser horseshoe bat throughout its known distribution area in the west of Ireland. It has subsequently purchased or leased 13 Irish properties which have been renovated and are managed as bat reserves. These 13 reserves now contain c. 23% of the known Irish lesser horseshoe bat population.

The Heritage Council, a state body, has been instrumental in initiating bat monitoring in Ireland. They have also purchased the largest lesser horseshoe bat roost in the country, with 400+ bats present.

The National Parks & Wildlife Service, part of the Department of the Environment, Heritage & Local Government (DEHLG), manages the Irish State's nature conservation

responsibilities under National and European law. NPWS represent Ireland at EUROBATS MoPs and AC meetings. NPWS is also charged with the conservation of a range of ecosystems and populations of flora and fauna in Ireland.

A particular responsibility of NPWS is the designation and protection of Special Areas of Conservation (SACs); 41 of these have been designated for the lesser horseshoe bat, the only Annex II bat species found in Ireland. NPWS are directly involved in bat conservation through survey, monitoring and site protection. Much recent effort has centred on the development of a coordinated National Bat Monitoring Programme. From 2006 NPWS will work with its sister organisation in Northern Ireland (the Environment and Heritage Service) to ensure that future bat monitoring will be conducted on an all-island, cross-border basis.



Squares being surveyed in the All-Ireland Car Transect Bat Monitoring Project.

The importance of BCIreland

BCIreland is a non-governmental organisation and was launched in 2004 as an umbrella organisation for the country's bat groups. BCIreland's main aim is the conservation of bats and their habitats in Ireland. This is achieved through education, monitoring, research and site protection. Its Educational Programme includes: The Batline



Participants at a bat detector training course organised by Bat Conservation Ireland.

— a national telephone help line for roost owners and the general public; annual bat detector workshop; talks and walks and school visits, which are supplemented with bat packs - containing information on species. BCIreland has a central role in delivering Ireland's National Bat Monitoring Programme. With funding from NPWS and the Heritage Council it coordinates the CarTransect Monitoring Survey, in operation since 2003, and it will pilot the Daubenton's Bat Waterways Survey in 2006. BCIreland has also devised a database to collate records of bat roosts and foraging areas throughout the country. This information will be vital for future monitoring, research and site protection programmes. BCIreland is supported by government funding through the NPWS and the Heritage Council.

BCIreland also organises the national bat conference which normally takes place every second year. In 2005 BCIreland helped host the Xth European Bat Research

Symposium and its associated Bat Fieldcraft Workshop. Both events, which were being held in Ireland for the first time, were attended by delegates from across Europe and the wider world and were extremely successful. BCIreland liaises closely with the Northern Ireland Bat Group (NIBG) for cross-border projects and the NIBG is represented on its Management Committee.

Monitoring bats in Ireland

Over the last decade there has been an increase in bat surveys both for research and as part of Environmental Impact Assessments, the rise of bat groups and training for volunteers etc. Conferences, workshops, seminars and courses in bat ecology and conservation have become annual events. Guidelines on bat conservation during the planning and construction of national road schemes have recently been published by the National Roads Authority (see www.nra.ie). As the economy of the country is booming, construction and development have taken place on a massive scale in the last ten years. This has led to unprecedented road building and quarrying, residential, commercial and amenity development, waste disposal etc. This has resulted in large scale impacts on the countryside and bat populations. The affect of this has been reduced with mitigation measures to safeguard bats, but monitoring of the effectiveness of such mitigation is in its infancy and the long-term affects are still unknown. As well as bat boxes and landscaping considerations, flyovers and bat houses are now regularly constructed to offset loss of flight paths and roosts due to development. Some problems have recently emerged, however, with regard to poor bat surveys giving rise



Work with a bat detector.

to little or no mitigation requirements or in some cases inappropriate mitigation. Efforts to initiate common training standards for bat consultants are underway.

NPWS holds the national lesser horseshoe bat database, compiled in 2003. This database is on-going and updated regularly. Data on other species is less complete, but a National Biological Research Centre will shortly be launched in Ireland. It is hoped that this will, in due course, maintain a central database of all bat records for the

country. This in turn will facilitate increased knowledge of bat distribution and status in Ireland and encourage a more coordinated approach to the collection of bat data.

Another interesting development is the proposed re-introduction of the great-spotted woodpecker *Dendrocopus major* by the Irish Wildlife Trust. Ireland has had no woodpeckers since this species disappeared from our woodlands in the 19th Century. The importance of woodpeckers as key-stone species in woodlands is well known. The proposed re-introduction of this bird, following IUCN guidelines, is welcomed by BCIreland who believe that this would be a major pro-active conservation move for a number of different wildlife species, including several tree-dwelling bats.

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Italy joins the EUROBATS family!

by the Italian Ministry for Environment and Territory

Italy became a Party to the EUROBATS Agreement last year when, in May 2005, after a lengthy legislative process, the Italian Parliament finally approved the law enabling the country to join and subscribe to EUROBATS. The instrument of ratification was deposited in October 2005; representing an important milestone in the progress of bat conservation in Italy.

According to present knowledge, we have 37 bat taxa occurring on Italian territory, but historical data seems to confirm a general decrease of cave-dwelling species, though with some exceptions. However, data is scarce and not widely distributed. In Italy, the main threat to bats is loss of habitats and roosting sites. In addition, pollution and the general use of pesticides in agricultural areas contribute to a reduction of the quantity of prey available to bats.

Another serious problem results from lack of knowledge on the part of some administrative bodies of how critical the situation of bat species is. This lack of official awareness makes it particularly difficult to plan a national strategy for the protection of bats.

In Italy several bat conservation projects have been carried out on a regional or smaller scale. These perform a very necessary function by remedying lack of knowledge and preserving some areas from actions that could damage bat populations, breeding colonies or hibernacula. In addition, a number of projects undertake information-spreading and awareness-raising activities.

We note about 75 projects carried out between 1994 and 2006. Most of them have focused on northern and central Italy, but obviously this pattern does not correspond to that of bat distribution. Many projects have been funded by protected areas or by small local administrations.

Until now these projects have constituted the biggest source of information on the status and trends of bat populations in Italy. A comprehensive national strategy is clearly necessary. Becoming a Party to EUROBATS gave the Italian Ministry for the Environment the opportunity at last to promote and finance several research and other initiatives related to bat management and conservation.

The framework of the EUROBATS Agreement made it possible for the Italian Ministry for the Environment to draw up an agreement for collaboration with the University of Insubria and the Italian Chiropterologist Research Group (GIRC). The agreement aims at the protection of bats roosting in historic buildings, as well as the setting up of a system of permits for bat captures and bat ringing that conforms to international standards and is based on centralised management of a new database for captured bats.

Increasing knowledge and improving conservation

In our opinion it is essential to facilitate and strengthen the collaboration between two different fields — biological conservation

and heritage conservation — for their mutual benefit.

One of the major factors in bat conservation is the presence of bats in buildings. Nearly all of our bat species live more or less regularly in man-made constructions. Consequently it is often difficult to reconcile bat conservation with human requirements, particularly when buildings are undergoing restoration.

The problem is considerable when historic monuments are being restored, as this kind of building contains spaces well adapted to offer shelter to bats. Building restoration is not a problem per se if it is managed by enlisting suitable skills and competences; but such work presents a serious threat to bats, and may even cause the local extinction of whole bat populations, if it is carried out without special preparations addressing the bats' needs. The Italian project aims to set up co-operation between the Ministry for the Environment and the Ministry for Cultural Heritage, which is in charge of maintaining historic buildings and monuments. Those engaged in the joint project will aim to reach agreement on common guidelines for public works undertaken on historic buildings serving as dwellings for bats.

The management and centralisation of information provided by captured bats and the establishment of criteria for building up a permit system have a high priority for the Italian government as it works to guarantee that laws and international regulations regarding bat protection are respected and followed. The achievement of these aims will facilitate transboundary cooperation



Cattedrale di Aosta (Aosta Valley, Aosta): Rhinolophus ferrumequinum in the under-roof of the cathedral. © Paolo Debernardi

between Italy and neighbouring countries. The project aims to draw up a standard text on bat ringing and to set up a national data bank that can be used on request by bat workers operating both in Italy and in other member countries.

Finally, having now become a Party to EUROBATS, the Italian Ministry of the Environment plans to bring out an English version of a work produced a couple of years ago, the "Guidelines for Bat Monitoring," published by the Ministry for the Environment, the GIRC and the National Institute for Wildlife (INFS). These guidelines represent a comprehensive report on the distribution and status of bats in Italy, with a detailed description of several methods for studying bat biology in different situations. The English edition will enable other EUROBATS members to share the Italian experience.



Future challenges

Looking to EUROBATS' future, we perceive that one of the main obstacles to the implementation of the Agreement's goals in Italy is popular prejudice against bats. Efforts must be made to spread information about their status and their capital role in the preservation of biodiversity, as well as to inform public opinion about threats to their welfare and of the need to protect and conserve these animals.

The European Bat Night is a very good initiative, yet it takes place mainly at local level and receives little support from the media. In our opinion, the influence of the national and international press could be used to help bring about a more bat-friendly attitude on the part of the public. This would certainly assist the work of governmental agencies and other bodies.

We also consider — although a proper survey at national level has not been done to verify our point of view — that there is not enough overlap between measures taken in the interests of protected natural sites and those carried out in connection with areas of importance for the conservation of bats.

The Natura 2000 network — an instrument of the EU Habitat Directive — is a good first step, but it is not enough. In Italy we lack protection for bats' foraging areas and for bat roosts other than caves, such as trees, buildings, bridges etc.

From this perspective, we think that one of the focuses of EUROBATS in the future should be on stronger cooperation with the bodies involved in the implementation of ecological networks, like Natura 2000, the Emerald Network (Bern Convention) and EuroParc, with its activities on trans-boundary protected areas: the aim being joint action on common themes.

Another focus could be on the problems accompanying bat presence in historic, monumental and ordinary buildings because, in a Europe becoming more and more densely inhabited and urbanized, these problems are going to spread and to represent a very considerable challenge to bat conservation.

As the Parties to the Agreement celebrate its 15th anniversary, Italy is very happy to have joined the EUROBATS family and hopes to make further contributions to the progress of bat conservation in Europe.

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Bat research and conservation in Italy: the role of EUROBATS and the Italian Chiroptera Research Group (GIRC)

by Adriano Martinoli

The culture of nature protection in Italy has, unfortunately, always played a marginal role. In this scenario, bat conservation has not found fertile ground, in terms of both public attitude and attention paid by wildlife management authorities. The activities carried out by bat specialists were inevitably affected by such discouraging circumstances.

However, in the last decade there has been a considerable rise in the levels of interest shown in conservation. Ratification of EC directives and other international treaties, along with the growing attention towards bat protection encouraged by European agencies and authorities, have contributed to improve the situation.

In 1998, on the occasion of the first Italian Bat Congress, a crucial event took place, partly promoted by a close yet indirect synergy with EUROBATS. Several bat specialists started the process leading to the creation of the first national research group fully devoted to bat ecology and conservation. A main objective recognised at that Congress was to encourage the Italian Government to join the Bat Agreement — the process was concluded successfully on May 27th, 2005.

The initiative was soon followed by the official foundation of the Italian Chiroptera

Research Group (thereafter named GIRC), a nation-wide association comprising bat scientists aiming to promote and develop scientific research on bats in the country.

The GIRC's first objective is to improve the knowledge available on bats and their habitats, as well as to coordinate and promote conservation actions, with special reference to bats. The association also acts as a consultant for national and local authorities, as well as private bodies, for all aspects related to bat conservation. Moreover, it constitutes a reference point to international bodies dealing with bat protection, and invests a lot of effort in raising public awareness on the importance of saving threatened bat populations.

Research and conservation prompted by GIRC

After its official foundation (December 11th, 1999), GIRC joined the Italian Mammal Association (A.T.It), whose main concern was the promotion of scientific research on mammal conservation and management.

The Italian roost database

The first GIRC project, started in 1999, was the "Italian bat roost project," aiming to set up a national archive of bat roosts as a tool



to develop effective conservation strategies (GIRC, 2004).

The database includes all records of roosts found in Italy since 1990, and covers information on the bat fauna present, as well as site features and locations shown by the UTM-MGRS geographical reference system at a 10-km resolution. The project's main aims are to identify roosts characterised by a high conservation value as key conservation targets as well as, in the long term, to assess population trends for the species which may be surveyed effectively through roost counts. Special attention is paid to threatened bat species.

Guidelines for bat monitoring

The group has also developed guidelines for bat monitoring in collaboration with the Italian Environment Ministry and the Italian Wildlife Agency (Istituto Nazionale per la Fauna Selvatica — INFS), which illustrate and standardise methods to be adopted by all technicians and researchers involved in bat work (capture, handling, species identification, counts, tagging, data storage). The document, published in 2004 (Agnelli et al., 2004), also offers updated information on bat distribution in Italy as well as on the legal aspects of bat conservation. The volume will soon be translated into English and made available to foreign specialists.

SOS Bats

Started as a pilot project in 2002 in some Italian districts, the SOS bat service, coordinated by GIRC, deals with help requests from the public, generally forwarded by local agencies, which mostly concern bats in houses or public buildings. GIRC advises local bodies joining the initiative on all logi-



European Bat Night organized by GIRC in the northern part of Italy, Campo dei Fiori Natural Park in 2003.

stical and scientific aspects on the management of bats vs. humans conflict situations. A web site (www.pipistrelli.org) provides all relevant details on this activity, including the type of advice offered and the local bodies joining the initiative. A down-loadable first aid booklet is also available, providing basic information on how to assist injured bats. GIRC and LIPU-BirdLife Italy also signed an agreement on bat rescue activities carried out at the LIPU wildlife rescue centers.

Collaboration between bird and bat specialists

A recent achievement is represented by an agreement between GIRC and bird ringers, aimed to record basic data on bats accidentally captured during bird-netting operations. Some netting sites have in fact proved especially important for bats. This co-operation may be crucial to understand basic aspects of bat biology, and consequently develop effective conservation strategies. One of the group's aims is to improve the



information available on species range and abundance, as well as on migration routes (undoubtedly vital to coordinate conservation actions promoted on an international scale) and the protection of bats in buildings, with special reference to buildings of historical significance. Following Italy's ratification of the Bat Agreement, the Italian Environment Ministry and GIRC officially stipulated a collaboration on the protection of bats in buildings. Final products planned include guidelines for bat conservation in buildings, dissemination of information, mainly targeting local authorities which manage historical sites, (Soprintendenze ai Beni Storico-artistici ed archeologici), and the development of a working protocol, in association with the Italian Culture Ministry, on management of bat colonies at sites of historical or artistic significance.

Information and awareness raising

Many GIRC initiatives have aimed to attract public attention, including a traveling exhibit named "The bat world: between reality and imagination," carried out as part of the LIFE Natura Project promoted by the Campo dei Fiori Regional Park (Varese). Numerous Bat Night events have also been carried out in several areas of Italy (GIRC, 2002). At a national level, GIRC has promoted meetings and workshops devoted to bat research and conservation (Scaravelli e Martinoli, 2002, 2003).

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Bat protection legislation in the Netherlands

by *Peter H.C. Lina*

Ideas about the conservation of bats started began developing at the start of the 19th century. A letter from Janusz Leisler in Germany in 1813 is widely regarded as the first written proposal to give bats legal protection. After Leisler's proposal, several bat scientists began recommending measures to aid the conservation of bats, owing mainly to their function as destroyers of insects which represented a pest in agriculture and forestry.

It was as early as 1868 when the first draft for legal bat protection was presented. In the same year, a draft law which included the protection of bats and several bird species was promulgated by the autonomous parliament of Galicia which, at that time, was a part of Poland under Austrian rule in the aftermath of the partition. However, this first draft legislation was never put into force.

Twelve years later, in 1880, the first act to protect bats came into force in the Netherlands — the Protection of Animal Species useful for Agriculture and Forestry Act. The Act entered into force on October 1st, 1880. It is thought that this Act was the world's first piece of legislation aimed at the protection of bats. The act was, however, mainly the product of economic concerns. Bats were considered useful as destroyers of insects which were harmful to agriculture and forestry. The impact of this Act on the conservation of bats has never been reported.

In 1914, the Useful Animal Act entered into force and the 1880 Act was repealed. The continuation of legal bat protection was not considered necessary because there was no evidence that bats were a species under threat.

After approximately 60 years, provisions for the protection of bats became a part of the legal framework, with paragraph 5 of the Nature Conservancy Act in 1973. However, on this occasion, it was a concern over nature conservation, not economics, which lay behind the law. The law prohibited the catching or killing of bats or any attempt at these actions. Furthermore, it was no longer allowed to possess live or dead bats or to offer for sale dead bats, whether prepared, stuffed, or otherwise. Additionally, it became an offence to needlessly disturb bats.

Legal protection without adequate implementation is insufficient to give bats their required protection and to prevent their population decline. The public awareness of the importance of bat conservation was still very low when the legal protection was renewed. Many people were still scared of bats since, for the most part, they had insufficient knowledge of them. Because of this, when tenants discovered bats in spaces like cavity walls, the animals would come under threat as house owners would feel compelled to harm or kill them, or remove them from their roosts. Other threats



included the use of chemicals for remedial timber treatment and agriculture, the deterioration and fragmentation of feeding areas, water pollution, the felling of hollow trees, insulation of cavity walls of buildings, and the disturbance of winter roosts like subterranean limestone quarries by uncontrolled visits. Authorities were often unaware of the implications regarding the bat protection legislation.

To increase awareness of bats, in March 1980, the former Ministry of Cultural Affairs, Recreation, and Social Welfare initiated a national campaign to improve the conservation of bats. Posters and several hundreds of thousands of leaflets with basic information about the life history of bats, the known causes of their decline, the prevailing legislation, and conservation requirements for bats, were widely distributed. This campaign resulted in a considerable improvement in the public's attitude towards bats and of the need for their conservation. Indeed, as of 1982, the Ministry of Agriculture and Fisheries (currently Agriculture, Nature and Food Quality) became the relevant authority for policy and implementation of the legal conservation of bats in the Netherlands.

April 1st 2002 saw all native bat species strictly protected by the Fauna and Flora Act. This Act implements the species protection provisions of the Directive 92/43/EEC of 21 May 1992 on the Conservation of European Wildlife and Natural Habitats (Habitats Directive). The Flora and Fauna Act includes prohibitions on killing, possessing, and capturing bats and their deliberate disturbance. It also prohibits (deliberate and non-deliberate) disturbance, deterioration

and destruction of breeding sites, and all kind of roosts. Bat roosts are also fully protected when they are temporarily not in use by bats. Hence, the provisions of the Flora and Fauna Act also provide protection to winter roosts when they are not in use for hibernation, as maternity roosts are fully protected during winter.

A number of Special Areas of Conservation have been designated for some species listed in Annex II of the Habitats Directive: Twenty five foraging areas and areas with hibernacula for the pond bat, *Myotis dasycneme*, five areas with hibernacula for the mouse-eared bat, *Myotis myotis*, and four foraging areas, and two maternity roosts in a monastery and a former nunnery respectively for the Geoffroy's bat, *Myotis emarginatus*.

The Netherlands is Party to the Convention on the Conservation of European Wildlife and natural Habitats (Bern Convention) and to the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Since 1992, the Netherlands has also been a Party to the Agreement on the Conservation of Populations of European Bats (EUROBATS).



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EUROBATS and the efficiency of bat protection in Poland

by Andrzej Kepel

This article is a summary of the results of a survey carried out among Polish chiropterologists. It doesn't reflect the official opinion of Polish nature protection authorities nor the opinion of the author of this text, who is a representative of an NGO.

On 23 January 2006, an anonymous questionnaire containing six questions was sent to almost 100 Polish chiropterologists active in bat research and conservation. In February 2006 fifteen replies were received — mainly from nature protection NGOs and some from independent scientists. For the most part, the answers were almost unanimous. The questionnaire only covered the last 15 years, so several important facts from the previous history of bat protection in Poland are not included in the results.

The contribution of EUROBATS

Two contributions were mentioned alternatively in questionnaires. The first one is forcing the Polish Ministry of Environment at least once a year — when the report for EUROBATS has to be prepared — to spend some time thinking about bats and their protection. However, in two questionnaires it was underlined that the authorities do not broaden the scope of the report and are reluctant to initiate concrete action afterwards. However, in over eight of the questionnaires one important advantage of EUROBATS emerged. The existence and

idea of EUROBATS gave a strong impulse to create the Polish Agreement for Bat Protection (Porozumienie dla Ochrony Nietoperzy — PON). It represents the union of eight NGOs and other institutions active in bat protection. One of the aims of the PON members is to try to implement the EUROBATS guidelines and resolutions.

Speeding up conservation

Unfortunately there were very few positive answers on this question. This is mainly attributable to that fact that in the last few years a drastic decrease in the real protection of bats has been observed in Poland.

It seems the activities of NGOs, which are involved with bat protection, are independent from EUROBATS, and the enforcement tools of EUROBATS are weak when it comes to bat friendly policy decisions.

Good conservation practices

In most of the questionnaires the project for the protection of hibernacula of bats in the system of fortifications in Pozna was mentioned. It was the first (1995–1999) large scale bat protection project in Poland held by an NGO (Polish Society for Nature Protection “Salamandra”), based on the recognition of good scientific values and potential threats, using different methods, accomplished by monitoring and carrying out a parallel educational campaign, involving all stakeholders.

Three projects to protect summer roosts were named several times in the questionnaires. The first was the successful protection of breeding colonies of bats in Lower Silesia, carried out in the 90s by the Polish Society of Wildlife Fiends "pro Natura". Several important breeding colonies in lofts (mostly of *Rhinolophus hipposideros*) were protected. Many of the projects that followed took advantage of methods developed during the aforementioned example.

The next project "Protection of barn owls and bats in sacral buildings" was the first big conservation project organised by a consortium of several NGOs united in PON. It was coordinated by the Mazovian Society of Fauna Protection (now named: Wildlife Society "Stork"). The last project dealt with the protection of a *Myotis myotis* colony (ca. 400 individuals) in the old school in Kopanki. In this case it was not the scale that was important, but the method of protection. In the loft a special "bat observatory" was built by "Salamandra". Now it is an education centre visited by several thousand people every year, who not only learn about bats from lectures and an exhibition, but can observe live bats in a way that is safe for the animals. Bats have now become the main tourist attraction in this village, benefiting from the special attention and care of local citizens.

The last "milestone" project, which was named in some questionnaires, was the establishing of a bat hospital in Poznan in the 90's by "Salamandra". It did not result in any direct protection, although several hundred bats were treated there. However, the idea that bats are such precious animals, with a specialised 'hospital' dedicated to their protection, had a big influence on the general



Bat hospital in Poznan © Andrzej Kepel

public's attitude. Later similar hospitals in other cities were established. Unfortunately because of a lack of resources and changes in the legislation, most of them were closed in 2004 and 2005 and now only one bat hospital in Warsaw remains.

Transboundary co-operation

The project "Bats of Sudety" is often considered the most important international project. Chiropterologists of three neighboring countries (Czech Republic, Germany and Poland) cooperate and exchange experiences to monitor and protect bats in the Sudety Mountains.

The project to protect bats' hibernacula in Western Poland, coordinated by the "pro Natura" Society together with several German partners, (e.g. German Army) was mentioned several times as well.

Legislation cornerstones

There is only one legislation cornerstone in this 15-year period concerning bats. It was



the 28th September 2004, when the new Ministry of Environment resolution on animal species protection was signed. New rules for species protection of bats were officially accepted. This came as a result of a proposal prepared by the NGOs from PON. It is worth mentioning that the protection requirements of three bat species (out of 22 bat species found in Poland) were considered more important than the “economic needs of forestry, agriculture and fishery.” These are *Rhinolophus hipposideros*, *Myotis dasycneme* and *M. emarginatus*. Additionally, it was agreed that hibernacula, where over 200 bats were found, should be established as an area of special protection, where no construction or other changes can be made. Although these rules remain theoretical, they give us a good opportunity to enforce them in the future when necessary.

Success in the implementation of official EUROBATS guidelines

So far none of the EUROBATS guidelines have been officially adopted and implemented in Poland. The opinion reflected in the questionnaires suggested that the EUROBATS guidelines and resolutions are generally unknown to the authorities, conservationists and scientists. Therefore the responsible authorities should make an effort to translate and disseminate the information.

Some guidelines were voluntarily adopted by NGOs united in PON. These NGOs established the system of “chiropterological licences.” They agree that only experienced chiropterologists with proper training, who have proven their credentials after passing the special exams, should be entitled to apply to the Ministry for permission to practice

invasive research methods (such as netting or ringing). This system was established in 2001 and there are now over 60 licensed bat researchers of different license levels.

However, it remains a voluntary system which is exclusive to PON, despite the fact it is accepted by many independent scientists and other NGOs. The Ministry has not approved it yet, and applications by those who do not possess a license are often accepted.

NGOs from PON also established monitoring guidelines and ethical principles on bat research. Several guidelines and resolutions of EUROBATS were considered during their establishment. However, they also remain completely voluntary, and are not officially recognised.

Obstacles to the objectives of EUROBATS

There were three general obstacles shown in questionnaires. These are:

- lack of will in the official institutions — the official institutions and authorities do not take significant actions to protect bats. In November 2005 permission was given to open an all-year-round tourist trail in “Nietoperek” reserve — one of the biggest bat hibernacula in Europe! In winter, tourist groups can walk in the most valuable parts of this underground system, where hundreds of bats hibernate (this area is especially important for barbastelle





bats). In most of the questionnaires it was stressed that the authorities don't address the EUROBATS resolutions — this is also reflected in the Polish Nature Protection Law. Official bat monitoring has not been established yet. In addition, important hibernacula or breeding sites stay unprotected if NGOs don't secure them voluntarily. In one of the answers it was stated that there has not been one known case of punishment for killing bats or destroying their habitats. We suggest that strong international treaties should intervene and change this situation.

- lack of sufficient enforcement instruments of EUROBATS — the authorities ignore the Agreement's resolutions mainly because it has no legal instruments to enforce the implementation of guidelines. In some questionnaires there were suggestions that cooperation with the European Commission could help. The conservationists believe that the Habitat Directive could be used to force authorities to pay attention to the needs of wildlife protection.
- lack of resources — national funds for the protection and monitoring of bats are scarce, which means that hardly any new projects are carried out. Furthermore, the results of previous projects are vanishing, together with bat grills stolen for scrap metal and bat rehabilitation centers closed. Some activities are still carried out using the NGO's own resources, but their scale is limited by very modest budgets.

Raising the public profile of EUROBATS

As long as most EUROBATS guidelines and resolutions exist only in English through the website, the access to them by the general or even specialised public will be limited. Hence the translation and dissemination of these documents (or at least their summary) in Polish would be useful.

Despite the seemingly gloomy reality of the effectiveness of EUROBATS in Poland, it should be stressed, that this is not a problem unique to EUROBATS, but a general problem for all the nature protection and related international treaties to which Poland is a Party. The Polish naturalists still believe that the international community will support their drive to change the attitudes of the authorities, and that EUROBATS has a major role to play in achieving this. Hence, the previously discussed results from the survey should be understood as more like a call for help, than as criticism.

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EUROBATS: 15 years helping bat conservation in Portugal

by *Luísa Rodrigues*

The Portuguese bat fauna includes 26 species, 24 in the continental part of Europe. According to the new IUCN criteria, in the continent there are three species critically endangered, one endangered and five vulnerable.

Since 1967, Portuguese law has protected all bat species. They are also covered by international legislation, such as the Bern Convention, the Bonn Convention, and the EU Habitats Directive.

The actual list of Portuguese Special Areas of Conservation (SACs) includes the majority of important underground roosts; some areas also include feeding habitats.

In 1987 the Universidade de Lisboa and the Instituto da Conservação da Natureza started a project to obtain the data required to prepare a National Cave Bat Conservation Plan. This project included: a) an inventory of roosts, b) seasonal visits to the most important roosts to determine their occupation throughout the year, c) monitoring of those roosts, d) tagging of some of the most common species to map the movements and distribution of the various populations and to identify the network of roosts on which they depend.

The project culminated with the publication of the Plan, in 1992. This document not only included the basic biological background required to preserve our cave-dwelling bats, but it also identified a strategy for their conservation. It included recommen-

dations on specific roost protection measures (including the consolidation of the ceilings and walls of unstable roosts, clearing of the flying paths in roosts that can be blocked by falling stones, partial clearance of the vegetation that tends to block the entrances of some roosts, removal of inappropriate gates, and construction of fences in the entrances of some roosts), relevant lines of research, public education, and legislation. This strategy has defined most of the conservation work that has been carried out since its publication.

In 1994, co-financing by the LIFE Programme and Instituto da Conservação da Natureza allowed the extension of the conservation work to the poorly known non-cave-dwelling species. The first priorities were to study their distribution in nine natural parks and reserves and to obtain some information on habitat use in these areas; this project involved the search of roosts, mist-netting and transects with bat-detectors. It provided some useful data on the status of these species and allowed the preparation of preliminary recommendations for their conservation. Later on the study was extended to four other natural parks and several reserves. This project also allowed us to start a line of research related to one critical aspect of the conservation of cave-dwelling bats — the identification of the feeding habitats in the most important underground roosts. Until now, useful data

on *Myotis myotis*, *Rhinolophus mehelyi* and *Miniopterus schreibersii* has been collected using radio-tracking.

Since the 70's, a big project including several dams has been developed in southern Portugal (Alqueva Multipurpose Project). A construction of dams located in the river Guadiana is planned; eventually an area of 262 km² will be flooded. To minimise the negative impacts of the project on the local bat populations, the Empresa de Desenvolvimento e Infraestruturas do Alqueva and the Instituto da Conservação da Natureza developed a protocol, to inventor bat species present in the region, study their roosts and their feeding habitats, monitor the local bat populations after the biggest dam construction in Portugal and develop compensating measures. In total 12 species were identified in the area, seven of which are threatened.

With regard to the habitat use pattern, riparian corridors are preferred over the

agricultural- and commercially forested habitats by most of the bat species. Compensating measures included the construction of two artificial underground roosts and the placement of 200 bat-boxes. The first roost, constructed to replace a gallery inhabited by 300 individuals of five species, was rapidly occupied with 205 bats of four different species — a count recorded 13 months later. The second artificial roost was constructed a few months ago. Several nursing colonies of *Pipistrellus kuhlii* were already found occupying bat-boxes. During 2002 an environmental education campaign was developed regarding the conservation of bats. The educational campaign targeted 1890 children between six and ten years old from schools of the municipalities in the area of the biggest dam.

Since 2004, a project co-financed by LIFE Nature, Local Authority (Câmara Municipal de Montemor-o-Novo) and Instituto da Conservação da Natureza has begun the study on the impact of agriculture, forestry and husbandry on bat populations in a SAC (Serra de Monfurado), in order to develop guidelines for the site management plan. Four new species for this site have already been discovered, three with bat detectors (*Barbastella barbastellus*, *Myotis nattereri* and *Myotis daubentonii*) and one with mist-nets (*Myotis bechsteinii*). Mist-netting also allowed us to confirm the presence of species previously discovered using bat detectors: *Nyctalus leisleri*, *Myotis daubentonii*, *Myotis nattereri* and *Barbastella barbastellus*. Some captured tree-dwelling bats were marked with radio-tags and tracked back to their roosts. As a result seven new roosts of *Nyctalus leisleri* were found; these are the first known in the country.



Portuguese bat-workers: (from the left) Jorge Palmeirim, Luísa Rodrigues, Maria João Pereira, Tiago Marques, Sofia Lourenço and Hugo Rebelo. Only Ana Rainho is missing.



Recent conservation activities

In recent years, the research and conservation activities, described in the national implementation reports, included: a) monitoring programme of cave-dwelling species, b) roosts protection (fencing, vegetation clearance, prevention of stone falling), c) comparison of the stress periods in Portugal and Germany and study of several ecological aspects of *Myotis myotis*, d) study of the diet of *Myotis myotis*, e) development of bat-boxes for Mediterranean areas, f) study of the habitat use by *Tadarida teniotis*, g) study of the impact of parasitism on reproduction in bats, h) evaluation of the situation of bat species in the archipelagos of Madeira and Azores, i) confirmation of the presence of *P. pipistrellus* and *P. pygmaeus*, j) creation of an Interpretation Centre in a Natural Park (with an observatory where visitors can observe the bats inside the cave using infrared cameras), k) study of ecological aspects of *Barbastella barbastellus*, and l) construction of artificial roosts (200 bat-boxes, two underground galleries and one building).

The role of EUROBATS

Portugal signed EUROBATS in June 1993 and confirmed the ratification instrument in January 1996.

The accession to this Agreement highlighted the importance of bats in the country and created a link to the activities carried out by Instituto da Conservação da Natureza.

The implementation of the EUROBATS resolutions and the application of the prepared guidelines, has been taken into consideration for the following activities:

- The monitoring programme for cave-dwelling species using the methodologies described in Resolution 2.1;
- A list of the important underground roosts was prepared according to Resolution 2.4;
- A study of the migratory patterns of some cave-dwelling species (*Miniopterus schreibersii*, *Myotis myotis* and *Myotis blythii*) has been conducted in a few roosts, as recommended in Resolution 2.5;
- The list of activities has been selected in agreement with the conservation and management plan approved by EUROBATS (Resolutions 2.8, 3.3 and 4.9);
- Underground roosts have been protected accordingly to Resolution 4.3;
- Permits regarding the capture and study of captured wild bats have been prepared, taking into consideration the guidelines described in Resolution 4.6;
- Analysis of impact assessment studies for wind parks in areas of particular value to bat populations have taken into account Resolution 4.7.

In addition, implementation reports have also been prepared following the approved format (Resolutions 2.7 and 3.3). Nevertheless, there are still two resolutions that have not been implemented yet: Resolution 3.7 on the Amendment of the Agreement and Resolution 4.4 on Bat Conservation and Sustainable Forest Management.



The development of guidelines that ultimately can be applied by all Parties (and range states) to EUROBATS is a fantastic contribution to the study and conservation of the European bat populations. Undoubtedly the major contribution of EUROBATS to bat conservation in Portugal is the increase in public awareness as a result of the European Bat Night. This event wins in popularity and increases its dimensions each year

and, for the first time, various other institutions are developing activities to present bats and their lifestyle to the general public. This is the best indicator that EUROBATS is helping the Portuguese bats!

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The Romanian Bat Association celebrates with EUROBATS

by Abigel Szodoray-Paradi

The EUROBATS Agreement speeds up the process of bat conservation in Romania by inspiring good conservation practices and transboundary cooperation. Adhering to the terms of the Agreement, the Romanian Bat Protection Association (RBPA) is successfully implementing the following programmes and activities.

The National Bat Monitoring System in Romania

In 2002 the Romanian Bat Protection Association and the UK's Bat Conservation Trust (BCT) initiated the National Bat Monitoring Programme (NBMP) in Romania. This Programme is modelled on the UK's National Bat Monitoring Programme, launched by the BCT; its monitoring schemes have demonstrated that trends in bat populations can be statistically identified by collected data.

In Romania we already possessed sporadic data concerning bat distribution on our territory and the population trends of our 30 – generally poorly known – species of bats. However, it had not been possible to use the collected data to make statistical comparisons at regional or national level.

In order to solve this problem we had to establish a scientifically sound, data-driven system, and to develop and apply a standardised country-wide monitoring protocol. The method adopted assembles two sets



Anka with *Plecotus auritus*. © RBA

of data, derived from observations made at summer maternity roost sites and at winter hibernation sites in underground habitats. Over the last five years observers have visited the sites twice during the hibernation period (December – February) and twice during the summer period (May – July). The data collected was incorporated into the standard datasheet.

The key species and categories selected for monitoring were:

- cave dwelling bats: *Rhinolophus ferrum-equinum*, *Rhinolophus hipposideros*, *Myotis myotis/blythii*, *Miniopterus schreibersii*;
- non-cave dwelling bats: *Myotis daubentonii*, *Eptesicus serotinus*, *Pipistrellus*

pipistrellus/pygmaeus, *Nyctalus noctula*.

- Other species were identified as having have priority for further observations and research: *Pipistrellus nathusii*, *Barbastella barbastellus* and *Myotis dasycneme*.

The monitoring, covering the whole of Romania, involves 35 underground sites (three caves in the Eastern Carpathians, 15 in the Western Carpathians, 17 in Dobrogea and the Southern Carpathians).

To implement the NBMP, it has been necessary to develop and maintain a network of volunteers all over Romania. This has been achieved by organizing talks to University students, speleological clubs, environmental protection agencies, environmental NGOs and audiences at National Parks; while volunteers' identification skills have been improved through training courses, workshops and field excursions.

Education

Training of trainers: Two workshops, on National Bat Monitoring and Bat Detector Techniques, were organised by BCT and RBPA (at the Danube Delta, Romania, 2002; at Rimetea, Romania, 2003).

Volunteer recruitment: 23 classes were held in 11 cities; in the last three years there have been eight workshops. A total of 476 people (entered on the database of volunteers) currently (October 2005) make up the NBMP volunteer force network; 136 of them have taken part in surveys and delivered data.

By 2005 a countrywide network of 5+ local bat groups was established, providing a



Students on a bat-workshop in the field. © RBA

potential framework on which to build volunteer surveys. There are NBMP volunteers in all regions of Romania.

Besides the National Bat Monitoring Programme, our NGO coordinates the following activities:

- a survey of 40 underground habitats that are important shelters for bats; it is proposed to include these habitats in the Natura 2000 network and in the RBPA database (the project carried out in 2002 – 2004 yielded exclusive data from 273 records of 22 bat species in 93 caves);
- making an inventory of building- and forest-dwelling bats; case studies of potential habitats for bats;
- preparing a proposal for concrete measures to protect habitats that suffer disturbance from human activities (placement of warning notices at cave entrances, closing of threatened caves, rescue of bat colonies or individuals);



- establishing a national database of the distribution of bats in the countryside;
- involving volunteers in the implementation of the National Bat Monitoring Programme (three training camps and workshops annually; lectures in the University Centres of Bucharest, Cluj Napoca, Iasi, Sibiu, Oradea);
- raising awareness among the general public of the necessity to protect bats, this to be achieved through European Bat Night events and publication material, as well as through the media;
- Participation at meetings and scientific conferences.

The above-mentioned activities were assisted by the strong partnership and support of the Bat Conservation Trust (BCT) and other international donors: Bat Conservation International, the BP Conservation Programme, DEFRA (the UK Department for Environment, Food and Rural Affairs), Fauna and Flora International, the GEF UNDP Small Grants Programme, the Romanian Environmental Partnership Foundation, the Rufford Small Grants Programme.

The opportunity of taking part in Inter-Sessional Working Groups in the framework of meetings of the EUROBATS AC has made transboundary cooperation easier for the RBPA, connecting our experts with bat workers from abroad.

Promoting EUROBATS

The RBPA promotes all EUROBATS activities and programmes. EUROBATS is consistently mentioned as the RBPA's partner

— at press conferences, in project reports and in brochures, posters and information leaflets, as well as in the course of carrying out projects.

A good instrument for promoting the EUROBATS Agreement in Romania is European Bat Night, which has been taking place every year since 2002, involving more and more volunteers and raising public awareness in different parts of the country. In 2005 we staged the event in 14 Romanian cities and succeeded in drawing the attention of more than 3,000 people to the need to protect bats, and in directly engaging 1,500 participants in popularization activities. The event had a huge press echo, with more than 40 articles and radio and TV interviews devoted to it at local and national media.

Perspectives

One of the main threats to bats is the human factor — people are prejudiced against them, and that can lead to deliberate killing or damage. One way out of this problem is to popularize bats by involving large numbers of people in the European Bat Night. This EUROBATS initiative provides the perfect opportunity to educate the general public on the spot.

In Romania there are about 13,000 caves with potential as underground habitats for bats. Managers of regional development projects should take into account the danger of impact on the bat fauna and its habitats and migration routes.

The pattern of forest ownership is changing, as are forest management bodies, yet a system of sustainable forestry practices has not yet been elaborated. It is important therefore to provide experts (foresters, scientists, bat workers) to advise the authorities



in charge in the early stages of planning. When building renovations or construction works are intended, it is essential that the possible or actual presence of bats be taken into account. Unfortunately, this has so far not been the practice of the official bodies responsible in Romania for providing permits for such operations and ensuring the submission of environmental impact assessments.

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Observing EUROBATS from the Republic of Serbia* — bat study and conservation in a non-Party range state

by Branko Karapandza, Milan Paunovic, Jelena Ducic

Since modern faunistic studies began in the middle of the 19th century, there has been awareness in Serbia* of the need to protect and conserve wildlife. Although some attention was paid to bats, they remained for some time in the shadow of other, more charismatic groups. Nevertheless, there has been a long tradition here of bat studies and efforts at bat conservation. Thirty bat species from three families (Rhinolophidae, Vespertilionidae and Molossidae) have been recorded (five more are expected to be confirmed soon), as well as more than 530 roosting sites and 160 other 'bat' localities. Thus the basis for more systematic study and conservation of bats was established well before the EUROBATS Agreement.

Hence, with regard to many aspects of bat studies and conservation, Serbia's* accession to membership of EUROBATS has been in preparation for quite a while, despite the ongoing economic and political difficulties of system transition to separate political status for the two members of the dual entity and although not yet a Party to the Agreement, Serbia* is making an effort to contribute to various EUROBATS activities, and in return EUROBATS contributes to bat studies and conservation activities in

Serbia*. Whilst appreciating the contribution of earlier generations of bat workers and conservationists, as well as retaining a commitment to international cooperation and integration processes now going forward in Europe, we would like to give an idea of the background, current state and prospects of bat studies and conservation from the perspective of Serbia*.

Historical background – 150 years of bat studies and conservation

The founder of modern zoology (and botany) in Serbia* was Dr Josif Pancic (Savic 1977). From the middle of the 19th century, studies for a number of mammal groups (as well as plant groups) (Savic 1977, Miric 1979) were carried out by Pancic and his students. They were also responsible during the second half of the 19th century for collecting the first sets of scientific data on bats in Serbia*. The name of Dr. Lazar Dokic stands out especially for producing the first overview of the mammal fauna of Serbia, including 20 bat species (Dokic 1883).

However, bat studies were sporadic until 1954, when Dr. Dorde Miric became a curator of the mammal collection at the Natural History Museum in Belgrade. He brought with him a more intensive and systematic method of bat research; this is reflected in the fact that he founded bat banding, bat

* This article includes information about activities in the Republic of Montenegro from 2003-2006.

taxonomy and bat distribution studies in Serbia* (Miric et Paunovic 1994; Savic et al. 1995). Dr. Miric also surveyed hundreds of roosting sites, collected thousands of specimens for the Museum collection and recorded various species for the first time in Serbia*, thus making an invaluable contribution to further studies. On these foundations, laid by previous generations, the next phase began, when the new generation of bat workers stepped into the last decade of the 20th century (Savic et al. 1995).

Early conservation efforts and the development of legal protection

In the middle of the 19th century the first scientific observations of threatened areas of wildlife and the environment in Serbia* were made, heightening public awareness of the need to protect and conserve them (Pancic 1869; Dokic 1883), (Savic 1977). The importance of bats was noted even earlier in zoology textbooks (Marinkovic 1851). The importance of conservation, as well as the need for studies preparing the way for the protection of mammal populations, was pointed out by Petrov (1950); this service was done for bats in particular by Miric (1956). With the development of legislation, the first reports on conservation and protection of bats in the former Yugoslavia were published by Miric (1980-81, 1982).

The first official action taken by Serbia that impacted directly on bats was the legal protection of some speleological sites in 1949. There are now up to 30 such sites, most of them important bat shelters and as such vital to bat conservation. Special regulations introduced in 1956 and 1977 ensured that the Bacina Pecina and the Ribnicka Pecina caves are protected as bat



Myotis emarginatus and Rhinolophus ferrumequinum at bat house. © Milan Paunovic.

roosting sites. The first legal document in which bats in Serbia are legally protected is the Regulation on the Protection of Bat Populations by the State, where 22 bat species are mentioned (Sl. glasnik 1961). Of particular significance here is the fine for harming bats that was introduced in the province of Vojvodina in 1977. The regulation was in force until its replacement by the Directive on Protection of Animal Species as Natural Rarities (Sl. glasnik 1990).

The new Law on Environmental Protection came into effect in 1991. The Directive on Protection of Natural Rarities (Sl. glasnik 1993) was passed in 1993 and has been in force ever since. It strictly forbids individuals to “destroy, catch, harm, disturb, export or mount specimens of protected species,” as well as to “destroy or endanger their habitats.”

The bat species listed are assigned to Category I, which means they are subject to the strictest degree of protection. The Directive enumerates 21 species of the family Vespertilionidae (which are all listed by mistake as Rhinolophidae (sic!)). The intention may have been to protect all species of the Rhinolophidae family together with an additional 21 species from the Vesperti-



lionidae family, so the number of protected species should be 26 or 25. Although it represents a considerable improvement on previous regulations, containing, for example, an expanded and precisely defined list of outlawed actions, stricter protection provisions and an established system of fines, the Directive is full of misspellings and, lacking clarity, is very confusing.

In Montenegro, all bat species known to exist in the country were declared protected by the Directive on Protection of Rare, Endemic and Threatened Plant and Animal Species in 1982.

A new generation of bat workers

Although previous generations had laid a solid foundation of data collection, until recently most of this work remained fragmentary and scattered, and even unpublished (Miric et Paunovic 1994). However, since the last decade of the 20th century the research has become more thorough, systematic and focused. Also, the new generation of bat workers has launched an intensive programme of data processing, with analyses and syntheses of previous and recent records (Savic et al. 1995). These young bat workers have gathered around the Natural History Museum in Belgrade and an NGO, the Wildlife Conservation Society “Mustela”. The current phase is significant not only for scientific efforts, but also for ongoing education and public awareness activities.

Current legislation and responsible institutions

In 1999, after heated discussions involving bat workers and other specialists, a proposal was prepared for a new, revised and improved Directive on Protection of Natu-

ral Rarities to replace the existing one. The proposal contains an article providing for the protection of all bat species in Serbia, under the most strictly protected Category I; this proposal remains on the table. Meanwhile, the new Law on Environmental Protection (Sl. glasnik 2004) — now complete and fully harmonized with EU standards — has been passed and put into effect. We hope therefore that the new Directive will also be accepted soon.

The authorities responsible for nature conservation and environmental protection in Serbia* are the Ministry of Science and Environmental Protection in Serbia and the Ministry of Environmental Protection and Physical Planning in Montenegro. There is no officially designated institution responsible for bat studies, conservation and management, but a few institutions provide scientific information and consultancy: the Natural History Museum in Belgrade, Serbia’s Institute of Nature Protection and Montenegro’s Natural History Museum and Institute of Nature Protection.

So far Serbia* have ratified the following International Conventions and Agreements related to bat conservation: the Ramsar Convention (1977), CBD (2001) and CITES (2001).

Preparations are on course for ratification of the following international treaties related to bat conservation: CMS, EUROBATS and the Bern Convention. The preparation phase has lasted longer than was hoped, but the delay is understandable considering the need to build capacity, effect technical groundwork and observe serious budget restrictions — all necessary elements in the run-up to implementation of the treaties’ goals.



First steps towards EUROBATS

The current generation of bat workers in Serbia has matured in step with EUROBATS. For both, the beginning of the 1990s marked a turning point. Contacts with the European bat (and general mammal) community have remained limited for quite some time. Nevertheless, at the personal and NGO level those contacts led to invitations (special credit and gratitude are due here to Mr. Peter Lina) for Serbian representatives to attend the 6th Meeting of the EUROBATS Advisory Committee. The year 2001 saw a nomination in Portugal to the post of scientific focal point and in 2002 the first National Report was submitted to EUROBATS. Since then Serbia* has been a regular and active participant at all meetings. Indeed, despite its observer status, it continues to make an effort to contribute to EUROBATS activities. Its participation remained unofficial until 2003, when the responsible ministry finally intervened and someone was appointed to serve as an administrative focal point for matters related to bats.

Although the countries are not yet Parties to the Agreement, bat conservation efforts in Serbia* have been benefiting from EUROBATS. Here it is worth mentioning that EUROBATS and UNEP, as well as a number of Parties to the Agreement, frequently put forward arguments that cannot be disregarded in any debate about bat conservation, and these entities have thus become an important source of support for our own conservationists, especially when dealing with official governmental authorities. Joint efforts by bat workers and the ministry responsible for EUROBATS matters have helped to improve relations between the two sides.

We consider the role of the EUROBATS meetings to be equally significant for Party and non-Party range states. Those few days in the year offer a unique opportunity for the whole European bat worker community to gather and discuss important scientific and conservation issues, to exchange plans, ideas, opinions and experience, as well as to develop their expertise and establish personal contacts, thus preparing the way for future collaboration and in general furthering the cause of bat conservation. Before we started attending the EUROBATS meetings, such opportunities were rare, occurring only at the margin of symposiums. The participants from Serbia* have certainly benefited from the EUROBATS meetings, whilst also striving to make their own contribution.

Recent and current activities

The EUROBATS connection has served to strengthen bat research, conservation and public awareness activities in Serbia*. Many of our recent and ongoing bat projects are EUROBATS-inspired, especially those relating to preliminary monitoring of important roosting sites and the training of future bat workers.

Since it first took place in 2000, in Belgrade, European Bat Night has become a regular event with us, held also in several other towns. It has not only attracted the general public to its ongoing activities but also initiated many publications and even a documentary on bats called "Leteće nocobdije" (Flying night-dwellers) by the Ecological Department of the Serbian national RTV Broadcast (Paunovic et Karapandza 2003).

EUROBATS' most important impact on the study and conservation of bats in Serbia* has probably been the launching of



an ongoing data-processing and -updating programme, needed for the annual reports. This, with cooperation from the responsible authorities, has led to the development of a National Action Plan for the Conservation of Bats (Paunovic et al. 2004). This Action Plan is the cornerstone of a book soon to be published, dedicated to bat diversity in Serbia: a key project preoccupying the bat-worker community in Serbia for the last two years.

Needs and prospects

The central priority for bat protection and conservation is to ensure that the new Directive on Protection becomes effective as soon as possible. The ratification of important international Conventions, EUROBATS especially, is also considered a top priority by the entire scientific community. Although environmental issues are not always accorded primary importance by the government, the full and sincere commitment of the responsible Ministry (since the political changes in 2000) to the new Law on Environmental Protection (Sl. glasnik 2004), gives reason for optimism.

However, the main problem facing bat studies and conservation practices in Serbia* remains lack of finances, though this situation has been improving over the last few years. The continuing processes of political stabilization and association with the EU, as well as the expected economic development resulting from these, should help to resolve the difficulty in the foreseeable future. If the financial resources problem eases, our tradition of bat conservation, in combination with our modern scientific momentum, will be able to realise its full potential, and better times for bats and bat workers will follow.



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15th anniversary of EUROBATS and its implementation in Slovakia

by Lubomira Vavrova, Marcel Uhrin and Peter Kanuch

There is a long tradition of bat research and conservation in Slovakia which culminated in the ratification of EUROBATS in 1998. Although this represents a short period for assessment, the last seven years (1998-2005) has seen numerous activities implemented (including international co-operation with other members of EUROBATS, raising of public awareness etc.). The ratification of the Agreement has been a very useful tool for the promotion of the conservation of bats and their sites. Some of them are mentioned below.

Legislation

Prior to 1994 the conservation of bats in Slovakia was ensured by the Act for Nature Protection (No. 1/1955). Since 1994, bats have been protected by Act No. 287/1994 for Nature and Landscape Protection and listed in the annexes of the Order No. 93/1999 for Protected Plants and Animals and Their Social Valuation. In 2003 the Order No. 24/2003, which is an executive regulation of the new Act 543/2002 for Nature and Landscape Protection, took effect.

Currently 27 bats species exist in Slovakia — all of them are legally protected. All underground sites important for bats are legally protected too. On 1 May 2004 Slovakia became a full member of the European Union. One of the main obligations in connection

with nature protection is the implementation of the Habitats Directive (HD), in which all species of Microchiroptera are listed.

In 2001 the Red List of Mammals of Slovakia, (Žiak & Urban 2001) prepared in accordance with the IUCN categories and criteria, version 3.1 (2001), was published. The bats are classified as follows: critically endangered (one species), endangered (one species), vulnerable (six species), lower risk: conservation dependent (four species), lower risk: near threatened (three species), lower risk: least concern (five species), data deficient (six species; two newly recorded species can also be included).

In connection with the establishment of the NATURA 2000 network, 145 sites of European importance which focused on species protection including bats, were proposed in Slovakia. Moreover, the criteria for the evaluation of favourable conservation status of 24 bats listed in the Habitat Directive and their habitats in Slovakia (Kanuch et al. 2005) has been put forward.

It has been proposed that two sites of the NATURA 2000 network should be focused exclusively on bat protection — Bradlo (0.01 ha, with six bats species) and Dubnícke bane mines (ca 235 ha, with eight bats species). In total 64 European sites which have importance for the conservation of bats in Slovakia, have been put forward.



Research and monitoring

Between 28 August – 1 September 1998, 60 participants from seven countries took part in the second International Conference on Carpathian Bats in Nová Sedlica. The participants visited the wintering site of bats in the Starina water reservoir dam, and the conference also included a public lecture on bats and their protection. In Slovakia special chiropterological meetings and workshops were organized (e.g. 1994 in Dubník in Slanské vrchy Mts., 1995 in Malacky).

Between 30 May – 3 June 2001 the Bat Detector Workshop, in co-operation with bat experts from Slovakia and other countries, was organized in Moldava and Bodvou. Thanks to the German government and its implementation of the EUROBATS transboundary programme “Bat conservation expert training and data collection in Southeast Europe”, which supported the bat detector workshop in Slovakia, one new species (*Pipistrellus pygmaeus*) was added to the annexes of the order (Limpens 2001). In 2002 the workshop focused on bat occurrence in the panel houses in Modrapiesok. The participants visited some of the interesting bat sites in the region of Malé Karpaty Mts. (Cervený Kamen castle, the cave Driny).

On 2 August 2001 two specimens of *Myotis alcathoe* were found during the netting in the entrance to the Stipová jaskyna cave. The specimens were identified on the basis of DNA analysis. It was the first record of the species in Slovakia (Benda et al. 2003). Another new bat species found in Slovakia for the first time was *Hypsugo savii*, which was found to exist in Bratislava (26 May 2005) (Lehotska & Lehotsky 2005). Within the Twinning PHARE project in co-operation

with the experts from Germany, the workshop on monitoring methods of bats was organized in 2005. The winter census regularly monitors 300 sites with 21 different species (i.e. ca 78% of bats species in Slovakia). 20 sites are regularly monitored within the Partial Monitoring System — Biota.

Slovakia cooperates on a bat-banding as well; data is provided to a central database in the Slovak Bat Ringing Centre (since 2003). Some projects on the research and conservation of bats carried out in Slovakia include the following: “Active Bat Conservation” (organised by Environmental Education Centre BAMBI), grid mapping of bats using bat-detectors (EEC BAMBI and SNC — Protected Landscape Area Záhorie Administration), ecto- and endoparasitological research (Department of Zoology of the Comenius University in Bratislava, Parasitological Institute in Košice), research of ecology of the forest and tree-hollows bat species (Institute of Forest Ecology of Slovak Academy of Science in Zvolen), faunistic research in the regions (Muránska planina, southern Slovakia) within the Action Plan for implementation of the National Strategy on biodiversity conservation in Slovakia, research of seasonal dynamics throughout the monthly surveys in the caves, e.g. Dobšinská Ice Cave, Domatica, Jasovská cave (Slovak Cave Association, State Nature Conservancy (SNC) and Bat Conservation International), bat surveys in the Slovenský raj National Park (with support of BP Conservation Programme) and research of the foraging habitats and activities of bats in the forest (Faculty of Forestry of Technical University in Zvolen), etc.

In 1995 the first volume of the international chiropterological magazine “Netopiere”



(in 1997 turned to new name “Vespertilio”) was published. The magazine contained updates on the activities of the regional chiropterological groups and scientific contributions and it is edited by the Slovak Bat Conservation Group (SBCG) and Czech Bat Conservation Trust. Volume 6/2002 was edited as a catalogue of the wintering sites of bats in Slovakia with contributions from 46 co-authors and information on more than 660 sites.

In caves known to be inhabited by bat populations, the Slovak Caves Administration (SCA) keeps special books with data on bat biology and protection.

Practical management

Two protected sites in Slovakia were designed especially for bat protection: Dubnícke bane mines (eastern Slovakia) — a large complex of abandoned mines with numerous bat communities of high bat diversity and Dielik (Central Slovakia) — an abandoned railway tunnel with numerous winter colonies of pipistrelles, Schreiber bats and barbastelles.

Several management activities were carried out in the last 15 years (e.g. reconstruction of the entrance of the Malá Šimonka mine, drainage of the gallery of Dubník, cleaning of the church's attics in Príbelce, Dolný Hricov, Hrboltová, etc). In December 2005 the members of SBCG in co-operation with SNC cleared more than ten tons of guano from the attic of the church in the Ratková village. Many activities took place in co-operation with members of the speleological groups, e.g. cleaning and closing of underground sites, elimination of the activities leading to the disturbance of bats in their roosts (e.g. in the Certova diera



Cleaning of the church's attic in Ratková village

site near the Domica cave, Belianska jaskyna cave, Bystrianska jaskyna cave). Bats occurring in prefab houses and causing problems with house owners (cases occur in almost all larger towns) are removed from the endangered shelters.

Co-operation with the public

SBCG in co-operation with other institutions (SNC, SCA, ZOO Bratislava, museums) and volunteers organized the meetings within the European Bat Nights (Nová Sedlica – 1998, Revúca – 1999 and 2004, Sliac – 2003, Bratislava and Liptov region – 2005), with the support for advertising coming from the EUROBATS Secretariat. Many exhibitions and public lectures focused on bat conservation (e.g. travelling exhibition “Špirhac – Gacek – Trúlelek” provided by the East-Slovakian Museum in Košice). The promotion and information materials – brochures (“Bats of Slovenský Raj National Park,” “Conservation of Bats in Slovakia”), calendars, cards, etc. were published.



On the web site www.netopiere.sk people can find information on bats — biology, ecology and activities focused on bat protection and co-operation possibilities. In 2000 a popular and educational book *netopiere — tajomní obyvatelia jaskýn* edited by SCA was published. The research and monitoring results were presented in the scientific magazines and conferences. Since 2002 experts have started the work on the monograph of the distribution and ecology of mammals in Slovakia. SCA and Slovak television — TV studio Košice prepared the educational film *netopiere — tajomní obyvatelia jaskýn* in 2003.

Miscellaneous

The activities on practical bat management and protection are mostly performed by volunteers (esp. SBCG members and scientific institutions) in co-operation with SNC and SCA, but here is no special institution focused on bat research. With regard to the implementation of EUROBATS, the main problem is a lack of appropriately qualified people.

As mentioned above, the activities are mostly performed by volunteers in their free time with no financial support. One of the possible solutions to this unsatisfactory situation is more intensive international co-operation (e.g. projects), which would lead to an increase in the public interest in the subject of bat research and conservation. We would like to thank to all participants and hope that effective co-operation will continue in the future.

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Bat conservation in Slovenia

by Maja Zagmajster, Klemen Koselj, Nataša Zupancic, Alenka Petrinjak and Katerina Jazbec

On account of its geographical position and relatively well-preserved and heterogeneous landscape, Slovenia is rich in bat species. However, during the accelerated economic development that followed independence, the threats posed to crucial habitats by building plans have increased rapidly. Like mammalian fauna in other parts of Europe, bats in Slovenia are seriously endangered. In addition to international laws, national legislation has been enacted as a first step towards their long-term protection. Although a relatively late comer, the Slovenian government made an additional commitment in this direction by signing the EUROBATS Agreement in 2003. The next and most important step is the implementation of proper conservation measures at the practical level, where members of SDPVN — the Slovenian Association for Bat Research and Conservation — play a crucial role.

Slovenia is rich in bat species

Twenty-nine bat species have been recorded so far in Slovenia and it is expected that several more will be found (Presetnik et al., in press). This is a large number for a relatively small country (20,253 km²). As well as being part of a biodiversity hotspot in the Mediterranean basin (Myers et al. 2000), Slovenia possesses diverse geographical features that facilitate species richness, particularly in respect of bats. Situated on the border between the Balkan Peninsula, the Alps and the Pannonian Plain, the coun-

try is inhabited by both boreal bat species (the northern bat *Eptesicus nilssonii*) and Mediterranean ones that depend on warm caves for reproduction (the Mediterranean Horseshoe bat *Rhinolophus euryale*, Long-fingered bat *Myotis capaccinii* and Schreiber's bat *Miniopterus schreibersii*).

Slovenia's caves offer an abundance of natural roosting sites, with more than 8300 known. Large sustainably managed forests cover over 57% of the land surface, providing roosting and foraging habitats for many species, such as Bechstein's bat (*Myotis bechsteinii*) and the Barbastelle (*Barbastella barbastellus*). Species that are rare or have even disappeared from some parts of Europe are still quite common in Slovenia. For example, the Lesser horseshoe bat (*Rhinolophus hipposideros*) finds suitable hibernation places in numerous caves and maternity roost sites in buildings, as well as rich foraging grounds in nearby forests.

The majority of roosts in buildings used to be found in the attics and roof-spaces of churches and castles. These roosting sites, important for a number of bat species, are still abundant but are often being renovated without regard for bat conservation issues. For a detailed discussion of bat biodiversity and distribution in Slovenia, see Presetnik et al. (in press).

Legal protection of bats

First attempts at nature conservation in Slovenia had already begun by the end of the 19th century. The first legal measure afford-



ing protection to bats was the decree on Protection of Beneficial Birds and Mammals in 1966. However, bats were excluded from the species protection act that followed in 1976, although they had been mentioned in the draft. It was not until 1993 that official bat protection was restored. All species recorded in the country were included in the decree on Protection of Endangered Animal Species. In 2000, a new Law on Nature Conservation was passed, followed later by a new decree on species protection based on the same principles.

Besides all bat species, their habitats also are protected under the Habitats Directive. Potential Sites of Community Interest (pSCIs) were proposed for nine bat species on the Annex II list (Kryštufek et al. 2003). The final official list of proposed sites was evolved in bio-geographic seminars, where some additions were proposed by a SDPVN representative. For the majority of species the most important roosts, together with a rough estimate of potential foraging habitats, are included in pSCIs. However, for Bechstein's bat and the Barbastelle a wide area of deciduous and mixed forests, designated for large carnivores, was proposed in the absence of roost data (see Presetnik et al., in press). All bat species are included in the Red List of Endangered Plant and Animal Species.

Slovenia is a signatory to international agreements under which bats are protected. In 1988, the Bonn Convention (CMS) was ratified, and a year later the Bern Convention. Unfortunately, although members of SDPVN had been lobbying in favour of membership since 1996, the country signed up to the EUROBATS rather late (in 2003). However, in the meantime, government re-

presentatives had been stating positive intentions and regularly attending meetings of the EUROBATS Advisory Committee (AC). SDPVN members had also participated in AC meetings in order to exchange experiences with foreign bat conservationists and represent non-governmental views on bat conservation in Slovenia.

Implementing bat conservation

The first attempts to put bat protection policies into practice in Slovenia started in the late 1980s. They mostly aimed at the protection of cave-dwelling bats, for example by placing appeals for bat protection in cavers' magazines (Kryštufek 1986). The strategy was effective in the case of a Lesser horseshoe bat hibernaculum in the Marijino Brezno cave, which was closed, using bat friendly grills, by members of the Ljubljana Speleological Society. The positive effect of the grill construction was very evident, and the cave has latterly become home to the largest group of hibernating Lesser horseshoe bats in Slovenia (about 900 animals) (Petrinjak 2005).

Systematic work on bat conservation in Slovenia began with the formation of a Section for Bat Research and Conservation within the Biology Students Society (BSS) in 1998. It joined the individuals already involved in bat research at the time and also attracted new ones. In 2001, the section became an independent society (SDPVN). Our belief in the interconnection between bat research and bat conservation is reflected in the main goals of SDPVN:

- to study distribution and other aspects of bat biology in Slovenia;



- to use this data to monitor threats to populations of bat species and demand suitable protection measures;
- to promote bat conservation and research, as well as spreading knowledge about these mammals over a wide spectrum of audiences.

Before the developments in the second half of the 1990s, which led to the formation of SDPVN, the data on bat distribution in Slovenia was sparse and mainly limited to records of cave roosts and occasional mist-netting reports (e.g. Kryštufek & Cervený 1997, Kryštufek & Hudoklin 1999). SDPVN members started systematic gathering of data on diverse roost types, including nurseries, which previously had been largely neglected. In 1998, with the support of the Regional Environmental Centre for Central and Eastern Europe (REC), we equipped ourselves with our first bat detectors, and data on the foraging habitats of the more easily recognizable species began to multiply. Every year, together with bat researchers, we participated in research camps for biology students and schoolchildren. A broad methodological range enabled us to register some 15 species in a particular area in less than two weeks. On several occasions we were joined by foreign colleagues (particularly Jan Zúkal and Zdenek Rehák) who were willing to share their experience with us.

The exciting fieldwork done during the camps also proved the best way to recruit new bat workers to join us in our activities afterwards. In order to sharpen up our knowledge we regularly took part in bat research symposia and bat detector workshops. In

2000 we organized a training course in Slovenia as part of the larger European project coordinated by EUROBATS, supported by the German government (Limpens 2000, Zagamajster & Koselj 2001) and supervised by Herman Limpens assisted by Lothar Bach. The participants were able to improve their theoretical and practical skills using bat detectors in the field, as well as gathering new faunistic data, increasing the number of bat detectors available in the country and making new contacts that sparked off future collaboration.

The data on bat distribution assembled on to a digital database at the Centre for Cartography of Fauna and Flora was subsequently used in the process of designating Natura 2000 sites (Kryštufek et al. 2003) and the publication of a first comprehensive overview of bat distribution in Slovenia (Presetnik et al., in press). In addition, several extensive studies on bat biology were completed (Koselj 2002, Presetnik 2002, Zagamajster 2002, Aupic 2004, Petrinjak 2005).

A good example of conservation work evolving from parallel research can already be found in SDPVN's first international project, the Central European *Miniopterus* Protection Program, supported by REC in 1999/2000. The need for ensuring trans-boundary protection of migratory species, which is also the fundamental philosophy behind the EUROBATS Agreement, spurred the NGOs of Slovenia, Hungary, Bulgaria and Romania into coordinating their monitoring and conservation activities. Using monitoring data gathered monthly from roosts housing large numbers of species randomly distributed in Slovenia, it was possible to make recommendations on regulating tou-



rist use of cave roosts and on renovation works in the cellar of Grad na Gorickem Castle. The combined appeal from project partners working for the conservation of the Schreiber's bats and other bat species roosting in this castle was particularly fruitful. It led to the receipt of financial support from the government and cooperation from the Authority for the Protection of Cultural Heritage (Presetnik 2004a), for the following reasons:

- the international importance of the roost for preserving the bat subpopulation on the eastern edge of the Pannonian Plain was also stressed in the letters of support from the project partners;
- most importantly, the interests of nature and culture protection were in full accord, and no conflicting economic interests had been urged. Unfortunately, such is not the situation in many cases of threats to the bat roosts of Slovenia, which makes it all the more necessary for SDPVN to enforce their protection despite unhelpful background legislation (see 3.1).

SDPVN's endeavours in transboundary conservation (particularly necessary in small countries) were extended towards our north-western neighbours. Specifically, we have been collaborating since 2002 in the international project on Conservation of Bats in the Alpine-Adriatic Region, financed by the Interreg IIIa Program. Since 2005, a similar project coordinated in Slovenia by the Centre for Cartography of Fauna and Flora has received financial support (see the website <http://www.fledermausschutz.at/INTERREG/> for information on conservation activities).

at/INTERREG/ for information on conservation activities).

The case of the Ajdovska Jama cave

The following story instances a case where international support proved necessary to achieve proper bat roost conservation. The small Ajdovska Jama cave, which consists of a single chamber (15m in diameter) connected to the surface by two short passages, shelters the largest known maternity group of *Rhinolophus euryale* in the North-Western Balkans (c. 300 individuals) and is included in the Natura 2000 network. The cave's importance to bats has been thoroughly investigated; it was monitored at least once a month from 1997 to 1999 (Koselj 2002). In the winter of 2000/2001 a metal walkway, with an observation platform that ran underneath the roost, was built in the cave in preparation for the setting up of a permanent exhibition of archaeological finds. The sponsors, a local authority, had applied for none of the permits required for building in a natural habitat, using caves for touristic purposes or causing disturbance to a protected species, nor did they submit an environmental impact assessment.

After the unpleasant discovery of the project in July 2001, SDPVN informed the nature conservation authorities and the sponsors that the procedure was unlawful and constituted a threat to the existence of *R. euryale*. The project was not called off; indeed, a powerful electric lighting system was installed in the cave. SDPVN sent a denunciation of the sponsors to the sanctioning body (the Inspectorate for the Environment) and reminded the authorities of their duties. Instead of a definitive halt being called to the project, an official management licence



was issued to the sponsors. SDPVN did not receive any official replies to its appeals (including an Appeal for Temporary Protection in 2004), nor was it sent documents it asked for, so in July 2003 it turned for help to the Secretariats of the Environment DG, the Bern Convention, the Bonn Convention and EUROBATS. These bodies contacted the government and asked for an explanation. Nevertheless, the official opening for tourists took place in September 2003, when bats are normally still in residence in the cave. Reacting to the concern raised by the Bern Convention and EUROBATS Secretariats, the government slowly began to act.

In 2004, the bat monitoring scheme was granted financial support (Presetnik 2004b), even though this was not particularly necessary, since data had already been gathered over a long period (Koselj 2002) and filed at the responsible Ministry. It seems though, that the lighting system and the metal construction, which produces loud ultrasonic noise when walked on, will not be removed, which is worrying. But still, the government finally initiated procedures for the proper protection of the roost, and that is a very positive outcome.

European Bat Nights

Various myths about bats' evil nature are widespread in Slovenia, as elsewhere. To achieve efficient bat conservation, these prejudices have to be overcome by educating the people. An important part of SDPVN's public awareness activities is the EUROBATS

European Bat Night initiative (EBN). In 1998, SDPVN organized an EBN for the first time in Slovenia. It was an instant success, so since then such events have been orga-

nized all over the country and promoted with displays of EUROBATS EBN posters. Permanent features of the program have been lectures on bats and evening walks using bat detectors. Bats are unusual creatures, so SDPVN employs some unusual methods when presenting them. Especially successful events were art workshops for children, photo exhibitions about bats set up in popular coffee bars and an original puppet play, "What does uncle Julce have in his attic?" To reach as many people as possible, bat slides were often projected out of doors, even on the central square in Ljubljana. Several organizations have cooperated in producing the event in their areas. A particularly fruitful contribution was that of a local mystical society, Vrbov log, to a presentation near Ajdovska Jama during EBN 2005. EBNs have always received good media coverage in the press and on the internet, radio and TV.

It is important to keep up such bat-promoting activities throughout the year. In 2004 and 2005, SDPVN was a leading partner in the "Bats in the Natura 2000 network" project, financially supported by the government. We visited a large number of parish priests responsible for churches included in the Natura 2000 network because of their importance for bats. They usually agreed to bat protection issues being raised in their churches. In addition, the local people were acquainted with bats through lectures that showed them the treasures around them.

The outlook for bat conservation in Slovenia

Most bat conservation activities in Slovenia have been performed in the last eight years, practically always within the framework of



Presentation of bats at the elementary school OŠ Škofije in Slovenia. © Maja Zagmajster

SDPVN. They have improved the situation greatly, but there are still major problems. Much of the construction work in bat roosts is initiated without regard for the bats and without the required permits, even when the work is financed from public funds, as was the case at Ajdovska Jama. If SDPVN members do not visit the sites in question at various stages during the operation, the threats to bats are completely overlooked.

Instead of having to take on the role of a voluntary bat police force, as at present, we should like in future to see more commitment from the government, in enforcing the protection and conservation procedures demanded by legislation and to penalizing offenders. With additional obligations deriving from the FFH directive and also from the EUROBATS Agreement, we believe that governmental practice will change. Recent discussions on bat protection, and acknowledgment of the need to address at governmental level the problem of renovation works, give us reason to be hopeful.

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Bats and EUROBATS – the Bat Conservation Trust’s perspective

by Allison Rasey

The UK’s interest in bats and their conservation has grown considerably from the small handful of people carrying out research prior to the 1960s; then the first heterodyne bat detectors were produced and this opened up the mysterious world of bats a little wider. These detectors gave more people the opportunity to find out about the lives of bats, their habitats and, very importantly, about declining populations. It was concern about declines in bat populations that led to the establishment of legislation in 1981 for England, Scotland and Wales, and in 1985 for Northern Ireland.

This legislation gave protection to bats and their roosts, and increased further the special interest in bats. By this time some local bat groups had been set up by volunteers who were interested either in research or the conservation of bats within their locality. Many groups were attached to a natural history or mammal group, or a local wildlife trust.

The next major landmark for the UK’s bats was the signing in 1991 of The Agreement on the Conservation of Populations of European Bats (coming into force in 1994), and the establishment of EUROBATS. Because so many exciting initiatives can be traced back to the 1991 signing that have proved invaluable in promoting bat conservation in the UK, it is difficult to pick out just one or two; we at the Bat Conservation Trust have, therefore, tried here to outline several of the highlights from our perspective ...

The contributions of EUROBATS and working towards EUROBATS’ resolutions

EUROBATS gave impetus for the development of the Bat Conservation Trust (BCT) — a non-governmental organisation dedicated solely to the conservation of bats. The BCT was launched in 1990 and now has 20 staff. The Agreement itself and the purpose of EUROBATS was crucial to the success of BCT, as the projects that it set up to deliver bat conservation were (and continue to be) in line with the aims of the Agreement.



Children and bat badges. © BCT



BCT was set up as an NGO with funding from government departments and the statutory nature conservation agencies for England, Scotland and Wales; collaboration with WWF UK and charitable trusts keen to see bat conservation move forward was also vital to its establishment. The EUROBATS Agreement was vital in building the case for funding.

A major achievement has been the establishment of the BCT's National Bat Monitoring Programme (NBMP) in 1996; this is the longest running multi-species monitoring programme for mammals in the UK. The NBMP currently produces statistically robust population trends for 11 of the UK's 17 resident bat species. EUROBATS Resolution 2.2 on monitoring was integral to setting up the NBMP as a research project funded by the Department for Environment, Transport and the Regions and to securing further funding from the Joint Nature Conservation Committee, Environment Agency and People's Trust for Endangered Species. Support has also been received from English Nature and Countryside Council for Wales. Over 2,000 volunteers have taken part in the NBMP, with surveys at over 3,200 roost and field sites, amounting to 15,000 evenings of work! It is only with the goodwill of so many volunteers contributing that we are now able to identify trends that are underpinning recommendations for bat conservation in the UK Biodiversity Action Plan process.

Working towards EUROBATS Resolution 2.2, the monitoring methods that have been developed by the NBMP have been shared across Europe and, with funding from the UK government, workshops have been held by BCT in Romania, France, Georgia, the UK

and Slovenia. By doing this countries meet the EUROBATS resolutions on sharing knowledge and experience of methods for monitoring, and also in providing training in effective use of bat detectors. To further share best practice and knowledge workshops have also been held in Finland and the Republic of Ireland. None of this would have occurred without the collaboration of NGOs across Europe, brought together by EUROBATS.

Another major achievement has been the establishment of the BCT's training and education programme, prompted in part by the obligations in Article III of the Agreement. BCT runs training courses for non-bat professionals and bat experts, including arboriculturalists, land-use planning officers, ecologists, bat rehabilitators and bat surveyors. Again, collaboration with UK government departments and other charities has been vital to enable this training to develop and proceed. This works towards EUROBATS Resolution 3.8.

Also highlighting areas where further training and education is needed is the Bat Investigations Project. This was started in 2001 as a collaborative project between BCT and the Royal Society for the Protection of Birds because it was clear that European and country law was being broken with respect to bats. It also works towards Article III of the Agreement. The Project ran for two years and recorded 144 offences against bats or their roosts. It is worrying that 67% of these involved building and construction industries, and the majority involved roost destruction; also, because most offences occur on private land and do not get reported, the actual figure will be many more than 144 for that two year period. The



Investigations Project continues with financial contributions from bat groups. Similar numbers of offences are being recorded, still with the majority involving the building and construction industry. However, the Project has resulted in bat related crime being targeted as a Wildlife Crime Priority by the police, with the result of increased awareness by the police and more offences being pursued through the legal system.



BCT team in spring 2006. © BCT

Important improvements to domestic bat protection law have been made for England and Wales in the form of the Countryside and Rights of Way Act 2000. This added reckless to the offence of intentional damage, destruction or obstruction of roosts, and also added reckless to the offence of intentional disturbance of a bat at a roost. In Scotland the protection went even further, with the Nature Conservation (Scotland) Act 2004 adding reckless to the offence of intentional killing, injuring or taking of a bat.

The EUROBATS Action Plan — drafted in 1995, was the first step towards protecting the foraging habitat of bats. “Although the UK’s existing legislation protected bats and their roosts, it was realised that more action was needed to safeguard bats at a population level because foraging areas were being destroyed. The EUROBATS Action Plan drew attention to the importance of protecting foraging habitat, not just roosts,” explains Prof Paul Racey, present at the 1991 signing and Scientific Adviser to the BCT. The Plan helps the UK identify important bat foraging areas that may be targeted

with agri-environment schemes to promote their conservation.

The Action Plan also identified forest management as an area that needed taking forward. Subsequently the German research project Bats and Forest Management was initiated in 1995 to formulate recommendations for the protection and support of forest dwelling bats. BCT utilised this knowledge and, with assistance from Peter Boye and other EUROBAT contacts, investigated tree and woodland management in the UK that would benefit bats, with the aim of producing guidelines for managers of both private and public woodlands and forests. In collaboration with the Forestry Commission, English Nature and the Countryside Council for Wales, guidelines were produced in 2005 and widely circulated.

Working towards Resolutions 1 Annex K and 4.9 on implementing the Conservation Management Plan, and with funding from UK Government Departments, BCT organised a three-day workshop in December 2004 in the UK to investigate minimum bat survey requirements for three areas of



concern — open space (looking particularly at survey for highways), buildings, and forests/woodland areas. To be successful, the breadth of experience of bat experts from countries across Europe was needed, and their kindness to donate over three days of their time to attend. This they did, and BCT was thrilled to see the aims of the workshop being addressed and very grateful for the co-operation and generosity of all involved. A lot of hard work was undertaken on those three days and evenings, the evening work especially was helped along with the very excellent organic beer available at the venue! It was excellent also for all countries involved to be able to share their knowledge and learn from each other. BCT is still working on writing up the guidelines resulting from the workshop, and hopes a draft will be publicly available in the spring of 2006.

BCT is pleased to see Resolution 4.7 on wind turbines, and the action coming out of this. This is an area of importance in the UK, as wind turbine proposals are on the increase and there has been a move for small household wind turbines to become exempt from planning permission. BCT continues to lobby for bats to be taken into account in these matters, and it is extremely helpful to have this resolution as back-up.

Resolution 3.5 International Year of the Bat 2001 provided a huge opportunity for volunteer bat groups in the UK, of which there are 95. With funding from the Government, there was a programme of events across the UK in August and September, run mostly by volunteers. BCT launched the week in London with celebrity support and attendance by Andreas Streit. There were 33 International Bat Week Events held in the UK,

with coverage in national and local press, national and local television and radio.

BCT would like to record that the majority of bat work is undertaken by the volunteer network in the UK, with most bat workers connected to their local bat group in some way. BCT supports the volunteer network by providing information, resources and training, and the volunteer network undertakes a wide range of bat conservation including roost construction and habitat maintenance, roost visits to householders, injured bat collection and rehabilitation, research, education and awareness raising. This works towards meeting Resolution 3.8.

The volunteer network is also essential to the running of the UK Bat Helpline. Thousands of calls and emails are received each year to the Helpline, many requiring help locally. It is the network of bat groups and bat rehabilitators that enables this need to be met. In addition, between May and September we are able to run an Out of Hours Helpline which would not be possible without the help of volunteers; callers can get advice and, if necessary, a visit, 24 hours a day. This not only promotes the conservation and awareness of bats, it also helps manage the (small) risk from EBLVs. Because of this, there is close collaboration with the government's health agency and department, who provide some funding towards the Helpline's running costs.

Main obstacle for implementing the Agreement's goals

We prefer to think of these as challenges rather than obstacles! There are many environmental issues in the world now, and bat conservation is but one issue. This is a challenge in itself — to keep the profile of



bat conservation high up in governments' and people's minds. However, what is good for many aspects of nature conservation — education, high quality and diverse habitats, links or corridors between habitats, low pollution, wide fauna and flora biodiversity, management of climate change — is also good for bats. Working closely with other environmental organisations to understand different points of view and work towards mutually agreeable goals, combined with improving connections with business and industry, is necessary for truly sustainable development. An example of this is climate change, bird, bat and landscape groups working together on wind turbines.

NGO activity is vital for meeting the Agreement's goals, and NGOs welcome the continued support of government to facilitate this. Furthermore, establishment of a strong network of NGOs throughout Europe collaborating under a BatLife partnership is an opportunity to be embraced.

Promotion of EUROBATS, raising awareness of EUROBATS

The existing Bat Night initiatives are excellent in raising awareness of bats generally amongst the public, so it would be worthwhile building on this. To raise further awareness of EUROBATS specifically, those attending bat walks need something to take away with them. This could be a leaflet or bookmark with information about EUROBATS for the adults, and perhaps a EUROBATS sticker for children. For example, for the European Bat Night in 2005 BCT prepared a new leaflet 'What bat is that?' aimed at adults and children and branded with the EUROBATS logo in addition to our own.



Leaflet of BCT inviting to bat walk. © BCT

Future focus of the Agreement

The Agreement is extremely valuable for bat conservation in Member States, and should continue to focus on requirements to maintain roosts within buildings (including education and advice), promotion and safeguard of accessible and high quality foraging areas, reduction in all pesticide use, and promote work to understand how bats use the landscape.

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List of abbreviations

AC	Advisory Committee
ACCOBAMS	Agreement for the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
AEWA	Agreement on the Conservation of African Eurasian Migratory Waterbirds
ANPU	Armenian Nature Protection Union (Armenia)
ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas
BAMBI	Environmental Education Centre (Slovakia)
BCIreland	Bat Conservation Ireland (Ireland)
BCT	Bat Conservation Trust (UK)
BfN	Federal Agency for Nature Protection (Bundesamt für Naturschutz)
BfV	Bund für Vogelschutz (Society for Bird Protection) (Germany)
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit) (Germany)
BRPG	Bat Research and Protection Group (Bulgaria)
CBD	Convention on Biological Diversity
CESON	The Czech Bat Conservation Trust (Czech Republic)
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMS	Convention on Migratory Species
COP	Conference on Parties
DEFRA	Department for Environment, Food and Rural Affairs (UK)
DEHLG	Department of the Environment, Heritage and Local Government
EBLVs	European Bat Lyssa Virus
EBN	European Bat Night
EEC	European Economic Community
EIA	Environmental Impact Assessment
EU	European Union
EUROBATS	Agreement on the Conservation of Populations of European Bats



FFPS	Flora and Fauna Preservation Society
GEF	Global Environmental Facility
GIRC	Gruppo Italiano Ricerca Chiroterteri (Italy)
IBUH	Important Bat Underground Habitats
IUCN	The World Conservation Union
JNCC	Joint Nature Conservation Committee (UK)
LIFE	EU LIFE Projects
MEDD	Ministere de l'Ecologie et du Developpement Durable (France)
MOP	Meeting of Parties
MP	Member of Parliament
NABU	Naturschuttbund Deutschland (German Society for Nature Conservation) (Germany)
NBMP	National Bat Monitoring Programme (UK)
NCC	Nature Conservancy Council (UK)
NGOs	Non-Governmental Organisations
NIBG	Northern Ireland Bat Group (Ireland)
NPWS	National Parks and Wildlife Service (Ireland)
ONF	National Forest Office
PON	Porocumienie dla Ochrony Nietopercy (Polish Agreement for Bat Protection) (Poland)
PSCIs	Potential Sites of Community Interest (Slovenia)
RBPA	Romanian Bat Protection Association (Romania)
SACs	Special Areas of Conservation
SCA	Slovak Caves Administration (Slovakia)
SBCG	Slovak Bat Conservation Group (Slovakia)
PSCIs	Potential Sites of Community Interest
SDPVN	Slovenian Association for Bat Research and Conservation (Slovenia)
SNC	State Nature Conservancy (Slovakia)
SSC	Species Survival Commission
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VWT	Vincent Wildlife Trust (Ireland)
WWF	World Wildlife Fund



Parties to EUROBATS

AGREEMENT ON THE CONSERVATION OF POPULATIONS OF EUROPEAN BATS

Entered into force on 16 January 1994

31 of 48 Range States are Parties to the Agreement

(The Parties to the Agreement are written in **bold** letters.)

Range States	Date of Signature	Date of deposit of Instrument of Accession
Albania		22 June 2001
Andorra		
Armenia		
Austria		
Azerbaijan		
Belarus		
Belgium	4 December 1991	14 May 2003
Bulgaria		9 November 1999
Croatia		8 August 2000
Cyprus		
Czech Republic		24 February 1994
Denmark	4 December 1991	6 January 1994
Bosnia and Herzegovina		
Estonia		11 November 2004
European Community		
Finland		20 September 1999
France	10 December 1993	7 July 1995
Georgia		25 July 2002
Germany	5 December 1991	18 October 1993
Greece		



Holy See		
Hungary		22 June 1994
Ireland	21 June 1993	21 June 1995
Italy		20 October 2005
Latvia		1 August 2003
Liechtenstein		
Lithuania		28 November 2001
Luxembourg	4 December 1991	29 October 1993
Macedonia, FYR		15 September 1999
Malta		2 March 2001
Moldova		2 February 2001
Monaco		23 July 1999
Netherlands	4 December 1991	17 March 1992
Norway	3 February 1993	Not necessary
Poland		10 April 1996
Portugal	4 June 1993	10 January 1996
Republic of Montenegro		
Republic of Serbia		
Romania		20 July 2000
Russian Federation		
San Marino		
Slovak Republic		9 July 1998
Slovenia		5 December 2003
Spain		
Sweden	4 March 1992	Not necessary
Switzerland		
Turkey		
Ukraine		30 September 1999
United Kingdom	4 December 1991	9 September 1992



List of protected species

**Bat species occurring in Europe to which this Agreement applies
(Species listed in the Annex to the Agreement Text)**

Pteropodidae
<i>Rousettus aegyptiacus</i> (Geoffroy, 1810)
Emballonuridae
<i>Taphozous nudiventris</i> (Cretzschmar, 1830)
Rhinolophidae
<i>Rhinolophus blasii</i> (Peters, 1866)
<i>Rhinolophus euryale</i> (Blasius, 1853)
<i>Rhinolophus ferrumequinum</i> (Schreber, 1774)
<i>Rhinolophus hipposideros</i> (Bechstein, 1800)
<i>Rhinolophus mehelyi</i> (Matschie, 1901)
Vespertilionidae
<i>Barbastella barbastellus</i> (Schreber, 1774)
<i>Barbastella leucomelas</i> (Cretzschmar, 1830)
<i>Eptesicus bottae</i> (Peters, 1869)
<i>Eptesicus nilssonii</i> (Keyserling & Blasius, 1839)
<i>Eptesicus serotinus</i> (Schreber, 1774)
<i>Hypsugo savii</i> (Bonaparte, 1837)
<i>Myotis alcathoe</i> (von Helversen & Heller, 2001)
<i>Myotis aurascens</i> (Kusjakin, 1935)
<i>Myotis bechsteinii</i> (Kuhl, 1817)
<i>Myotis blythii</i> (Tomes, 1857)
<i>Myotis brandtii</i> (Eversmann, 1845)
<i>Myotis capaccinii</i> (Bonaparte, 1837)
<i>Myotis dasycneme</i> (Boie, 1825)
<i>Myotis daubentonii</i> (Kuhl, 1817)
<i>Myotis emarginatus</i> (Geoffroy, 1806)



<i>Myotis hajastanicus</i> (Argyropulo, 1939)
<i>Myotis myotis</i> (Borkhausen, 1797)
<i>Myotis mystacinus</i> (Kuhl, 1817)
<i>Myotis nattereri</i> (Kuhl, 1817)
<i>Myotis nipalensis</i> (Dobson, 1871)
<i>Myotis cf. punicus</i> (Felten, 1977)
<i>Myotis schaubi</i> (Kormos, 1934)
<i>Nyctalus lasiopterus</i> (Schreber, 1780)
<i>Nyctalus leisleri</i> (Kuhl, 1817)
<i>Nyctalus noctula</i> (Schreber, 1774)
<i>Otonycteris hemprichii</i> (Peters, 1859)
<i>Pipistrellus kuhlii</i> (Kuhl, 1817)
<i>Pipistrellus nathusii</i> (Keyserling & Blasius, 1839)
<i>Pipistrellus pipistrellus</i> (Schreber, 1774)
<i>Pipistrellus pygmaeus</i> (Leach, 1825)
<i>Plecotus alpinus</i> (Kiefer & Veith, 2002)
<i>Plecotus auritus</i> (Linnaeus, 1758)
<i>Plecotus austriacus</i> (Fischer, 1829)
<i>Plecotus kolombatovici</i> (Dulic, 1980)
<i>Plecotus sardus</i> (Mucedda, Kiefer, Pidinchiedda & Veith, 2002)
<i>Vespertilio murinus</i> (Linnaeus, 1758)
<i>Miniopterus schreibersii</i> (Kuhl, 1817)
Molossidae
<i>Tadarida teniotis</i> (Rafinesque, 1814)



EUROBATS

1991-2006. EUROBATS celebrates its 15th anniversary.

EUROBATS Publication Series, No 1

In publishing this book EUROBATS proudly celebrates 15 years since the Agreement on the Conservation of Populations of European Bats was signed in 1991. We believe that the EUROBATS Anniversary represents the success of the member states to co-operate within the Agreement, as well as a milestone in the history of bat conservation in Europe.

The work of countries across Europe in studying bats and improving our knowledge about their ecological value is crucial, not only because bats are an essential component of the biodiversity of Europe, but they also represent one of the best natural indicators of the health of an ecosystem.

We hope this publication will give an insight into the substantial progress recent generations of bat researchers have made in the area of bat research across the geographical range of EUROBATS.

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