



7th Meeting of the Advisory Committee

Bucharest, Romania, 27 - 29 May 2002

Synthesis of the National Implementation Reports

Annex D

Data Collection

Parties, which collect data:

Parties: Albania¹⁾, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Lithuania, Luxembourg, Republic of Macedonia, Republic of Moldova, Monaco¹⁾, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Ukraine, United Kingdom

Non-Party Range States: Armenia, Azerbaijan, Belarus, Belgium (Wallonie), Estonia, Georgia, Russian Federation, Slovenia, Yugoslavia

Who collects it:

- Bulgaria: Institute of Zoology - BAS
National Museum of Natural History - BAS
Bat Research and Protection Group (NGO)
- Czech Republic: Czech Bat Conservation Trust (CBCT, CESON in Czech)
Czech Union of Nature Conservationists (CSOP in Czech)
- Denmark: The Zoological Museum, København
- Finland: Zoological Museum, Finnish Museum of Natural History
- France: Groupe Chiroptères de la Société Française pour l'Etude et la Protection des Mammifères (SFPEM)
Muséum National d'Histoire Naturelle (MNHN)
Local bat workers and other mammal and nature conservation groups
- Germany: The collection and evaluations of data in the *Länder* is still carried out in collaboration between nature conservation authorities, coordination offices for bat conservation, specialist organisations and interested individuals.
- Hungary: Hungarian Bat Research Society: House-dwelling bat database
Hungarian Bat Protection Foundation: Fauna database
Hungarian Natural Science Museum: Register of specimen of museums
- Lithuania: Lithuanian Society for Bat Conservation (LSBC)
Institute of Ecology of the Lithuanian Academy of Sciences
Ministry of Environment of the Republic of Lithuania

¹⁾ no details available

Luxembourg:	The Natural History Museum collects data of a national bat survey project in the national database LUXNAT
Macedonia:	Macedonian Museum of Natural History, Skopje
Moldova:	specialists from Group FAUNA since 1995
Netherlands:	a few national and regional natural history bodies
Norway:	Norwegian Zoological Society (NZF) Norwegian Chiroptera Information Centre (NIFF)
Poland:	Chiropterological Information Centre (C.I.C.) (Kraków) All-Polish Society for Bat conservation (Warsaw) Chiropterological Section of the Copernicus Naturalists Society (Kraków) Mazovian Group of Bat Researches (Warsaw) Polish Society for Nature Conservation "Salamandra" (Pozna) Polish Society of Wildlife Friends "Pro Natura" (Wroclaw)
Portugal:	"Instituto da Conservação da Natureza" in collaboration with "Faculdade de Ciências de Lisboa"
Romania:	<i>no details mentioned</i>
Slovak Republic:	State Nature Conservancy of the Slovak Republic Banská Bystrica, which includes Administration Offices of the 16 Protected Landscape Areas and 7 National Parks "Group for Bat Protection" (SON in Czech) Environmental Education Center BAMBI, Moldava nad Bodvou Miniopterus Working Group, Bratislava Slovak Speleological Society and Slovak Public Caves Office (supervise 12 caves open to the public in Slovakia)
Ukraine:	Zoological Museum of the National Academy of Sciences (collections) National Natural History Museum, Kyiv (collections) Zoological Museum of National University, Kyiv (collections) State Museum of Natural History, Lviv (collections) Zoological Museum of Lviv National University (collections) Museum of Nature of Kharkiv State University (collections)
United Kingdom:	
UK-wide:	The UK Environmental Change Network: Bat monitoring (activity and usage of habitat types at twelve terrestrial sites across the UK) as part of an integrated monitoring programme BCT and RSPB: Species Protection Database
Great Britain:	DETR / BCT: National Bat Monitoring Programme EN, SNH, CCW and DOE (NI): Bat sites and bat information databases (an update was undertaken) JNCC / Bristol University: National Bat Habitat Survey database Biological Records Centre: Distribution records CCW: Lesser horseshoe summer roost emergence counts in Wales Forest Enterprise Regions: Bat box data

BCT: Bats in Churches data and databases for selected species

VWT: Wales and West Midlands Lesser horseshoe bat survey

VWT: Bechstein's bat in bat boxes database

Volunteer bat groups: local datasets

Northern Ireland: Environment and Heritage Service (NI) and members of the Northern Ireland Bat Group: data on roost sites, stored in the Centre for Environmental Data Recording in the Ulster Museum

Gibraltar: The Gibraltar Ornithological and Natural History Society (GONHS)

Isle of Man: local Biological Records Center

Manx Wildlife Trust

Manx Bat Group

Armenia: Department of Zoology of the Faculty of Biology of the Yerevan State University
Institute of Zoology of National Academy of Science of Armenia
Armenian Nature Protectors Union (NGO)

Azerbaijan: Institute of Zoology of the Azerbaijan Academy of Sciences

Belarus: Zoological Museum of the Belarussian State University, Minsk
Zoological collection of the Brest University and
Grodno Museum of Local Lore (Grodno)

Belgium(Wallonie): *no specification*

Estonia: *no specification*

Georgia: *no specification*

Russian Federation: Zoological Institute, Russian Academy of Sciences
The Ecological Centre "Dront"
Udmurt State University and Institute of Applied Ecology
Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences
Zoological Museum of Moscow State University
The Faculty of Biology of Moscow State University
Zvenigorod Biological Station of Moscow State University
Biological Research Institute, St. Petersburg State University
Department of Zoology, Penza State Pedagogical University

Slovenia: Slovenian Museum of Natural History
Department of Nature Conservation
Biology Students' Society, Section for Bat Research and Conservation

Yugoslavia: (no special institution for collecting and evaluating data concerning bat conservation and management)
Natural History Museum, Belgrade (database, collections)
Wildlife Conservation Society MUSTELA (field work, database)

How data is collected:

Bulgaria: monitoring, mistnettings

Czech Republic: monitoring, hibernation site counts, bat banding

Denmark: monitoring with bat detectors

Finland:	monitoring with bat detectors, analysis of museum collections, monitoring on nursery colonies and hibernation sites
France:	<i>no details mentioned</i>
Germany:	<i>no details mentioned</i>
Hungary:	<i>no details mentioned</i>
Lithuania:	monitoring, banding
Luxembourg:	surveys (<i>no details mentioned</i>)
Macedonia:	<i>no details mentioned</i>
Moldova:	no details; the data is stored in a database
Netherlands:	monitoring
Norway:	<i>no details mentioned</i>
Poland:	monitoring
Portugal:	monitoring (observations, underground roosts monitoring) and banding, radio-telemetry, analysis of excrements
Romania:	<i>no details mentioned</i>
Slovak Republic:	monitoring (winter bat census, survey of bat occurrence in buildings), bat banding, limited use of bat detectors, local databases
Ukraine:	analysis of museum collections, ringing, monitoring
United Kingdom:	monitoring, ringing, radio-tracking

Armenia:	<i>no details mentioned</i>
Azerbaijan:	monitoring: observation of summer/reproduction and winter roosts, evaluation of collections in Azerbaijan, Georgia and Russia (St. Petersburg, Moscow), literature information
Belarus:	museum collections, ringing
Belgium (Wallonie):	monitoring: observation of summer/reproduction and winter roosts
Estonia:	bat counts in winter and summer, bat detector surveys
Georgia:	monitoring of summer and winter roosts, use of bat detectors, museum collections
Russian Federation:	monitoring
Slovenia:	monitoring of hibernaculas
Yugoslavia:	monitoring, databases, collections

Research and protection:

Bulgaria:

?? Inventory of the bat fauna of two national Parks "Central Balkan" and "Rila" (1997-1998)

?? Conservation of four bat caves in the Prebalkan region (1997-1999)

?? Bats - Conservation Plan (1998-2000). Main objectives:

- Development of an Information System and Database for important bat roosts in 4 regions in Bulgaria (Eastern Rhodopes, Strandja, Ropotamo, Dobrudja)
- Assessment of the conservation status of the bats on the territory of the Eastern Rhodopes
- Studies on the bat fauna of Dobrudja and Strandja regions

- Training workshops "Bat Conservation" for the staff of the Nature Information Centers, National Parks, Regional Environmental Inspectorates, Forestry Offices etc. that are involved in the Program
- ?? Ecological studies on rare and endangered bat species in Bulgaria (1996-2000)
- ?? Monitoring of numerous bat colonies in Western Stara Planina Mnt. (1998-1999)
- ?? Data collection on distribution and reproductive behaviour of the Geoffroy's bat *Myotis emarginatus* in Bulgaria (1997-1999)
- ?? Biodiversity assessment of bat fauna in protected territories "Estuary of rivers Veleka and Silistar" (1998), South Black Sea Coast (1998-1999)
- ?? Species composition and conservation needs of bat fauna in Vitosha Mountain Natural Park (1999-2000)

Czech Republic:

MSc and PhD studies:

- ?? Food and feeding ecology of a bat community in the Podyji National Park (southern Moravia)
- ?? Food and foraging ecology of *Eptesicus serotinus*
- ?? Morphometrical study on *Myotis myotis* and *Myotis blythii*
- ?? Morphological study on *Plecotus auritus* and *Plecotus austriacus*
- ?? Behaviour in nursery colonies of *Myotis myotis*

Others:

- ?? Long-term study of a bat community in the Podyji National Park
- ?? Studies on bat communities in the Moravian Karst, in a cave in southern Bohemia, in an old mine in south-western Bohemia, in small pseudokarstic caves in eastern Bohemia and at other sites
- ?? Habitat use and flight activity of various bat species (e.g. pipistrelles), studied with the use of bat detectors
- ?? Bat fauna of Turkey, Iran, Syria
- ?? Ecology of bats in agrocoenoses
- ?? Roost ecology of *Myotis brandtii*
- ?? Distribution of *Vespertilio murinus* in the country and its life history
- ?? Course of cave visitation by bats in the Bohemian Karst
- ?? Taxonomic, systematic and zoogeographical studies on Vespertilionidae
- ?? More attention was paid in 2000 to maternity roosts (*Rhinolophus hipposideros*, *Myotis myotis*, *Myotis emarginatus*) than in previous years, mostly because of the preparation of NATURA 2000 in the country
- ?? Behaviour of *Pipistrellus nathusii*
- ?? Seasonal dynamics of a population of *Myotis daubentonii*
- ?? Biology of *Myotis myotis* in pre-hibernation period
- ?? Palaeontology of Vespertilionidae
- ?? A special issue of the *Vespertilio* journal is in press, summarising data on the most important underground hibernacula in the Czech Republic from the last 30 years.

Denmark:

- ?? Registration of the occurrence of Danish bat species by Hans Baagoe (1973-1994) => Publication in 2000: "Baagoe, H.J.: Danish Bats: Atlas and Analysis of Distribution, Occurrence and Abundance."

Finland:

- ?? Registration of the occurrence and distribution of bat species in Finland by Torsten Stjernberg, Juhani Lokki and Olli Haukkovaara => will be published as an atlas on bats in Finland
- ?? Research project on the distribution and occurrence of bats, started in 1999 by the University of Turku, continued in summer 2000

France:

- ?? Eco-ethological studies on *Myotis capaccinii* in Languedoc-Roussillon
- ?? Studies on genetics and population biology of *Myotis capaccinii*
- ?? Studies on hunting habitats of *Myotis myotis* on Corsica
- ?? Eco-ethological studies on *Myotis emarginatus* in the Centre

Germany:

- ?? Research and development project by the Federal Office for Nature Conservation entitled "Studies and recommendations for the conservation of bats in forests", completed in 1998, with publication of the results in 2000 and 2001
- ?? Research and development project by the Federal Office for Nature Conservation entitled "Population-genetic examination on the structure of bat populations in the case of the noctule bat (*Nyctalus noctula*), completed in 1998, with publication of the results in 2000
- ?? Trial and development project by the Federal Office for Nature conservation in collaboration with the *Regierungspräsidium Gießen* and the *Stiftung Hessischer Naturschutz* entitled "Creating a roosting site network for building-dwelling bat species by securing and extending the roosting opportunities in and on building" scheduled for completion in 2001
- ?? Research and development project by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety entitled "Bat roosts on both sides of the River Oder"
- ?? LIFE project entitled "Transboundary programme on the conservation of bats in the west of central Europe", completed in 1998, final report now available (Saarland, Rhineland-Palatinate and North Rhine-Westphalia)
- ?? Research project entitled "Population development and conservation of bats in Bavaria" with monitoring counts in the maternity roosts of the greater and lesser horseshoe bat, the mouse-eared bat and the Geoffroy's bat and in selected winter roosts, focussing primarily on Northern Bavaria
- ?? Investigation of the rabies situation amongst bats in Brandenburg
- ?? Species aid programmes for the lesser horseshoe bat in Saxony-Anhalt and Thuringia
- ?? Monitoring programme to investigate the significance of the Levensau viaduct in Kiel for hibernating noctule bats and common pipistrelles (Schleswig-Holstein)
- ?? Regional research projects on the distribution and ecology of selected species, such as the parti-coloured bat in Brandenburg, the greater horseshoe bat and soprano pipistrelle in Baden-

- Württemberg, the lesser horseshoe bat, mouse-eared bat, serotine bat and others in Thuringia, and the noctule bat in the Philosophenwald forest in Gießen (Hesse)
- ?? Investigation of winter bat roosts in summer (Baden-Württemberg)
 - ?? Project on "Wild mammals in Baden-Württemberg", to determine, *inter alia*, the distribution, risk and protection requirements of bats in Baden-Württemberg
 - ?? "Bat atlas" project to provide the foundations for bat conservation in Bavaria
 - ?? "Elbe species and biotope conservation programme" in Saxony-Anhalt, with an explicit focus on bat conservation and a catalogue of measures
 - ?? Recognition of the function of a bat ringing centre for the east German *Länder* by the state Office for the Environment and Geology in Saxony, which in 1999 made corresponding agreements with the responsible State Offices of Mecklenburg-Upper Pomerania, Brandenburg, Thuringia and Saxony-Anhalt. A ringing programme has been co-ordinated between the *Länder* involved and is being carried out by some 20 volunteers
 - ?? Recognition of the function of a bat marking centre for Central Europe by the Alexander Koenig Zoological Research Institute and Museum in Bonn

Hungary:

- ?? Bat boxes (Fehér, Paulvics, Dobtosi, Galgóczy, Géczi)
- ?? Monitoring of caves (Szatyor, Z. Molnár, Gombkőto, Paulovics, Juhász)
- ?? Monitoring of mines (Bihari, Gombkőto, Z. Molnár, Géczi, Boldogh)
- ?? Forest-dwelling bats research (Estók)
- ?? Ecological conditions of the hibernacula of *Rhinolophus ferrumequinum* (Szatyor, Bihari)
- ?? Monitoring of house-dwelling bats (Bihari, Fehér, Dobrosi, Géczi, Z. Molnár, Gombkőto)
- ?? Population-ecology of Ectoparasites (Paulovics) - finished
- ?? Activity of hibernating bats (Paulovics)
- ?? Taxonomy, systematics and zoogeography of Old World bats (Csorba)
- ?? Bats of wetlands (Dombi, Papp, Dobrosi)
- ?? Ecological roles of bats in forest ecosystems (Papp) - finished
- ?? Movements of *Myotis emarginatus* (Papp) - finished
- ?? Rehabilitation and reproduction of injured and captured bats (Z. & V. Molnár)
- ?? Study of species diversity and sex ratio at mating sites (caves) in autumn (Z. Molnár, Paulovics)
- ?? Ecology of *Myotis nathusii* (Fehér)
- ?? Pathoanatomy and pathophysiology of bats (V. Molnár)
- ?? Veterinary treatment of sick and injured bats (V. Molnár)
- ?? Problems and factors by keeping bats in captivity (V. Molnár)
- ?? Endoparasitological (coprological) and ectoparasitological studies of bats (V. Molnár)
- ?? Ectoparasities of *Myotis daubentonii* (Paulovics)
- ?? Migration of *Myotis daubentonii* and *M. dasycneme* (Dombi)
- ?? Population ecology of bats (Bihari)
- ?? Roost selection of *Nyctalus noctula*, *Rhinolophus ferrumequinum* and *Myotis myotis* (Bihari)
- ?? Urbanization of bats (Bihari) - finished

?? Ecology and monitoring of *Miniopterus schreibersii* (Gombkőto) - finished

?? Databases:

- House-dwelling bat database (Hungarian Bat Research Society)
- Fauna database (Hungarian Bat Protection Foundation)
- Hungarian Mammal Database (Nature Foundation)
- Register of specimens of museums (Hungarian Natural Science Museum)

Lithuania:

- ?? Monitoring of eight selected bat species (surveys of winter roosts and breeding sites) (since 1999)
- ?? Search for and studies on the most important sites for bats in Lithuania (1996-1998)
- ?? Project of Lithuania (Kaunas University of Medicine) and Poland (Gdansk University) "DNA heterogeneous genetic research of *Pipistrellus nathusii* sp." (started summer 2001)
- ?? Several working groups were formed due to the program "Implementation of Natura 2000 Network on regional and local level" to deal with investigation, research, fieldwork and partially monitoring of the selected bat species *Barbastella barbastellus* and *Myotis dasycneme*.

Luxembourg:

- ?? A programme called "Combles et Clochers" (Steeple and attics) initiated by SICONA, a syndicate of communes, aims to open 14 churches for bats in the Western part of the country.
- ?? With beginning in the year 2000, a new financial aid can be granted for protection measures and habitat improvement measures for threatened species. A first financial aid has been granted for the bat-friendly restoration of a roosting site in a large church attic.

Macedonia:

- ?? No recent ongoing programmes or research.

Moldova:

- ?? The Water Quality Management and biodiversity Conservation of the Lower Dniester River Project (financed by GEF) includes bat protection issues, such as bat friendly forest management.

Netherlands:

- ?? Monitoring project on bat rabies (1986 -)
- ?? Study on the functions of vertical landscape elements for bats (PhD thesis, finished 1998)
- ?? Inventory of the problems dealing with inquiries regarding building-dwelling bats
- ?? Evaluation of the National Bat Action Plan 1988
- ?? Environmental impact assessment reports focused on bats have been issued for eight different areas
- ?? Management approval study of bats in an industrial area in the Municipality of Rotterdam
- ?? Management approvals for the conservation of bats were issued for eleven different areas
- ?? A 10-year feasibility study (begun in 1997) is being carried out evaluating the use of bridge pier spaces as bat winter roosts
- ?? Preliminary investigation in the Nijmegen area with an eye to future use of church roof cavities as summer roosts
- ?? Study on the effectiveness of roof cavity surveys as a monitoring methodology of bat populations

- ?? Analysis of the utility of summer roost surveys for elaborating population trends of several bat species
- ?? National monitoring programme on mammals, including bats
- ?? A monitoring project and seasonal activity study on *Pipistrellus pipistrellus*, *Plecotus auritus* and *Myotis daubentonii*, mainly roosting in bat boxes, is being carried out in the Rimborg Forest in Southern Limburg

Norway:

- ?? A number of County Governors have in recent years funded mapping of the distribution of different species
- ?? The Directorate for Nature Management has funded an evaluation of the resolutions in relation to the national implementation, in particular on habitat proposals. A project in relation to this was started in 2000 and is expected to continue in 2001.
- ?? The Directorate has financed a number of projects relating to general mapping of bat occurrences in Norway, *inter alia* these are:
 1. Mapping of forest-dwelling species in southern and western parts of the country. This project runs over three seasons and is planned to be concluded in 2002.
 2. Mapping of underground hibernation localities potentially suitable for bats (mines, caves, etc.). Project concluded in 2001.
 3. Annual monitoring of selected underground hibernation localities (eight abandoned mines in SE Norway) is to be continued (financed for five years).
 4. General mapping of distribution of all mammal species in Norway with the aim of producing a national mammal atlas (tentative publication set to 2004).
 5. A reporting system and follow up on bat observations (primarily roosts) reported by the public.
 6. Training seminar on bat surveying, with emphasis on bats in forests and finding of roosts (five days in June/July 2001, with invited expert from The Netherlands).

Poland:

- ?? Doctor's thesis:
 - Aleksander RACHWALD (SGGW Warszawa) "Activity and environmental preferences of bats in natural forest in Bialowieza National Park" (1988)
 - Krzysztof PIKSA (Akademia Pedagogiczna in Kraków) "Bats from caves in the Tatra Mountains and its relation to history of region, geography and ecology " (1999)
 - Tomasz JARZEMBOWSKI (Gdansk University) "Ecology of *Pipistrellus nathusii* during seasonal migration on Mierzeja Wisłana (Northern Poland)" (2000)
- ?? Master's thesis:
 - Aneta DUSZYNSKA (Szczecin University): "Evaluation of the bat fauna in some biotops of the Cedynski Landscape Park" (1998)
 - Jakub NOWAK (Jagiellonian University): "Dynamic of the temporal changes of bats hibernating in some caves of Tatra Mountains in relation to the bat fauna of the mountains." (1999)
 - Katarzyna OCHMAN (Jagiellonian University): "Analysis of holocene bat fauna from Pod Sokola Góra Cave in systematics and zoogeographical aspects" (1999)

- Radoslaw WIERTEL (Jagiellonian University): "Ectoparasits of bats from Southern Poland: *Diptera: Nycteribidae, Siphonaptera: Ischnopsyllidae, Acari: Ixodidae*" (1999)
 - Agnieszka KLESZOWSKA (Jagiellonian University): "Diurnal activity and behaviour of bats *Roussetus aegyptiacus* GEOFFROY in captivity in ZOO Kraków" (2000)
 - Mateusz CIECHANOWSKI (Gdansk University): "Bats (*Chiroptera*) of the Darzlubska Forest - species composition and some aspects of ecology and biometry" (2000)
- ?? Every year, at the first half of February winter bat censuses in caves and cave-like shelters are organised. This action entitled: "Winter Bat census" (DSN) was realised in 1999 (12th DSN) and in 2000 (13th DSN). This action is developed by Chiropterological Information Centre and as well as by regional centres, which conduct permanent monitoring of bat population in regions.
- ?? Another very interesting enterprise conducted by the Polish Society for Nature Conservation "Salamandra" in Poznan consisted in the building of the bats observatory named "Batmanówka", at the attic of school at Kopanki. At the attic the summer breeding colony of *Myotis myotis* can be found. The behaviour of the animals can be watched through the transparent copula that makes the barrier between the observers and the colony of bats. The colony can be lighted up with red light that prevents from disturbance.

Portugal:

- ?? Evaluation of the amount of disturbance of some of the most important underground roosts.
- ?? Control of the vegetation in the entrances of some roosts.
- ?? Monitoring program of cave-dwelling species (since 1987).
- ?? Identification of the most important feeding areas of some cave-dwelling species (*Myotis myotis*, *Miniopterus schreibersii* and *Rhinolophus mehelyi*) (using radio-tracking and bat detectors).
- ?? Diet of *Myotis myotis* (dropping analysis and comparing it with results of pitfall trapping).
- ?? Inventory of bat fauna in Natural Parks.
- ?? Project on several aspects of population biology of *Myotis myotis*.
- ?? Development of bat-boxes for Mediterranean areas.
- ?? Habitat use of *Tadarida teniotis*.
- ?? Development of bat-boxes for Mediterranean areas.

Romania:

- ?? In 1999, the LIFE project „Combined actions for the protection and the development of the Apuseni Mountains' natural heritage" was aproved, proposed by the Bihor County Council in partnership with Speleological Institute and Romanian Speleological Federation. The project aims to prevent degradation of the karst heritage and to restore the adjacent degraded areas. The target sights are caves and surrounding karst areas, representing bat's habitats, on the other great value.
- ?? In December 2001, the LIFE-Nature project „Conservation Program for Bat's Underground Habitats in SW Carpathians" was started by Fauna and Flora International and the Green Cross Romania in partnership with the Speleological Institute, the Group for Underwater and Speleological Exploration and the „Grigore Antipa" National Museum of Natural History. The project overall objective is to put into place an effectively conservation management program in order to safeguard endangered species of bats, conserve their underground habitats and

incorporate biodiversity conservation as an integral part of sustainable human development in the Southwestern Carpathian region.

Slovak Republic:

- ?? Annual winter census of bats in more than 300 localities
- ?? Survey of nursery colonies in buildings
- ?? Project "Active Bat Conservation"
- ?? Grid mapping of bats using detectors
- ?? Ecto- and endoparasitological research
- ?? Faunistic research in several regions (e.g. Muránska planina, southern Slovakia, East Slovakian lowlands)
- ?? Dynamics of bat population in several caves open to public (e.g. Dobsinská Ice Cave, Domica)

Ukraine:

- ?? Preparation of a special bulletin on bats as a part of the Bulletin "Novitates Theriologicae"
- ?? Publications about general and regional reviews of bat fauna, distribution of bats in Ukraine, bat ecology incl. ringing and study on its migration, morphology and echolocation.
- ?? National Action Plan for the Conservation of bats is under preparation in co-operation with Department of Biological Resources of the Ministry of the Environment and Natural Resources of Ukraine. This programme consists of:
 - a) Identification of roost sites and habitats of bats;
 - b) Working out of approaches and measures for bat conservation;
 - c) Development of legal measures for conservation of bats;
 - d) Creation the network for monitoring and activities promoting bat conservation;
 - e) Public awareness relevant to the conservation of bats;
 - h) International co-operation in this field.

Programmes in progress:

- ?? Inventory of bat fauna in some Natural Parks and Reserves in the Eastern Carpathian Mts.
- ?? Monitoring of cave-dwelling species.
- ?? Migration status of bats in Ukraine.
- ?? Ascertaining of modern status and distribution of Pond Bat in the west part of Ukraine.
- ?? The results of bat investigations carried out by Ukrainian scientists are reflected in the publications for the following topics: general and regional reviews of bat fauna, distribution of bats in Ukraine, bat ecology, study of migrations, morphology. These publications are listed in the Annex 3 of the Ukrainian National Implementation Report.
- ?? D.Sc. theses are prepared or being under preparation:
 - Bobkova O.: Ektoparasites of bats in Ukraine.
 - Godlevsky L.: Comparative analysis of bat population in urbanised and natural areas in Ukraine.
 - Petrushenko Ya.: Vertebrate animals of the underground cavity.
 - Pokynchereda V.: Bat population of the underground shelters in Eastern Carpathians.
 - Tyshchenko V.: Dendrophilous Bats in the Western Podillia.

United Kingdom:

Action Plans, Meetings etc.:

- ?? Biodiversity Action Plans (BAP) by the UK Biodiversity Steering Group
- ?? Workshops on current research and identification of priorities for action plans for Horseshoe bats, Bechstein's and barbastelle bats (Dec. 1998 / March 1999)
- ?? Manx Biodiversity Action Plan
- ?? EN is currently running three Species Recovery programmes for bats: Greater horseshoe bat (1994 -), Barbastelle and Bechstein's bat (1995 -), Natterer's bat (1995-1999).
- ?? Wales Bat Symposium (CCW, 1997)
- ?? SNH supported a BCT Scottish Bat Day (meeting of Scottish bat workers) in October 1999
- ?? Specific measures for exceptionally large Pipistrelle house roosts in Scotland

Research projects underway in 1998 - 1999:

- ?? Development of Relative Toxicity Index for pesticides
- ?? Greater horseshoe recovery programme
- ?? Echolocation, flight and foraging
- ?? Greater horseshoe bat ecology
- ?? Annual bat colony survey
- ?? Application of molecular methodologies to studies of population genetics, social organisation and taxonomy
- ?? National Bat Monitoring Programme (*ongoing in 2000*)
- ?? Social organisation of Pipistrelle bats
- ?? Serotine bat breeding behaviour, site fidelity, mortality
- ?? Ecology of Daubenton's bat
- ?? Population/habitat studies
- ?? Ecology of Natterer's bat
- ?? Greater horseshoe bat foraging
- ?? Lesser horseshoe bat maternity roost monitoring (*ongoing in 2000*)
- ?? Lesser Horseshoe foraging
- ?? Bechstein's bat survey
- ?? Roost monitoring of Greater Horseshoe bat
- ?? Community Structure and resource partition of bats in Northern Ireland
- ?? Ecology and Conservation of Leisler's bat
- ?? Use of corridors by bats
- ?? Ecology and behaviour of Noctule bats
- ?? Research on the biology of Leisler's bat in Northern Ireland
- ?? Hedgerow architecture and its implications for pipistrelles and other bats
- ?? Bechstein's studies
- ?? Barbastelle studies
- ?? Long-eared and Serotine ecology PhD
- ?? Bat use of Farm Woodland Premium Scheme plantations
- ?? Noctule bat roosting and foraging behaviour
- ?? Bats & wildlife corridors

- ?? Ecology of pipistrelle species
- ?? Leisler's bat long-term ringing project
- ?? Bat rabies surveillance
- ?? Effects of avermectins on bat foraging over cattle grazed pasture
- ?? Wales & West Midlands Lesser horseshoe bat roost survey
- ?? Radio-tracking study of foraging behaviour of Lesser horseshoe bats
- ?? Radio-tracking studies to identify key foraging areas around important Greater horseshoe bat roosts for designations of SACs
- ?? Roosting and foraging ecology of Bechstein's bat
- ?? Roosting and foraging ecology of the Barbastelle
- ?? Design and construction of artificial roosts for Lesser horseshoe bats
- ?? Serotine bat regional variations in roost occupancy and diet
- ?? Feasibility of artificial maternity roosts for Lesser horseshoe bats
- ?? Bechstein's bat box project
- ?? Preservation, protection, enhancement and creation of underground habitats for bats
- ?? DNA profiling of Serotine bat colonies in SE England and adjacent mainland Europe

Research projects underway in 2000:

- ?? Bat box monitoring project at the River Thames
- ?? Long-term monitoring programme for bats on the rivers Usk and Wye
- ?? PhD thesis on genetic structure of Greater horseshoe bat populations in England and Wales
- ?? PhD thesis on the use of landscape elements by bats in north east Scotland
- ?? Promotion of the conservation of bats roosts
- ?? Winter feeding studies on Greater horseshoe bats
- ?? MSc thesis on the diet of the Pipistrelle bat in Dorset
- ?? Installation of automated bat counters
- ?? Monitoring of Lesser horseshoe bats
- ?? Ile of Man: survey of bridges and caves for bats
- ?? Devise of standard techniques to provide baseline data for 8 species of bat in the UK
- ?? Bat chamber Design and Monitoring project

Research projects underway in 2001:

- ?? Biodiversity Project (BCT, funded by EN and the Esmee Fairbairn Trust)
- ?? Radio tracking (The Wildlife Trust West Wales, funded by CCW)
- ?? The use of landscape elements by bats in N.E. Scotland (University of Aberdeen)
- ?? Bridge survey (Manx Bat Group)
- ?? Catchment and population in N. England (University of Leeds)
- ?? Sexual segregation in nesting and foraging of the *M. daubentonii* (University of Leeds)
- ?? Molecular ecology of the greater horseshoe (University of Bristol)
- ?? Autumnal swarming behaviour (University of Bristol)
- ?? The effect of torch light on foraging Daubentons in Surrey (University College, London)
- ?? Dispersal and foraging behaviour of greater horseshoe bats (English Nature - EN)
- ?? Radio tracking of greater horseshoe bats (EN)
- ?? Greater horseshoe (EN)

?? Winter feeding studies on greater horseshoe bats (EN)

?? Advice on bat colony management and mitigation (EN)

?? Greater horseshoe (Dorset Wildlife Trust)

Armenia:

?? An union NGO (ANPU) has been created, joined by more than 170 Armenian scientists, to save and protect the bats of Armenia, their shelters, the places of breeding, summer and winter roosts

?? One thesis for a Professor of Biological Science and 4 thesis for a degree of Doctor of Biological Sciences have been defended dealing with bat concerns

Azerbaijan:

?? Studies on the bat fauna of the Absheron Peninsula and Gobustan (eastern part of Azerbaijan)

?? Exploring of the bat fauna of the Lencoran Lowland in June 1999

?? Preparing of the project "Conservation strategies for underground habitats, forested and mountain areas along the flyway of bats in Azerbaijan"

?? Participation in the bat-detector workshop in Tbilisi (Georgia) in May 2000.

?? In 2001, members of the NGO "Mammalogists of Azerbaijan" have studied the bat fauna of the Kura Plain from the Apsheron Peninsula to the Western border with Georgia (mainly along the oil pipeline Baku-Supsa).

Belarus:

?? The materials on Chiroptera available in the country were collected in the 30s, the second half of the 40s – 80s of the XX century and are for the most part based on the faunistic researches of this group of mammals, conducted by the Belarussian zoologists I. N. Serzhanin and A. N. Kurskov.

?? The first most complete specific list of Chiroptera is associated with the publication of the monograph by I. N. Serzhanin "Mammals Of Belarus" (1956). Researches by A. N. Kurskov on territorial-biotopical distribution and biology of Chiroptera in the southwestern and central parts of the country fall at the 60s and 80s. He is also doing ringing of animals to find out migration routes of the migrating species.

?? In the 90s researches of Chiroptera are of uncoordinated sporadic nature and most of the time restricted to gathering of new data on the ecology and faunistics of the given group. Long-term work in this line of research was performed in Brest region and on the territory of the National Park "Belovezhskaya Puscha" by the specialists from the faculty of biology at the Brest University, M. G. Demianchik and V. T. Demianchik. Occasional researches on the territory of the National Park "Pripiatsky" were carried out by I. M. Zenina, and on the territory of the Berezinsky Reserve by the employers of the Zoological Museum of the Moscow State University, A. V. Borisenko and S. V. Kruskop and a scientist from the Reserve A. P. Kashtalilan. In august of 1998 Chiroptera species composition was explored by Gunars Peterson and Vieturs Vintulis of the Latvian Agricultural University (Elgava city).

?? A long-term prospect of studying this group is only present for Brest and adjacent regions where (at Brest University) there is a bats specialist. Training of another specialist on Chiroptera is intended at the post-graduate school of the Academy of Sciences of the Republic of Belarus in 2001-2004 for the Institute of Zoology (Minsk).

Belgium (Wallonie):

- ?? Transborder LIFE project for bat protection in winter roosts (regrouping the Wallonie, the G.D. of Luxembourg and contiguous region of France and Germany)
- ?? Protection of hibernating places against destruction and all kinds of disturbances
- ?? The operation "Lofts and steeples" aims to protect and to render accessible to the wild fauna lofts and steeples of public buildings (e.g. churches, schools, city halls)
- ?? Contacts of the Wallonian administration and the Provincial Technical Services and the Administration in charge of the Architectural Patrimony to systematise favourable adjustments for the fauna in public buildings, notably during renovations
- ?? Different agri-environmentale measures favourable to the fauna and flora and permitting development of the diversity and abundance of insect populations are initiated by the Region
- ?? A new project, the contract "Fallow - wild fauna", is currently under way of elaboration by the Region. The goal of this project is to regulate fallow in a manner generally more favourable to the wild fauna than in the past.
- ?? An agreement is anticipated between the Division of the Nature and Forests and the Ministry of the National Defence for integrated management of military territories in open and wooded environments (approximately 6000 ha).

Estonia:

Bat-related events and projects in 2000:

- ?? Regular bat counts in winter and summer monitoring sites under project "Bats" of the National Environmental Monitoring Programme (Matti Masing, Vello Keppart, Kaja Lotman & Lauri Lutsar).
- ?? Fieldwork of the project "The inventory of bats in winter in Hiiumaa County" (March 2000; Matti Masing).
- ?? First study of hibernating bats in Naissaare Island (March 2000; Matti Masing & Lauri Lutsar).
- ?? Renovation of doors of bat hibernation cellars at Suuremõisa (Hiiumaa) and at Raadi (Tartu), and special events dedicated to this activity (October 2000).
- ?? Fieldwork of the project "The inventory of bats in winter in Läänemaa County" (November 2000; Kaja Lotman, Lauri Lutsar & Matti Masing).
- ?? Project "Bats" of the National Environmental Monitoring Programme (Matti Masing, Vello Keppart, Kaja Lotman & Lauri Lutsar).
- ?? The inventory of bats in winter in Hiiumaa County (March 2000; Matti Masing).
- ?? The inventory of bats in winter in Läänemaa County (November 2000; Kaja Lotman, Lauri Lutsar & Matti Masing).

Bat-related events and projects in 2001 (see *Eptesicus* Newsdesk, www.hot.ee/sicista/eptesicus, October 2001):

- ?? International expedition to the bat hibernation sites of northwestern Estonia (03—18 March 2001; Matti Masing, Kaja Lotman, Yrjö Siivonen, Mikko Erkinaro & Eeva-Maria Tidenberg & Seppo Neuvonen).
- ?? Regular bat counts in winter monitoring sites under project "Bats" of the National Environmental Monitoring Programme (March 2001; Matti Masing and Lauri Lutsar). The counting of bats in

Piusa caves gave a record value of 4,573 bats in six caves which is the largest aggregation of hibernating bats known in northern Europe.

- ?? Fieldwork of the project "The inventory of bats in winter in Läänemaa County" (March 2001).
- ?? The first official meeting of the Estonian Bat Group with the authorities of nature conservation in Estonia, Tallinn, 9 May 2001; Kaja Lotman, Lauri Lutsar, Matti Masing & Riinu Rannap).
- ?? Participation in the First Baltic Bat Detector Workshop, Zhemaitia, Lithuania, 16-20 May 2001 (Matti Masing, Lauri Lutsar, Eve Roos, Maili Palubinskas & Tiia Möller).
- ?? Peter Lina's visit to Estonia, 21-23 May 2001, incl. Bat-Night over Kasari River and search for *Myotis dasycneme* near northern coast (guided by Kaja Lotman, Lauri Lutsar & Matti Masing).
- ?? Official meeting of Peter Lina, the authorities of nature conservation in Estonia (Hanno Zingel & Riinu Rannap) and members of Estonian Bat Group (Kaja Lotman, Lauri Lutsar & Matti Masing) in Tallinn on 22 May 2001.
- ?? Regular bat counts at eight summer monitoring stations (16 June – 10 July, project "Bats" of the National Environmental Monitoring Programme; Matti Masing, Vello Keppart, Kaja Lotman & Lauri Lutsar).
- ?? International expedition to the bat hibernation sites of northern Estonia (10—11 November 2001; Matti Masing, Lauri Lutsar, Yrjö Siivonen, Mikko Erkinaro & Terhi Wermundsen).
- ?? First Estonian Bat Conference – Tartu, 12 December 2001 (with oral presentations by Linda Poots, Matti Masing, Lauri Lutsar, Eve Roos & Tiia Möller).
- ?? Review of important sites of bats, amphibians and reptiles in Tartu, May 2001 (Matti Masing, for Tartu Loodusmaja).
- ?? Observation of bats in northern Tartu, since June 2001 (Eve Roos).
- ?? Observation of bats at Häädemeeste, since August 2001 (Maili Palubinskas).
- ?? Observation of bats at Melliste, since August 2001 (Tiia Möller).
- ?? Observation of bats in southeastern Tartu, since September 2001 (Matti Masing).
- ?? "Pond Bat – a species of special interest under Natura 2000", July – September 2001 (Lauri Lutsar & Matti Masing, project "Natura 2000").
- ?? "Small mammals of Hiiumaa Island, 2001", August 2001 (Matti Masing).
- ?? Small mammals on the islets of Saarnaki and Hanikatsi", August 2001 (Matti Masing, to Hiiumaa Islets Landscape Reserve).
- ?? "The inventory of hibernating bats in Harjumaa County", November 2001 (Matti Masing & Lauri Lutsar).
- ?? "A review of Estonian bats", November 2001 (Matti Masing, for the Department of Nature Conservation of the Estonian Ministry of the Environment).

Georgia:

- ?? Preparation of the catalogue of caves in which there are bat colonies. (*in progress*)
- ?? Joint Azerbaijani-Georgian project (study of consequences of construction of oil pipelines in these countries for the mammal fauna). (*in progress*)
- ?? Programme "The present situation of Bats in Georgia - tracks of the Past" was completed (by N. Tchankoshvili). (*completed*)
- ?? PhD thesis about the Georgian bats

- ?? The project "Bat's colonies and stopover sites in the karst caves of Eastern Black Sea Coast (Western Transcaucasia)" is prepared as a part of the EUROBATS project proposal "Conservation strategies for underground habitats, forested and mountain areas along the flyway of bats in Eastern and South-Eastern Europe" with UNEP/GEF funding. (*begun*)
- ?? The proposal "Save the bat colonies in the karst caves of Western Transcaucasia" is prepared on request of WWF-Georgia office and is approved as one of the priorities in the biological diversity conservation of the Caucasus. (*begun*)

Russian Federation:

- ?? Survey of bats of the Nizhny Novgorod Region (1985-1988, 1992-1999, 2000-)
- ?? Field works in the Udmurt Republic (1991-)
- ?? Studies on bats in the western and south-western slopes of the Ural Mountains
- ?? Monitoring of bats in the mines of Samarskaya Luka (Middle Volga) (continuing)
- ?? Cave-dwelling bats of Western Caucasus (1994-)
- ?? Short-term survey in Caucasian Reserve (finished)
- ?? Survey of bats of the Middle Don area
- ?? Studies of summer ecology and local distribution patterns of bats, particularly *Myotis dasycneme* and *Pipistrellus nathusii*, and surveys of local hibernation sites in the Noginsk District and in the Odintsovo District
- ?? For the first time series of surveys aimed to investigate bat fauna in the cities (Moscow and Moscow Region, Adler, etc.) and their demands for living conditions have been carried out and subsequently reported at a specialist conference held in Moscow in the year 2000.
- ?? Sequential survey of one of the Moscow Region's priority-driven species, the pond bat, continued last summer in the vicinity of Zvenigorod Biological Station of Moscow University, when dispersal routes of bats from their maternity roosts to foraging sites were traced using chemiluminescent tagging.
- ?? Bat research in caves of the Western Caucasus (S. Gazaryan) started in 1997, allowing now to suggest about 20 caves with surroundings as natural monuments with preservation status of nature reserves.
- ?? Chistiakov, D.V.: Survey of distribution and ecology of *Pipistrellus nathusii* in NW Russia (1997-2001). Notes on migration are given as well. See "Plecotus et al." No. 4 (in Russian with English summary).

Slovenia:

- ?? Research projects on individual species' biology (Mediterranean horseshoe bat, Schreiber' bat)
- ?? Participation in the Central European *Miniopterus* protection programme

Yugoslavia:

- ?? 2001-2002: Underground shelters and its importance for conservation of bat fauna in Serbia. The Local Project, sponsored by REC YU.
- ?? 2001-2003: Experimental area with artificial bat shelters (bat-boxes) in National Park Fruska Gora, Vojvodina province, Serbia. Co-operative project of NP Fruska Gora and Natural History Museum, Belgrade.
- ?? 2001-2003: Setting of central database of bat roosts, records and references in Yugoslavia.

?? 1999-2004: Zoogeographical, ecological and taxonomical studies of different bat species and groups, especially *Myotis myotis/blythii*, *M. daubentonii*, *M. bechsteinii*, *M. mystacinus/brandtii*, *M. emarginatus*, *M. nattereri*, *Pipistrellus pipistrellus/pygmaeus*, *P. kuhlii*, *Plecotis auritus/austriacus*.

Does any Party or Non-Party Range State collect data describing migratory habitats?

Hungary:

?? Recapture of a *Rhinolophus ferrumequinum* in Transylvania, which was banded in Hungary. The distance is 320 km!

?? Data on migration routes of *Miniopterus schreibersii*, *Rhinolophus ferrumequinum*, *Myotis myotis* and *Myotis blythii*

Netherlands:

?? Long-term study on the ecology of *Pipistrellus nathusii* in the Netherlands and on its seasonal migration between the Netherlands and Central and Eastern European countries (continuing)

Portugal:

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

Russian Federation:

?? Study of the northern distribution limits of migratory and resident species of Russian bats (2000-)

?? Study on the status of local populations of migrating bat species (particularly *Nyctalus noctula*) in the vicinity of Maikop (NW Caucasus) (2000-)

?? See Chistiakov 1997-2001

Ukraine: mentioned study on migration of bats (see above)

Belarus: Chiroptera ringing that was performed in the 40s – 80s in Belarus, in the southwestern and central parts of the country (more than 1500 animals of 10 species were ringed from 1948 to 1975) provided data on migration of Noctule Bat and Parti-coloured Bat. (Kurskov, 1981).

Migration routes of migrating species from the central and southwestern parts of the country to the countries of Western Europe which are situated to the south of Carpathian Mts such as Austria, Hungary, Romania go through the western parts of Ukraine, Poland, Czechia and Slovakia.

No data is available about migration routes of other migrating species of Chiroptera found in Belarus.