

the conference manual



15<sup>TH</sup> INTERNATIONAL  
BAT RESEARCH  
CONFERENCE  
PRAGUE, 23-27 AUG 2010

# 15<sup>TH</sup> INTERNATIONAL BAT RESEARCH CONFERENCE

With about 500 participants, the present meeting may become the largest assembly of bat students that ever appeared. The organizers are very pleased to host such a mee-

ting in Prague, the capital of the Czech Republic. This is already the second time that the most prominent assembly of bat specialists will appear in this country. The 15th IBRC will take place 42 years to the day after the 1st IBRC organized here by Vladimír HANÁK and Jiří GAISLER, pioneer personalities of modern European bat research who both are taking an active role in the present meeting as well.

The reappearance of the IBRC in the place from which the tradition of bat research conferences first arose opens a good opportunity for comparisons with all that has changed in bat research and our understanding of bat biology during the intervening period between the two meetings. We believe that the 15th IBRC will provide a pleasant platform for presenting current state of scientific study of bats, discussions on future trends and the conservation measures focused to one of the most exciting product of evolution: the flying mammals.

The organizers welcome you in Prague and wish you a pleasant stay in the  
Czech Republic.

## INTERNATIONAL BAT RESEARCH CONFERENCES

A CONFERENCE SERIES OF CONSIDERABLE TRADITION \* BY ITS GEOGRAPHIC AND CONCEPTUAL COVERAGES, NUMBER OF PARTICIPATED SCIENTISTS, AND/OR

BY ITS IMPACT UPON THE PROGRESS OF THE DISCIPLINE OFTEN CONSIDERED AS THE MOST IMPORTANT AND RESPECTFUL ASSEMBLY OF BAT SCIENTISTS \* FOR MORE THAN 40 YEARS, THE IBRC SERIES HAS MAPPED THE PATHWAYS OF DEVELOPMENT OF THE DISCIPLINE, AND HAS PROVIDED A PROMINENT PLATFORM FOR INTRODUCING NEW CONCEPTUAL AND METHODICAL ISSUES

1st	1968	Czechoslovakia, Hluboka n.V.
2nd	1970	The Netherlands, Amsterdam
3rd	1972	Yugoslavia, Plitvice
4th	1975	Kenya, Nairobi
5th	1978	USA, Albuquerque
6th	1982	Nigeria, Ife
7th	1985	UK, Aberdeen
8th	1989	Australia, Sydney
9th	1992	India, Madurai
10th	1995	USA, Boston
11th	1998	Brazil, Pirenopolis
12th	2001	Malaysia, Bangi
13th	2004	Poland, Mikolajki
14th	2007	Mexico, Merida
15th	2010	Czech Republic, Praha

AND FRUITFUL DISCUSSIONS ON BIOLOGY, TAXONOMY, BIOGEOGRAPHY, MORPHOLOGY, BEHAVIOUR, EVOLUTION AND ALL OTHER TOPICS IN STUDY OF BATS.

## Scientific Committee

Robert J. BAKER	Lubbock, USA
Wiesław BOGDANOWICZ	Warsaw, Poland
M. Brock FENTON	North York, Canada
Jiří GAISLER	Brno, Czech Republic
Gregg GUNNELL	Ann Arbor, USA
Vladimír HANÁK	Prague, Czech Republic
Suzanne J. HAND	Sydney, Australia
+Otto VON HELVERSEN	Erlangen, Germany
David S. JACOBS	Cape Town, South Africa
Gareth JONES	Bristol, Great Britain
Elisabeth KALKO	Ulm, Germany
Sergey V. KRUSKOP	Moscow, Russia
Thomas H. KUNZ	Boston, USA
Gary F. McCracken	Knoxville, USA
Rodrigo A. MEDELLIN	Mexico City, Mexico
Paul A. RACEY	Aberdeen, Great Britain
Björn M. SIEMERS	Seewiesen, Germany
Bernard SIGÉ	Lyon, France
Nancy B. SIMMONS	New York, USA
Gerhard STORCH	Frankfurt a. M., Germany
Emma TEELING	Dublin, Ireland
Ronald A. VAN DEN BUSSCHE	Stillwater, USA
Christian VOIGT	Berlin, Germany
Jan ZIMA	Brno, Czech Republic

## Local organizing committee

Ivan HORÁČEK (Faculty of Science, Charles University, Prague)

Michal ANDREAS	Silva Tarouca Research Institute Prague
Tomáš BARTONIČKA	Masaryk University, Brno
Petr BENDA	National Museum and Charles University
Vladimír BEJČEK	Czech University of Life Sciences Prague
Jaroslav ČERVENÝ	Czech University of Life Sciences Prague
Vladimír HANZAL	Czech Nature Conservation Agency
Pavel HULVA	Charles University in Prague
Helena JAHELKOVÁ	Charles University in Prague
Radek K. LUČAN	Charles University in Prague
Antonín REITER	South Moravia Museum, Znojmo
Zdeněk ŘEHÁK	Masaryk University Brno
Marcel UHRIN	Kafárik University Kolce
Dita WEINFURTOVÁ	ČESON
Jan ZUKAL	CAS Institute of Vertebrate Biology, Brno

ČESON - Czech Bat Conservation Trust

info

In general terms, everyone of the local organization committee is ready to help you in case of any problems. Nevertheless, the more serviceable will be to preferably contact (a) the conference administration where technical aspects of registration, accommodation, payment, etc. are concerned, and contact (b) the secretaries and/or chairman of the local committee if it should be program items or organisational proposals that are the matter of your communication.

### Chairman of the Local Organizing Committee:

**Prof. Dr. Ivan Horáček**

Department of Zoology,  
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Faculty of Science  
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Czech Republic  
Phone: + 420 221 951 851, 00420 **728095036**  
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### Secretaries:

**Dr. Tomáš Bartonička**

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E-mail: rlucan@centrum.cz

### Conference administration:

*Registration, payments, meals, excursions:*

**Mrs. Helena Lonekova**

Conference Partners s.r.o.  
Rumunská 12, 120 00 Prague 2  
Czech Republic  
Phone/Fax: + 420 224 262 109, Cell: + 420 **608 408 708**  
E-mail: conference@conference.cz, ibrc@conference.cz

*Accommodation and sight-seeing tours:*

**Mr. Martin Zein**

Conference Partners Prague s.r.o.  
Sokolská 26, 120 00 Prague 2  
Czech Republic  
Phone: + 420 224 262 108, + 420 **777 616 577**  
Fax: + 420 224 261 703  
E-mail: zein@conferencepartners.cz

*Your address in the Conference:*

15th IBRC  
SIC - Česká Zemědělská Universita  
(Czech University of Life Sciences)  
Kam cká 129  
160 00 Prague 6 - Suchdol  
Czech Republic  
Phone: + 420 224 381 111

The Conference Websites  
**www.conference.cz/IBRC**  
**www.ibrc.cz**

# Registration and local basics

## The registration desk

will be the information and administration centre of the Conference. It will be open throughout the Conference each day from 8.00 to 20.00.

Besides standard registration agenda the staff of the registration desk is ready to help you and advise with organizing your sight seeing program, search for travelling information and help if any unexpected situation appear. In a limited extent you can purchase there also bus tickets and some supplementary conference items (T-shirts etc.). The book „A tribute to bats“ and DVD „Of bats and Darkness“ edited on occasion of the Conference will be available at the Registration room at special conference price. The **computer room** neighbouring the registration desk and opened simultaneously with the registration desk is also at your disposal. The computer room is primarily intended for uploading and control of your presentations but it also provides an instant internet access (besides the free wi-fi access point established for the Conference participants - see below).

Throughout the Conference also the technical staff of the organization committee (students wearing the yellow Conference shirts) are also at your disposal.

## Local basics

**Currency:** Though many shops in the centre of Prague will accept EUR and common credit cards, in most instances you will need local currency CZK (Czech Crowns). You can use your credit card to get CZK from bank cash dispensers (ATMs), such as those situated in the Campus. Money exchange is also possible in banks and exchange offices or in regular hotels at reception desks (but not in the student residences).

**Emergency :** Emergency calls can be effected from any phone in the Czech Republic free of charge. Non-stop emergency phone number is **112** (Integrated Rescue System = Firefighters, Police, Emergency Medical Service) facilitates emergency calls for foreigners and it is possible to use in wide scale of emergencies (traffic accidents, fires, floods, flash floods, serious health injuries, leaks of dangerous chemical substances, offences against the law...). The operators speak Czech, English and German.

In any case, if any trouble do not hesitate to contact the Conference administration and/or the organizers for a help.

# The Conference venue

Campus of  
Czech University of Life Sciences  
Kaměná 129, 160 00 Praha 6 - Suchbátov  
Czech Republic

The Conference takes place in the modern campus of the Czech University of Life Sciences (Česká zemědělská universita), situated on the NW-outskirts of the city, nearby the former village of **Suchbátov** (now part of Prague).

The Campus includes a well-designed conference centre and provides all standard facilities (such as a number of satellite rooms open to symposia, workshops and informal gatherings, a student restaurant, pubs and snack counters, 3 ATMs, bank office, pharmacy and center of medical care, computer room, free wireless internet, sport facilities and last but not least some cheap accommodation in student hostels just next to the Conference venue).

**WIFI Internet access** within the Conference area in the Campus is for the participants available upon the following options:

*ssid:* IBRC  
*security:* WPA2-PSK/AES  
*password:* 15ibrc@p2010

## Meals

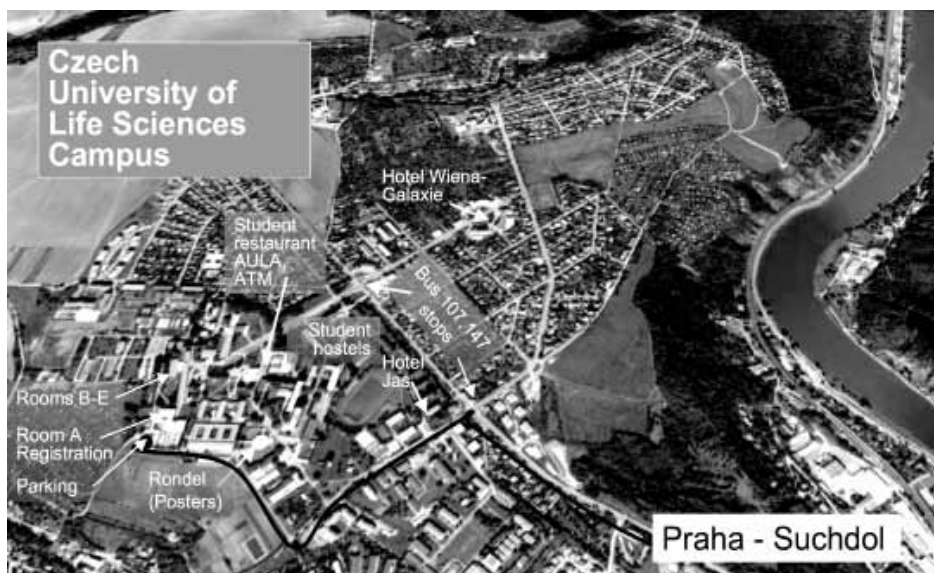
Luncheons are available from 23 August to 27 August in the student restaurant (situated in the centre of the campus) at the price of 6 EUR each. The student restaurant also provides breakfast (for prepaid coupons). Several pubs and restaurants will be open at your disposal, either within the campus or in the close vicinity, hotel Wiena-Galaxy can be particularly recommended.

Coffee and snacks will be served during the breaks both in the morning and afternoon sessions on corridors neighbouring the lecture rooms.

## City transportation

Prague has a comprehensive network of public transportation consisting of metro, trams and buses. Single 'transferable' tickets (valid for 90 min. after marking/validation in a tram/bus/Metro station at the start of your journey) cost 26 CZK. The ticket can be purchased from the coin machines at metro stations and at newspaper stands. Also the travel passes for 3 days (330 CZK) or 5 days (500 CZK) are available there and in a limited extent can be purchased also at the registration desk.

Prague is generally considered not to be a dangerous city. Nevertheless, be aware of pickpockets, particularly in the metro or trams, and of 'incorrect accounting' in taxis. The price of taxi transportation from the Airport or the city centre to Suchbátov should not exceed some 400 to 500 CZK (ca 20 EUR). The phone **taxi AAA** (phone **14014**) can be recommended.



The Campus is accessible by **buses No. 107 and 147** from metro station **Dejvická** (terminal station of **metro line A - green**) to the bus stop „**Zemědělská univerzita**“. Buses depart every 5-10 mins. After regular day/evening services cease, during night hours, the Campus is still accessible by bus no. **502** (details of time tables will be available at the registration desk). Using the bus and metro, the historical centre of the Prague is accessible in some 20 minutes. **Parking:** Parking in the area of the Czech University of Life Sciences is available free of charge. Parking in the centre of the city is much more complicated and in many places is only available for holders of special local permissions. In general, it is strongly recommended to avoid entering the town centre by car. Use of public transportation, though much less comfortable, can spare both time and money, and works quite efficiently.



# Structure of the Conference

The 15<sup>th</sup> IBRC has been essentially organized as an *open* meeting: all submitted items were accepted including the form of presentation suggested by the authors.

The **scientific programme** of the Conference consists of (i) eight plenary keynote lectures by 15 leading personalities of the branch invited by the organizers, (ii) 247 oral presentations and 153 posters organized in (iii) 17 Symposia, 6 thematic sessions of contributed presentations and 3 Workshops. The oral presentations will appear in 4-5 parallel sessions, posters will be on display throughout duration of the Conference.

The programme includes an open meeting of the IUCN Chiroptera specialist group, concluding plenary session and evening public presentation by the special guest of the Conference, Merlin TUTTLE (Thursday 20.00).

## Student Award

The most valuable and impressive student presentations will be awarded by **Student Award** based on decision of *ad hoc* jury (members of the Scientific Committee of the Conference and chairpersons of the sessions). The awards (sponsored among other by Pettersson Elektronik, Ecotone and Tom Kunz) will be declared at the Concluding plenary session on Friday afternoon.

## Technicalities

### Oral presentations

Except for few, all oral presentations (including discussion) are restricted to 20 min time slots and for the integrity of the Conference structure it is very important to respect time schedule of individual presentations quite strictly.

### Uploading presentations

All presentations must be uploaded **in advance**, if possible a day prior to the scheduled term of presentation, **in the computer room** neighbouring the Registration desk (assistance of organizers is at your disposal).

Uploading a presentation at the lecture room during breaks is exceptionally also possible but not recommended. Please, do not forget to test complete functionality of your presentation prior uploading.

### Posters

will be on display throughout the Conference in a rounded building called Rondel. Special poster session will take place on Tuesday evening. Posters are to be inserted at the beginning of the meeting in a self-helping way. Standard tools and fixation utilities will be available at the place.



## Social events

SUNDAY 22 Aug.

\*Welcome party - informal gathering

\*Ceremonial opening with a performance

by Paul and Cassandra EINSTEIN:

*Travels of Giovanni Pipistrelli, a bat extraordinaire,*

introduced by Elisabeth K.V. KALKO

TUESDAY 24 Aug.

\*Poster session with serving snacks, beer and wine

WEDNESDAY 25 Aug.

\*Conference Excursion terminating at a field party at the castle ruin Točnick, barbecue, wine, local beer, bat detectors.

FRIDAY 27 Aug.

\*The Conference Farewell reception and Concert in Karolinum, the historical seat of the Charles University (1348) - paid separately, not included in the Conference fee



Guided tours in Prague and tourist trips to other destinations (Kutná Hora, Carlsbad a.o.) can be separately ordered at the Registration desk. The representatives of Conference Partners Agency are ready to help in choosing the programme perfectly fitting to your wishes. The current information on Prague, exhibitions etc. can be obtained from [www.prague.cz](http://www.prague.cz) or [www.pis.cz](http://www.pis.cz) (Prague Information Service).

info

## Keynote lectures

MONDAY 08.40

**Estimating diversity: how many bat species are there?**

Nancy B. SIMMONS & Andrea L. WETTERER (USA)

MONDAY 13.40

**Chiropteran ancestry and early divergences**

Gregg GUNNELL (USA), Gerhard STORCH,

Jörg HABERSETZER (GERMANY), & Bernard SIGÉ (FRANCE)

TUESDAY 08.40

**Of bats and molecules: a genomics perspective**

**I. Karyotype evolution illuminated by FISH**

Marianne VOLLETH (Germany)

**II. The use of comparative genomics in the study of bats**

Emma TEELING (Ireland)

TUESDAY 13.40

**From sensory modalities to ecological processes, from temperate to tropical zones: Following Otto von Helversen's legacy in bat research**

Christian C. VOIGT & Elisabeth K.V. KALKO (Germany)

WEDNESDAY 08.40

**The sensory world of bats**

Björn M. SIEMERS (Germany) & Gareth JONES (United Kingdom)

THURSDAY 08.40

**Life history and sociobiology of bats**

Gerald KERTH (Germany)

THURSDAY 13.40

**Advances in aeroecology: An emerging discipline**

Thomas H. KUNZ (USA)

FRIDAY 08.40

**Bat Conservation: Past, Present and Future**

Paul A. RACEY (United Kingdom)

## Symposia

**S1 Past to Present: Fossils and the Evolutionary History of Bats.**

Gregg GUNNELL

TUESDAY afternoon

**S2 Adaptations and Evolutionary Ecology.**

David JACOBS

TUESDAY morning-afternoon

**S3 Gerhard Neuweiler Memorial Symposium on Echolocation in Bats.**

Björn M. SIEMERS & Gareth JONES

WEDNESDAY morning THURSDAY morning

**S4 Speciation dynamics and taxonomy.**

Manuel RUEDI & Petr BENDA

MONDAY morning-afternoon

**S5 Bat extinctions: past, present, and future.**

Nancy SIMMONS & Liliana DAVALOS

TUESDAY afternoon

**S6 Integrating information across multiple molecular markers - current and future studies in bat genetic research.**

Stephen J. ROSSITER & Pavel HULVA

THURSDAY afternoon

**S7 New Approaches in the Study of Bat Flight.**

Sharon SWARTZ & Anders HEDENSTRÖM

MONDAY afternoon

**S8 Movement Ecology of Bats.**

Thomas H. KUNZ & Paul M. CRYAN

THURSDAY afternoon - FRIDAY morning

**S9 Global bat Monitoring and Bioindication.**

Kate JONES & Tomáš BARTONIČKA

THURSDAY morning - afternoon

**S10 Bat and parasites: implications for social life, disease transmission, and co-evolution.**

Gerald KERTH & Philippe CHRISTE

MONDAY morning

**S11 Bat-fruit interactions:  
new findings from individual to community level.**

Marco A.R. MELLO & Elisabeth K.V. KALKO

MONDAY afternoon

**S12 Diversity Patterns and Processes:  
from Local Assemblages to Continental Gradients.**

Jakob FAHR & Tigga KINGSTON

MONDAY afternoon

**S13 Social and vocal complexity in bats.**

Mirjam KNÖRNSCHILD & Martina NAGY

THURSDAY afternoon

**S14 Anthropogenic impact on bats:  
from fragmentation to urbanization.**

Kirsten JUNG, Elisabeth K.V. KALKO & Raphael ARLETTAZ

MONDAY morning - TUESDAY afternoon

**S15 Diversity, systematics and conservation of South American bats.**

Valéria C.TAVARES, Ludmilla M.S. AGUIAR, Enrico BERNARD,  
& Renato GREGORIN

WEDNESDAY morning, FRIDAY morning

**S16 Bats as inspiration for biomimetic robots.**

Annemarie SURLYKKE & Elisabeth K. V. KALKO

TUESDAY morning

**S17 Bats and pathogen emergence .**

Sébastien J. PUECHMAILLE & Meriadeg AR GOUILH

TUESDAY afternoon

[illegible]

**SESSIONS:**  
morning **09.40**  
afternoon **14.40**

S	SYMPOsia
C	Contributed sessions

coffee breaks (10.40, 15.40)

Activity	Start Time	End Time
lectures	08.40	13.40
apps		
lunch time	(12.00 - 13.40)	

# **The 15<sup>th</sup> IBRC Programme in detail**

**MONDAY 23 Aug 2010**

**08.30 Plenary session (Room A)**  
Chairperson: Ivan HORÁČEK

## Keynote lecture K1:

## Estimating diversity: how many bat species are there?

*by*

Nancy B. SIMMONS, Andrea L. WETTERER (USA)

**09.40-12.20**      **Morning sessions**

Room A: Symposium S4 (Speciation) - part I

Room B: Symposium S14 (Conservation) - part I

Room C: Contributed session ADAPTATIONS

Room D: Symposium S10 (Parasites)

11.40-13.40 *Lunch***13.40 Plenary session (Room A)**

Chairperson: Suzanne HAND

## Keynote lecture K2:

## Chiropteran ancestry and early divergences

*by*

Gregg GUNNELL (USA) , Gerhard STORCH,  
Jörg HABERSETZER (GERMANY), Bernard SIGÉ (FRANCE)

## 14.40-18.20 Afternoon sessions

Room A: Symposium S12 (Diversity)

Room B: Symposium S7 (Flight)

Room C: Symposium S11 (Bat-Fruit)

Room D: Symposium S4 (Speciation) - part II

Room E: Contributed session BEHAVIOUR - part I

### Evening free, optionally

20.00 Room A: Symposium S12 - round table discussion

20.00 Room B: CEI Workshop W1 on bat fauna, bat conservation and monitoring in SE- Europe and Middle East

# TUESDAY 24 Aug 2010

**08.30**      **Plenary session** (Room A)  
Chairperson: Robert J. BAKER

Keynote lecture K3:

**Of bats and molecules: a genomics perspective**

**I. Karyotype evolution illuminated by FISH**

Marianne VOLLETH (Germany)

**II. The use of comparative genomics in the study of bats**

Emma TEELING (Ireland)

**K3**

**09.40-12.20**      **Morning sessions**

Room A: Symposium S2 (Adaptations) - part I

Room B: Contributed session CONSERVATION - part I

Room C: Symposium S16 (Robots)

Room D: Contributed session MONITORING

Room E: Contributed session TAXONOMY - part I

**11.40-13.40**      *Lunch*

**13.40**      **Plenary session** (Room A)  
Chairperson: Paul A. RACEY

Keynote lecture K2:

**From sensory modalities to ecological processes, from temperate to tropical zones: Following Otto von Helver-  
sen's legacy in bat research**

Christian C. VOIGT, Elisabeth K.V. KALKO (Germany)

**K4**

**14.40-18.20**      **Afternoon sessions**

Room A: Symposium S17 (Epidemiology)

Workshop 2 WNS in Europe

Room B: Symposium S14 (Conservation) - part II

Room C: Symposium S2 (Adaptations) - part II

Room D: Symposium S1 (Fossils)

Room E: Contributed session DISTRIBUTION

**Evening**

**19.00-23.00**      **POSTER SESSION**      **(Rondel)**  
with serving snacks etc.

# WEDNESDAY 25Aug2010

08.30

**Plenary session** (Room A)

Chairperson: Hans-Ulrich SCHNITZLER

**K5**

Keynote lecture K5:

## **The sensory world of bats**

by

Björn M. SIEMERS (Germany),

Gareth JONES (United Kingdom)

09.40-12.20

### **Morning sessions**

Room A: Symposium S3 (Echolocation) - part I

Room B: Symposium S5 (Extinctions)

Room C: Symposium S15 (South America) - part I

Room D: Contributed session CONSERVATION part II

Room E: Contributed session ECOLOGY - part II

11.40-13.30

*Lunch*

13.30 -?

### **CONFERENCE EXCURSION**

A half-day Conference excursion (covered by the conference fee) will visit three separate areas close to Prague:

**A) Bohemian karst** - valley of the Berounka river, Koněpruské caves - the largest cave system in the area with about 2 km of passages, rich in hibernating bats and fossil bat assemblages from Miocene to Early Pleistocene.

**B) Křivoklátsko** UNESCO Biosphere Reserve - an extensive woodland complex preserved as a royal hunting forest of Czech kings since the early Middle Ages. A visit to the royal castle Křivoklát (13-14th Century architecture; important roost of *Myotis myotis*, *Nyctalus noctula*, *Pipistrellus pipistrellus*, etc.) and localities with peak numbers of the recently-described species *Myotis alcathoe*.

**C) Příbramsko** - mining region (silver, uranium, etc.) famous since the early Middle Ages, besides having a number of world 'firsts' in mining technology (the first mine deeper than 1 km, etc.). Passing through the town of Příbram, rich in baroque monuments, on the lower slopes of the forested Brdy mountains, the excursion will then visit a curious artificial underground water system (the hibernation roost of some bats) and will pass through impressive woodland stands across the highest peaks of central Bohemia.

All three excursions will rejoin together at the ruin of a Medieval royal castle, **Točnick**, (the site of a continuously-studied breeding colony of *M. myotis*) where an evening banquet will take place, together with optional opportunity for some bat detectoring.

**Departure is from the parking in front of the registration building (and room A) at 13.30.**



# excursion

Conference Excursion: alternatives **A, B, C**



**A**



**B**



**C**



# THURSDAY 26 Aug 2010

**08.30**                    **Plenary session** (Room A)  
Chairperson: Gary F. McCracken

**K6**                    Keynote lecture K6:  
**Life history and sociobiology of bats**  
*by*  
Gerald KERTH (Germany)

**09.40-12.20**        **Morning sessions**  
Room A: Symposium S9 (Monitoring) - part I  
Room B: Contributed session ECOLOGY - part II  
Room C: Symposium S3 (Echolocation) - part II  
Room D: Symposium S15 (South America) - part II

*11.40-13.40*        *Lunch*

**13.40**                    **Plenary session** (Room A)  
Chairperson: Wieslaw BOGDANOWICZ

**K7**                    Keynote lecture K7:  
**Advances in aeroecology: An emerging discipline**  
*by*  
Thomas H. KUNZ (USA)

**14.40-18.20**        **Afternoon sessions**  
Room A: Symposium S8 (Movements) - part I  
Room B: Symposium S6 (Molecules) - part I  
Room C: Symposium S13 (Social vocalization)  
Room D: Symposium S9 (Monitoring) - part II

## **Evening**

20.00 - 21.30        **An evening with Merlin Tuttle** (Room A)  
introduced by Jiří GAISLER and Thomas H.KUNZ

**Conserving Bats:  
Challenges and Opportunities**  
*by*  
Merlin TUTTLE (USA)

# FRIDAY 27 Aug 2010

**08.30**      **Plenary session** (Room A)  
Chairperson: Raphael ARLETTAZ

Keynote lecture K8:  
**Bat Conservation: Past, Present and Future**  
*by*  
Paul A. RACEY (United Kingdom)

**K8**

**09.40-12.20**      **Morning sessions**  
Room A: Contributed session BEHAVIOUR - part II  
Room B: Symposium S8 (Movements) - part II  
            Workshop W3 *Rousettus*  
Room C: Contributed session ECOLOGY- part III  
Room D: Contributed session CONSERVATION - part III

*11.40-13.40*      *Lunch*

**13.40-14.40**      Room B: Contributed session BEHAVIOUR - part III

**13.40-14.40**      **Plenary session** (Room A)  
Chairperson: Paul A. Racey  
Open Meeting of  
The **IUCN Bat Specialist Group**

14.40-15.00      coffee break

**14.40-17.00**      **Plenary sessions (Room A)**  
Concluding remarks by the Symposia Conveners  
Student Awards  
Proposals of the further Conferences  
Closing the 15th IBRC

## Evening

19.00 - 23.00      **Farewell Reception and Concert**  
**in**  
**KAROLINUM**  
(historical seat of the Charles University)  
Praha 1, Ovocný trh 3



# **Parallel sessions**

## S4

### Speciation dynamics and taxonomy

Conveners: Manuel RUEDI and Peter BENDA

- 09.40 S4.0 Introduction to the symposium -  
**Speciation and taxonomy in bats: challenges**  
Manuel RUEDI (Switzerland), Petr BENDA (Czech Republic)
- 10.00 S4.1 **Allopatric, Ecological, Hybrid, etc. Speciation in bats: How do their wing prints differ?**  
Robert J. BAKER, Peter A. LARSEN, María R. MARCHÁN-RIVADENEIRA
- 10.20 S4.2 **Is fixation of chromosomal rearrangements mediated by social structure? Perspectives from the Peter's tent-roosting bat, *Uroderma bilobatum***  
Maria SAGOT, Caleb PHILLIPS, Richard STEVENS, Robert BAKER
- 10.40 *coffee*
- 11.00 S4.3 **Sibling species of *Rhinolophus luctus* from Peninsular Malaysia detected by karyological analysis**  
Marianne VOLLETH, Frieder MAYER (Germany), Josef LOIDL (Austria), Hoi-Sen YONG (Malaysia), Klaus-Gerhard HELLER (Germany)
- 11.20 S4.4 **Cryptic species of horseshoe bats (Rhinolophidae) of the *R. hildebrandtii* complex in southern Africa**  
Peter TAYLOR, Samantha STOFFBERG (South Africa), Ara MONADJEM (Swaziland), Corrie SCHOEMAN, Woody COTTERILL (South Africa)
- 11.40 student S4.5 **Speciation in progress? Phonotypes and genetic differences in two coexisting morphotypes of the bat *Macrotus waterhousii minor***  
Anna BASTIAN (Germany), Emanuel MORA (Cuba), Sabine SCHMIDT (Germany)
- 12.00 student S4.6 **Restricted gene flow is required for sensory speciation in bats**  
Sebastien PUECHMAILLE (Ireland), Meriadeg AR GOULH (France), Mehdi YOBUKOL, Piyathip PHAYAPAN (Thailand), Khin MIE MIE (Myanmar), Paul J. BATES (UK), Eric J. PETIT (France), Iain J. MACKIE (UK), Emma C. TEELING (Ireland)

## Diversity Patterns and Processes – from Local Assemblages to Continental Gradients **S12**

Conveners: Jakob FAHR and Tigga KINGSTON

- 14.40 S12.1 **Bat distributions along elevational gradients and their implications for ecology and conservation**  
Bruce D. PATTERSON (USA)
- 15.00 S12.2 **Species diversity of bats along an altitudinal gradient in southern Malawi.**  
Michael CURRAN, Mirjam KOPP, Jan BECK (Switzerland), Jakob FAHR
- 15.20 S12.3 **Landscape and temporal variability of insectivorous bat assemblages in a Malaysian rainforest: just what is a bat assemblage?**  
Tigga KINGSTON (USA), Rakhmad SUJARNO KUDOS (Malaysia), Juliana SENAWI (USA), Zubaid AKBAR, Rosli HASHIM (Malaysia), Thomas KUNZ (USA), Sucharita GOPAL (Malaysia)
- 15.40 *coffee*
- 16.00 S12.4 **Biome transitions as centres of diversity: Habitat heterogeneity and diversity patterns of West African bat assemblages across spatial scales.**  
Jakob FAHR, Elisabeth K. V. KALKO
- 16.20 S12.5 **Latitudinal diversity gradients in New World bats: Are they a consequence of niche conservatism?**  
Maria J. Ramos PEREIRA, Jorge M. PALMEIRIM
- 16.40 S12.6 **Stronger tests of mid-domain effects on latitudinal**  
Richard D. STEVENS, J. Sebastian TELLO & Maria Mercedes GAVILANEZ
- 17.00 S12.7 **Where is my bat? Ground-validation of presence-only modelling and its integration with molecular techniques for the conservation of rare species**  
Hugo REBELO (United Kingdom, Portugal), Elsa FROUFE, Nuno FERRAND (Portugal), Gareth JONES (United Kingdom)
- 17.20 student S12.8 **Modelling continental species richness of African bats at high resolution** Matthias K. B. HERKT, Günter BARNIKEL, Martin WEGMANN, Elisabeth K. V. KALKO, Jakob FAHR
- 17.40 student S12.9 **The influence of abiotic factors on the distribution of bats (Chiroptera) in South Africa.**  
Hassan BABIKER, David S. JACOBS
- 18.00 S12.10 **Environmental correlates of bat species richness in Central and southern Africa: effects of spatial structure, taxonomy and model selection**  
M. Corrie SCHOEMAN, F. D. P. COTTERILL, Peter J. TAYLOR (South Africa), Ara MONADJEM (Swaziland)

18.20-18.40 S12. C **Round table discussion: “Diversity patterns and**  
19.30 **processes – conclusions and future perspectives”**

## S14

### **Anthropogenic impact on bats: from fragmentation to urbanization**

*Conveners:* Kirsten JUNG, Elisabeth K.V. KALKO, Raphael ARLETTAZ

- 09.40      **S14.1 Effects of tropical forest fragmentation on aerial insectivorous bats in a land-bridge island system**  
Sergio ESTRADA-VILLEGAS (Canada), Brian J. MCGILL (USA), Christoph F. J. MEYER (Portugal), Elisabeth K. V. KALKO (Germany, Panama)
- 10.00      **S14.2 Reconsidering the importance of harvested forests for the conservation of tree-dwelling bats**  
Danilo RUSSO (Italy, UK), Luca CISTRONE, Antonio Pietro GARONNA (Italy), Gareth JONES (UK)
- 10.20      **S14.3 Structural heterogeneity affects bats occurrence and activity in Central European forest stands**  
Kirsten JUNG, Sonja KAISER, Stefan BÖHM, Jens NIESCHULZE, Ernst-Detlef SCHULZE, Elisabeth K. V. KALKO (Germany)
- 10.40      *coffee*
- 11.00      **S14.4 Effects of connectivity and shape of landscape elements on bats**  
student      Annie EHRENBOLD, Fabio BONTADINA, Raphaël ARLETTAZ, Martin K. OBRIST (Switzerland)
- 11.20      **S14.5 Resource selection by slow- and fast-flying insectivorous bats in a heavily urbanized landscape**  
Rafael AVILA-FLORES (Mexico)
- 11.40      **S14.6 Bat's exploitation of cities: the importance of spatial and environmental variables**  
Thomas SATTLER, Martin K. OBRIST, Raphaël ARLETTAZ, Marco MORETTI, Fabio BONTADINA (Switzerland)



**New Approaches in the Study of Bat Flight**

*Conveners:* Sharon SWARTZ and Anders HEDENSTRÖM

**S7**

- 14.40      **Introduction to the Symposium.**  
Sharon SWARTZ and Anders HEDENSTRÖM
- 15.00      **S7.1      Mechanics of soft tissue wing structures and the flight of bats.**  
Sharon SWARTZ, Jorn CHENEY, Andrew BEARNOT, Joseph BAHLMAN, Hannah LIPPE, Daniel RISKIN, Kenneth RISKIN (USA)
- 15.20      **S7.2      Flight constrains maximum size in bats.**  
Ulla M. LINDHE NORBERG, R. ÅKE NORBERG (Sweden)
- 15.40      *coffee*
- 16.00      **S7.3      Does use of the uroptagium during flight give insight into the origin of flight in bats?**  
Rick A. ADAMS (USA)
- 16.20      **S7.4      The conundrum of limb motion-echolocation linkage. Nice idea but where's the evidence?**  
Stuart PARSONS, Daniel RISKIN, John HERMANSON
- 16.40      **S7.5      Context-dependent energetically optimal flight speeds in bats.**  
Marc HOLDERIED (United Kingdom)
- 17.00      **S7.6      Studying flight energetics in-situ using field deployable stable isotope analyzers.**  
Christian C. VOIGT, Daniel LEWANZIK
- 17.20  
student      **S7.7      The Trinity of Energy Conversion - Kinematics, Aerodynamics and Energetics of Bat Flight.**  
Rhea VON BUSSE (Germany), Christoffer JOHANSSON, Florian MUIJRES (Sweden), York WINTER (Germany), Anders Hedenström
- 17.40      **S7.8      The aerodynamics of different bat species**  
Tatjana Y. HUBEL (USA, UK), Nickolay I. HRISTOV, Daniel K. RISKIN (Riskin), Sharon M. SWARTZ (USA, UK), Kenneth S. BREUER (USA, UK)
- 18.00      **S7.9      Aerodynamic performance of flapping bat flight using time-resolved wake visualization**  
Florian T. MUIJRES, L. Christoffer JOHANSSON, Anders HEDENSTRÖM (Sweden)

10.00 student	<b>CA1    Echolocation, Flight and Inner Ear Adptation in Bats</b> Kalina DAVIES, Norman MACLEOD, Paul BATES (United Kingdom), Emma TEELING (Ireland), Stephen ROSSITER (United Kingdom)
10.20	<b>CA2    Bat Facial and Lip Projections: Unique Integumentary Morphology</b> Gary KWIECINSKI, Paul HOMNICK, Daniel HERR, Giuseppe BONGIORNO (USA)
10.20 student	<b>CA3    A digestive perspective on nectar-feeding specialization in phyllostomid bats</b> Jorge AYALA-BERDON, Jorge E. SCHONDUBE (Mexico)
10.40	<i>coffee</i>
11.00	<b>CA4    High activity enables life on a high sugar diet in nectar-feeding bats</b> Detlev H. KELM, Ralph SIMON, Christian VOIGT, Doreen KUHLOW, Michael RISTOW (Germany)
11.20	<b>CA5    Dietary differences among nectar-feeding bats in French Guiana</b> Cullen K GEISELMAN (USA)
11.40	<b>CA6    The effect of tributyltin on the complement pathway and oxidative stress level of Daubenton's bats</b> Thomas LILLEY, Janina STAUFFER, Mirella KANERVA, Tatu HIITOLA, Mikko NIKINMAA (Finland)

**Bat-fruit interactions: new findings from individual to community level** **S11**

*Conveners:* Marco Aurelio RIBEIRO MELLO and Elisabeth K. V. KALKO

- 14.40 S11.1 **Frugivory and the diversification of phyllostomid bats**  
Elizabeth R. DUMONT, Liliana M. DÁVALOS, Aaron GOLDBERG, Christian C. VOIGT, Katja REX, Sharlene E. SANTANA (USA)
- 15.00 S11.2 **Bat-fruit interactions in the Neotropics: cohesive and resilient subsystems within seed dispersal networks**  
Marco MELLO (Germany), Flavia MARQUITTI, Paulo GUIMARAES (Brazil), Elisabeth KALKO (Germany, Panama), Pedro JORDANO (Spain), Marcus AGUIAR (Brazil)
- 15.20 S11.3 **Mutualistic networks in frugivorous bats: effects of perturbations**  
Jorge GALINDO-GONZÁLEZ, Victor RICO-GRAY, Cecilia DÍAZ-CASTELAZO, Alejandro CASTRO-LUNA, Jesús R. HERNÁNDEZ MONTERO (Mexico)
- 15.40 *coffee*
- 16.00 S11.4 **Switching gears: The evolution of plasticity in feeding behavior and performance in phyllostomids**  
Sharlene E. SANTANA, Elizabeth R. DUMONT (USA)
- 16.20 S11.5 **Availability of food for frugivorous bats in Neotropical rainforests: the influence of flooding and of river banks**  
J. TIAGO MARQUES, Maria JOÃO PEREIRA, Jorge M. PALMEIRIM (Portugal)
- 16.40 student S11.6 **Bats drink mineral enriched water with a grain of clay at salt licks in Amazonian rain forests**  
Simon J. GHANEM, Hans RUPPERT (Germany), Thomas H. KUNZ (USA), Christian C. VOIGT (Germany)
- 17.00 student S11.7 **Small bats disperse large seeds: re-evaluating the seed dispersal service of Neotropical bats**  
Felipe MELO, Bernal RODRIGUEZ-HERRERA, Robin CHAZDON, Rodrigo A. MEDELLIN, Gerardo CEBALLOS
- 17.20 S11.8 **Ontogeny of foraging of the short-nosed fruit bat *Cynopterus sphinx* in captivity**  
Suthakar S. ISAAC, P. Augustus ROBINCES (India)
- 17.40 *General discussion*

## S10

### **Bat and parasites: implication for social life, disease transmission, and co-evolution**

*Conveners:* Gerald KERTH and Christe PHILIPPE

- 09.40      S10.1    **Evolution of bat flies (Diptera; Hippoboscoidea): Implications for host-pathogen co-evolution**  
Katharina DITTMAR, Bruce D. PATTERSON, Carl W. DICK,  
Matthew GRUWELL, Jason R. MAYBERRY, Solon MORSE (USA)
- 10.00      S10.2    **The importance of ecological, physiological and phylogeographical factors to explain parasite distribution among hosts: an example with Spinturnicid mites and their bat hosts**  
Christe PHILIPPE, Olivier GLAIZOT, Nadia BRUYNDONCKX,  
Raphaël ARLETTAZ (Switzerland)
- 10.20  
student      S10.3    **A comparison of genetic population structure in two bat host-parasite systems**  
A.J. VAN SCHAIK, G. KERTH, (Germany)
- 10.40      *coffee*
- 11.00      S10.4    **How did bat parasites evolved to successfully adapt to their hosts?**  
Sofia LOURENÇO, Jorge M. PALMEIRIM (Portugal)
- 11.20  
student      S10.5    **Bat bugs of the family Cimicidae (Heteroptera)**  
Ondřej BALVÍN, Jitka VILÍMOVÁ (Czech Republic)
- 11.40      S10.6    **Endoparasites of pipistrelle bats**  
Jennifer LORD, Nicole DODD, Geoff HIDE, Darren BROOKS  
(United Kingdom)
- 12.00  
student      S10.7    **Occurrence of bat ectoparasites in the Urals**  
Oleg ORLOV, Maria ORLOVA (Russia)

**Speciation dynamics and taxonomy***Conveners:* Manuel RUEDI and Peter BENDA**S4<sup>2</sup>**

- 14.40  
student
- S4.7 Speciation and systematics of Malaysian *Kerivoula* inferred from multiple datasets**  
Faisal Ali ANWARALI KHAN, Sergio SOLARI, Vicki J. SWIER,  
Peter A. LARSEN, M. T. ABDULLAH, Robert J. BAKER  
(USA, Malaysia, Colombia)
- 15.00
- S4.8 Each flying fox on its own branch:  
a phylogenetic tree for *Pteropus***  
Francisca ALMEIDA (Spain), Simone LOSS (USA),  
Norberto P. GIANNINI (Argentina, USA), Kris HELGEN,  
Nancy SIMMONS (USA)
- 15.20
- S4.9 The pipistrelle bats of Macaronesia: a  
phylogeographic approach**  
Javier JUSTE, Domingo TRUJILLO, Carlos IBÁÑEZ (Spain)
- 15.40
- coffee*
- 16.00
- S4.10 Mitochondrial DNA Relationships among  
North Palearctic *Eptesicus* species**  
Ilya ARTYUSHIN, Anna BANNIKOVA, Vladimir LEBEDEV,  
Sergey KRUSKOP (Russia)
- 16.20  
student
- S4.11 Deep differentiation between and within  
Mediterranean glacial refugia in the *Myotis nattereri* bat**  
Irene SALICINI, Carlos IBÁÑEZ, Javier JUSTE (Spain)
- 16.40
- S4.12 Current challenges in the taxonomy of  
Vietnamese *Myotis***  
Sergey KRUSKOP (Russia), Alex BORISENKO (Canada)
- 17.00
- S4.13 What is new in systematics of the genus  
*Scotophilus* (Vespertilionidae) in Africa?**  
Peter VALLO, Petr BENDA, Petr KOUBEK (Czech Republic)

# MONDAY

W1

## MONDAY

evening : Room B 20.00

### W1: CEI Workshop



### **Bats of Balkans and Eastern Mediterranean: implementation of monitoring schemes and conservation measures**

The long term monitoring, performed in central Europe for more than 40 years, revealed dramatic variations in population development of particular bat species and remarkable interspecific and interregional differences in the respective trends. Unfortunately, almost no such information is still available from SE Europe and Middle East. The present workshop is an attempt to find the measures to fill the gap.

The workshop sponsored by the CEI (Central European Initiative) funds that should provide a platform to the experts in bat research and bat conservation from Central, Eastern and Southern Europe as well as those from Middle East to share their experience in monitoring and conservation of bats in their countries and discuss possibilities of unifying the methods and concept of monitoring bat populations throughout the region. The workshop expects to (a) refine information on current distribution and conservation status of particular bat species in the region, and (b) establish a common scheme of long-term monitoring of bat populations in the region operating with unified methods and common outputs, and (c) propose a platform for further monitoring and cooperation in bat studies and bat conservation in the region.

#### *Conveners:*

Zdeněk ŘEHÁK, Radek K. LUČAN, Tomáš BARTONIČKA, Ivan HORÁČEK (Czech Republic) Marcel UHRIN (Slovakia)

W2

## TUESDAY

evening : Room A 18.00

### Workshop W2:

### **White Nose Syndrome in Europe: state of knowledge and the Action plan**

An open platform for discussions on topics of WNS in Europe. The aim of the workshop is to refine the way of international co-operation, to survey the current status of knowledge across Europe and /or to specify issues of the Action plan and its implications if necessary.

#### W2 Conveners:

Sébastien PUECHMAILLE (Ireland), Natália MARTÍNKOVÁ (Czech Republic)

Contributed session: **BEHAVIOUR****CB<sup>1</sup>**

Chairpersons: Ganapathy MARIMUTHU and Marc HOLDERIED

- 14.40  
student CB1 **“Noisy neighbours”: Do long-tailed bats (*Chalinobus tuberculatus*) alter their evening activity in response to aircraft noise?**  
Darren LE ROUX, Joseph R. WAAS (New Zealand)
- 15.00 CB2 **Dynamics of roost entrance in a leaf-roosting bat**  
Gloriana CHAVERRI (USA), Karina MONTERO (Costa Rica)
- 15.20  
student CB3 **Do bats recognize their predators?**  
Tess DRIESSENS (Belgium), Björn SIEMERS (Germany)
- 15.40  
student *coffee*
- 16.00 CB4 **Sensory basis of habitat recognition in echolocating bats** Stefan GREIF, Björn M. SIEMERS (Germany)
- 16.20  
student CB5 **The scanning behaviour of free ranging *Barbastella* bats (*Barbastella barbastellus*)**  
Anna-Maria SEIBERT, Jens C. KOBLITZ, Annette DANZINGER, Hans-Ulrich SCHNITZLER (Germany)
- 16.40 CB6 **Behavioral evidence for eavesdropping on prey song in two Palearctic sibling bat species**  
Patricia L. JONES (Germany, USA), Rachel A. PAGE (Germany)  
Manfred HARTBAUER (Austria), Björn M. SIEMERS (Germany)
- 17.00  
student CB7 **Echolocating bats achieve high prey detection performance with broadband calls**  
Daniela A. SCHMIEDER (Germany), Tigga KINGSTON (USA), Rosli HASHIM (Malaysia), Björn M. SIEMERS (Germany)
- 17.20  
student CB8 **Source levels of echolocation signals vary in correlation with wing beat cycle in landing Big Brown bats (*Eptesicus fuscus*)**  
Jens C KOBLITZ, Peter STILZ, Hans-Ulrich SCHNITZLER (Germany)
- 17.40  
student CB9 **Emission and echo SPL in foraging Greater Mouse-eared bats (*Myotis myotis*) at different target strength**  
Tobias BUDENZ, Annette DENZINGER, Hans-Ulrich SCHNITZLER (Germany)
- 18.00 CB10 **Emitting echolocation calls through nose or mouth in *Trachops cirrhosus* (Phyllostomidae)**  
Line F. JOHANNESSEN (Denmark), Elisabeth K. V. KALKO (Germany), Rachel PAGE (USA), Annemarie SURLYKKE

## S2

### **Adaptations and Evolutionary Ecology**

Convener: David S. JACOBS

- 09.40  
student
- S2.1 **Adaptation of echolocation call intensity to ecological constraints in phyllostomid bats**  
Signe BRINKLØV, Elisabeth K. V. KALKO, Annemarie SURLYKKE (Germany)
- 10.00
- S2.2 **Bat-frog interactions: Learning, categorization and memory**  
Rachel A. PAGE (Panama)
- 10.20
- S2.3 **Spread your wings and fly: behavioural flexibility and niche breadth in a depauperate bat community**  
John RATCLIFFE (Denmark), Reese McMILLAN (Canada), Jaime TANNER (USA), James FULLARD (Canada)
- 10.40
- coffee*
- 11.00  
student
- S2.4 **The relationship between geographic range size and niche breadth in African Horseshoe bats**  
Jonathan ARONSON, David JACOBS (South Africa)
- 11.20  
student
- S2.5 **Sensory escape from a predator-prey arms race: low amplitude biosonar beats moth hearing**  
Hannah M. TER HOFSTEDE, Holger R. GOERLITZ, Matt R. K. ZEALE, Gareth JONES, Marc W. HOLDERIED (United Kingdom)
- 11.40
- S2.6 **What, if anything, can variation in echolocation calls tell us about speciation in bats?**  
David JACOBS (South Africa)
- 12.00  
student
- S2.7 **Factors affecting the emergence times of several sympatric insectivorous bat species**  
Alicia THOMAS , David JACOBS (South Africa)



**Bats and pathogen emergence** **S17***Conveners:* Sébastien J. PUECHMAILLE and Meriadeg AR COUL

- 14.40      **S17.1 White-nose Syndrome in North America**  
David BLEHERT, Carol METEYER, Anne BALLMANN, Jeff LORCH, Brenda BERLOWSKI-ZIER, Laura MULLER, Paul CRYAN (USA)
- 15.00      **S17.2 The Potential Threat of White Nose Syndrome to European Bats: An Action Plan**  
Paul RACEY (United Kingdom) on behalf of the White Nose Syndrome Consortium
- 15.20      **S17.3 Detection of emerging viruses in bat guano**  
L.L.M POON, D.K.W CHU, J.S.M. PEIRIS (Hong Kong)
- 15.40      *coffee*
- 16.00      **S17.4 Volant Viruses: a metaviromic study of a West African bat population**  
student  
KS BAKER, M CACCAMO, G.DALY, N. BEXFIELD, KELLAM P (UK), SUU-IRE R (Ghana), HAYMAN DTS, HEENEY J, CUNNINGHAM AA, WOOD JLN, MURCIA P (UK)
- 16.20      **S17.5 Disease investigations in Straw Coloured Fruit Bats (*Eidolon helvum*) in the Gulf of Guinea islands**  
student  
Alison J. PEEL, Loras Andrés FERNÁNDEZ, Kate S BAKER, David T.S HAYMAN, Alexandra KAMINS, Stephen J. ROSSITER, David R.SARGAN, Andrew A. CUNNINGHAM, James L.N WOOD (United Kingdom)
- 16.40      **S17.6 Human-made landscapes drive livestock rabies outbreaks transmitted by *Desmodus rotundus* in Mexico**  
Rafael AVILA-FLORES, Alvaro AGUILAR-SETIÉN, Nidia ARÉCHIGA-CEBALLOS, Alfonso DE VEGA, Dolores MANZANO-MARTÍNEZ, Rodrigo A. MEDELLÍN, Gerardo SUZÁN, Heliot ZARZA (Mexico)
- 17.00      **S17.7 Multi-spatial approach for monitoring and modeling bat rabies in Puebla México**  
student  
Gerardo SUZÁN, Rafael ÁVILA-FLORES, Roberto CARRASCO, Oscar RICO, Heliot ZARZA, Angélica MENCHACA, Guillermo LACY, Brenda CORTÉS, Dolores MANZANO-MARTÍNEZ, Elizabeth LOZA-RUBIO, Edith ROJAS, Nidia ARÉCHIGA-CEBALLOS, Rodrigo A. MEDELLÍN (Mexico)
- 17.20      **S17.8 Control of livestock paralytic rabies in eastern Mexico: an innovative scientific research-based approach**  
Dolores MANZANO-MARTÍNEZ, Alvaro AGUILAR-SETIÉN, Nidia ARÉCHIGA-CEBALLOS, Rafael AVILA-FLORES, Alfonso De VEGA, Rodrigo A MEDELLÍN, Gerardo SUZÁN, Heliot ZARZA (Mexico)
- 17.40      **S17.9 Emerging infectious diseases as an opportunity for bat conservation**  
Gary F. McCracken (USA)

- 09.40CC1 **Anthropogenic impacts on bat communities: demography and biotic homogenisation**  
Grégoire LOIS, Christian KERBIRIOU,  
Jean-François JULIEN (France)
- 10.00CC2 **Recurring fires in Mediterranean habitats and their impact on bats**  
Xavier PUIG-MONTSERRAT, Carles FLAQUER, Ruth G. RÀFOLS,  
Adrià L. BAUCELLS (Spain)
- 10.20CC3 **Roads and bats: landscape, road features and bat ecology effects on road kills and activity**  
studentDenis MEDINAS, Tiago MARQUES, António MIRA (Portugal)
- 10.40coffee
- 11.00CC4 **Hoary bat (*Lasiurus cinereus*) and Brazilian free-tailed bat (*Tadarida brasiliensis*) mortality at the Montezuma Hills wind energy region in Central California**  
Dave S. JOHNSTON, Judd A. HOWELL, Nellie THORNGATE,  
Scott B. TERRILL, and James CASTLE (USA)
- 11.20CC5 **Barbed wire fences and Hawaiian hoary bats: what we know**  
Jeff ZIMPFER, Frank BONACCORSO (USA)

## Anthropogenic impact on bats: from fragmentation to urbanization **S14**

*Conveners:* Kirsten JUNG, Elisabeth K.V. KALKO, Raphael ARLETTAZ

- 14.40 student S14.7 “Waiter, there’s a bat in my soup!” Implications of fruit bats as bushmeat in Ghana, West Africa  
Alexandra KAMINS, Olivier RESTIF, Marcus ROWCLIFFE, Andrew CUNNINGHAM (United Kingdom), Yaa NTIAMOA-BAIDU (Ghana), James WOOD (United Kingdom)
- 15.00 S14.8 **Bats and Mine Closure: A Double-edged Sword**  
Patricia E. BROWN (USA)
- 15.20 S14.9 **Spatial activity and diet of *Rousettus aegyptiacus* on Cyprus: does conservation of the only European megabat depends on supporting alien plants?**  
Radek K. LUČAN, Tomáš BARTONIČKA, Martin ČÍZEK, Petr JEDLIČKA, Šimon ŘEŘUCHA, Martin ŠÁLEK, Haris NICOLAOU, Ivan HORÁČEK (Czech Republic nad Cyprus)
- 15.40 coffee
- 16.00 S14.10 **The importance of distance variables in the modelling of bat foraging habitat**  
Ana RAINHO, Jorge M. PALMEIRIM (Portugal)
- 16.20 S14.11 **Exposure of bats to endocrine disrupting chemicals at sewage treatment works**  
Kirsty J PARK, CT MÜLLER (United Kingdom), S MARKMAN (United Kingdom, Israel), O SWINSCOW-HALL, D PASCOE (United Kingdom), K BUCHANAN (United Kingdom, Australia)
- 16.40 S14.12 **Species-specific barrier effects of a motorway on the habitat use of two endangered bat species and the role of connecting elements**  
Markus MELBER, Gerald KERTH (Germany)
- 17.00 student S14.13 **Bat traffic along Irish motorways - how to reduce the toll for commuting bats?**  
Isobel ABBOTT, Fidelma BUTLER, Simon HARRISON (Ireland)
- 17.20 student S14.14 **Linking habitat loss and bat decline: the conservation biology of the grey long-eared bat in England**  
Orly RAZGOUR, Gareth JONES (UK)
- 17.40 S14.15 **A multi-faceted research programme deciphers the mechanism of decline of a rare European bat**  
Raphaël ARLETTAZ, Fabio BONTADINA (Switzerland)

## S16

### **Bats as inspiration for biomimetic robots**

*Conveners:* Annemarie SURLYKKE, Elisabeth K.V. KALKO

- 09.40                      S16.1    **Bats as inspiration for biomimetic robots**  
Annemarie SURLYKKE (Denmark)
- 10.00                      S16.2    **Task related flexibility in echolocation behaviour of**  
student                      *Noctilio leporinus*  
Kirstin ÜBERNICKEL, Elisabeth K.V. KALKO (Germany)
- 10.20                      S16.3    **Echolocation strategies for object recognition**  
student                      **in dense rainforest for two gleaning bats, *Micronycteris***  
***microtis* and *Thyroptera tricolor***  
Inga GEIPEL, Elisabeth K. V. KALKO (Germany)
- 10.40    *coffee*
- 11.00                      S16.4    **Generating Rich Emission Beams for Echolocation**  
Roman KUC (USA)
- 11.20                      S16.5    **Dynamics of the echolocation beam shape in**  
**vespertilionid bats**  
Lasse JAKOBSEN, Annemarie SURLYKKE (Denmark)

**Adaptations and Evolutionary Ecology**

Convener: David JACOBS

S2

- 14.40 S2.8 **The evolution of high-frequency echolocation in horseshoe bats: moth hearing, body size or habitat?**  
Samantha STOFFBERG, David S. JACOBS, Conrad A. MATTHEE (South Africa)
- 15.00 S2.9 **Geographic variation in echolocation calls of the endemic Cape Horseshoe bat, *Rhinolophus capensis***  
student Lizelle Janine ODENDAAL, David Steve JACOBS (South Africa)
- 15.20 S2.10 **The potential communication value of species specific terminal frequencies in European pipistrelle bats**  
student Melanie HÜPKES, Hans-Ulrich SCHNITZLER, Annette DENZINGER (Germany)
- 15.40 *coffee*
- 16.00 S2.11 **Convergent evolution in nectar-feeding phyllostomid bats: nectar lapping vs. nectar pumping**  
Marco TSCHAPKA, Tania P. GONZÁLEZ-TERRAZAS (Germany)
- 16.20 S2.12 **Gut capacity predicts geographic distribution in phyllostomid bats**  
Jorge E. SCHONDUBE, Jorge AYALA-BERDON, Enrique MARTÍNEZ-MEYER (Mexico)
- 16.40 S2.13 **Three peas in a pod? Energetics of three sympatric gleaning bats**  
student Nina I. BECKER, Jorge A. ENCARNACÃO, Marco TSCHAPKA, Elisabeth K. V. KALKO (Germany)
- 17.00 S2.14 **Evolution of nectarivory in phyllostomid bats (Phyllostomidae Gray, 1825, Chiroptera: Mammalia)**  
Thomas DATZMANN, Otto VON HELVERSEN, Frieder MAYER (Germany)

# TUESDAY

# morning

## CM

Contributed session **MONITORING**

*Chairpersons:* Friederike SPITZENBERGER,  
Roger RANSOME

- 09.40 CM1 **Bats and bat research in the Moravian Karst: 1850–2010**  
Jiří GAISLER, Miroslav KOVAŘÍK, Zdeněk ŘEHÁK, Jan ZIMA, Jan ZUKAL (Czech Republic)
- 10.00 CM2 **A methodology for searching and monitoring diurnal roosts**  
Adalberto CESARI, Ana Carolina D'Oliveira PAVAN, Guilherme Siniciato Terra GARBINO, Carla Cristina AQUINO, Thalita Fonseca ALVES (Brazil)
- 10.20 student CM3 **Project PteroCount - an initiative towards the conservation of bats in South Asia**  
Joseph Reginald LOUIS, Sanjay MOLUR (India), Shahroukh MISTRY (USA)
- 10.40 *coffee*
- 11.00 student CM4 **Bats and Wind Farms: relationship between bat activity and fatalities, methodologies evaluation and influence of environmental and ecological factors on mortality**  
Francisco AMORIM, Luísa RODRIGUES (Portugal)
- 11.20 CM5 **Results of the Indicator Bats (IbatsRo) programme in Romania between 2006–2009**  
Abigél SZODORAY-PARÁDI (Romania), Kate JONES (United Kingdom), Farkas SZODORAY-PARÁDI (Romania)
- 11.40 CM6 **Climate change linked range expansion of Nathusius pipistrelle bat**  
Mathieu LUNDY, Ian MONTGOMERY, Jon RUSS (United Kingdom)

## Past to Present: Fossils and the Evolutionary History of Bats

Convener: Gregg GUNNELL

# S1

- 14.40 S1.0 **Welcome and Introductory Remarks**  
by Gregg GUNNELL
- 15.00 S1.1 **Dental characteristics of the most primitive known bat *Onychonycteris finneyi***  
Gregg F. GUNNELL, Nancy B. SIMMONS (USA), Jörg HABERSETZER, (Germany), Paul M. VELAZCO, Peter D. SMITS (USA)
- 15.20 S1.2 **Evolution of body mass in Old and New-World Leaf-nosed bats**  
Norberto P. GIANNINI, Liliana M. DAVALOS, Gregg GUNNELL, Nancy B. SIMMONS (Argentina, USA)
- 15.40 *coffee*
- 16.00 S1.3 **New data on the early Eocene bats of Vastan, India**  
Thierry SMITH (Belgium), Rajendra RANA, Ashok SAHNI, Kishor KUMAR (India), Kenneth ROSE (USA)
- 16.20 S1.4 **An exceptionally well-preserved hipposiderid fauna from a middle Miocene cave deposit in the Riversleigh World Heritage Area, Queensland, Australia**  
Karen H. BLACK, Suzanne J. HAND, Mike ARCHER, Henk GODTHELP (Australia)
- 16.40 S1.5 **Multiple invasions of Australasia by New World bats? Evidence from the fossil record**  
Suzanne J. HAND, Trevor H. WORTHY (Australia), Robin M.D. BECK (USA), Jennifer P. JONES (Australia), Alan J.D. TENNYSON, R. Paul SCOFIELD (New Zealand), Mike ARCHER (Australia)
- 17.00 S1.6 **Inferring the evolutionary factors from rates of phenotypic divergence in *Myotis***  
Igor DZEVERIN, Maria GHAZALI (Ukraine)
- 17.20 S1.7 **A Phylogeny of the Neotropical stenodermatine bats (Chiroptera: Phyllostomidae): putting the fossils in the context**  
Valéria da C. TAVARES (Brazil), F. BALSEIRO, C. MANCINA, (Cuba)
- 18.00 S1.8 **The Quaternary fossil record of Bats in Spain: an update**  
Paloma SEVILLA, Juan Manuel LÓPEZ-GARCÍA (Spain)
- 18.20 S1.C **Summary Remarks** by Gregg GUNNELL

09.40	<b>CT1    Some difficulties of using integrated approach in bat taxonomy</b> Mikhail P. TIUNOV (Russia)
10.00	<b>CT2    Should we standardize international English common names of bats?</b> Samantha STOFFBERG, Philip A.R HOCKEY, Corrie M. SCHOEMAN (South Africa)
10.20	<b>CT3    Taxonomic Network for Southeast Asian Bats</b> Paul BATES (United Kingdom), Pipat SOISOOK ((Thailand), Bounsavane DOUANGBOUBPHA (Laos), Saveng ITH (Cambodia), Vu Dinh THONG (Vietnam), Si Si Hla BU (Myanmar), Neil FUREY (Cambodia), Nikky HAMMOND (United Kingdom), Chutam SATASOOK (Thailand)
10.40	<i>coffee</i>
11.00	<b>CT4    Taxonomic researches of some Southeast Asian Horseshoe bats</b> Pipat SOISOOK, Kwan NUALCHAROEN, Ariya DEJTARADOL (Thailand), Saveng ITH (Cambodia), Sara BUMRUNGSRI, Chutamas SATASOOK (Thailand), Paul BATES (United Kingdom)
11.20 student	<b>CT5    Acoustic and Genetic variation in <i>Rhinolophus rouxii</i> in South India</b> Balaji CHATTOPADHYAY, A Vinoth Kumar KUMARAVEL, Kritika M GARG, Paramanatha Swami DOSS DEVARAJ (India), Gerd SCHULLER (Germany), Uma RAMAKRISHNAN, Sripathi KANDULA_(India)
11.40 student	<b>CT6    Genetic variation in <i>Cynopterus sphinx</i></b> Balaji CHATTOPADHYAY, M Kritika GARG, A Vinoth Kumar KUMARAVEL, Paramanatha Swami DOSS DEVARAJ (India), Uma RAMAKRISHNAN, Sripathi KANDULA_(India)
12.00	<b>CT7    Toward a molecular phylogeny for the Molossidae (Chiroptera) of Africa and the Western Indian Ocean region</b> Jennifer M. LAMB, Taryn M. C. RALPH, Theshnie NAIDOO, Peter J. TAYLOR, Fanja RATRIMOMANARIVO, William STANLEY, Steven M. GOODMAN



Contributed session **DISTRIBUTION**  
 Chairpersons: Paul BATES , Michail P. TIUNOV

CD

- 14.40  
student  
 CD1 **Geographic distribution of parasites of the insectivorous bat, *Miniopterus natalensis* (Chiroptera: Miniopteridae), in South Africa**  
 Simon WOOD, David JACOBS, Kerstin JUNKER (South Africa)
- 15.00  
student  
 CD2 **Phylogeography and Population Genetic Structure of *Rhinopoma microphyllum* in Iran**  
 Vahid AKMALI, Ali FARAZMAND, Jamshid DARVISH, Mozafar SHARIFI (Iran)
- 15.20  
 CD3 **Habitat and Morphology of emballonurids of Pakistan**  
 Muhammad MAHMOOD-UL-HASSAN, Arshad JAVID, Sana ASHRAF (Pakistan)
- 15.40  
*coffee*
- 16.00  
 CD4 **Habitat and morphology of Greater Asiatic yellow house bat, *Scotophilus heathii* (Microchiroptera: Vespertilionidae )**  
 Arshad JAVID, Muhammad MAHMOOD-UL-HASSAN (Pakistan)
- 16.20  
 CD5 ***Miniopterus schreibersii pallidus* or *Miniopterus pallidus*: the current evidence**  
 Andrzej FURMAN (Turkey), Tomasz POSTAWA (Poland), Emrah CORAMAN (Turkey)
- 16.40  
student  
 CD6 **The Distribution of Genetic Diversity of *Miniopterus schreibersii*, in Europe and Anatolia**  
 Rasit BILGIN, Öncü MARACI (Turkey), Sébastien J PUECHMAILLE (Ireland), Primož PRESETNIK (Slovenia), Daniela HAMIDOVIC, Norma FRESSEL (Croatia), Branko KARANPANDŽA, Milan PAUNOVIĆ (Serbia), Carlos IBAÑEZ (Spain), Benjamin ALLEGRI (France), Kanat GÜRÜN (Turkey), Panagiotis GEOGRIAKAKIS (Greece), Macel UHRIN (Slovakia), Petr BENDA (Czech Republic), Javier JUSTE (Spain)
- 17.00  
 CD7 **Distribution and migratory status of *P. pipistrellus* and *P. pygmaeus* in the Russian Caucasus**  
 Suren GAZARYAN (Russia)
- 17.20  
 CD8 **Zoogeographical analysis of the Caucasian bat fauna**  
 Irina K. RAKHMATULINA (Azerbaijan)
- 17.40  
student  
 CD9 **Spatial model of bovine rabies transmitted by *Desmodus rotundus*. Landscape structure and edges related to rabies risk**  
 Roberto CARRASCO-HERNÁNDEZ, María Dolores MANZANO-MARTINEZ, Carlos BAUTISTA, Alfonso DE VEGA-GARCÍA, Ana FLISSER, Rodrigo A. MEDELLÍN, Gerardo SUZÁN (Mexico)

# Room A      WEDNESDAY

S3

## Gerhard Neuweiler Memorial Symposium on Echolocation in Bats

*Conveners:* Björn SIEMERS and Gareth JONES

- 09.40      **S3.0    Introduction: Gerhard Neuweiler and bat echolocation research**  
(Björn SIEMERS)
- 09.50      **S3.1    In memory of Gerhard Neuweiler: The auditory fovea, an adaptation for flutter detection in echolocating bats using CF-FM signals**  
Hans-Ulrich SCHNITZLER, Annette DENZINGER (Germany)
- 10.20      **S3.2    Role of FoxP2 expression in the control of vocalizations in echolocating and non-echolocating bats**  
Walter METZNER (USA), Shuyi ZHANG (China)
- 10.40      *coffee*
- 11.00      **S3.3    Beyond echolocation: bats as models for acoustic communication**  
Sabine SCHMIDT (Germany)
- 11.20      **S3.4    Foraging activity of Central European bats in winters of varying severity ? A study dedicated to the memory of Prof. Gerhard Neuweiler who long encouraged ecological research in endangered European bats**  
Andreas ZAHN, Eva KRINER, Robert MAYER (Germany)
- 11.40      **S3.5    A bony connection signals laryngeal echolocation in bats**  
Paul A. FAURE, Nina VESELKA, David D. McERLAIN, David W. HOLDSWORTH, Judith L. EGER (Canada), Rethy CHHEM (Austria), Matthew J. MASON, Kirsty L. BRAIN (United Kingdom), M. Brock FENTON (Canada)

**S5**

**S5**

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| 09.40 | <p><b>S5.1 Cenozoic patterns of origination and extinction in bat communities</b><br/> Gregg F. GUNNELL, (USA)</p>   |
| 10.00 | <p><b>S5.2 Historical and imminent bat extinctions: documenting extinctions and discerning patterns</b><br/> Kristofer M. HELGEN (USA)</p>   |
| 10.20 | <p><b>S5.3 Complementarity in extinction drivers among Caribbean endemic bats</b><br/> Liliana DÁVALOS, Amy L. RUSSELL (USA)</p>   |
| 10.40 | <p><i>coffee</i></p>   |
| 11.00 | <p><b>S5.4 Assessing short-term extinction risks using genetic simulation analyses</b><br/> Amy L. RUSSELL (USA)</p>   |
| 11.20 | <p><b>S5.5 Bat extinctions in the Australasian Region: view from the fourth dimension</b><br/> Suzanne J. HAND, Michael ARCHER, Henk GODTHELP (Australia)</p>  |
| 11.40 | <p><b>S5.6 The Status of White-Nose Syndrome in North America</b><br/> Jeremy T.H.COLEMAN, Alan C. HICKS, David S.BLEHERT, Anne E.BALLMANN, Paul M. CRYAN, Noell L. RAYMAN (USA)</p>                       |
| 12.00 | <p><b>S5.7 Impacts of White-Nose Syndrome on Population Viability of Little Brown Myotis (<i>Myotis lucifugus</i>)</b><br/> Winifred F. FRICK, Jacob F. POLLOCK, Kate E. LANGWIG, Thomas H. KUNZ (USA)</p> |
| 12.20 | <p><b>S5.8 Prioritising the unknown</b><br/> K.E. JONES, K. SAFI (United Kingdom)</p>  |

# WEDNESDAY

## Diversity, systematics and conservation of South American bats.

*Conveners:* Valeria C.TAVARES, Ludmilla M.S. AGULAR,  
Enrico BERNARD, Renato GREGORIN

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|-------|--|
| 09.40 | <p><b>S15.1 The diversity of Brazilian bats: an update with comments on species distribution and taxonomy</b><br/> Valéria da C. TAVARES, Renato GREGORIN (Brazil)</p>   |
| 10.00 | <p><b>S15.2 Biodiversity, systematics, and conservation of bats from the Guianan subregion of northern Amazonia</b><br/> Burton K LIM. (Canada), Valéria da C. TAVARES (Brazil)</p>  |
| 10.20 | <p><b>S15.3 Advances of the Colombian chiropterology, biodiversity, ecology, and conservation</b><br/> Hugo MANTILLA-MELUK, Robert J. BAKER (USA),<br/> Alex Mauricio JIMÉNEZ (Mexico)</p>   |
| 10.40 | <p><i>coffee</i></p>   |
| 11.00 | <p><b>S15.4 Richness of bats in the Floresta Nacional Tapirape-Aquiri, State of Para, Northern Brazil</b><br/> Adalberto CESARI, AnaCarolina D PAVAN, Marcus VB OLIVEIRA, Guilherme ST GARBINO, Carla C AQUINO, Luciana G PEREIRA, Simone S Martins, Thalita F. ALVES, Juliana G BARROS, Caroline C AIRES, Felipe M MARTINS, Fabio O NASCIMENTO (Brazil)</p> |
| 11.20 | <p><b>S15.5 The underestimated diversity of bats in Brazil: idiosyncratic limitations or shared concerns within South America about collection management and systematic practices?</b><br/> Renato GREGORIN, Valéria Cunha TAVARES (Brazil)</p>   |
| 11.40 | <p><b>S15.6 Better knowing the Brazilian bats: a 200-years task?</b><br/> Enrico BERNARD, Ludmilla M.S. AGUIAR,<br/> Ricardo B. MACHADO (Brazil)</p>   |
| 12.00 | <p><b>S15.7 Bat conservation in Brazil: the <i>Lonchophylla dekeyseri</i> Action Plan</b><br/> Ludmilla M.S. AGUIAR , Ricardo B. MACHADO (Brazil)</p>  |

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| 09.40            | <p><b>CC6 Ecology of Bats of India: Synthesis for Future Directions</b><br/>         Joseph Reginald LOUIS, Riki KRISHNAN,<br/>         Pramod PADMANABHAN, Sanjay MOLUR (India)</p>  |
| 10.00            | <p><b>CC7 Role of <i>Latidens salimalii</i> (endemic endangered Fruit Bat of South India) in forest restoration of Southern Western Ghats, India</b><br/>         Juliet VANITHARANI, Veliah CHELLADURAI (India)</p>  |
| 10.20            | <p><b>CC8 Bats: Conservation and Ecotourism, the experience at Tirimbina Rainforest</b><br/>         Carlos CHAVARRÍA, Bernal RODRÍGUEZ-HERRERA (Costa Rica)</p>  |
| 10.40            | <p><i>coffee</i></p>  |
| 11.00            | <p><b>CC9 Patterns of habitat use by bats in a mosaic of land-use types in a biodiversity hotspot in Southern Chile</b><br/>         Paul A.HEADY III, Winifred F. FRICK (USA), Mauricio SOTO-GAMBOA (Chile), Christine N. MEYNARD (France)</p>   |
| 11.20            | <p><b>CC10 Bat fauna in Chernobyl Exclusion Zone</b><br/>         Sergij GASHCHAK, Anton VLASCHENKO, Alexander NAGLOV (Ukraine), Nicholas BERESFORD (United Kingdom)</p>  |
| 11.40<br>student | <p><b>CC11 Bat communities in a fragmented landscape in southern Western Ghats: status, ecology and conservation</b><br/>         Eleni K. FOUI (India), John D. ALTRINGHAM (UK), Mahesh SANKARAN (India), Christine SINGFIELD (UK), Divya MUDAPPA (India), Jacobus BIESMEIJER (UK)</p> |

# Room E

# WEDNESDAY

CE<sup>2</sup>

Contributed session **ECOLOGY I**

*Chairpersons:* Hans BAAGOE, Jorge ENCARNACAO

- 09.40 CE1 **How hot is my home: Temperature of different types of tents**  
Bernal RODRIGUEZ-HERRERA, Viquez-R LUIS (Costa Rica)
- 10.00 CE2 **How affect the origin to thermal preference and hibernation period of *Myotis formosus* in Korea?**  
Sun-Sook KIM, Yu-Seong CHOI, Bong-Hyeon KIM, Jeong-Chil Yoo (Korea)
- 10.20 CE3 **One bushman and two quasi-villagers: roost selection in three cryptic whiskered bats (*Myotis alcaethoe*, *Myotis mystacinus* and *Myotis brandtii*)**  
Radek K. LUČAN, Tomáš BARTONIČKA, Tereza BŘEZINOVÁ, Helena JAHELKOVÁ, Martin ŠÁLEK, Tereza VLASATÁ (Czech Republic)
- 10.40 *coffee*
- 11.00 student CE4 **Between a rock and a wet place: Home range and habitat associations of a maternity colony of *Myotis mystacinus* (whiskered bat) in a lowland agricultural landscape**  
Daniel J. BUCKLEY (Ireland), Mathieu G. LUNDY (United Kingdom), Emma S.M. BOSTON (Ireland), David D SCOTT, Ian W. MONTGOMERY, Paulo PRODÖHL (United Kingdom), Ferdia MARNELL, Emma C. TEELING (Ireland)
- 11.20 student CE5 **From crevice to edge: Ecology of *Myotis brandtii* in a landscape cultivated by man**  
Anika LUSTIG, Wigbert SCHORCHT, Andreas ZAHN (Germany)
- 11.40 CE6 **Habitat and breeding roost selection by *Myotis bechsteinii*. What limits the species distribution in the Mediterranean range?**  
María NAPAL, Inazio GARIN, Urtzi GOITI, Egoitz SALSAMENDI, Joxerra AIHARTZA (Spain)
- 12.00 CE7 **Patterns of habitat use by female *Plecotus auritus* and predicted negative impacts of woodland management**  
David A. HILL (Japan), Stephanie E MURPHY, Frank GREENAWAY (United Kingdom)

morning



## S9

### Global bat Monitoring and Bioindication

Conveners: Kate JONES and Tomáš BARTONIČKA

- 09.40      **S9.1    Ecosystem services provided by bats**  
Thomas H. KUNZ, Elizabeth BRAUN DE TORREZ, Dana M. BAUER, Tatyana A. LOBOVA, Theodore H. FLEMING (USA)
- 10.00      **S9.2    Getting the measure of biodiversity: Bats and global biodiversity indicators**  
Ben COLLEN, Louise McRAE, Jonathan LOH (Switzerland)
- 10.20      **S9.3    Bat monitoring and the development of multi-species indicators**  
Karen A. HAYSOM (United Kingdom)
- 10.40      *coffee*
- 11.00      **S9.4    Monitoring ultrasonic biodiversity: using bats as biodiversity indicators**  
K.E. JONES, J. RUSS (United Kingdom)
- 11.20      **S9.5    From revision of red list to bat biodiversity monitoring: procedures, first results, and projections**  
Martin K. OBRIST, Fabio BONTADINA, Thierry BOHNENSTENGEL, Pascal MOESCHLER, Hubert KRÄTTLI (Switzerland)
- 11.40      **S9.6    Czech and Slovak bat monitoring schemes: experiences, results, inspirations**  
Ivan HORÁČEK, Tomáš BARTONIČKA, Marcel UHRIN, Czech Bat Conservation Trust, Slovak Bat Protection Society



**Movement Ecology of Bats**

Coveners: Thomas H. KUNZ and Paul M. CRYAN

**S8**

- 14.40 S8.1 **Migratory structure and geographic origins of hoary bats (*Lasiurus cinereus*) inferred from stable isotope analysis**  
Paul M. CRYAN, Craig A. STRICKER, Michael B. WUNDER (USA)
- 15.00 S8.2 **Using stable isotopes to trace bat migrations in Europe**  
Ana G. POPA-LISSEANU, Christian C. VOIGT (Germany)
- 15.20 S8.3 **Physiological ecology of migration and stopover in North American tree bats**  
student Liam P. MCGUIRE, M. Brock FENTON, Christopher G. GUGLIELMO (Canada)
- 15.40 *coffee*
- 16.00 S8.4 **Marco! Polo! Social calls used by *Thyroptera tricolor* for locating roostmates**  
Erin H. GILLAM, Glorianna CHAVERRI (USA)
- 16.20 S8.5 **Spatio-temporal variability in nightly dispersal patterns of *Tadarida brasiliensis*: Modeling bat movements in 3D**  
Winifred F. FRICK, Kenneth W. HOWARD, Phillip B. CHILSON, Thomas H. KUNZ (USA)
- 16.40 S8.6 **Bat-like creatures engaged in high-altitude migratory and feeding or reproductive behavior over temperate landscapes in North America**  
Ronald P. LARKIN, Alex R. HOAR, Louise C. ALLEN, Margrit BETKE, Nickolay I. HRISTOV, Thomas H. KUNZ (USA)
- 17.00 S8.7 **Scales of movement by a long-distance migrant: the Brazilian free-tailed bat (*Tadarida brasiliensis*)**  
Nickolay I. HRISTOV, Margrit BETKE, Sharon M. SWARTZ, Thomas H. KUNZ (USA)
- 17.20 S8.8 **Using satellite telemetry to assess movement patterns of *Pteropus* spp.**  
Jonathan H. EPSTEIN (USA), Craig S. SMITH (Australia), Andrew BREED (United Kingdom), Raina PLOWRIGHT (USA), Hume E. FIELD (Australia), Peter DASZAK (USA)
- 17.40 S8.9 **The urban crowd: foraging ecology of straw-coloured fruit bats (*Eidolon helvum*) from the non-migratory subpopulation in Accra, Ghana**  
Dina K.N. DECHMANN (Germany), Richard SUU-IRE (Ghana), Martin WIKELSKI, Jakob FAHR (Germany)

CE<sup>3</sup>

Contributed session **ECOLOGY II**

Chairpersons: LUIS AGUIRRE, Ran NATHAN

- 09.40      CE8      **Elliptic Fourier Descriptors (EFDs) discriminate the echolocation calls of myotine bats**  
Mathieu LUNDY (United Kingdom), Emma TEELING, Emma BOSTON (Ireland), David SCOTT (United Kingdom), Daniel BUCKLEY (Ireland), P. PRODÖHL (United Kingdom), Ferdia MARNELL (Ireland), Ian MONTGOMERY (United Kingdom)
- 10.00      CE9      **The white tent-making bat and the period of roost availability during forest succession**  
Melquisedec GAMBA-RÍOS, Eugenia CORDERO SCHMIDT, Bernal RODRÍGUEZ HERRERA (Costa Rica)
- 10.20      CE10      **Dynamics of cave use by cave-dwelling bats in arid and semiarid zones in Northern Venezuela**  
student      Ariany GARCÍA-RAWLINS, Jafet M NASSAR., Fernando SIMAL (Venezuela)
- 10.40      *coffee*
- 11.00      CE11      **Insectivorous bat activity in habitats with water bodies in central and south Mexico**  
M. Cristina MACSWINEY GONZÁLES, Antonio GUILLÉN-SERVENT (Mexico)
- 11.20      CE12      **Gallery forests boost bat diversity in southern Mali, West Africa**  
Natalie WEBER (Germany), Laurent GRANJON (Senegal), Jakob FAHR (Germany)
- 11.40      CE13      **The use of natural and artificial bodies of water by desert and non desert species of bats**  
Carmi KORINE, Orly RAZGOUR, Uzi SHAMIR, David SALTZ, Itzhak BENENSON (Israel)

**Integrating information across multiple molecular markers:** current and future studies in bat genetic research  
*Conveners:* Stephen J. ROSSITER and Pavel HULVA

S6

- 14.40 S6.1 **The impact of environmental niche specialisation on the evolution of olfaction in bats**  
 Sara HAYDEN, Micheal BEAKERT, Emma C. TEELING (Ireland)
- 15.00 S6.2 **Variation in candidate genes for cranial evolution in phyllostomid bats**  
 Caleb PHILLIPS, Hugo MANTILLA, Robert BAKER (USA)
- 15.20 S6.3 **Hearing genes: insights from phylogenetic discordance**  
 Stephen ROSSITER (United Kingdom), Yang LIU (China), Gang LI (USA), James COTTON (United Kingdom), Gareth JONES (UK), Shuyi ZHANG (China)
- 15.40 *coffee*
- 16.00 student S6.4 **Blind as a Bat? Comparative Genomics Brings Light to the Evolution of Color Vision in Bats**  
 Bruno F. SIMOES (Ireland), Huabin ZHAO, Shuyi ZHANG (China), Stephen ROSSITER (UK), Emma C. TEELING (Ireland)
- 1620 S6.5 **A phylogenetic analysis of Pteropodidae based on multi-locus molecular data**  
 Francisca C. ALMEIDA (Spain), Norberto P. GIANNINI (Argentina, USA), Nancy SIMMONS (USA)
- 16.40 S6.6 **Molecular phylogeny and systematics of Old World serotine bats (genus *Eptesicus*, Vespertilionidae, Chiroptera)**  
 Javier JUSTE (Spain), Petr BENDA (Czech Republic), Juan Luis GARCIA-MUDARRA, Carlos IBÁÑEZ (Spain)
- 17.00 S6.7 **Hypothesis testing in genetic demography: using multilocus data to reconstruct evolutionary history**  
 Amy L. RUSSELL, Murray P. COX, Veronica A. BROWN, Gary F. MCCracken (USA)
- 17.20 student S6.8 **Population history of *Craseonycteris thonglongyai***  
 Sebastien J. PUECHMAILLE (Ireland), Meriadeg AR GOULH (France), Medhi YUKUBOL, Piyathip PIYAPAN (Thailand), Khin MIE MIE (Myanmar), Paul J. BATES (United Kingdom), Eric J. PETIT (France), Iain J. MACKIE (United Kingdom), Emma C. TEELING (Ireland)
- 18.00 S6.9 **Phylogeography of *Pipistrellus pipistrellus* species group: radiation and reticulation**  
 Pavel HULVA, Alena FURNUSKOVA, Adela CHUDARKOVA (Czech Republic), Benjamin ALLEGRI, Allowen EVIN (France), Petr BENDA, Ivan HORÁČEK, Tomas BARTONIČKA, Josef BRYJA (Czech Republic)
- 18.20 student S6.10 **Phylogeography of *Rhinolophus hipposideros***  
 Serena E. DOOL, Stephen J. ROSSITER, Emma C. TEELING (Ireland)

S3<sup>2</sup>

Gerhard Neuweiler Memorial Symposium on  
Echolocation in Bats.

Conveners: Björn SIEMERS and Gareth JONES

09.40	<div>S3.6    <b>Echo acoustic properties of bat-pollinated flowers and their recognition by glossophagine bats</b></div> <div>Ralph SIMON, Otto VON HELVERSEN (Germany)</div>
10.00	<div>S3.7    <b>Stroboscopic flow perception in free flying bats</b></div> <div>Marc HOLDERIED (United Kingdom)</div>
10.20	<div>S3.8    <b>Bat-moth interactions in the field: trajectory analysis reveals stereotypic yet effective evasive responses and their counter-responses</b></div> <div>R. Holger GOERLITZ, M. Hannah TER HOFSTEDE, Marc W. HOLDERIED, (Germany)</div>
10.40	<div>coffee</div>
11.00 student	<div>S3.9    <b>Adapting Echolocation call intensity and directionality to habitat and behavior</b></div> <div>A. SURLYKKE, S. BRINKLOEV, L. JAKOBSEN (Denmark), E. K. V. KALKO (Germany), C. F. MOSS (USA)</div>
11.20 student	<div>S3.10   <b>Understanding the impact of shared evolutionary history on echolocation call design</b></div> <div>Alanna MALTBY, Gareth JONES, Helen CHATTERGEE, Kate JONES (UK)</div>
12.00	<div>S3. C    Symposium summary and conclusions</div> <div>by Gareth JONES</div>

## S13

### Social and vocal complexity in bats

Conveners: Mirjam KNÖRNSCHILD and Martina NAGY

- 14.40      **S13.1 Development of vocalization and social communication in a free-ranging nursing colony of the Lesser Roundleaf bat, *Hipposideros turpis***  
Sumiko MATSUMURA (Japan)
- 15.00      **S13.2 Learned vocal signatures in a polygynous bat**  
Mirjam KNÖRNSCHILD, Martina NAGY, Otto VON HELVERSEN (Germany)
- 15.20      **S13.3 Male greater sac-winged bats gain fitness benefits in larger colonies**  
NAGY Martina, KNÖRNSCHILD Mirjam, VOIGT Christian C., MAYER Frieder (Germany)
- 15.40      *coffee*
- 16.00      **S13.4 Group decision-making in fission-fusion societies: Lessons from Bechstein's bats and brown long-eared bats**  
FLEISCHMANN Daniela, KERTH Gerald (Germany)
- 16.20      **S13.5 Social calls are sufficient for locating conspecifics at roosts in a tree-dwelling bat *Nyctalus noctula***  
Joanna FURMANKIEWICZ, Ireneusz RUCZYŃSKI (Poland), Gareth JONES (United Kingdom)
- 16.40      **S13.6 Do Bats Jazz? Song composition and syntax in the song of the common noctule bat**  
student  
Silke L. VOIGT-HEUCKE, J. Ansgar THODE, Silke KIPPER (Germany)
- 17.00      **S13.7 Advertisement calls of *Pipistrellus nathusii*: complex message of individual males**  
JAHELKOVÁ Helena, HORÁČEK Ivan, BARTONIČKA Tomáš (Czech Republic)
- 17.20      **S13.8 Categorization of affect intensity and individuality within call types emitted during agonistic interactions**  
student  
Hanna KASTEIN (Germany), A.V. Kumar KUMARAVEL, Sripathi KANDULA (India), Sabine SCHMIDT (Germany)

## S15<sup>2</sup>

### **Diversity, systematics and conservation of South American bats.**

*Conveners:* Valeria C.TAVARES, Ludmilla M.S. AGUILAR,  
Enrico BERNARD, Renato GREGORIN

- 09.40      S15.8 **Red Latinoamericana de Conservacion de Murciélagos**  
Rodrigo A. MEDELLIN (Mexico)
- 10.00      S15.9 **Future scenarios caused by climate change on bat species from the Brazilian Cerrado: what if the species are not able to move?**  
Ricardo Bomfim MACHADO, Ludmilla Moura de Souza AGUIAR (Brazil)
- 10.20      S15.10 **Habitat complexity: the importance of understory structure on the Phyllostomidae assemblages in the Brazilian Atlantic Forest**  
Julio BAUMGARTEN, Deborah FARIA, Eleonore SETZ (Brazil)
- 10.40      *coffee*
- 11.00      S15.11 **Combined analyses of extant and fossil “phyllostomine” bats (Chiroptera, Phyllostomidae)**  
Paúl M. VELAZCO, Nancy B. SIMMONS, Peter D. SMITS, Susan TSANG, Liliana M. DÁVALOS (USA)

**Global bat Monitoring and Bioindication***Conveners:* Kate JONES and Tomáš BARTONIČKA**S9<sup>2</sup>**

- 14.40      **S9.7    25 years of bat monitoring in Bavaria/Germany - population trends and future tasks**  
Angelika MESCHÉDE (Canada), Matthias HAMMER,  
Andreas ZAHN, Bernd-Ulrich RUDOLPH (Germany)
- 15.00  
I      **S9.8    An assessment of the suitability of tropical bats for long-term monitoring**  
Christoph MEYER, Ludmilla AGUIAR, Luis AGUIRRE,  
Julio BAUMGARTEN, Frank CLARKE, Jean-François COSSON,  
Sergio ESTRADA VILLEGAS, Jakob FAHR, Deborah FARIA,  
Neil FUREY, Mickaël HENRY, Robert HODGKISON,  
Richard JENKINS, Kirsten JUNG, Tigga KINGSTON, Thomas KUNZ,  
Cristina MACSWINEY GONZALEZ, Isabel MOYA,  
Bruce PATTERSON, Jean-Marc PONS, Paul RACEY, Katja REX,  
Erica SAMPAIO, Sergio SOLARI, Kathryn STONER,  
Christian VOIGT, Dietrich VON STADEN, Christa WEISE,  
Elisabeth KALKO
- 15.20      **S9.9    Applying non-invasive genetic monitoring to bat populations**  
Emma S. M. BOSTON, Mathieu G. LUNDY, Daniel L. BUCKLEY,  
David SCOTT, Paulo A. PRODÖHL, Ian MONTGOMERY,  
Ferdia MARNELL, Emma C. TEELING (Ireland)
- 15.40      *coffee*
- 16.00  
student      **S9.10   Predicting distributions of Asian bat species over 20000 years and solving zoo-geographic riddles**  
Alice C. HUGHES (UK), Chutamas SATASOOK (Thailand),  
Paul J.J. BATES (UK), Pipat SOISOOK, Tuenjit SRITONGCHUAY  
(Thailand), Gareth JONES (UK), Sara BUMRUNGRI (Thailand)

## CB<sup>2</sup>

Contributed session **BEHAVIOUR II**  
Chairpersons: Rick ADAMS, Joanna FURMANKIEWICZ

- 09.40                      **CB11 Food Transfer By Mother To Pup In The Indian False Vampire Bat, *Megaderma lyra***  
H. RAGHURAM, G. MARIMUTHU (India)
- 10.00                      **CB12 Concept learning in the nectar feeding bat**  
student                      ***Glossophaga soricina***  
Georgina ROSS, Marc HOLDERIED (United Kingdom)
- 10.20                      **CB13 Directional hearing by echolocating nectar-feeding**  
student                      **bats (*Glossophaga soricina*)**  
Violaine DRAPEAU, Marc HOLDERIED (United Kingdom)
- 10.40    *coffee*
- 11.00                      **CB14 Recent philopatry in *Tadarida brasiliensis***  
student                      **(Chiroptera: Molossidae) females in Mexico.**  
Ariadna E. MORALES-GARCIA, Daniel PINERO (Mexico)
- 11.20                      **CB15 Survival of young female greater horseshoe bats**  
**seems to be influenced by birth synchrony with other**  
**young, especially those from their own matriline.**  
Roger RANSOME, Gareth JONES, Stephen ROSSITER (United Kingdom)
- 11.40                      **CB16 Is harem size a predictor of male reproductive**  
student                      **success across habitats and seasons?**  
Kritika M.GARG, Balaji CHATTOPADHYAY, Vinoth Kumar  
KUMARAVEL, Paramanantha Swami Doss DEVARAJ, Sripathi  
KANDULA, Uma RAMAKRISHNAN (India)



afternoon

# Room A

## Open Meeting of **IUCN Bat Specialist Group**

*Chairpersons:* Paul A. RACEY, Rodrigo A. MEDELLÍN

13.40 **News from EUROBATS**  
Andreas STREIT

13.50 AGENDA OF IUCN BAT SPECIALIST GROUP

14.40 coffee

## Closing plenary session of the Conference

*Chaipersons:* The organizers

15.00 **Concluding remarks by the Symposia Conveners**  
and  
**Agenda of common interest**

16.00 **Declaring Student Award**16.20 **Next Conferences**

## 16.40 Closing the Conference

19.30 **Farewell Reception and Concert in KAROLINUM**  
**Praha 1, Ovocný trh 3**  
(optional)

## SATURDAY 28 August

**08.30** departure of the optional Post-Conference  
Excursions:

***A - Southern Moravia***  
***B - Northern Bohemia***

## S8<sup>2</sup>

### Movement Ecology of Bats

*Coveners:* Thomas H. KUNZ and Paul M. CRYAN

09.40  
student

#### S8.10 Movement ecology of GPS-tracked *Rousettus aegyptiacus*: Unexpected foraging movements in a predictable heterogeneous landscape

Asaf TSOAR, Nachum ULANOVSKY, Yoav BARTAN, Ofir ALTSTEIN (Israel), Giacomo DELL'OMO (Italy), Alexei L. VYSSOTSKI (Switzerland), Ran NATHAN (Israel)

10.00  
student

#### S8.11 GPS tracking of Egyptian fruit bats: First evidence for large-scale navigational map in a mammal

Nachum ULANOVSKY, Asaf TSOAR, Yoav BARTAN, Ofir ALTSTEIN (Israel), Giacomo DELL'OMO (Italy), Alexei L. VYSSOTSKI (Switzerland), Yossi YOVEL, Ran NATHAN (Israel)

10.20

#### S8.12 Movement ecology of GPS-tracked Egyptian fruit bats: Bats as long-distance dispersal vectors of seeds

Ran NATHAN, Asaf TSOAR, David SHOHAMI, Yoav BARTAN, Ofir ALTSTEIN, Nachum ULANOVSKY (Israel)

10.40

*coffee*

11.00

#### S8.13 Impacts of Various Factors on Population Status and Movement of *Rousettus aegyptiacus* in Iran

Hossein ZOHOORI, Bahram H. KIABI, Kourosh KAVOUSI (Iran)

## W3

### WORKSHOP 3 The Mediterranean Fruit bat, *Rousettus aegyptiacus*: distribution, abundance trends, monitoring

*Conveners:* Radek K. LUČAN, Ivan HORÁČEK

11.20

#### S5.6 Is the only European population of fruitbats close to extinction?

Haris NICOLAOU, Eleftherios HADJISTERKOTIS, Elena EROTKRITOU (Cyprus), Radek K. LUČAN, Tomáš BARTONIČKA, Ivan HORÁČEK (Czech Republic)

11.40

#### C81 The Mediterranean fruit bats, *Rousettus aegyptiacus*: distribution, chorologic status, and perspectives.

Ivan HORÁČEK, Petr BENDA, Pavel HULVA (Czech Republic), Rasit BILGIN (Turkey), Mounir ABI-SAID, Rena KARANOUH (Lebanon), Nursel ASAN, İrfan ALBAYRAK, Ahmed KARATASH (Turkey), Haris NICOLAOU (Cyprus), Tomáš BARTONIČKA, Radek LUČAN (Czech Republic)

afternoon

Room B

Contributed session **BEHAVIOUR III**  
*Chairpersons:* Stuart PARSONS, Sumiko MATSUMURA

**CB<sup>3</sup>**

- 13.40 CB17 **Bats in snow: Do they hibernate?**  
Hirofumi HIRAKAWA, Dai FUKUI (Japan)
- 14.00 CB18 **“Out for the count?” Winter torpor in Natterer’s**  
student **bat *Myotis nattereri***  
Paul HOPE, Gareth JONES (United Kingdom)
- 14.20 CB19 **Does hibernation affect memory retention for a**  
**spatial foraging task in bats?**  
Ireneusz RUCZYŃSKI (Germany, Poland), Björn SIEMERS  
(Germany)

CE<sup>1</sup>

Contributed session **ECOLOGY III**

*Chairpersons:* Jorge PALMEIRIM, Mozafar SHARIFI

09.40  
student

**CE14 The bigger you are the harder you bite: linking form and function of forest interior insectivorous bats**  
Juliana SENAWI (USA, Malaysia), Bjorn SIEMERS, Daniela SCHMIEDER (Germany), Tigga KINGSTON (USA)

10.00

**CE15 DNA-based diet analysis of insectivorous bats**  
Matt RK ZEALE, Roger K BUTLIN, Gary LA BARKER, Gareth JONES (United Kingdom)

10.20

**CE16 Diet composition, resource partitioning and trophic niche overlap in forest foliage gleaning bats**  
Michal ANDREAS, Antonín REITER, Petr BENDA (Czech Republic)

10.40

*coffee*

11.00  
student

**CE17 Comparative diet analyse of the two sympatric European ‘trawling’ bat species, *Myotis dasycneme* and *Myotis daubentonii***  
Frauke KRÜGER, Inka HARMS, Robert SOMMER (Germany)

11.20

**CE18 ‘When and where’? Decisions of foraging bats in a forest landscape various among foraging groups**  
Milenka MEHR, Hans-Joachim KLEMMT, Hans PRETZSCH, Roland BRANDL, Jörg MÜLLER (Germany)

11.40

**CE19 What influence the selection of foraging sites in rhinolophids?**  
Egoitz SALSAMENDI, Inmaculada AROSTEGUI, Joxerra AIHARTZA, David ALMENAR, Urtzi GOITI, Inazio GARIN (Spain)

- |       |   |
|-------|---|
| 9.40  | <p><b>CC12 Population genetics and conservation status of cryptic species: the case of European <i>Pipistrellus</i></b><br/>         Anna SZTENCEL-JABLONKA, Wiesław BOGDANOWICZ (Poland)</p>   |
| 10.00 | <p><b>CC13 The challenge posed by newly discovered cryptic species: disentangling the environmental niches of long-eared bats</b><br/>         Marianne D. RUTISHAUSER, Fabio BONTADINA, Veronika BRAUNISCH, Sohrab ASHRAFI, Raphaël ARLETTAZ (Switzerland)</p> |
| 10.20 | <p><b>CC14 The effect of bark beetle infestation and salvage logging on bat activity</b><br/>         Milenka MEHR, Roland BRANDL, Thomas KNEIB, Jörg MÜLLER (Germany)</p>  |
| 10.40 | <p><i>coffee</i></p>  |
| 11.00 | <p><b>CC15 The creation of new artificial lakes as a mitigation measure for bats</b><br/>         Ralf GYSELINGS, Erika VAN DEN BERGH (Belgium)</p>   |
| 11.20 | <p><b>CC16 Can organic farming help to conserve bats?</b><br/>         Fiona MATHEWS, Paul JOHNSON, David MACDONALD</p>   |



# **List of Posters**

# P

## Morphology, adaptations, phylogeny

- 1**  
Student **The RoBat; a bat inspired flapper**  
Melanie STUIVER, Florian MUIJRES, Anders HEDENSTRÖM (Sweden) & Bas VAN OUDHEUSDEN (Netherlands)
- 2** **Comparative morphology of distal part of hind limb of bats with different ability to quadrupedal locomotion**  
Lucie ŠTORKOVÁ & Josef HOTOVÝ (Czech Republic)
- 3** **Complexity of chiropteran dentition: the GIS approach**  
František ŠPOUTIL (Czech Republic), Jukka JERNVALL (Finland) & Alistair EVANS (Australia)
- 4**  
Student **Looking at baculum function from a histomorphological perspective**  
Anna Nele HERDINA, Hanns PLENK Jr., Petra POKORNY, Helge HILGERS, Barbara HERZIG-STRASCHIL & Brian D. METSCHER (Austria)
- 5** **Modularity and the evolutionary flexibility of the skull of chiropterans**  
A. PORTO, Daniela M. ROSSONI & Gabriel MARROIG (Brazil)
- 6**  
Student **Sensory specializations compromise bite force in bats**  
Stefan GREIF (Germany), Anthony HERREL (France), Elisabeth R. DUMONT (USA), Ivailo BORISOV (Bulgaria) & Björn M. SIEMERS (Germany)
- 7**  
Student **“A peculiar bat”: are environment-specific adaptations of the New Zealand short-tailed bat (*Mystacina tuberculata*) associated with changes to conserved genetic sequences?**  
Darren LE ROUX, Claire MULHOLLAND, Joseph WAAS & Richard WILKINS (New Zealand)
- 8** **Bats that walk: a new evolutionary hypothesis for the terrestrial behaviour of New Zealand’s endemic mystacinids**  
Suzanne J. HAND (Australia), Vera WEISBECKER (United Kingdom, Germany), Robin M. D. BECK (USA), Michael ARCHER, Henk GODTHELP (Australia), Alan J. D. TENNYSON (New Zealand) & Trevor H. WORTHY (Australia)
- 9** **Establishing hypotheses of homology in the phyllostomid bat skulls**  
Daniela M. ROSSONI, A. PORTO (Brazil), Norberto P. GIANNINI (Argentina) & Gabriel MARROIG (Brazil)
- 10**  
Student **Evolution of diets in Phyllostomidae: a contribution based on molecular phylogeny data**  
Yann GAGER, Fidel BOTERO & Emmanuel DOUZERY (France)
- 11**  
Student **When size matters: the influence of competition on bat body size**  
Gwen DELCROS, Peter J. TAYLOR & Corrie SCHOEMAN (South Africa)



- 12** **Derived characters of higher-level chiropteran clades**  
 Andrea L. WETTERER, Nancy B. SIMMONS & Gregg F. GUNNELL (USA)
- 13** **Primitive and derived shoulder joints of Messel bats**  
 Jörg HABERSETZER & Evelyn SCHLOSSER-STURM (Germany)
- 14** **Some new vespertilionid bats (Chiroptera, Mammalia) from the Late Miocene of Ukraine**  
 Valentina V. ROSINA (Russia) & Yuriy A. SEMENOV (Ukraine)
- 15** **The bat fauna of Mé Auré Cave, Moindou, New Caledonia: evidence of human consumption and a new species record from the recent past**  
 Suzanne J. HAND (Australia) & Jack A. GRANT-MACKIE (New Zealand)
- 16** **Report on fossil bats from Mumyo-Ana Cave, Akiyoshi-Dai Plateau, Yamaguchi Prefecture, Japan**  
 Sumiko MATSUMURA & Mari ISHIDA (Japan)
- 17** **New evidence for *Barbastella barbastellus* in the latest Pleistocene of Northeastern Iberia**  
 Juan Manuel LÓPEZ-GARCÍA, Paloma SEVILLA & Sandra BAÑULS (Spain)
- 18** **The Plio-Pleistocene bat fossils of the Almenara-Casablanca Complex: getting closer to a modern assemblage**  
 Paloma SEVILLA & Marc FURIÓ (Spain)
- 19** **Molecular systematics of the family Molossidae based on nuclear and mitochondrial genes**  
 Loren AMMERMAN, Dana LOREN & Marie TIPPS (USA)
- 20** **Molecular phylogeny of African “pipistrelle” bats (Chiroptera: Vespertilionidae) suggests new clades, rearrangement of genera, and extensive cryptic diversity within species**  
 Student  
 Maria HELBIG, Thomas DATZMANN, Frieder MAYER & Jakob FAHR (Germany)
- 21** **Genetic diversity of vespertilionid bats from West Africa – preliminary results**  
 Student  
 Darina KOUBÍNOVÁ (Czech Republic), Nancy IRWIN (United Kingdom), Pavel HULVA & Jan ZIMA (Czech Republic)
- 22** **Phylogeography of *Musonycteris harrisoni* along the Pacific coast of Mexico**  
 Jorge ORTEGA (Mexico), Marco TSCHAPKA (Germany), Tania GONZÁLEZ-TERRAZAS, Gerardo SUZÁN & Rodrigo MEDELLÍN (Mexico)

# P

- 23** **A new morphological form of whiskered bat in the Caucasus**  
Suren V. GAZARYAN (Russia)
- 24** **Cranial morphological diversity of common vampire bat (*Desmodus rotundus*) in Central and South America**  
Felipe MARTINS (Brazil) & Mark HUBBE (Chile)
- 25** **On the taxonomic position of *Pipistrellus stenopterus***  
Sergey V. KRUSKOP (Russia)
- 26** **Phylogeography of *Miniopterus schreibersii schreibersii* and *M. s. pallidus* in Asia Minor as inferred from climate modelling predictions**  
Student  
Elif ICAGASIOGLU & Andrzej FURMAN (Turkey)
- 27** **The sympatry of *Miniopterus schreibersii schreibersii* and *Miniopterus schreibersii pallidus* in three caves: The smoking gun for their elevation to full species Status**  
Student  
Öncü MARACI, Rasit BILGIN (Turkey), Radek K. LUČAN, Tomáš BARTONIČKA, Pavel HULVA & Ivan HORÁČEK (Czech Republic)
- 28** **Low genetic diversity in the last surviving population of *Rhinolophus mehelyi* from Romania**  
Anca DRAGU (Romania), Federico ABASCAL (Spain), Ivailo BORISOV (Bulgaria) & Rafael ZARDOYA (Spain)
- 29** **Tree surfing: The phylogeography of the woodland specialist, *Myotis mystacinus* (whiskered bat) in Ireland**  
Student  
Daniel J. BUCKLEY, Emma S. M. BOSTON (Ireland), Mathieu G. LUNDY (United Kingdom), David D. SCOTT, Ferdia MARNELL, Sebastien PEUCHMAILLE (Ireland), Manuel RUEDI (Switzerland), John D. ALTRINGHAM, Camille JAN, Anita GLOVER (United Kingdom), Sergey V. KRUSKOP (Russia), Ian W. MONTGOMERY, Paulo PRODÖHL (United Kingdom) & Emma C. TEELING (Ireland)

## Distribution

- 30** **Assemblage of bats and ecological considerations in forest fragments in southeastern Brazil**  
Renato GREGORIN & Lívia Oliveira LOUREIRO (Brazil)
- 31** **Dispersal of *Eumops* into the Greater Antilles: Impacts of Pleistocene Sea Level Fluctuations**  
Molly M. McDONOUGH, Faisal Ali ANWARALI KHAN, Loren K. AMMERMAN & Robert J. BAKER (USA)
- 32** **Recent fragmentation of a panmictic population of *Nyctinomops laticaudatus* (Molossidae) in Yucatan, Mexico**  
Student  
Ariadna E. MORALES-GARCIA & Daniel PINERO (Mexico)

- 33** **First confirmed record of *Vespertilio murinus* in the Pyrenees**  
Antton ALBERDI, Ostaizka AIZPURUA, Inazio GARIN & Joxerra AIHARTZA (Basque Country)
- 34** **Does *Tadarida teniotis* really occur in Crimea?**  
Marcel UHRIN (Slovakia), Suren GAZARYAN (Russia) & Petr BENDA (Czech Republic)
- 35** ***Rhinolophus euryale* (Rhinolophidae) in Slovakia: current status of a population living at the margin of the species distribution range**  
Martin ŠEVČÍK, Petr BENDA (Czech Republic) & Marcel UHRIN (Slovakia)
- 36** **Bat fauna primary inventory and monitoring using mist nets**  
Student  
Alona GUKASOVA & Anton VLASCHENKO (Ukraine)
- 37** **Bat fauna research of Paklenica National Park with special emphasis on altitude distribution**  
Student  
Dina KOVAČ, Željka DRDAR, Dania RANDI, Darija JOSIĆ & Daniela HAMIDOVIĆ (Croatia)
- 38** **Materials for Atlas of bats of Montenegro**  
Student  
Milan PAUNOVIĆ, Branko KARAPANDŽA (Serbia), Čeda IVANOVIĆ, Maša ŽDRALEVIĆ, Marina ĐUROVIĆ (Montenegro) & Primož PRESETNIK (Slovenia)
- 39** **Bat roost characteristics in central Norway (62–64 degrees north)**  
Knut Åge STORSTAD (Norway)
- 40** **Bats in the National Parks Thayatal and Podyjí**  
Ulrich HÜTTMEIR (Austria), Antonín REITER (Czech Republic) & Guido REITER (Austria)
- 41** **Bats of Albania: distribution and conservation status**  
Konrad SACHANOWICZ & Mateusz CIECHANOWSKI (Poland)
- 42** **Current and potential distribution of Bavarian bats – effect of landscape and climate**  
Angelika MESCHÉDE, Rüdiger KRAHE (Canada) & Otto VON HELVERSEN (Germany)
- 43** **New data about bat hibernation sites on the north-west of Russia**  
Dmitriy V. CHISTYAKOV & Svetlana V. BOGDARINA (Russia)
- 44** **Distribution and abundance of cave-dwelling bats in Fars province, Iran: implication to bat conservation**  
Student  
Vahid AKMALI, Mozafar SHARIFI, Jamshid DARVISH & Somayeh ESMAEILI RINEH (Iran)

# P

- 45 Noteworthy bat records from Yemen**  
Petr BENDA (Czech Republic), Masaa M. AL-JUMAILY (Yemen), Antonín REITER (Czech Republic) & Abdul Karim NASHER (Yemen)
- 45 Tadovan Cave – a living ecosystem in Iran for study of bats**  
Student  
Somayeh ESMAEILI RINEH, Vahid AKMALI & Mozafar SHARIFI (Iran)
- 47 To the Bat fauna of bozdags (grey hills) within the Greater Caucasus**  
Nijat HASANOV & Nijar ABDURAHMANOVA (Azerbaijan)
- 48 Zoogeographical analysis of the Caucasian bat fauna**  
Irina K. RAKHMATULINA (Azerbaijan)

## Community ecology, abundance dynamics

- 49 Adaptability of Neotropical aerial insectivorous bats to urbanization**  
Kirsten JUNG (Germany) & Elisabeth K. V. KALKO (Germany, Panama)
- 50 Assemblage of bats and ecological considerations in forest fragments in Southeastern Brazil**  
Livia Oliveira LOUREIRO & Renato GREGORIN (Brazil)
- 51 Bat activity in different strata of a beech forest in Northwest Germany**  
Lothar BACH, Petra BACH & Manfred TILLMANN (Germany)
- 52 Bat key underground sites in the eastern Crimea (Ukraine): numbers, threats and future**  
Lena GODLEVSKA, Maria GHAZALI, Anna KHOKHLOVA & Volodymyr TYSHCHENKO (Ukraine)
- 53 Bat species richness, diversity and abundance in a mosaic of forest and cocoa plantations in Southern Bahia, Brazil**  
Deborah FARIA, Julio BAUMGARTEN, Solange FARIA & Ludmilla AGUIAR (Brazil)
- 54 Community Structure of the bat fauna of the Black River State Park**  
José BOSCO ISAAC Jr. & Érico Ribeiro HUGO (Brazil)
- 55 Structure of a bat assemblages in different landscapes in a high elevation area in Southeastern Brazil**  
Martins Ligiane MORAS & Renato GREGORIN (Brazil)
- 56 Bat diversity at Panguana Biological Station, Peru – 25 years ago and now**  
Angelika MESCHÉDE (Canada), Sandra VELAZCO (Peru), Juliane DILLER (Germany) & Víctor PACHECO (Peru)

- 57** **Habitat use by bats in anthropogenically transformed mosaic landscape of northern Poland**  
Mateusz CIECHANOWSKI (Poland)
- 58** **Distribution pattern of hibernating bats in caves along Carpathians elevation gradient (Poland)**  
Krzysztof PIKSA & Jakub NOWAK (Poland)
- 59** **Flight activity of migratory bats on Estonian coasts**  
Matti MASING (Estonia)
- 60** **Hotspots of bat migration at lentic and lotic waters**  
Student Michaela GERGES, Veronika ZEUS, Andreas ZAHN (Germany) & Guido REITER (Austria)
- 61** **The influence of landscape structure to the activity of bats**  
Zuzana HACEKOVÁ, Blanka LEHOTSKÁ & Jana RUŽIČKOVÁ (Slovakia)
- 62** **Relating presence of house-dwelling bat species to habitat features in heterogeneous landscape (Central Europe)**  
Marcel UHRIN, Peter KAŇUCH (Slovakia) & Petr BENDA (Czech Republic)
- 63** **Bats in the Bratislava city, Slovakia**  
Blanka LEHOTSKÁ (Slovakia)
- 64** **Bat fauna of the city of Prague**  
Vladimír HANÁK, Jana NECKÁŘOVÁ, Petr BENDA, Vladimír HANZAL, Miloš ANDĚRA, Ivan HORÁČEK, Helena JAHELKOVÁ, Anna ZIEGLEROVÁ & Dagmar ZIEGLEROVÁ (Czech Republic)
- 65** **Abandoned old mines in the Central Slovakia: Important bat hibernation sites**  
Peter BAČKOR (Slovakia)
- 66** **Chiroptera of the Gali Region (Abkhazia, Georgia)**  
Nona MIKAIA (Georgia)
- 67** **The community structure of cave-dwelling bat populations in Yildiz Mountains, Turkish Thrace**  
Emrah ÇORAMAN & Andrzej FURMAN (Turkey)

### Monitoring and conservation biology

- 68** **Population dynamics of four bat species in Austria**  
Guido REITER, Ulrich HÜTTMEIR, Maria JERABEK, Simone PYSARCZUK, Elisabeth SCHOBER, Anton VORAUER, Stephanie WOHLFAHRT & Hans WALSER (Austria)
- 69** **Population development of *Rhinolophus hipposideros* at the northern border of its range in Saxony (Germany) during the last thirty years**  
Ulrich ZÖPHEL, Thomas FRANK, Ullrich DINGELDEY, Christiane SCHMIDT & Thomas WÜRFLEIN (Germany)

# P

- 70** **Variation in declines of six hibernating bat species from White-Nose Syndrome in eastern North America**  
Kate E. LANGWIG, Winifred F. FRICK, Alan C. HICKS, Carl J. HERZOG & Thomas H. KUNZ (USA)
- 71** ***Pipistrellus kuhlii*: further range extension in Ukraine**  
Andriy-Taras BASHTA (Ukraine)
- 72** **A new acoustic method to study the area expansion of *Pipistrellus kuhlii***  
Student  
Tamás GÖRFÖL, Péter ESTÓK & Sándor ZSEBŐK (Hungary)
- 73** **Activity and roosting ecology of mixed colony of *Miniopterus schreibersii* and *Rhinolophus euryale* in a cave near Zagreb: improving current bat monitoring and cave management**  
Student  
Norma FRESSEL, Petra ŽVORC, Marina KIPSON, Vida ZRNČIĆ & Daniela HAMIDOVIĆ (Croatia)
- 74** **Short term observations of emergence and flight routes of *Rhinolophus hipposideros* from a summer roost in central Slovenia: implications for conservation**  
Student  
Veronika RAMOVŠ, Simon ZIDAR & Maja ZAGMAJSTER (Slovenia)
- 75** **Conservation status of bats of the island of São Tomé (Gulf of Guinea)**  
Ana RAINHO, Christoph F. J. MEYER, Sólveig THORSTEINDÓTTIR & Jorge M. PALMEIRIM (Portugal)
- 76** **Impacts of land-use intensification on rainforest bat assemblages in Sumatra, Indonesia**  
Student  
Joe Chun Chia HUANG (Taiwan, USA), Elly Lestari RUSTIATI, Jani MASTER, Hesti PRASTIANINGRUM (Indonesia) & Tigga KINGSTON (USA)
- 77** **Enriching agroecosystems with fruit-producing tree species favors bat abundance and richness in Veracruz, Mexico**  
Alejandro A. CASTRO-LUNA & Jorge GALINDO-GONZÁLEZ (Mexico)
- 78** **Importance of forest fragments in agricultural landscape to bats**  
Zdeněk ŘEHÁK, Žaneta HORÁČKOVÁ, Jan ZUKAL & Tomáš BARTONIČKA (Czech Republic)
- 79** **The Bechstein's bat survey project: mapping the UK distribution of this rare species**  
Helen MILLER, David HILL & Frank GREENAWAY (United Kingdom)
- 80** **Genetic structure of *Myotis daubentonii* populations from Finland - Possible effects of organic tin compounds**  
Veronika LAINE, Thomas LILLEY & Craig PRIMMER (Finland)

- 81** **The complement pathway and oxidative parameters of *Myotis daubentonii*, possible effects organic tin contamination**  
 Student  
 Thomas LILLEY, Janina STAUFFER, Mirella KANERVA, Tatu HIITOLA, Veronika LAINE & Mikko NIKINMAA (Finland)
- 82** **Occurrence of bats in prefab houses in the Czech Republic and their conservation**  
 Petra SCHNITZEROVÁ, Tomáš BARTONIČKA, Borek FRANĚK, Jiří GAISLER, Josef CHYTIL, Jana NECKÁŘOVÁ, Pavla POKOROVÁ, Tomáš SVAČINA, František ŠPOUTIL, Vít TEJROVSKÝ & Dita WEINFURTOVÁ (Czech Republic)
- 83** **An overview on BIUS research projects and its impact on existing and further bat research in Croatia**  
 Student  
 Martina RATKO, Valerija APTREEVA, Marija KRAJNOVIĆ & Jure KRASIĆ (Croatia)
- 84** **Bat Conservation Programme in Padurea Craiului, Bihor and Trascau Mountains, Romania**  
 Farkas SZODORAY-PARÁDI, Abigél SZODORAY-PARÁDI, Zoltán NAGY, Csaba JÉRE & Szilárd BÜCS (Romania)
- 85** **Conservation of Bats in Hong Kong**  
 Cynthia CHAN SZE-MAN (Hong Kong)
- 86** **Conserving bats in partnership: the birth of BatLife Europe**  
 Karen A. HAYSOM, Katie N. PARSONS & Julia HANMER (United Kingdom)
- 87** **Current and future conservation of European bats**  
 C. WALTERS (United Kingdom)
- 88** **Public attitudes towards bats in Switzerland: How they are affected by experience and knowledge**  
 Irene C. WEINBERGER & Robert HOME (Switzerland)
- 89** **Farmer encouraging bat conservation to fight *Chilo suppressalis* pest: an example to follow**  
 Carles FLAQUER (Spain), Emilio GUERRIERI, Maurilia MONTI (Italy), Ruth G. RAFOLS, Xavier FERRER, David GISBERT, Ignacio TORRE, Xavier PUIG-MONTERRAT & Antoni ARRIZABALAGA (Basque Country)
- 90** **Greenbridges as crossovers for bats**  
 Lothar BACH & Petra BACH (Germany)
- 91** **Protection of bats in the Košice city (East Slovakia)**  
 Student  
 Ľuboš KORYTÁR, Anna ONDREJKOVÁ, Róbert ONDREJKA, Zdenek BENÍŠEK, Marián PROKEŠ, Eva SLEPECKÁ, Judit SÜLI & Miroslav FULÍN (Slovakia)
- 92** **Natura 2000 – proposal of protected areas for bats in Croatia**  
 Maja ĐAKOVIĆ & Igor PAVLINIĆ (Croatia)



- 93** **Ukraine: workshop “Bats and man: conservation and epidemiological aspects”**  
Lena GODLEVSKA (Ukraine) & Peter H. C. LINA (Netherlands)

## Parasites, diseases

- 94** **New records of bat ectoparasites (Nycteribiidae, Ixodidae, Argasidae, Spinturnicidae) from the Eastern Mediterranean and Middle East**  
Student

Martin ŠEVČÍK (Slovak Republic), Petr BENDA, Antonín REITER (Czech Republic) & Marcel UHRIN (Slovakia)

- 95** **Mites, males and members – Parasitism in *Myotis daubentonii***

Jorge A. ENCARNAÇÃO (Germany)

- 96** **Patterns of ectoparasite abundance infecting distinct population of *Miniopterus* species in their contact zone in Asia Minor**

Tomasz POSTAWA (Poland), Andrzej FURMAN & Tunc OZTUNC & Emrah ÇORAMAN (Turkey)

- 97** **Prevalence of Spinturnicidae, Ixodidae and Argasidae in bats during spring and fall swarming (southern Poland)**

Krzysztof PIKSA, Anna BOJAR & Kinga NIEDOŚPIAŁ (Poland)

- 98** **Bats may be carriers of *Campylobacter***

Wilma C. HAZELEGER, Wilma F. JACOBS-REITSMA, Marcel VAN BERGEN, Peter H.C. LINA, Thijs BOSCH & Rijkelt R. BEUMER (Netherlands)

- 99** **Circulation of group 2 coronaviruses in a bat species common to urban areas in Western Europe**

Chantal B. E. M. REUSKEN, Peter H. C. LINA, Annemarie PIELAAT, Ankje DE VRIES, Cecile DAM-DEISZ, Jeroen ADEMA (Netherlands), Jan Felix DREXLER, Christian DROSTEN (Germany) & Engbert A. KOOI (Netherlands)

- 100** **Diseases of United Kingdom bats**

Student Tom AUGUST, Mathews FIONA & Nunn MILES (United Kingdom)

- 101** **Rabies and bat conservation in Europe**

Peter H. C. LINA (Netherlands)

- 102** **National surveillance of bat rabies in France**

E. PICARD-MEYER, J. BARRAT, N. STROUCKEN, E. LITAIZE, M. BIARNAIS, J. AMBERT, C. BUJACK, Liza DADU and F. CLIQUET (France)

- 103** **Influence of anthropogenic disturbance on cave-roosting bats and the potential emergence of associated zoonotic diseases**

Kendra L. PHELPS, Kevin J. OLIVAL & Tigga KINGSTON (USA)



- 104 Surveillance project: EBLVs in bats in Finland**  
Eeva-Maria KYHERÖINEN, Thomas LILLEY, Anita HUOVILAINEN,  
Veronika LAINE, Tiina NOKIREKI & Miia JAKAVA-VILJANEN (Finland)

### Ecology: foraging, roosting

- 105 Plasma testosterone levels decrease after activation of skin immune system in a free-ranging mammal**  
Sabine GREINER, Volker STEFANSKI, M. DEHNHARD & Christian C. VOIGT (Germany)
- 106 A more efficient technique to collect seeds dispersed by bats**  
Jorge GALINDO-GONZÁLEZ, Guillermo VÁZQUEZ-DOMÍNGUEZ, Romeo A. SALDAÑA-VÁZQUEZ & Jesús R. HERNÁNDEZ-MONTERO (Mexico)
- 107 BAARA Biological AutomAted RAdiotelemetry system: New technology in ecological field studies**  
Petr JEDLIČKA, Martin ČÍZEK, Šimon ŘEŘUCHA & Tomáš BARTONIČKA (Czech Republic)
- 108 The effects of flight energetics and echolocation on group-foraging and sociality of bats**  
Christian C. VOIGT, Silke L. VOIGT-HEUCKE, Martin WIKELSKI & Dina K. N. DECHMANN (Germany)
- 109 Trophic discrimination may obscure spatial information in stable hydrogen isotope ratios of bat hair**  
Anna ERZBERGER, Ana POPA-LISSEANU & Christian C. VOIGT (Germany)
- 110 A picture of bat activity at a cave entrance in Austria**  
Guido REITER, Oliver GEBHARDT (Austria) & Karl KUGELSCHAFTER (Germany)
- 111 Are bats able to sniff out their roosts?**  
Student Jana ŠVARIČKOVÁ & Tomáš BARTONIČKA (Czech Republic)
- 112 Basal metabolic rate of *Myotis daubentonii* male in relation to microclimate, habitat location and group size**  
Moritz KRAFFT, Nina I. BECKER, Elisabeth K. V. KALKO & Jorge A. ENCARNACAO (Germany)
- 113 Cotton balls, the trilogy: building process, habitat preference and social structure**  
Bernal RODRÍGUEZ-HERRERA & Rodrigo MEDELLÍN (Mexico)
- 114 Dynamics of emergence from roost and diet of *Myotis dasycneme* from nursery colony in Lubnia, northern Poland**  
Aneta ZAPART & Mateusz CIECHANOWSKI (Poland)
- 115 Effect of weather on the timing of reproduction and reproductive success in a colony of *Myotis daubentonii***  
Radek K. LUČAN & Vladimír HANÁK (Czech Republic)

# P

- 116** **Maternity roosts and behaviour of *Murina ussuriensis***  
Dai FUKUI, David A. HILL & Sumiko MATSUMURA (Japan)
- 117** ***Miniopterus schreibersii* – what is this cave-roosts flagship species doing in church attics?**  
Primož PRESETNIK & Monika PODGORELEC (Slovenia)
- 118** **Prehibernation habitat use, shelter selection and movements by *Myotis myotis***  
Hana BERKOVÁ, Martin POKORNÝ & Jan ZUKAL (Czech Republic)
- 119** **Temporal pattern of activity of *Pipistrellus pipistrellus* in the Hranická Chasm**  
Zdeněk ŘEHÁK & Lenka FALKOVÁ (Czech Republic)
- 120** **Roost fidelity and dispersal in *Cynopterus sphinx***  
Student  
A Vinoth Kumar KUMARAVEL, Paramanantha Swami Doss DEVARAJ, Balaji CHATTOPADHYAY & Sripathi KANDULA (India)
- 121** **Roosting and reproductive ecology of *Plecotus macrobullaris* and *P. kolombatovici***  
Igor PAVLINIĆ & Maja ĐAKOVIĆ (Croatia)
- 122** **Social behavior and vocalization of two cryptic bat species (*Pipistrellus pipistrellus*, *P. pygmaeus*) in the vicinity of their hibernaculum**  
Lenka KLEBANOVÁ, Tomáš BARTONIČKA & Antonín REITER (Czech Republic)
- 123** **Take care and keep in touch! Constrains in the roost-site selection of tree-dwelling Bechstein's bat**  
Peter HOHTI, Martin CELUCH, Štefan DANKO & Peter KAŇUCH (Slovakia)
- 124** **Do thermoregulatory behaviour and related costs reflect differences in geographic distribution between closely related mouse-eared bats, *Myotis myotis* and *M. blythii oxygnathus*, in Europe?**  
B.-Markus SCHULLER, Christian C. VOIGT, Kathrin H. DAUSMANN & Björn M. SIEMERS (Germany)
- 125** **Metabolic rates, Nutritional State, and Thermoregulatory Behavior of *Molossus***  
Jean Manuel SANDOVAL & Armando RODRIGUEZ-DURAN (USA)
- 126** **Maximum glucocorticoid levels vary with feeding habit and habitat seasonality in two phyllostomid species**  
Student  
Daniel J. LEWANZIK, Detlev H. KELM, Sabine GREINER, Martin DEHNHARD & Christian C. VOIGT (Germany)
- 127** **Nectaraminoacids modify food selection in nectarivorous bats**  
Student  
Nelly RODRÍGUEZ-PENA, Kathryn E. STONER, Jorge AYALA-BERDÓN, C. M. Flores ORTIZ & Jorge E. SCHONDUBE (Mexico)

**128** **Energy and nutritional demands in *Hipposideros bicolor* 142 kHz giving birth right on time**  
Nurul Ain ELIAS (USA), Rosli HASHIM (Malaysia) & Tigga KINGSTON (USA)

**129** **Why do bats fly far for dinner?**  
Jorge A. ENCARNACÃO, Nina I. BECKER & Klemens EKSCHMITT (Germany)

**130** **Tell me what you eat, and I'll tell you what you are - Trophic niche comparison between *Myotis dasycneme* and *Myotis daubentonii***  
Student  
Inka HARMS, Frauke KRÜGER & Robert SOMMER (Germany)

**131** **Capture success and efficiency of trawling bats**  
Marko BÖHM & Jorge A. ENCARNACÃO (Germany)

**132** **New data on piscivory in *Myotis capaccinii***  
Ostaizka AIZPURUA, Iñaki ODRIÓZOLA, David ALMENAR, Joxerra AIHARTZA & Inazio GARIN (Basque Country)

## Behaviour, Bioacoustics

**133** **Perch-hunting in *Rhinolophus* bats is related to the high energy costs of manoeuvring in flight**  
Christian C. VOIGT, B.-Markus SCHULLER, Stefan GREIF & Björn M. SIEMERS (Germany)

**134** **Big eyes, but for what? The role of vision, echolocation and olfaction in the foraging behaviour of the big-eyed bat *Chiroderma villosum* (Phyllostomidae)**  
Student  
Insa WAGNER (Germany) & Elisabeth K. V. KALKO (Germany, Panama)

**135** **Behavioural evidence for olfactory species discrimination in temperate bats**  
Student  
Ivailo BORISOV (Bulgaria, Germany), Maike SCHUCHMANN, Leonie BAIER, Sara TROXELL & Björn M. SIEMERS (Germany)

**136** **Mating system, swarming behavior and testosterone levels in a hibernating bat (*Myotis myotis*) from the temperate zone**  
Burkard PFEIFFER (Germany), Franz SCHWARZENBERGER (Austria) & Frieder MAYER (Germany)

**137** **Social calls and behaviour of *Rousettus aegyptiacus*: first results**  
Helena JAHELKOVÁ & Pavla VAŠIČKOVÁ (Czech Republic)

**138** **Unusual social calls of *Pipistrellus nathusii* recorded in May and June**  
Helena JAHELKOVÁ (Czech Republic)

# P

- 139** **Understanding cooperation in the Neotropical leaf-roosting bat *Thyroptera tricolor***  
Gloriana CHAVERRI, Erin H. GILLAM & Thomas H. KUNZ (USA)
- 140** **Can bats count?**  
Student Theresa CLARIN, Adriana DORADO & Björn M. SIEMERS (Germany)
- 141** **Obstacle avoidance in *Eptesicus fuscus* with increasing degree of difficulty**  
Sonja BRAUN, Melanie HÜPKES, Hans-Ulrich SCHNITZLER & Annette DENZINGER (Germany)
- 142** **Out of the dark: diurnal activity in *Hipposideros ruber* on São Tomé island (West Africa)**  
Danilo RUSSO (Italy, UK), Guglielmo MAGLIO (Italy) & Jorge PALMEIRIM (Portugal)
- 143** **Echolocation behaviour of the nectar-feeding bat *Leptonycteris yerbabuenae* approaching natural and modified flowers**  
Tania P. GONZALEZ-TERRAZAS, Jens KOBLITZ, Marco TSCHAPKA (Germany), Theodore H. FLEMING (USA), Rodrigo MEDELLÍN (Mexico), Hans-Ulrich SCHNITZLER & Elisabeth K. V. KALKO (Germany)
- 144** **New degrees of freedom in sonar-beam control by fruit bats**  
Student Yossi YOVEL (Israel), Ben FALK, Cynthia F. MOSS (USA) & Nachum ULANOVSKY (Israel)
- 145** **Signal design of the sonar clicks of *Rousettus aegyptiacus***  
Student Maya GEVA, Yossi YOVEL & Nachum ULANOVSKY (Israel)
- 146** **Spatial and temporal resolution of bat sonar**  
Cornelia GEBERL & Lutz WIEGREBE (Germany)
- 147** **To buzz or not to buzz? Intentional control of echolocation in drinking bats**  
Student Stefan GREIF & Björn M. SIEMERS (Germany)
- 148** **Perception of an object's spatial extent in the echo-acoustic imaging of bats**  
Melina HEINRICH, Alexander WARMBOLD, Susanne HOFFMANN, Uwe FIRZLAFF & Lutz WIEGREBE (Germany)
- 149** **The effect of mirror orientation on bats' perception of echoacoustic mirror images**  
Student Sándor ZSEBÖK, Stefan GREIF & Björn M. SIEMERS (Germany)
- 150** **The variability of echolocation and social calls of cryptic pipistrelles across western Palaearctic**  
Helena JAHELKOVÁ (Czech Republic), Panagiotis GEORGIAKAKIS (Greece), Simon DEMETROPOULOS (Cyprus), Tomáš BARTONIČKA, Radek K. LUČAN, Ivan HORÁČEK (Czech Republic), Haris NICOLAOU (Cyprus), Petros LYMPERAKIS (Greece) & Pavel HULVA (Czech Republic)

**151**

Student

**Ultrasound attenuation and bat detection in tropical rainforest canopies**

Tamara INKSTER, Stephen WILLIAMS &amp; Simon ROBSON (Australia)

**152****Variability of echolocation calls from the Madagascar as observed by expedition Biriki**

František ŠPOUTIL, Pavel LINHART, Simona POLÁKOVÁ, Veronika DORŇÁKOVÁ, Petra TUMOVÁ &amp; Šárka DEMELOVÁ (Czech Republic)

**153**

Student

**Adaptive behavior of gleaning bats during spatial orientation and prey acquisition**

Johanna FLICK, Hanz-Ulich SCHNITZER &amp; Anette DENZINGER (Germany)