

Treffen der Deutschen Fledermausforschenden 2022

-

Meeting of the German Bat Researchers 2022



Bild: Sönke von den Berg

October 21-23, 2022

Greifswald

Hosted by:

Department of Applied Zoology and Nature Conservation,
University of Greifswald

Marcus Fritze

Jaap van Schaik

Prof. Gerald Kerth

Alena Bernarding

Alex Scheuerlein

Antonia Hammer

Eric Gutte

Frauke Meier

Gabriella Krivek

Jakob Skwara

Jan Gogarten

Janis Wolf

Liska Meyer-Olbersleben

Marie-Luise Höcke

Moritz Krämer

Pratigya Gyawali

Sofia Rizzi



UNIVERSITÄT GREIFSWALD

Wissen lockt. Seit 1456



Program in a nutshell

| | Friday | Saturday | Sunday |
|---------------|--|-----------------------|----------------------|
| 8:00 - 9:00 | | Breakfast | Breakfast |
| 9:00 - 10:15 | | Session 2 - 5x 15min | Session 6 - 5x 15min |
| 10:15 - 10:45 | | Coffee Break | Coffee Break |
| 10:45 - 12:00 | | Session 3 - 5x 15min | Session 7 - 5x 15min |
| 12:00 | | Lunch | Closing remarks |
| 12:15 - 13:30 | | | Lunch |
| 13:30 - 15:00 | | Free time | Departure |
| 15:00 - 16:15 | Arrival and Registration | Session 4 - 5x 15min | |
| 16:15 - 16:45 | | Coffee Break | |
| 16:45 - 18:00 | | Session 5 - 5x 15min | |
| 18:00 - 19:00 | Dinner | Dinner | |
| 19:00 - 20:00 | Opening remarks & Session 1 - 5x 15min | Poster session - even | |
| 20:00 - 21:00 | | Poster session - odd | |
| 21:00 - late | Social time | Social time | |

Welcome to Greifswald

With a slight delay of approximately 10 months, it is our great pleasure to welcome you to Greifswald for the German Bat Research Meeting 2022.

We know that Greifswald is not particularly centrally located within Germany, and we are thrilled that so many of you have registered to make the long trip to be with us this weekend. We hope you enjoy your brief visit to the Baltic coast!

It was on the ferry back from Frauenchiemsee and the TDFF 2020 that news of a potential new respiratory disease outbreak started hitting the European media. Over two years later, we are still dealing with the pandemic, and all the changes it has brought to public perception and our own interactions with bats.

This year, the invasion of Ukraine and its far-reaching consequences have shown us the incredible lengths to which some bat researchers are willing to go. We are humbled and grateful that a delegation from the Ukrainian Bat Rehabilitation Center will be in attendance and share their experiences over the last months with us.

The TDFF has always been a family meeting of sorts. An opportunity for many who have known each other for decades to meet again, and an opportunity for new faces to present themselves and make new connections in a warm and stimulating environment. This year, we are happy to note that there has been a substantial uptick in registrations from bat researchers outside of the classic academic realm. This influx of local expertise and enthusiasm is more than welcome in our family. In this context, we have tried to make as much time as possible for coffee breaks and informal exchange, and look forward to recounting tales and plotting new adventures together.

We hope it will be an incredibly intense and productive 48 hours together!

The TDFF 2022 crew

Program notes

Travel

Train/Bus: Greifswald can be easily reached by train (2,5 hrs by ICE from Berlin) and Flixbus. Directly in front of the train station is the ZOB (Bus terminal), from there, Bus 2 provides regular service to Wieck, Brücke (Leaves at :02 / :17 / :32 / :47; complete plan: <https://www.sw-greifswald.de/siteflow/scripts/core/file.php?id=3597>).

Car: The address of the venue is Yachtweg 3, 17493 Greifswald. Parking is available behind the venue (see map below).



Venue

The Maritimes Jugenddorf Wieck (MaJuWi), is idyllically located directly along the river Ryck in the Baltic harbor town of Wieck (Greifswald). The conference venue will be open for registration from 15:00 on Friday, with the official program starting at 18:00 with dinner, and 19:00 with the opening remarks. The conference will end at 14:00 on Sunday.

Meals

All meals will be served in the central dining room. Since the capacity of the dining area is limited, we kindly ask to spread out lunch and dinner attendance as much as possible and to use other areas for conversations after you are finished eating. For the omnivores, please help us ensure that the vegetarian and vegan options are not depleted before all people have had a chance to serve themselves.

Internet

Limited bandwidth WiFi is available in the auditorium and dining area. Please check at the registration desk for the password.

Presentation format

All talk slots will be 15 minutes in length. Please limit your talk to 10-12 minutes to leave room for questions and transitions. The session chair will provide a warning when 10 / 12 minutes have passed, and will cut off any presentations that go beyond 14 minutes. To minimize technical delays, all presentations will be run from a single laptop. A station will be set up at the registration desk where you will be able to upload your presentation and check for any formatting issues.

Poster format

Posters should be in portrait orientation and no larger than A0. Posters will be directly installed during registration, and will be viewable throughout the conference. A 2 hour poster session (with refreshments) will take place on Saturday after dinner for more structured presentation of your work. Please refer to the number in front of your poster in the program book, and be present at your poster in the first hour (even numbers) or the second hour (odd numbers).

Talk and poster prizes

There will be a small prize awarded for the best talk and poster presented by a junior researcher (\leq PhD student). Everyone will be given two small slips of paper with two colored symbols at the registration desk. These symbols correspond to the symbols in the program/abstract book for talks/posters. Simply write the name of your winner on these slips and submit them at the registration desk, latest during the last coffee break on Sunday morning.

Abstract book

The abstract book is available for download from the conference website.

Evening refreshments

During the free social time in the evenings, we will provide a selection of water, juice, beer and wine for a nominal fee.

Photography

Keeping with the tradition of previous meetings, we would like to have some of our team roam around with cameras to document the happenings at the conference. A selection will be put online for all participants to enjoy, and some general ambience shots will be posted to social media to promote the conference (e.g. we will use our account @BatResearch_HGW on twitter, and the hashtag #germanbatmeeting2022). During registration we will ask you to sign a consent form to allow this use. If you have any concerns, please let us know!

Covid-19 protocol

An update regarding the current rules and regulations in Mecklenburg-Vorpommern regarding large assemblies will be provided approximately one week before the

conference. If no rules are current in effect, we advise all participants to take whatever protective measures they deem necessary. A limited number of antigen tests will be available at the registration/help desk, and we strongly encourage everyone to test themselves prior to arrival. Face masks can be worn on a voluntary basis. Further restrictive or mandatory precautionary measures such as assigned seating would inhibit scientific exchange, the main focus of this event. Thus, all on-site participants accept a certain risk for the sake of interacting face-to-face.

Help




If you have any additional questions or comments for us, please feel free to contact us via: tdff2022@uni-greifswald.de. During the conference, local organizers will be wearing bright blue name tags, and we'll do our best to accommodate any wishes you may have.

PROGRAM

Friday

- 15:00 Arrival & Registration
- 18:00 Dinner
- 19:00 Opening remarks
- 19:15 Gerald Kerth Bat research at Uni Greifswald

Session 1

- 19:45 Fruit bat migration matches the green wave in Africa
Edward Hurme, Jakob Fahr, Eidolon Monitoring Network, Eric Bakwo Fils, C. Tom Hash, M. Teague O'Mara, Heidi Richter, Iroro Tanshi, Paul W. Webala, Natalie Weber, Martin Wikelski & Dina K. N. Dechmann
- 20:00  Gene flow in a secondary contact zone of two highly divergent lineages within the *Myotis nattereri* species complex
Darija Josić, Mozes P.K. Blom, Emrah Çoraman & Frieder Mayer
- 20:15  Biogeographic history and gene flow patterns within the 'Natterer's bats' in the Caucasus
Vanuhi Hambardzumyan, Mozes Blom, Emrah Çoraman & Frieder Mayer
- 20:30  Energy saving strategies in common noctule bats
Lara Keicher & Dina K.N. Dechmann
- 20:45 Bat rehabilitation in war, challenges for keepers and kepted
Anton Vlaschenko, Alona Shulenko, Maryna Yerofeieva, Anzhela But, Valeria Bohodist, Kseniia Kravchenko & **Alona Prylutska**
- 21:00 Social time


Saturday


8:00 Breakfast

Session 2

09:00 Advances in open-source conservation technology for the study of bats and other small species
Jannis Gottwald, Patrick Lampe & Jonas Höchst

09:15 Automatisiertes Aktivitäts- und Bestandsmonitoring von Fledermausquartieren – lohnt der Aufwand?
Karl Kugelschafter


09:30  Automated bat species identification from camera trap images using deep learning
Gabriella Krivek, Alexander Gillert, Karl Kugelschafter, Martin Harder, Marcus Fritze, Karina Frankowski, Luisa Timm, Liska Meyer-Olbersleben, Uwe Freiherr von Lukas, Gerald Kerth & Jaap van Schaik


09:45  Social calls of *Myotis* bats – variety and function during autumn swarming
Anja Bergmann, Florian Gloza-Rausch, Bernadette Wimmer, Karl Kugelschafter & Mirjam Knörnschild


10:00 Studying echolocating groups with the *Ushichka* dataset: methods and insights
Thejasvi Beleyur


10:15 Coffee Break


Session 3

10:45  The reverse cocktail party problem: Dynamic time-domain jamming avoidance in freely socializing bats
Ava Kiai, David Poeppel, Manfred Kössl & Julio Hechavarría

11:00  A mating call that interferes with bats' sensory systems
Antoniya Hubancheva, Klaus Hochradel, Katrin Dimitrova, Kaloyana Koseva & Holger R. Goerlitz

11:15  Talking Echoes: The communicative potential of functional echolocation calls in the common big-eared bat, *Micronycteris microtis*
Sophie Holtz, Inga Geipel, Rachel Page & Mirjam Knörnschild


11:30 The micro- and macrodialects of the parti-coloured bat
 **Eva Mardus** & Mirjam Knörnschild


11:45 Intraspecific individual differences in vocal behavior
 **Theresa Schabacker**, Lysanne Snijders & Mirjam Knörnschild

12:00 Lunch

13:30 Free time Explore Wieck / Eldena / Greifswald

Session 4

15:00 Multiyear and cave level variation in foraging behaviour of the greater
 spear-nosed bat
Camila Calderón-Capote, Teague O'Mara, Meg Crofoot & Dina Dechmann

15:15 Social foraging behavior and information use linked to prey distribution in
 an ephemeral insect-eating bat
Jenna E. Kohles & Dina K. N. Dechmann





15:30 Ulm`s citadel between hibernating bats and increasing human use
Patrick Cvecko, Dirk Häckel, Robin Weeber & Marco Tschapka

15:45 Of cattle, bats and insects - Can low intensity grazing and traditional land
use promote biodiversity in Central Europe?
Sebastian Brackhane, Anna-Lena Hendel, Bernd Ihle, Hartmuth Mohr, Bettina Saier,
Jochen Paleit, Albert Reif, Markus Dietz & Mona Strack

16:00 Winteraktivität von Zwerg- und Mückenfledermäusen
Christian Giese

16:15 Coffee Break

Session 5

- 16:45 Evaluating the effects of retention forestry on bat habitat selection
 **Anna-Lena Hendel**, Nathalie Winiger, Marlotte Jonker, Katarzyna Zielewska-Büttner, Selina Ganz, Petra Adler & Veronika Braunisch
- 17:00 Bats respond negatively to proximity of wind turbines in European boreal forests
 **Simon P. Gaultier** & Thomas M. Lilley
- 17:15 Activity of forest specialist bats decreases towards wind turbines at forest sites
 **Julia S. Ellerbrok**, Anna Delius, Franziska Peter, Nina Farwig & Christian C. Voigt
- 17:30 Wind energy production leads to habitat loss for common noctule bats in Europe
Christine Reusch, Stephanie Kramer-Schadt, Ana A. Paul, Maya Lozar, Marcus Fritze & Christian C. Voigt
- 17:45 Bat fatalities at old wind turbines and the loss of trophic interactions
 **Carolin Scholz**, Klara Kaiser, Samantha Look, Kristin Scharnweber & Christian C. Voigt
- 18:00 Dinner

Poster Session


- 19:00 **Poster session** **Even numbers**
- 20:00 **Poster session** **Odd numbers**
- 21:00 Social time


Sunday

8:00 Breakfast

Session 6

09:00 Vocalization and navigation behaviour in normal-hearing and hearing-impaired bats
Leonie Baier, Eva Mardus, Thejasvi Beleyur, Laura Stidsholt, Ella Lattenkamp & Holger R. Goerlitz

09:15 Sexually selected behaviors and vocalizations in *Phyllostomus discolor*
 **Marisa Tietge**, Jörg Harder, Ella Z. Lattenkamp & Mirjam Knörnschild

09:30 *Phyllostomus discolor* retain a consistent beam size in seeking targets
 **Ravi Umadi**, Lasse Jakobsen, Lutz Wiegrebe & Uwe Firzlaff

09:45 You eat what you hear: Hearing sensitivity as an underlying mechanism for niche differentiation in gleaning bats
Inga Geipel, Ella Z. Lattenkamp, M. May Dixon, Lutz Wiegrebe & Rachel A. Page

10:00 Echolocation strategies of bats for the detection of fluttering insects in clutter
Hans-Ulrich Schnitzler & Annette Denzinger

10:15 Coffee Break

Session 7

10:45 Stealth echolocation in hawking bats reflects ancestral gleaning traits not counter-measures to moth hearing
Lasse Jakobsen, Daniel Lewanzik, Holger R. Goerlitz, Erik Etzler & John M. Ratcliffe









11:00 Vocal tract and acoustic allometry in neotropical bats
Hans T. Bilger, Julia A. Clarke, Michael J. Ryan & Mirjam Knörnschild

11:15 The first transgenic bat as a model organism for research on mammalian vocal learning

Stephen Gareth Hörpel, Paolo Devanna, Graham Hughes, Janine Mengede, Uwe Firzlaff & Sonja C. Vernes

- 11:30 Determination of physiological body temperature and hematological parameters in captive *Rousettus aegyptiacus* and *Eidolon helvum* bats
Melanie Rissmann, Virginia Friedrichs, Nils Kley, Martin Straube, Balal Sadeghi & **Anne Balkema-Buschmann**
- 11:45 Revealed with modern and classical approaches – Hidden diversity in an Eocene bat fauna (Messel, Germany)
Renate Rabenstein, Sandra Engels, Gregg F. Gunnell(†), Nancy B. Simmons & Jörg Habersetzer
- 12:00 Closing remarks
- 12:15 Lunch
- 13:30 Departure

Poster contributions

- 1 Cross-modal cues and the cocktail party
Leonie Baier, Logan James, Gregg Cohen, Rachel Page, Paul Clements, Kimberly Hunter, Ryan Taylor & Michael Ryan
-  2 Active control of receiver morphology of freely flying bats during prey capture
Felix T. Häfele, Danuta M. Wisniewska & Lasse Jakobsen
-  3 The importance of consistency and positive reinforcement in bat training
Kaloyana Koseva, Astrid Særmak, Laura Stidsholt & Antoniya Hubancheva
- 4 Echolocation behavior in the hipposiderid, *Hipposideros armiger*, and the rhinolophid, *Rhinolophus paradoxolophus*, while landing
Diana Schoeppler, Hans-Ulrich Schnitzler & Annette Denzinger
-  5 Stimulus-specific adaptation in the bat's frontal and auditory cortex
Eugenia González Palomares & Julio C. Hechavarria
-  6 The bat cerebellum and its roles in vocalization and hearing
Shivani Hariharan, Luciana López Jury & Julio C. Hechavarria
-  7 Acoustic Context Modulates Natural Sound Discrimination in Auditory Cortex through Frequency-Specific Adaptation
Luciana F. Lopez Jury, Francisco García-Rosales, Eugenia González-Palomares, Manfred Kössl, and Julio C. Hechavarria
-  8 How the brain detects important sounds: Deviance detection in auditory brainstem responses of bats
Johannes Wetekam, Julio Hechavarria, Luciana López Jury & Manfred Kössl
- 9 Automatische Erfassung von Jagdgebieten und Quartiernutzung im Eingriffsbereich mit dem tRackIT-System
Frank Adorf, Jannis Gottwald & Regina Straub
-  10 Bats and forest structure
Melina T. Dietzer
-  11 Structurally rich dry grasslands – potential stepping stones for bats in open farmland
Sophie P. Ewert, Mirjam Knörnschild, Kirsten Jung & Karl-Heinz Frommolt
- 12 BATLAS - An online platform for the automatic analysis of bat count data to estimate population trends
Marcus Fritze, Stefan Mayr, Jens Berg, Peter Busse, Jörg Harder, Uwe Hoffmeister, Jörn Horn, Martin Koch, Gerhard Maetz, Sarah Malaske, Frank Meisel, Angelika Meschede, Ruth Petermann, Wolfgang Rackow, Marco

Roßner, Klaus Thiele, Siegfried Wielert, Gerald Kerth, Alexander Scheuerlein



- 13 Importance of water bodies for bat conservation in a human-transformed landscape

Pratigya Gyawali, Alexander Scheuerlein, Erik Sperfeld & Marcus Fritze

- 14 Einfluss von Landnutzungsveränderungen und einer Autobahn auf die Jagdhabitatnutzung von zwei Wochenstubenkolonien der Bechsteinfledermaus (*Myotis bechsteinii*) in Ostwestfalen (2011-2020)

Simone Huth, Jörg Bettendorf, Michael Veith & Jochen Lüttmann

- 15 Ecological application of acoustic bat monitoring at wind turbines

Frank Adorf, Thomas Grunwald, Kathrin Jäckel, Carsten Braun, Liam Bailey, Kseniia Kravchenko

- 16 Roost variety in a population of *Myotis daubentonii* in a mid-mountain region in North Rhine-Westphalia, Germany

Frauke Krüger & Stefan Jacob

- 17 Decreasing light pollution is key in order to increase the value of urban areas for bat conservation

Daniel Lewanzik, Tanja M. Straka, Julia Lorenz, Lara Marggraf, Silke Voigt-Heucke, Anke Schumann, Miriam Brandt & Christian C. Voigt

- 18 Large-scale long-term passive-acoustic monitoring reveals spatio-temporal activity patterns of boreal bats

Miika Kotila, Kati Suominen, Aleksi Lehikoinen, Anna Blomberg, Ville Vasko, Eero J. Vesterinen, Thomas M. Lilley



- 19 The use of Ulm`s citadel (Wilhelmsburg) as a hibernaculum for bats

Robin Weeber, Marco Tschapka & Patrick Cvecko

- 20 The echoic world of wild bats

Laura Stidsholt, Stefan Greif, Holger Goerlitz, Kristian Beedholm, Jamie Macaulay, Mark Johnson & Peter Teglberg Madsen

- 21 Ergebnisse aus 10 Jahren Fledermausprojekt des NABU-Regionalverbands Brandenburg-Havel

Beatrix Wuntke

- 22 Vertical stratification of edge and open space bats in a neotropical bat assemblage

Julian Hinz, Danielle M. Adams & Annette Denzinger



- 23 Vertical stratification of insectivorous bats in 100 meter altitude in agricultural areas of central Thailand

Supawan Srilopan & Sara Bumrungsri



- 24 Seasonal and individual variation in diet and habitat use of common noctule bats (*Nyctalus noctula*) foraging above farmland

Marit Kelling, Aileen Grünwald, Carolin Scholz, Jan Pufelski, Manuel Roeleke, Torsten Blohm, Ran Nathan, Sivan Toledo & Christian C. Voigt



- 25 Habitat use and spatial movements of Leisler's bats (*Nyctalus leisleri*)

Michelle Korn, Carolin Scholz, Uwe Hoffmeister, Christine Reusch & Christian C. Voigt

- 26 Common noctule bats form mobile sensory networks to optimize prey localization

Manuel Roeleke, Ulrike E. Schlägel, Cara Gallagher, Jan Pufelski, Torsten Blohm, Ran Nathan, Sivan Toledo, Florian Jeltsch & Christian C. Voigt

- 27 How to get around? Cross-generational information transfer in maternity colonies of greater mouse-eared bats

Simon P. Ripperger, Lutz Ittermann, Jörg Harder, Frieder Mayer & Ahana A. Fernandez



- 28 Testing the long-term memory in common noctule bat (*Nyctalus noctula*)

Alona Shulenko, Maryna Yerofeieva, Anzhela But & Anton Vlaschenko

- 29 Bats and Concerts - How light immissions can influence the migration of bats to their hibernation site

Florian Gloza-Rausch



- 30 Genomic investigation of introgressive hybridization in two cryptic bat species

Marie Gurke, Mozes P.K. Blom, Emrah Çoraman, Frieder Mayer



- 31 Population genetic structure of barbastelle bats (*Barbastella barbastellus*) in Germany

Moritz Krämer, Gerald Kerth & Jaap van Schaik

- 32 Serotine's secrets - No sexual penetration involved in the mating of *Eptesicus serotinus*, a new copulatory pattern in mammals.

Nicolas J. Fasel, Jan Jeucken, Kseniia Kravchenko, Marcus Fritze, Ireneusz Ruczyński, Ewa Komar, Alona Shulenko, Marharyta Moiseienko, Anton Vlaschenko & Susanne Holtze

- 33 The spatialMaxent UI: Accounting for spatial autocorrelation during model parameterization leads to less complex Maxent models and a better predictive performance on spatially independent data

Lisa Bald & Jannis Gottwald



- 34 Identification of bat fossil petrosals from Zoolithenhöhle (Burggailenreuth, Franconia, Germany) via micro-CT 3D modelling

Nicola Eccel, Julia A. Schultz & Thomas Martin



- 35 How social are roosting groups of *C. perspicillata*? A pilot study on allogrooming and related behaviours

Michelle Müller, Michelle Menge & Sabine Schmidt



- 36** Do female Bechstein's bats give a shit? The role of conspecific faeces odour in roost selection in *Myotis bechsteinii*

Sofia Rizzi, Franziska Schäfer & Gerald Kerth



- 37** The large colonial bat, *Chaerephon plicatus*, can alter their own cave temperatures

Nittaya Ruadreo & Sara Bumrungsri



- 38** Experimentally increased roost temperatures lead to larger body sizes in Bechstein's bats (*Myotis bechsteinii*)

Janis Wolf, Carolin Munding, Alexander Scheuerlein & Gerald Kerth