

Melissa B. Meierhofer, PhD

Postdoctoral Researcher
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4 June 2023
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Education

- Ph.D. Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX.
Advisor: Dr. Michael Morrison. Title: Texas winter bats and roosts prior to the arrival of white-nose syndrome. August 2020.
- M.S. Animal Behavior, Bucknell University, Lewisburg, PA.
Advisor: Dr. DeeAnn Reeder. Title: Physiological consequences of white-nose syndrome. January 2014.
- B.A. Psychobiology, Ripon College, Ripon, WI.
Advisor: Dr. Memuna Khan. McNair Scholar Undergraduate Research. Title: Fecal testosterone metabolites, begging behavior, and growth of Eastern bluebird (*Sialia sialis*) nestlings. May 2011.
- Maymester, Ethology of Killer Whales, San Juan Island, WA. May 2010.

Current professional appointment

Postdoctoral Researcher, Metazoa Team, Finnish Museum of Natural History, Luomus, University of Helsinki. Supervisor: Dr. Thomas Lilley. July 2020–present.

Previous professional appointment(s)

Fulbright-EDUFI Visiting Researcher, Finnish Museum of Natural History, Luomus, University of Helsinki. Supervisor: Dr. Thomas Lilley. August 2019–March 2020.

Research Associate, Natural Resources Institute, Texas A&M University. Supervisor Dr. Brian Pierce. November 2015–August 2019.

Grants received

*Graduate students were not allowed to be PI's

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| 2023–2026 | Biodiversa+ n°2021-955 (DarCo), Team member, Partner 4 Co-PI: Dr. Lilley (est. 212,444€; total budget > 1.7mil €) |
| 2021–2024 | Academy of Finland, Post-doctoral funding (276,523€) |
| 2021–2025 | Kone Foundation, Post-doctoral funding (136,100€) |
| 2020 | University of Helsinki, Travel Grant (990€) |
| 2019 | Texas EcoLab (\$6,557), Co-PI |
| 2018–2021 | Texas Parks and Wildlife Department, Sub-contract, Co-author* (\$199,123) |
| 2017–2019 | U.S. Fish and Wildlife Service, Co-author* (\$119,000) |
| 2017–2019 | FightWNS (\$3,100), Co-PI |
| 2017–2018 | National Speleological Society, WNS Rapid Response Grant (\$4,800), Co-PI |
| 2017–2018 | Texas EcoLab (\$2,333), Co-PI |
| 2016–2019 | Texas Aggie Graduate Grant, Texas A&M University (\$1,500/sem; total \$7,500) |
| 2016–2017 | National Speleological Society, Research Grant (\$600), Co-PI |
| 2013 | Travel Grant, Bucknell University (\$300) |

Awards and honors

- 2022 Outstanding Publication award, Texas Chapter of the Wildlife Society

2019–2020	Fulbright-EDUFI Finland Fellow (\$17,056)
2019–2020	Philanthropic Educational Organization (P.E.O.) Scholar (\$15,000)
2019	Vice Chancellor's Award in Excellence, Texas A&M University
2019	Tom Slick Graduate Research Fellowship, Texas A&M University (\$30,552)
2018	WFSC Graduate Student Scholarship, Texas A&M University (\$390)
2012	Best poster presentation, Organization for Bat Conservation Award (\$300)
2011	Best senior poster presentation, Ripon College
2007–2011	Founders Scholarship, Ripon College (\$7,000/yr)
2007–2011	Art Scholarship, Ripon College (\$5,000/yr)
2007	Alumni Scholarship, Ripon College (\$2,000)

Peer-reviewed publications *indicates shared first authorship

- MB Meierhofer**, JS Johnson, J Perez-Jimenez, F Ito, PW Webela, S Wiantoro, E Bernard, KC Tanalgo, A Hughes, P Cardoso, T Lilley, and S Mammola. In Press. Effective conservation of subterranean-roosting bats. *Conservation Biology*.
- MB Meierhofer**, P Cardoso, T Lilley, S Mammola. 2022. The promise and perils of engineering cave climates: Response to Turner et al. *Conservation Biology*. doi:10.1111/COBI.13927.
- MB Meierhofer**, SJ Leivers, BL Pierce, GW Powers, JW Evans, ML Morrison. 2022. Structural and environmental predictors of tri-colored bat presence and abundance in Texas caves. *Journal of Mammalogy*. doi:10.1093/jmammal/gyz099.
- S Mammola*, **MB Meierhofer***, et al. 2022. Towards evidence-based conservation of subterranean ecosystems. *Biological Reviews*. doi:10.1111/BRV.12851.
- R Ferreira, ... **MB Meierhofer**, WF Frick. 2022. Brazilian cave heritage under siege. *Science*. doi:10.1126/science.abo1973.
- LK Wolf, **MB Meierhofer**, ML Morrison, DM Cairns, TE Lacher. 2022. Modeling the suitability of Texas karst regions for infection by *Pseudogymnoascus destructans* in bats. *Journal of Mammalogy*. doi:10.1093/jmammal/gyac017.
- P Lundberg, **MB Meierhofer**, V Vasko, M Suutari, A Ojala, A Vainio, TM Lilley. 2021. Next-generation ultrasonic recorders facilitate effective bat activity and distribution monitoring by citizen scientists. *Ecosphere* doi:10.1002/ecs2.3866.
- JJ Wynne, FG Howarth, S Mammola, RL Ferreira, P Cardoso, T Di Lorenzo, DMP Galassi, RA Medellin, BW Miller, D Sánchez-Fernández, ME Bichuette, J Biswas, C Boonyanusith, PAV Borges, PJ Boston, N Cheeptham, L Deharveng, D Eme, D Fenolio, C Fišer, Ž Fišer, AM García, S Gon III, F Goudarzi, C Griebler, S Halse, H Hoch, AD Katx, L Kováč, TM Lilley, S Manchi, R Maneenti, WE Martinez, **MB Meierhofer**, AZ Miller, O Moldovan, ML Niemiller, T Pipan, TG Pellegrini, CM Phillips-Lander, C Poot, PA Racey, IA de Rosário, A Sendra, WA Shear, MS Silva, M Tian, S Taiti, MP Vernarsky, SY Pakarati, M Zagmajster, Y Zhao. 2021. A roadmap for the conservation of the subterranean biome. *Nature Ecology and Evolution* doi:10.1111/conl.12834.
- MB Meierhofer**, TM Lilley, L Ruokolainen, JS Johnson, S Parratt, ML Morrison, BL Pierce, JW Evans, and J Anttila. 2021. Ten-year projection of white-nose syndrome disease dynamics at the southern leading-edge of infection in North America. *PROC B*. doi:10.1098/rspb.2021.0719.
- AS Blomberg, V Vasko, **MB Meierhofer**, JS Johnson, T Eeva, TM Lilley. 2021. Winter activity of boreal bats. *Mammalian Biology* doi:10.1007/s42991-021-00111-8.
- SJ Leivers, ML Morrison, BL Pierce, **MB Meierhofer**. 2021. Wildlife behavior at culverts in East Texas. *Texas Journal of Science* doi:10.32011/txjsoci_73_1_Note1.

- G Ossa, TM Lilley, AG Waag, **MB Meierhofer**, and JS Johnson. 2020. Roosting ecology of the southernmost tree-dwelling bats *Myotis chiloensis* and *Eptesicus magellanicus* in southern Tierra del Fuego. *Austral Ecology* doi:10.1111/aec.12950.
- S Mammola, I Amorim, ME Bichuette, P Borges, N Cheeptham, S Cooper, D Culver, L Deharveng, D Eme, R Ferreira, C Fiser, Ž Fišer, D Fong, C Griebler, W Jeffery, J Kowalko, J Jogovic, T Lilley, F Malard, R Manenti, A Martínez, **MB Meierhofer**, D Northup, T Pellegrini, M Protas, M Niemiller, AS Reboleira, T Pipan, M Venarsky, J Wynne, M Zagmajster, and P Cardoso. 2020. Fundamental research questions in subterranean biology. *Biological Reviews* doi:10.1111/brv.12642.
- SJ Leivers, **MB Meierhofer**, BL Pierce, JW Evans, and ML Morrison. 2019. External temperature and distance from entrance influences microclimate temperature of cave and culvert roosting tri-colored bats (*Perimyotis subflavus*). *Ecology and Evolution* doi:10.1002/ece3.5841.
- MB Meierhofer**, JS Johnson, SJ Leivers, BL Pierce, JW Evans, and ML Morrison. 2019. Winter habitats of bats in Texas. *PLOS One* doi:10.1371/journal.pone.0220839.
- MB Meierhofer**, SJ Leivers, R Fern, LK Wolf, JH Young Jr., BL Pierce, JW Evans, and ML Morrison. 2019. Structural and environmental predictors of tri-colored bat presence and abundance in Texas culverts. *Journal of Mammalogy* doi:10.1093/jmammal/gyz099.
- MB Meierhofer**, H-H Wang, WE Grant, JH Young Jr., LH Johnston, LK Wolf, JW Evans, BL Pierce, JM Szewczak, and ML Morrison. 2018. Use of box beam bridges as day roosts by Mexican free-tailed bats (*Tadarida brasiliensis*) in Texas. *Southeastern Naturalist* doi:10.1656/058.017.0410.
- MB Meierhofer**, J.S. Johnson, KA Field, SS Lumadue, A Kurta, JA Kath, and DM Reeder. 2018. Bats recovering from white-nose syndrome elevate metabolic rate during spring wing healing. *Journal of Wildlife Disease* doi:10.7589/2017-08-195.
- MB Meierhofer**, and KD Demere. 2017. Leucism in two tri-colored bats (*Perimyotis subflavus*) in Texas. *Southeastern Naturalist*. 16:N43–N45.
- KD Demere, **MB Meierhofer**, ML Morrison, BL Pierce, JM Szewczak, and LK Ammerman. 2017. Noteworthy records for six species of bats from 13 Texas counties and the first voucher specimens from *Pseudogymnoascus destructans* positive sites. *Occasional Papers, Museum of Texas Tech University*. 351:1–10.
- MS Moore, KA Field, MJ Behr, GG Turner, ME Furze, DWF Stern, PR Allegra, SA Bouboulis, CD Musante, ME Vodzak, ME Biron, **MB Meierhofer**, WF Frick, JT Foster, D Howell, JA Kath, A Kurta, G Nordquist, JS Johnson, TM Lilley, BW Barrett, and DM Reeder. 2017. Energy conserving thermoregulatory patterns and lower disease severity in a bat resistant to the impacts of white-nose syndrome. *Journal of Comparative Physiology B* doi:10.1007/s00360-017-1109-2.
- JS Johnson, DM Reeder, T Lilley, GÁ Czirják, C Voight, JW McMichael III, **MB Meierhofer**, SS Lumadue, AJ Altmann, MA Toro, and KA Field. 2015. Antibodies to *Pseudogymnoascus destructans* are not sufficient for protection against white-nose syndrome. *Ecology and Evolution* doi:10.1002/ece3.1502.
- JS Johnson, DM Reeder, JW McMichael III, **MB Meierhofer**, DWF Stern, SS Lumadue, LE Sigler, HD Winters, ME Vodzak, A Kurta, JA Kath, and KA Field. 2014. Host, pathogen, and environmental characteristics predict white-nose syndrome mortality in captive little brown bats (*Myotis lucifugus*). *PLOS One* doi:10.1371/journal.pone.0112502.

Peer-reviewed publications in review

I Okpala, GR Rodrigue, C Han, **MB Meierhofer**, S Halse, J Kropczynski, J Johnson. Perception analysis of animals during zoonotic disease outbreaks: A natural language processing approach to analyzing social media perceptions towards bats. *CSCW 2023: ACM Conference on Computer Supported Cooperative Work*.

I Vaccarelli, R Colado, S Pallarés, DMP Galassi, D Sanchez-Fernandez, M Di Cicco, **MB Meierhofer**, E Piano, T Di Lorenzo, S Mammola. A global meta-analysis on the biological impacts of climate change in subterranean ecosystems. *One Earth*.

Peer-reviewed publications in progress

MC Parker, SR Fritts, S Weaver, **MB Meierhofer**, J Dutton. Mercury concentrations in Texas bats.

Published artwork

Scientific illustration for a figure published in: DM Reeder, KM Helgen, ME Vodzak, DP Lunde, and I Ejotre. A new genus for a rare African vespertilionid bat: insights from South Sudan. 2013. *ZooKeys* 285:89-115.

Teaching, tutoring, and mentorship experience

2023–2024 Mentor, One Health Early Career Champions mentorship program, University of Helsinki and the University of Nairobi.

2023 Instructor, BIO-204: Habitats and Species Field Course (Elinympäristöt ja lajisto -kenttäkurssi), Bats; University of Helsinki.

2022–Present Graduate Committee Member, Luomus Finnish Museum of Natural History, University of Helsinki: Ella Sippola, Funded PhD student.

2022–Present Graduate Committee Co-Chair, Rangeland, Wildlife and Fisheries Management, Texas A&M University: Kylie Perez, Masters student.

2022 Erasmus Student Mentor, Luomus Finnish Museum of Natural History, University of Helsinki: Gizem Geçgil (June–August).

2018 Undergraduate Research Mentor, Texas A&M University. 10-week summer session undergraduate research project.

2012 Teaching Assistant, Bucknell University. Courses: Anatomy and Physiology, Plant Systematics.

2010–2011 Teaching Assistant, Ripon College. Course: Ecology.

2009 Tutor, Ripon College. Course: Introduction to Psychology.

Professional memberships and service

Guest Editor: Subterranean Biology, Topical Collection, Bats (May 2023–present)

Session Moderator: Fulbright Finland Forum (Sept 2021)

Selection Committee: Fulbright Finland Undergraduate Grant Program (Apr 2021; 2022)

Steering Committee Member: 15th European Bat Research Symposium (2020–May 2021)

Delegate: Graduate and Professional Student Council, Texas A&M University (2018)

Reviewer: Animals, Conservation Biology, Conservation Physiology, Ecology and Evolution, Journal of Mammalogy, Journal of Wildlife Management and Monographs, Journal of Wildlife Diseases, Mammalia, Northeastern Naturalist, Oecologia, PLOS One, Wildlife Society Bulletin

Presentation Judge: North American Joint Bat Working Group Meeting & 28th Annual Colloquium on the Conservation of Mammals in the Southeastern U.S. (2018)

Wildlife Monitor: Bluebird Restoration Association of Wisconsin (2009–2010)

Volunteer: Fulbright Buddy Program, Finland (2021, 2022)
Study skin preparation (birds and mammals), Field Museum, Chicago, IL (Feb 2014–Feb 2015)

Professional memberships: North American Society for Bat Research, National Speleological Society (ID: 67678)

Outreach

2015–2020 [Texas A&M NRI Hibernacula Surveys Facebook Page](#)

2018, 2019 [Texas BioBlitz Bat Walk Leader](#), Texas A&M University

2018 [Skype a Scientist](#), Texas A&M University. Taught a 3rd grade class in Nevada about bats.

Training and certifications

Spring 2023 Pedagogy Course, UP2.1 Constructive Alignment in Course Design

Apr 2021 The Use of Animals in Research: Course for Persons Carrying out Procedures
Bat Ringing/Banding Certified – Finland

Sept 2016 National Cave Rescue Commission Level 1 Cave Rescue Certification (7448)

July 2016 Bat Survey Solutions Combined Field Surveys Technique Training

Invited seminars

*BatLife Sweden. **Invited Keynote Speaker.** 11–13 November 2022. Title: Global assessment of the effectiveness of conservation actions for subterranean-roosting bat species.

US Fish and Wildlife Service, White-nose syndrome call. 17 February 2022. Title: Summary of “Structural and environmental predictors of tri-colored presence and abundance in Texas caves.” 97 attendees.

Texas Parks and Wildlife, Wildlife Diversity Webinar. 21 October 2020. Title: Bat winter roosts in Texas. 136 attendees.

LUOMUS Finnish Museum of Natural History, Helsinki, Finland. 13 November 2019. Title: Winter habitats of bats in Texas.

Viherlaakson Koulu, Espoo, Finland. 18 September 2019 and 9 October 2019. Title: School life in the United States.

Edward Jones Financial Group, College Station, TX. 12 September 2018. Title: The importance of bats to humans and the threats they face.

Brazos Texas Master Naturalist Meeting, College Station, TX. 10 March 2017. Title: Texas bats and white-nose syndrome.

Annual Texas Speleological Association Spring Convention, Rocksprings, TX. April 22–24, 2016. Title: Going deep: the distances we go for bats.

- Ripon College Senior Seminar Class, Ripon, WI. 12 February 2014. Title: Physiological consequences of white-nose syndrome.
- Mifflinburg Garden Tour, Mifflinburg, PA. June 2012. Title: Bats in your backyard.
- Public Library of Union County, Lewisburg, PA. 21 June 2012. Title: Bats of the world.
- Oshkosh Ornithological Society, Oshkosh, WI. August 2010. Title: Testosterone and behavior of Eastern Bluebird nestlings.
- Ripon Rotary Club, Ripon, WI. May 2010. Title: Attracting Eastern Bluebirds to the box.
- Oshkosh Ornithological Society, Oshkosh, WI. August 2009. Title: Birds of North America: The Eastern Bluebird (*Sialia sialis*).

Professional conferences *indicates presenter

- MB Meierhofer*, JS Johnson, J Perez-Jimenez, F Ito, PW Webela, S Wiantoro, E Bernard, KC Tanalgo, A Hughes, P Cardoso, T Lilley, and S Mammola. 2022. Global assessment of the effectiveness of conservation actions for subterranean-roosting bat species. 19th International Bat Research Conference and 50th North American Symposium for Bat Research. Austin, TX.
- MC Parker*, SR Fritts, S Weaver, MB Meierhofer, and J Dutton. 2020. Mercury Concentrations in Texas Bats. Poster. 27th Annual Biology Student Colloquium at Texas State University. San Marcos, TX.
- MC Parker*, SR Fritts, S Weaver, MB Meierhofer, and J Dutton. 2020. Intra- and Interspecific Variability in Mercury Concentrations in Texas Bats. Poster. Texas Chapter of the Wildlife Society, February 13–15. Corpus Christ, TX.
- MB Meierhofer*, SJ Leivers, R Fern, LK Wolf, BL Pierce, JW Evans, and ML Morrison. 2019. Structural and environmental predictors of tri-colored bat presence and abundance in Texas. 55th Annual Meeting of the Texas Chapter of The Wildlife Society, February 21–23, 2019. Montgomery, TX.
- MB Meierhofer*, R Fern, LK Wolf, BL Pierce, JW Evans, and ML Morrison. 2018. Culvert use of overwintering tri-colored bats in Texas. 48th Annual North American Society for Bat Research, October 23–28, 2018. Puerto Vallarta, Mexico.
- MB Meierhofer*, BL Pierce, JM Szewczak, JW Evans, and ML Morrison. 2018. Baseline data on overwintering bats and roosts in Texas. Poster. North American Joint Bat Working Group Meeting and 28th Annual Colloquium on the Conservation of Mammals in the Southeastern U.S., March 27–29, 2018. Roanoke, VA.
- MB Meierhofer*, BL Pierce, JM Szewczak, JW Evans, and ML Morrison. 2018. Baseline data on overwintering bats and roosts in Texas: An update. Annual Texas Chapter of the Wildlife Society, February 9–11, 2018. Dallas, TX.
- MB Meierhofer*, BL Pierce, JM Szewczak, JW Evans, and ML Morrison. 2017. Baseline data on overwintering bats and roosts in Texas. Poster. 47th Annual North American Society for Bat Research, October 18–21, 2017. Knoxville, TN.
- MB Meierhofer*, BL Pierce, JM Szewczak, JW Evans, and ML Morrison. 2017. Baseline data on overwintering bats and roosts in Texas. Poster. Annual Texas Chapter of the Wildlife Society, February 16–18, 2017. San Antonio, TX.
- MB Meierhofer*, BL Pierce, JM Szewczak, JW Evans, and ML Morrison. 2016. Gathering baseline data on winter bats and roosts in Texas: How you can help. 17th Annual Texas Master Naturalist Meeting, October 21–23, 2016. Montgomery, TX.

- MB Meierhofer*, JW Evans, BL Pierce, JM Szewczak, and ML Morrison. 2016. Gathering baseline data on overwintering bats and roosts in Texas. Poster. 46th Annual North American Society for Bat Research, October 12–15, 2016. San Antonio, TX.
- DM Reeder*, MB Meierhofer, SS Lumadue, MS Moore, JS Johnson, MJ Behr, and KA Field. 2014. Species differences in susceptibility to white-nose syndrome and the cost of infection. 7th Annual White-nose Syndrome Workshop, September 8–12, 2014. St. Louis, MO. 6th Annual White-nose Syndrome Workshop, September 3–6, 2013. Boise, ID.
- MS Moore, KA Field*, MJ Behr, G Turner, M Furze, DWF Stern, P Allegra, W Frick, J Foster, M Kilpatrick, SA Brownlee, C Musante, M Vodzak, M Biron, MB Meierhofer, JS Johnson, and DM Reeder. Immune responses against *Geomyces destructans* vary between species. 6th Annual White-nose Syndrome Workshop, September 3–6, 2013. Boise, ID.
- JS Johnson*, K.A. Field, J.W. McMichael III, MB Meierhofer, DWF Stern, and DM Reeder. The effect of temperature and infectious dose on white-nose syndrome in captive *Myotis lucifugus*. 16th International Bat Research Conference and 43rd North American Society for Bat Research, August 12–15, 2013. San Jose, Costa Rica.
- MB Meierhofer*, JS Johnson, and DM Reeder. Physiological consequences of white-nose syndrome. 43rd annual North American Society for Bat Research, August 12–15, 2013. San Jose, Costa Rica.
- MB Meierhofer*, M Pucciarello, C Butchkoski, G Turner, and DM Reeder. 2012. Reproduction in big brown bats: fitness in a post white-nose world. Poster. 42nd Annual North American Society for Bat Research, October 24–27, 2012. San Juan, Puerto Rico.
- MB Meierhofer*. Fecal testosterone metabolites, begging behavior, and growth of Eastern Bluebird (*Sialia sialis*) nestlings. Poster. Ripon College Senior Symposium, April, 2011. AFO-COS-WOS Conference, March 8–13, 2011. Kearney, NE.
- MB Meierhofer*. Parental care and growth in Eastern Bluebirds (*Sialia sialis*). Poster. 19th Annual Ronald E. McNair Scholars Research Conference, November 5–7, 2010. Delavan, WI.

Media coverage

- 2020** KVUE Austin. Interview. (November 2020). Texas researchers testing vaccine to slow down ‘evolutionary event’ killing millions of bats nationwide.
- 2019** Texas Parks and Wildlife. (January/February 2019). Interview. Melissa Meierhofer’s life is in a ditch ... literally.
- 2018** AgriLife Today. (July 2018). Interview. Skype A Scientist program lets NRI research associate connect to new audience.
- 2017** Popular Science. (Aug 2017). Interview. Hurricane Harvey’s putting bats at risk-but help is on the way.
- Natural Resources Institute (July 2017). Blog Post. White-nose syndrome 101.
- Natural Resources Institute (NRI). (Mar 2017). Interview. NRI bat researchers help detect fungus that causes white-nose syndrome.
- Associated Press. (Mar 2017). Interview. Fungus potentially lethal to bats found in northwest Texas.
- The Wildlife Society. (Mar 2017). Interview. White-nose fungus found in Texas.
- Albuquerque Journal. (Mar 2017). Interview. Fungus potentially lethal to bats found in northwest Texas.

High Plains/Midwest Ag Journal. (Jan 2017). Interview. Texas A&M institute sends up 'bat signal' for help from Texas landowners.

Houston Public Media. (Jan 2017). Interview. Help a team of Texas researchers create a bat census.

The Eagle. (Jan 2017). Interview. Bat researchers need public's help.

2016

Wild Wonderings. (Apr 2016). Blog Post. White-nose syndrome: Understanding the implications for Texas bats.