JAY MCENTEE, PHD

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Department of Biology Missouri State University

Positions

Assistant Professor, Biology Department, Missouri State University 2019 - present

Postdoctoral Research Associate, Biology Dept., University of Florida

Advisor: J. Gordon Burleigh 2014 - 2019

Postdoctoral Research Associate, Dept. of Ecology and Evolutionary Biology, U. of Arizona Advisor: Joanna Masel 2013 - 2014

Education

Ph.D., Department of Integrative Biology, University of California, Berkeley (2006-2013)

Advisor: Rauri C.K. Bowie. Committee members: Craig Moritz, Frederic Theunissen.

Dissertation: Social Selection, Song Evolution, and the Ecology of Parapatry in Sunbirds

B.A., Integrative Biology, University of California, Berkeley (1998-2002) Undergraduate advisor: Ned K. Johnson

Publications

- McIntire, MS & McEntee, JP. 2023. Ospreys do not exhibit strong footedness at the population level. *Wilson Journal of Ornithology (Accepted*).
- Zapata, D & McEntee, JP. 2023. Sex-specific territoriality, aggression, and duetting in the Carolina wren during the non-breeding season. *Animal Behaviour* 203:157 -170. doi: https://doi.org/10.1016/j.anbehav.2023.06.014
- Zenil-Ferguson, R; **McEntee, JP**; Burleigh, JG; & RA Duckworth. 2022. The evolution of nest site specialization and its macroevolutionary consequences in passerine birds. *Systematic Biology.* doi: https://doi.org/10.1093/sysbio/syac083.
- **McEntee, JP;** Zelazny, Z*, & JG Burleigh. *Submitted.*The macroecology of passerine nest types, in the light of macroevolution. Preprint: *bioRxiv.* doi: https://doi.org/10.1101/360958.
- Tobias, J; . . . **McEntee, JP**; et al. (54th of 115 authors) 2022. AVONET:

 Morphological, ecological, and geographical data for all birds. *Ecology Letters* 25(3): 581-597. https://doi.org/10.1111/ele.13898.
- McEntee, JP; Zelazny, Z*, & JG Burleigh. 2021. On the relationship between nest concealment and the conspicuous coloration of female passerines: a test of Wallace's hypothesis. *Revista Ecuatoriana de Medicina y Ciencias Biológicas*. https://doi.org/10.26801/remcb.v42i2.906.
- McEntee, JP; Zhelezov, G; Werema, C; Najar, N; Peñalba, J; Mulungu, E; Mbilinyi, M; Karimi, S; Chumakova, L; Burleigh, JG; and RCK Bowie. 2021. Punctuated evolution in the learned songs of African sunbirds. *Proc Roy Soc B* 288:TBD. doi: https://doi.org/10.1098rspb.2021.2062 *Highlighted in:* Berkeley News, Treehugger, Daily Mail (UK), India Times.
- **McEntee, JP**; JG Burleigh; & S. Singhal. 2020. Dispersal predicts hybrid zone widths across animal diversity: Implications for species borders under incomplete reproductive isolation. *American Naturalist* 196(1): 9-28.

- McEntee, JP; Tobias, JA; Sheard, C & JG Burleigh. 2018. Tempo and timing of ecological trait divergence in bird speciation. *Nature Ecology and Evolution* 2:1120-1127.

 **Blog post: Nature Ecology & Evolution Behind the Paper. McEntee, JP. Sister species interactions in birds, and the potential for citizen science to change our perspectives. **Highlighted in: UF College of Liberal Arts and Sciences: Stories. **Birds of a Feather. July 20, 2018. (https://ufliberalartsandsciences.exposure.co/birds-of-a-feather)
- Bowie, RCK; Pasquet, E; **McEntee JP**; Njilima, F; and J. Fjeldså. 2018. The systematics and biogeography of African tailorbirds (Cisticolidae: Artisornis) with comment on the choice of Bayesian branch-length prior when analyzing heterogeneous data. *Molecular Phylogenetics and Evolution* 118: 172-183. doi: https://doi.org/10.1016/j.ympev.2017.08.011.
- Xiong, K; **McEntee, JP**; Porfirio D*; & J Masel. 2017. Drift barriers to quality control when genes are expressed at different levels. *Genetics* 205(1): 397-407. doi: 10.1534/genetics.116.192567.
- Streicher, JW; **McEntee, JP**; Drzich, LC; Card, DC; Schield, DR; Smart, U; Parkinson, CL; Smith, EN; & TA Castoe. 2016. Genetic surfing, not allopatric divergence, explains spatial sorting of mitochondrial haplotypes in venomous coralsnakes. *Evolution* 70(7): 1435-1449.
- **McEntee, JP**; Peñalba, JV*; Werema, C; Mulungu, E; Mbilinyi, M; Moyer, D; Hansen, L; Fjeldså, J; & RCK Bowie. 2016. Social selection parapatry in Afrotropical sunbirds. *Evolution* 70(6): 1307-21. *Highlighted in: Nature* 533, 441 (May 26, 2016). doi: 10.1038/533441a; *Scientific American Briefings*.
- Rudolph, KP & **JP McEntee**. 2015. Spoils of war and peace: Enemy adoption and colony fusion follow costly conflict in Acacia-ants. *Behavioral Ecology* 27(3): 793-802.

 **Press coverage: CBC Quirks and Quarks (Canada), Cosmos Magazine (Australia), 95bFM: Dear Science (New Zealand), etc.
- **McEntee, JP**. 2014. Reciprocal territorial responses of parapatric African sunbirds: species-level asymmetry and intra-specific geographic variation. *Behavioral Ecology* 25(6): 1380-1394.
- **McEntee, JP** & TJ Devitt. 2014. Crouching towhees, hidden scrub-jay: California towhees *Melozone* crissalis fight territorial battles while mobbing a Western Scrub-jay *Aphelocoma californica*. Southwestern Naturalist 59(1): 147-150.
- Werema, C; **McEntee, JP**; Mulungu, E; and M Mbilinyi. 2014. Preliminary observations of the avifauna of the village-managed Ikokoto Forest, Udzungwa Mountains, Tanzania. *Scopus* 32: 19-26.
- Portik, D; Mulungu, E; Sequeira, D; and **JP McEntee**. 2013. Preliminary herpetological surveys of the Serra Jeci and Namuli Massifs, Mozambique, and an initial checklist of the southern Afromontane archipelago. *Herpetological Review* 44(3): 394-406.
- Richmond, O; **McEntee, JP**; Hijmans, R., and J. Brashares. 2010. Is the climate right for Pleistocene re-wilding? Using species distribution models to extrapolate climatic suitability for mammals across continents. *PLoS ONE* e12899 Vol. 5 Iss. 9, September.
- Benedict, LS & **JP McEntee**. 2009. Context, structural variability, and distinctiveness of California towhee (*Pipilo crissalis*) vocal duets. *Ethology* 115(1): 77-86.
- Cordeiro, NJ; Ndangalasi, HC; **McEntee, JP**; and HF Howe. 2009. Disperser limitation and recruitment of an endemic African tree in a fragmented landscape. *Ecology* 90(4): 1030-1041.
- Koenig, WD, **McEntee, JP**; and EL Walters. 2008. Ecology and energetics of acorn harvest by acorn woodpeckers. *Evolutionary Ecology Research* 10: 811-822.
- **McEntee, JP**; Cordeiro, NJ; James, M; and DC Moyer. 2005. Foraging observations of the threatened long-billed tailorbird *Artisornis moreaui* in Tanzania. *Scopus* 25: 51-54.

Teaching

As Instructor of Record, Missouri State University: Statistical Methods for Biologists (Fall 2019-23); Molecular Markers (Fall 2019, '21, '23); Ornithology (Spring 2020-23); Population Genetics & Evolutionary Mechanisms (Fall 2020); Biology Seminar focusing on career options and development (Fall 2020-21, '23); The Evolution of Beauty Graduate Seminar (Fall 2020), Biogeography (Fall 2021 – Fall 2023), Advanced Population Genetics (Fall 2022)

As Graduate Student Instructor, UC Berkeley: Natural History of the Vertebrates (Spring 2007 & '08); Evolution (Fall 2007); Introductory Biology -- Ecology, Evolution, and Plant Morphology (Fall 2006, Summer and Fall 2012*).

*Outstanding Graduate Student Instructor Award

Short course: Molecular Systematics and Conservation, University of Dar-es-salaam, Tanzania (initiated, co-organized, and co-taught). Other instructors: Rauri Bowie, Benjamin Carter. Co-organizer: Chacha Werema.

August 2010

2021

2015

Grants & Awards

Delta Foundation Grant (\$2,120)	2021	
Faculty Research Grant, Missouri State University (\$7,500)	2019, 2022	
Outstanding Graduate Student Instructor Award, UC Berkeley	2013	
Mohamed bin Zayed Species Conservation Fund grant (\$10,000)	2011	
Museum of Vertebrate Zoology Special Call for Research Funds (\$5,000)		
National Science Foundation Doctoral Dissertation Improvement Grant (\$13,566)	2010	
Society for the Study of Evolution International Event Award (\$1,000)		
National Geographic Society/Waitt Grant (\$13,571)	2009	
Beim Summer Research Award, Integrative Biology, UC Berkeley (\$3,000)		
American Ornithologists' Union Research Award (\$2,500)		
Louise Kellogg Grant, Museum of Vertebrate Zoology (\$1,000)		
Explorers' Club Exploration Fund Grants (\$1,500 + \$1,500)	2008 & 2009	
UC Berkeley Center for African Studies' Andrew and Mary Thompson Rocca Scholar (\$\)	\$3,424) 2008	
Charles Koford Grant, Museum of Vertebrate Zoology (\$1,500)		
Albert Preston Hendrickson Grant, Museum of Vertebrate Zoology (\$2,000)	2007	

Additional Grant Applications Submitted

Delta Foundation Grant (\$2,120)

NSF BRC-BIO, unsuccessful

2022

Mohamed bin Zayed Species Conservation Fund, unsuccessful

National Science Foundation: Harnessing the Data Revolution Ideas Labs Pre-proposal, unsuccessful

2019

National Science Foundation DEB Biodiversity - Discovery & Analysis preproposal (co-PI with Scott Taylor),

unsuccessful

2016

Danish Council for Independent Research, DFF-MOBILEX, with Rute Fonseca, unsuccessful

Fellowships

NIH Postdoctoral Excellence in Research and Teaching, University of Arizona (declined)	2014
NSF Postdoctoral Research Fellowship in Biology (\$140,000, declined)	2013
Museum of Vertebrate Zoology Joseph Maillard Fellowship (\$11,000)	2011
Summer Research Fellowship, Integrative Biology, UC Berkeley (\$3,000)	
Beim Summer Research Fellowship, Integrative Biology, UC Berkeley (\$3,000)	2010
NSF Graduate Research Fellowship (\$122,500)	2008-2011

Professional Service

Reviewer for: American Naturalist*, AoB PLANTS, The Auk: Ornithological Advances (now Ornithology), Behavioral Ecology, Behavioural Ecology and Sociobiology, Behaviour, Biological Conservation, Biological Journal of the Linnean Society, BMC Zoology, East African Journal of Natural History, Ecology and Evolution, Evolution**, Ibis, Journal of Avian Biology, Journal of Biogeography, Journal of Natural History, Journal of Evolutionary Biology, Journal of Zoological Systematics and Evolutionary Research, Molecular Ecology, Molecular Phylogenetics and Evolution, Ostrich, PeerJ, Phillipine Journal of Science, Proceedings of the Royal Society B, Scopus, Studies in Avian Biology, Zootaxa, Zoological Journal of the Linnean Society.

*A highly rated review (per Managing Editor)

Committees and Additional Activities:

Missouri State University Committee for Faculty Concerns

Fall 2021 – Spring 2024

Director (=board member), Greater Ozarks Audubon Society

September 2021 to May 2022

Committees for: GLADE (Green Leadership Academy for Diverse Ecosystems), Strategic

Planning

Faculty Advisor for:

1) The Bird Club (Missouri State University campus chapter of Audubon Society)

		2021 to present
2)	Missouri State Men's Ultimate	2022 to present
3)	Missouri State Disc Golf	2022 to present
4)	Missouri State Women's Ultimate	2023

Missouri State University Faculty Senate	2020 to present
Early Professionals Committee, American Ornithological Society	2018-2020
AOS Student Presentation Judge	2018
Mentor, American Ornithological Society Student-mentor Lunch	2017, 2018
AOU/COS/SCO-SOC Student Presentation Judge	2014
UC Berkeley Dept. of Integrative Biology Graduate Admissions	2010, 2011

Invited Talks

Department of Biological Sciences Fall 2022 seminar series, "Why are there so few hole-nesting passerine bird species? . . . and some on-going studies on learned bird song," Missouri University of Science and Technology, Rolla, Missouri. August 29, 2022.

Missouri Master Naturalists April 2022 meeting, "Songs of the Ozarks, and beyond," Springfield, Missouri. April 18, 2022.

Guest lecture, Conservation Biology. University of Cincinnati. January 20, 2022.

Friday Seminar series, School of Biological Sciences, University of Northern Colorado, April 23rd, 2021. The (potential) role of pulsed evolution in the generation of species differences.

Greater Ozarks Audubon Society, September 17, 2020.

Department of Biological Sciences, Missouri University of Science and Technology. February 10, 2020. Whitney Laboratory for Marine Bioscience, November 30, 2018.

Louisiana State University Museum of Natural Science. October 26, 2018.

University College Dublin: School of Biology and Environmental Science. June 11, 2018.

^{**}A 2018 review was recognized by Editor-in-chief as one of journal's best reviews of year

- Natural History Museum of Los Angeles County, March 22, 2018. How new birds are made: Insights from fieldwork in Africa, museum collections, and citizen science.
- Rutgers University, Newark. Dept. Biological Sciences, April 12, 2017. Tempo, mode, and timing of trait divergence in bird speciation.
- Northern Arizona University. Dept. of Biological Sciences Seminar Series. August 29, 2016. Getting funkier, getting bigger: Divergence in song and ecological traits in bird speciation.
- Early Professionals Symposium, North American Ornithological Congress. August 17, 2016. Muddy boots, singing birds, and big trees: Integrative study of bird speciation and diversification.
- Florida State University. Special Seminar. April 2016. Allee, Alulas, and Alleles: Secondary Contact in Birds.
- San Diego Field Ornithologists, September 15, 2015. The Museum and the Cradle: Why East African Sky Islands Harbor So Many Endemic Birds.

Presentations

- Palmer, S & JP McEntee. Investigating the relationship between ancestry and song repertoire in a chickadee hybrid zone. AOS & SCO-SOC 2023. 11 August. London, Ontario, Canada.
- Zapata, D & JP McEntee. Sex-specific territoriality and duetting in the Carolina Wren (Thryothorus ludovicianus) during the non-breeding season. AOS & SCO-SOC 2023. 9 August. London, Ontario, Canada.
- Vickers, ZH & JP McEntee. Does local abundance predict the size of Bewick's Wrens' song repertoires? American Ornithological Society and Birds Caribbean 2022 Ornithological Conference. 30 June 2022. San Juan, Puerto Rico.
- Vickers, Z & **JP McEntee**. Differences in song culture complexity among varying population densities of Bewick's Wrens. American Behavior Society Virtual Conference, July 2020.
- **McEntee, JP.** Geographic variation in song repertoires of Bewick's wrens, including extant and extinct migratory populations. Midwest Migration Network Virtual Conference, July 2020.
- **McEntee, JP** & JG Burleigh. Pattern and paradox in passerine nest types. American Ornithological Society. Tucson, AZ. April 2018.
- **McEntee, JP;** Winger, B; Tobias, JA; Sheard, C; and JG Burleigh. Macroevolutionary and population genomic perspectives on trait divergence during speciation in birds. American Ornithological Society 2017. East Lansing, MI, August 2017.
- **McEntee, JP** & JG Burleigh. Pattern and paradox in passerine nest types. Evolution 2017. Portland, OR, June 2017.
- **McEntee, JP;** Zelazny, Z; and JG Burleigh. The conservation of behavioral traits and their roles as selective regimes for female plumage evolution in the Passeriformes. North American Ornithological Congress. Washington, DC. August 18, 2016.
- **McEntee, JP;** Zelazny, Z; and JG Burleigh. Behavioral traits as selective regimes: Nesting behavior and female plumage evolution. American Society of Naturalists Meeting, Asilomar, CA, January 2016.
- **McEntee, JP**; and JG Burleigh. Pulsed evolution and the co-existence of bird species. Evolution 2015. Guaruja, Brazil. June 2015.
- **McEntee, JP**; and RCK Bowie. Song evolution in sunbirds of African sky islands. AOU/COS/SCO Joint Meeting, Estes Park, Colorado, USA. September 2014.
- **McEntee, JP**; Ruhfel, B; and JG Burleigh. Dynamic variation in rates of body mass evolution in extant birds. Evolution 2013. Snowbird, Utah, USA. June 23, 2013.

- **McEntee, JP;** Penalba, J; and RCK Bowie. Singing out from sky islands: sunbird song evolution across the Eastern Afromontane. Society for Integrative and Comparative Biology 2013, San Francisco. January 4, 2013.
- **McEntee, JP.** Songs of mountains near and far: sunbirds on African sky islands. MVZ Lunch Seminar, Museum of Vertebrate Zoology, University of California, Berkeley. December 5, 2012. Video: https://www.youtube.com/watch?v=gl7t_LuQ2F0
- **McEntee, JP;** Penalba, J; Bowie, RCK. Territorial response to divergent signals in parapatric sky island sunbirds. Animal Behavior Society, Albuquerque, USA June 2012.
- **McEntee, JP**; and RCK Bowie. A sky island contact zone between sibling sunbird species with highly divergent song. Evolution, Norman, USA June 2011.
- **McEntee, JP**; Bowie, RCK; Fjeldsa, J. Evolutionary dynamics of a sky island contact zone. American Ornithologists' Union, San Diego, February 2010.
- **McEntee, JP**. Sunbird song evolution and speciation in East African sky islands. Seminar in Behavior, Department of Integrative Biology, University of California, Berkeley. April 16, 2009.
- Richmond, O. & **JP McEntee**. Is the climate right for Pleistocene re-wilding? ESPM Wildlife and Conservation Biology Seminar Series, University of California, Berkeley. October 2007.

Posters

- Hiers, T; Palmer, S; Lange, R; Zapata, D; Zhelezov, G; & JP McEntee. A novel approach to scoring rhythmic variation in evolving White-throated Sparrow *(Zonotrichia albicollis)* songs.

 Midwestern Ecology and Evolution Conference. March 31 April 2 2023. Louisville, Kentucky.
- Palmer, SM & **JP McEntee**. Determining quantity of song recording necessary for accurate acoustic measurements in Black-capped Chickadees (*Poecile atricapillus*) and Carolina Chickadees (*Poecile carolinensis*). American Ornithological Society and Birds Caribbean 2022 Ornithological Conference. June-July 2022. San Juan, Puerto Rico.
- Palmer, S* (presenter); **McEntee, JP**; Blankenship, T*; Jamie, G; Jones, S; Mulungu, E; & NJ Cordeiro. Origins of song variation in the sky island *Artisornis* tailorbirds of the Eastern Afromontane. American Ornithological Society and the Society of Canadian Ornithologists Société des ornithologists du Canada, August 2021.
- Vickers, ZH & **JP McEntee**. Are House Wrens responsible for the decline of Bewick's Wrens? Using models to assess the impacts of interspecific competition over space and time. American Ornithological Society and the Society of Canadian Ornithologists Société des ornithologists du Canada, August 2021.
- Palmer, S* (presenter); **McEntee, JP**; Blankenship, T*; Jamie, G; Jones, S; Mulungu, E; & NJ Cordeiro. Testing the acoustic adaptation hypothesis in songs of Artisornis tailorbirds. Missouri State University College of Natural and Applied Sciences Undergraduate Research Symposium. April 2021.
- Blankenship, T* (presenter); NJ Cordeiro; & **JP McEntee**. The structure of male-female duets in *Artisornis* tailorbirds of eastern Africa. Wilson Ornithological Society and the Association of Field Ornithologists, Cape May, NJ USA, October 2019.
- **JP McEntee** (presenter); JG Burleigh; & S Songhal. Random dispersal predicts hybrid zone widths across animal diversity: Implications for species borders under incomplete reproductive isolation. Evolution, Providence, RI USA, June 2019.
- **JP McEntee**; JG Burleigh; & S Singhal (presenter). Dispersal predicts hybrid zone widths across animal diversity. Gordon Research Conference: Speciation. Ventura, California. March 2019.

- **JP McEntee** (presenter) & JG Burleigh. Body mass disparity predicts co-occurrence and sympatry in avian sister species. Gordon Research Conference: Speciation. Ventura, California. March 2015.
- Nadje Najar* (presenter) & **JP McEntee**. Song and syllable use evolution in Fuelleborn's Sunbirds Nectarinia fuelleborni. Behavior, Indiana University, June 2011.
- Richmond, O (presenter); **McEntee, JP (presenter)**; Brashares, J; and R Hijmans. Is the climate right for Pleistocene re-wilding? San Francisco Bay Area SCB Symposium, February 2006.
- *denotes undergraduate or recent graduate author

Field expeditions

- June August 2007. Exploratory fieldwork for PhD dissertation sound recording and bird specimen collection. Tanzania: East and West Usambara Mountains.
- May December 2008. Sound recording and bird specimen collection. Tanzania: Udzungwa Mountains, Mt. Rungwe, Uluguru Mountains, Usambara Mountains, Mt. Kilimanjaro.
- May November 2009. Sound recording and specimen collection. Tanzania: Udzungwa Mountains, Ukaguru Mountains, Nguru Mountains, Mbulu Highlands. Kenya: Mt. Kenya, Aberdares Mountains.
- February 2010. Sound recording of San Clemente Sage Sparrow *Amphispiza belli clementeae*. San Clemente Island, California.
- June August 2010. Sound recording, specimen collection, and playback experiments. Tanzania: Udzungwa Mountains, Mt Rungwe, Rubeho Mountains.
- July August 2011. Sound recording, bird and herp specimen collection, population estimation Long billed Tailorbird *Artisornis moreaui sousae*. Transect through eastern Mozambique from Maputo to Lichinga, including Niesi Plateau and Mt. Namuli.

Graduate research mentoring

Zach Vickers (Masters, 2020-22)

Danny Zapata (Masters, 2020-22)

Shelby Palmer (Masters, 2021-23)

Sasha Freeman (2023-present)

Mackenzie McIntire (starting 2024)

Undergraduate research mentoring

As PI at Missouri State University:

2019-20: Tricia Blankenship, Shelby Palmer, Sydney Wright (MoLSAMP scholar)

2020-21: Shelby Palmer, Arthur Ludwig, Alexis Parks, Sam Grove

- 2021-22: Rachel Lange, Matthew Keese, Brandy Heithold, Gabriela Rivero-Ramirez, Grace Hall, Caleb Hiers
- 2022-23: Carter Stoelzel, Dustin Kohler, Gabriela Rivero-Ramirez, Taylor Hiers, Jeff Gardner, Abbie Bond, Mackenzie McIntire
- 2023-24: Carter Stoelzel, Taylor Hiers, Mackenzie McIntire

Professional Membership

American Ornithological Society (elective member) International Society for the Study of Evolution American Society of Naturalists