Jenna M. McCullough, Ph.D

NSF Postdoctoral Fellow
Department of Biology, University of California Los Angeles &
Division of Birds, Natural History Museum of Los Angeles County, Los Angeles, CA
jmccullough@nhm.org | website | Google Scholar

EDUCATION

2024 **Doctor of Philosophy, Ph.D,** in Biology
Department of Biology, University of New Mexico, Albuquerque, NM
Advisor: Dr. Michael J. Andersen

2018 **Master of Science, MSc,** in Biology
Department of Biology, University of New Mexico, Albuquerque, NM
Advisor: Dr. Michael J. Andersen

2015 **Bachelors of Science, BS** in Biology
Department of Biology, University of Idaho, Moscow, ID

2015 **Bachelors of Science, BS** in Wildlife Resources
Department of Fish and Wildlife Sciences, University of Idaho, Moscow, ID

PROFESSIONAL PREPARATION

August 2025–	NSF Postdoctoral Fellow, University of California Los Angeles (UCLA) and the Natural History Museum of Los Angeles County (NHMLAC). Advisors: Drs. Allison Shultz and Stepfanie Aguillon
2024–2025	Postdoctoral Scholar, University of Kentucky, Advisor: Dr. Zenil-Ferguson
2024–	Research Associate, University of New Mexico and Museum of Southwestern Biology
2016–2024	Graduate Research, Curatorial, & Teaching Assistantships, University of New Mexico
2016	Laboratory Technician for Dr. Michael J. Andersen, University of New Mexico
2015	Curatorial Assistant, University of Washington Burke Museum
2014–2015	Laboratory Technician for Dr. David Tank, University of Idaho

PEER-REVIEWED PUBLICATIONS

Google Scholar Profile

I have published 29 peer-reviewed studies with 11 as the first author. Selected journals I have published in include *Systematic Biology*, *Molecular Ecology, Communications Biology, American Naturalist, Proceedings of the Royal Society B, Journal of Biogeography,* and *Ornithology.* (* indicates undergraduate mentee)

IN REVIEW OR REVISION:

32. Vinciguerra, NT, B Benz, JM McCullough, RJ Moyle, & MJ Andersen. *In review.* Phylogenomics and biogeography of honeyeaters in the genus *Myzomela* (Meliphagidae). *Proceedings of the Royal Society B*

31. Zhao, M, G Thom, BC Faircloth, MJ Andersen, FK Barker, BW Benz, MJ Braun, GA Bravo, RT Brumfield, RT Chesser, EP Derryberry, TC Glenn, MG Harvey, PA Hosner, TS Imfeld, L Joseph, JD Manthey, JE McCormack, **JM McCullough**, RG Moyle, CH Oliveros, NDW Carreiro, K Winker, DJ Field, DT Ksepka, EL Braun, RT Kimball, & BT Smith. *In review.* Efficient Inference of Macrophylogenies: Insights from the Avian Tree of Life. *Systematic Biology.* Available on doi.org/10.1101/2025.02.17.638170

30. **McCullough, JM,** CM Eliason, S Hackett, CE Myers, MJ Andersen. *In review*. Phylogenomics of a genus of 'Great Speciators' reveals rampant incomplete lineage sorting, gene flow, and mitochondrial capture in island systems. *Systematic Biology.* Available on BioRXiv at doi.org/10.1101/2024.08.28.610082

PUBLISHED:

29. **McCullough, JM**, LH DeCicco, D Boseto, RG Moyle, & MJ Andersen. 2025. What is an eared nightjar? Ultraconserved elements clarify the evolutionary relationships of *Eurostopodus* and *Lyncornis* nightjars (Aves: Caprimulgidae). *Bulletin of the Society of Systematic Biologists* DOI:10.18061/bssb.v4i1.10183
28. DeRaad, DA, AN Files, LH DeCicco, RP Martin, **JM McCullough**, P Holland, D Pikacha Jr., IG Tigulu, D Boseto, TH Lavery, MJ Andersen, & RG Moyle. 2024. Genomic patterns in the dwarf kingfishers of northern Melanesia reveal a mechanistic framework explaining the paradox of the great speciators. *Evolution Letters*. DOI:10.1093/evlett/qrae035
27. Vinciguerra, NT, **JM McCullough**, & K Burns. 2024. Punctuated evolution of bill morphology in the tanagers (Thraupidae), the largest family of songbirds. *Ornithology.* DOI:10.1093/ornithology/ukae00. *Editor's Choice.*
26. Eliason, CM, LE Mellenthin, T Hains, **JM McCullough**, S Pirro, MJ Andersen, & SJ Hackett. 2024. Adaptive convergence of brain and sensory genes in plunge-diving kingfishers (Aves: Alcedinidae). *Communications Biology* 6:1011. DOI: 10.1038/s42003-023-05359-z
25. DeRaad, D, **JM McCullough**, L DeCicco, P Hime, L Joseph, MJ Andersen, & RG Moyle. 2023. Mitonuclear discordance results from incomplete lineage sorting, with no detectable evidence for gene flow, in a rapid radiation of *Todiramphus* kingfishers. *Molecular Ecology.* DOI:10.1111/mec.17080
24. **McCullough, JM**, S Masedung, TM Said, & NT Vinciguerra. 2024. First description of the natal plumage of Black-crowned White-eye (*Zosterops atrifrons atrifrons*). *Kukila* 24:18–20.
23. **McCullough, JM**, JP Hruska, CH Oliveros, RG Moyle, & MJ Andersen. 2023. Ultraconserved elements support the elevation of a new avian family, Eurocephalidae, the white-crowned shrikes. *Ornithology.* ukad025
22. Eliason, CE, **JM McCullough,** S Hackett, & MJ Andersen. 2023. Complex plumages spur rapid color diversification in island kingfishers (Aves: Alcedinidae). *eLife* 12:e83426. DOI: https://doi.org/10.7554/eLife.83426
21. **McCullough, JM**, LH DeCicco, MW Herr, P Holland, D Pikacha, TH Lavery, KV Olson, DA DeRaad, IG Tigulu, XM Mapel, LB Klicka, R Famoo, J Hobete, L Runi, G Rusa, A Tippet, D Boseto, RM Brown, RG Moyle, & MJ Andersen. 2023. A survey of terrestrial vertebrates of Tetepare Island, Solomon Islands, including six new island records. *Pacific Science* 76(4):411–435.
20. Eliason, CE, T Hains, **JM McCullough**, MJ Andersen, & S Hackett. 2022. Genome Report: Novelty of sensory genes within a 'great speciator' revealed with a high-quality reference genome of the collared kingfisher (*Todiramphus chloris collaris*). *G3: Genes, Genomes, Genetics* 12:11 DOI: 10.1093/g3journal/jkac260
19. **McCullough, JM,** C Oliveros, B Benz, R Zenil-Ferguson, J Cracraft, RG Moyle, & MJ Andersen. 2022. Wallacean and Melanesian islands promote higher rates of diversification within the global passerine radiation Corvides. *Systematic Biology*. DOI: 10.1093/sysbio/syac044
18. **McCullough, JM**, EF Gyllenhaal, XM Mapel, L Joseph, & MJ Andersen. 2021. Taxonomic implications of recent molecular analyses of Spectacled (*Symposiachrus trivirgatus*) and Spotted (*S. guttula*) Monarch Flycatchers (Passeriformes: Monarchidae). *The Emu - Austral Ornithology*. DOI 10.1080/01584197.2021.1977143
17. Andersen, MJ, JM **McCullough**, XM Mapel, EF Gyllenhaal, KA Jønsson, & L Joseph. 2021. Complex demographic histories and a mitochondrial capture event in a non-sister pair of monarch-flycatchers. *Molecular Ecology* DOI:10.1111/mec.15856
16. Eliason, C, **JM McCullough**, MJ Andersen, & S Hackett. 2021. Accelerated brain shape evolution is associated with rapid diversification in an avian radiation. *American Naturalist.* DOI: 10.1086/713664

15. Guo*, TV, S Mosah, **JM McCullough**, D DeRaad, LH DeCicco, RG Moyle, & MJ Andersen. 2021. Detailed description of the nest, eggs, and juvenal plumage of the Solomons Nightjar (*Eurostopodus nigripennis*). *Wilson Journal of Ornithology*
14. Barrow, LN, SM Bauernfeind, PA Cruz, JL Williamson, DL Wiley, JE Ford, MJ Baumann, SS Brady, AN Chavez, CR Gadek, SC Galen, AB Johnson, XM Mapel, RA Marroquin-Flores, TE Martinez, **JM McCullough**, J McLaughlin, & CC Witt. 2021. Comparing complex communities using null models: a case study of haemosporidian parasite variation among sky islands. *Oecologia*. DOI: 10.1007/s00442-021-04854-6
13. Rice, AA, NT Vinciguerra, & **JM McCullough**. 2020. Early nest record and additional notes on the breeding biology of the Chestnut-capped Brush-finch (*Arremon brunneinucha suttoni*) in Southern Mexico. *Ornitología Neotropica* 31:76–78.
12. **McCullough, JM**, NT Vinciguerra, S Jallow, & JM Marks. 2020. First observations of allopreening in the Sennar Penduline-tit *Anthoscopus punctifrons. Bulletin of the African Bird Club* 27(2):258–259.
11. DeCicco, LH, LB Klicka, LC Campillo, IG Tigulu, J Waihuru, R Tako, A Sirikolo, XM Mapel, **JM McCullough**, MJ Andersen, & RG Moyle. 2020. New distributional records of the Blue-faced Parrotfinch (*Erythrura trichroa*) in the Solomon Islands. *Wilson Journal of Ornithology* 132(1):192–197.
10. **McCullough, JM**, BT Smith, RG Moyle, & MJ Andersen. 2019. A North American origin of a pantropical bird radiation (Aves: Coraciiformes) is supported by genomic and fossil data. *Proceedings of the Royal Society B* 286(1910), 20190122
9. **McCullough, JM**, L Joseph, RG Moyle, & MJ Andersen. 2019. Ultraconserved elements put the final nail in the coffin of traditional use of the genus *Meliphaga* (Aves: Meliphagidae). *Zoologica Scripta* 48:411–418.
8. Andersen, MJ, **JM McCullough**, AS Nyári, RG Moyle, & L Joseph. 2019. Ultraconserved Elements resolve genus level relationships in an Australasian bird Radiation (Aves: Meliphagidae). *Emu - Austral Ornithology* (Special Issue: New Guniea and Indo-pacific avifauna). DOI: 10.1080/01584197.2019.1595662
7. DeCicco, LH, SS Brady, XM Mapel, **JM McCullough**, IG Tigulu, MJ Andersen, & RG Moyle. 2019. Notes on the birds of Isabel, Solomon Islands, including the first record since 1927 of Island Leaf Warbler *Phylloscopus maforensis. Bulletin of the British Ornithologists' Club* 139(4):311–319.
6. **McCullough, JM,** W Feuerabendt, & G Londoño. 2019. Additional notes on the nesting biology of the Blackish Tapaculo (*Scytalopus latrans*). *Wilson Journal of Ornithology* 131(4):817–824
5. Andersen, MJ, **JM McCullough**, WM Mauck III, BT Smith, & RG Moyle. 2018. A phylogeny of kingfishers reveals an Indomalayan origin and elevated rates of diversification on oceanic islands. *Journal of Biogeography* 45(2):269–281.
4. Marroquin-Flores, RA, JL Williamson, AN Chavez, SM Bauernfeind, M Baumann, CR Gadek, AB Johnson, **JM McCullough**, CC Witt, & LN Barrow. 2017. Diversity, abundance, and host relationships in the avian malaria community of New Mexico pine forests. *PeerJ*:e3700
3. **McCullough, JM,** & G. Londoño. 2017. Nesting biology of the Black-throated Tody-tyrant (*Hemitriccus granadensis*) with notes on mating displays. *Wilson Journal of Ornithology* 129(4):819–825.
2. **McCullough, JM**, & C Conway. 2017. Breeding behavior of Northern Saw-whet Owls in Oregon. *Northwest Science* 91(2):222–227.
1. Marks, JS, A Nightingale, & **JM McCullough**. 2015. On the breeding biology of Northern Saw-Whet owls (*Aegolius acadicus*). *Journal of Raptor Research 49*(4):486–497.

FUNDING

I have been directly awarded >$319,670 for research and conference travel and was heavily involved in the writing, research, and dissemination of an NSF DEB ($1.3 million) during my PhD.

RESEARCH FUNDING ($304,670 DIRECTLY AWARDED / $1,683,657 TOTAL)

2025 National Science Foundation (NSF) Postdoctoral Research Fellowship in Biology ($270,000) Award # 2507989. *"Genetic and Mechanistic Bases of Rapid Phenotypic Evolution: Functional Implications & Environmental Associations of Structural White Color in Birds"*

2025 American Ornithological Society Kessel Research Fellowship ($15,000)

2021 National Science Foundation (NSF) DEB – Evolutionary Processes ($1,363,987); Award # 2112467 "*Collaborative Research: Genomics of speciation and evolution of ecological traits in a geographic radiation of island kingfishers.*" Though not a PI, I significantly contributed to ideas, writing, and research at all stages; I was the singular named PhD student for this award, which funded the entirety of my dissertation research, three years of research assistantship funding, and conference travel.

2021 American Museum of Natural History Frank Chapman Research Grant ($3,000)
2021 UNM Biology Department: Alvin R. and Caroline G. Grove Research Award ($2,000)
2020 UNM Research Allocations Committee Research Award ($10,000)
2020 UNM Biology Department: Alvin R. and Caroline G. Grove Research Award ($500)
2020 UNM Biology Department: Melinda Bealmer Memorial Scholarship ($500)
2020 UNM Biology Department: Richard B. Forbes Conservation Award ($2,000)
2020 American Ornithological Society Werner and Hildegard Hesse Research Award ($2,500)
2020 British Ornithologists' Union Small Ornithological Research Grant ($2,080)
2018 UNM Biology Department: Alvin R. and Caroline G. Grove Research Award ($1,700)
2017 American Museum of Natural History Chapman Collection Study Grant ($1,200)
2017 Society of Systematic Biologists Graduate Student Research Award ($1,300)
2017 UNM Graduate Resources Allocations Committee Research Award ($400)
2017 UNM Biology Department: Alvin R. and Caroline G. Grove Research Award ($2,700)
2017 Wilson Ornithological Society Student Research Grant ($1,500)
2016 Experiment.com crowd-funding campaign ($1,400)
2014 University of Idaho: Berklund Undergraduate Research Scholar Award ($1,790)

CONFERENCE TRAVEL FUNDING ($2,100)

2018 UNM Graduate Resources Allocations Committee Travel Award ($150)
2018 American Ornithological Society Conference Travel Award ($1,100)
2017 American Ornithological Society Conference Travel Award ($700)
2017 UNM Graduate Resources Allocations Committee Travel Award ($150)

FIELD WORK

My fieldwork background spans both ecology and collections-based work. I have performed field research across three Western States and internationally in Colombia and the Solomon Islands. I have prepared >820 avian specimens housed in multiple collections: Museum of Southwestern Biology (MSB), Burke Museum of History and Culture at the University of Washington (UWBM), Cincinnati Natural History Museum (MNHS), University of Kansas Biodiversity Institute (KUNHM), the San Diego Natural History Museum (SDNHM), Field Museum (FMNH), and the Louisiana State University Museum of Natural Sciences (LSUMNS).

COLLECTION-BASED EXPEDITIONS

2019 **Solomon Islands**. Expedition to Rendova, Tetepare, and Kolombangara Islands.
2018 **Solomon Islands.** Expedition to Isabel and Makira Islands.
2017 **New Mexico, USA**. Collecting in mountainous regions of northern New Mexico.

ECOLOGY-FOCUSED FIELDWORK

2015 **Colombia**. Studying breeding biology of Neotropical birds in Farallones de Cali NP. *PI: Dr. Gustavo Londoño*
2014 **Idaho**. Fall bird banding at the Intermountain Bird Observatory, Boise State University. *PI: Dr. Jay Carlisle*
2014 **Idaho**. Radio telemetry and tracking of Sage Grouse outside of Twin Falls. *PI: Dr. Courtney Conway*

2014	**Utah.** Bird banding at the Rio Mesa Research Station, University of Utah *Lead Bander: Laura Doll*
2013	**Idaho**. Fall bird banding at the Intermountain Bird Observatory, Boise State University. *PI: Dr. Jay Carlisle*
2013	**Utah**. Kit Fox and Coyote genetic sampling and diet analysis. *PI: Dr. Robert Lonsinger*
2012	**Idaho**. Bleak Taylor Internship studying vocal behavior of owls in the Frank Church Wilderness Area. *PI: Dr. Courtney Conway*
2012–2015	**Oregon**. Studying breeding biology of Northern Saw-whet owls in Boardman. *PI: Drs. Courtney Conway and Jeff Marks*

TEACHING AND MENTORSHIP

I have developed two graduate-level courses (marked by *), served as instructor of record for one course (for 10 semesters), and have served as a teaching assistant for numerous courses during my undergraduate and graduate degrees (10 semesters). I have directly mentored seven students (High School to PhD level), resulting in one publication.

TEACHING

*Course taught as an Undergrad TA **Course taught as a Grad TA ***Course I developed †Instructor of Record

University of Kentucky

2024	Guest lecturer on Genetic Drift for BIOL 303 Honors Introduction to Evolution (25 undergraduate students)

University of New Mexico

2020**	BIOL 406 Global Avian Diversity and Systematics (20 undergrad students)
2020***†	BIOL 502 Graduate Student Professional Development (15 grad students)
2019***†	BIOL 502 Advanced R Seminar (15 grad students)
2018	BIOL 519 Phylogenetics; Guest Lab lecture (20 undergrad/grad students)
2017– 2022†	BIOL 402/502 Biology Dep. BioBlog (2–8 undergrad/grad students ea. semester)
2016**	BIOL 124L Intro Biology for Health Sciences (66 undergrad students)

University of Idaho

2015*	BIOL 102 Biology and Society (24 undergrad students)
2013*	FOR 320 Dendrology (30 undergraduate students)
2013–2014*	BIOL 115 Cells and the Evolution of Life (24 undergrad students each semester)
2012–2013*	BIOL 116 Organisms and Environments (24 undergrad students each semester)

WORKSHOPS

Cincinnati Natural History Museum

2025***	Basics of Avian Specimen Preparation for Natural Nistory Collections (4 students). June–July 2025

University of Kentucky

2025***	'Data to Design: Scientific graphics in ggplot2 and Adobe Illustrator' (30 graduate students). 6 March 2025.

MENTORSHIP

I have mentored one high school student, three undergraduate students, one masters', and three PhD students. One mentee's independent research project was published in 2019 (Guo et al. 2019, publication #15).

SELECTED PRESENTATIONS

I have given 17 oral or poster presentations and contributed 24 abstracts at local, national, and international venues.

INVITED SEMINARS

McCullough, J.M. Unraveling the Paradox of the 'Great Speciators': evolutionary dynamics of a geographic radiation of island kingfishers (*Todiramphus*). Invited hour-long seminar for the Department of Biology Research Talks series at the University of Kentucky on 18 Feb. 2025.

McCullough, JM. Unraveling the Paradox of the 'Great Speciators': evolutionary dynamics of a geographic radiation of island kingfishers (*Todiramphus*). Invited hour-long Systematics, Ecology and Evolution (SEE) Seminar for Louisiana State University Biology Department on 3 Feb. 2025

McCullough, J.M. Drivers of rapid phenotypic and species diversification. Invited hour-long seminar for the School of Biological Sciences and Sam Noble Natural History Museum, University of Oklahoma on 22 Jan. 2025.

McCullough, JM. Systematics and diversification of Indo-Pacific birds. Invited hour-long seminar at the Centre for Biodiversity Analysis, Australian National University, Canberra, ACT, Australia on 18 Nov. 2022.

Selected Conference Presentations

McCullough, JM, CE Eliason, SJ Hackett, CE Myers, MJ Andersen. Genomes, wings, and feathers: what long-dead bird specimens can reveal about evolution on islands. 2024 Annual Research & Career Symposium, University of Kentucky. 18 September 2024. Contributed 3 min oral presentation for the Postdoc "3MT" Competition, a science communication symposium. 3rd place.

McCullough, JM, CE Eliason, F Machado-Stredel, D Tan, CE Myers, SJ Hackett, MJ Andersen. Unraveling the Paradox of the 'Great Speciators': evolutionary dynamics of a geographic radiation of island kingfishers (*Todiramphus*). 3rd Joint Congress on Evolutionary Biology (both in-person and virtual conferences), July 26–30, 2024. Contributed oral presentation and was a Ernst Mayr Award Symposium finalist.

McCullough, JM. Systematics and diversification of Indo-Pacific Birds. University of New Mexico Department of Biology's "Brown Bag" seminar series, 18 October, 2023. Contributed 45 min. oral presentation.

McCullough, JM, CE Eliason, SJ Hackett, MJ Andersen. Whole-genome resequencing of a geographic radiation of *Todiramphus* kingfishers yields insights into tempo and mode of a clade of "Great Speciators" (Aves:Alcedinidae). Joint meeting of the American Ornithological Society (AOS) and the Society of Canadian Ornithologists–Société des ornithologistes du Canada (SCO–SOC), August 2023. Contributed 15 min. oral presentation.

McCullough, JM, CE Eliason, SJ Hackett, MJ Andersen. Whole-genome resentencing of a geographic radiation of *Todiramphus* kingfishers yields insights into tempo and mode of a clade of "Great Speciators" (Aves:Alcedinidae). Evolution, June 2023. Contributed 15 min oral presentation.

McCullough, JM, CH Oliveros, BW Benz, R Zenil-Ferguson, J Cracraft, RG Moyle, MJ Andersen. Wallacean and Melanesian Islands Promote Higher Rates of Diversification within the Global Passerine Radiation Corvides. American Ornithological Society conference, June 2022. Contributed 15 min. oral presentation.

McCullough, JM, XM Mapel, EF Gyllenhaal, K Jønsson, L Joseph, & M Andersen. Robbery in progress: ongoing mitochondrial capture in an Australian population of the Spectacled Monarch *Symposiachrus trivirgatus*. Systematic Biology meeting, January 2020. Contributed poster presentation.

McCullough, JM, RG Moyle, BT Smith, & MJ Andersen. Biogeography of the pantropical order Coraciiformes. International Ornithological Congress, August 2018. Contributed oral and poster presentations.

McCullough, JM, RG Moyle, BT Smith, & MJ Andersen. Biogeography of the avian order Coraciiformes. American Ornithological Society conference, April 2018. Contributed oral presentation. *Session moderator.*

McCullough, JM, MJ Andersen, NR Friedman, L Joseph, AT Peterson, RG Moyle, & AS Nyari. Ultraconserved elements resolve genus-level relationships in the honeyeaters (Meliphagidae).

American Ornithology Conference, April 2018. Contributed 5 min lightning presentation. *Session Moderator.*

McCullough, JM, RG Moyle, BT Smith, and MJ Andersen. Systematics of the avian order Coraciiformes. New Mexico Ornithological Society 2018 meeting, March 2018. Contributed 15 min. oral presentation.

Synergistic Activities and Service

I engage in service through scientific peer-review (14 articles, one book chapter) and scientific communication, as well as serving in leadership roles of academic and professional societies. I've been interviewed for 18 different media outlets and written eight popular science articles. I frequently participate in scientific communication with the public, including participating as a guest for a podcast series, giving guest lectures at local schools (ten visits to various schools in Albuquerque, NM during 2019–2024), and educating the public during in museum outreach events with visitors to the Museum of Southwestern Biology in Albuquerque, NM (2016–2024) and the Field Museum in Chicago, IL (2025).

Peer Review

Scientific journals

Biology Letters (1), Canadian Field Naturalist (1), Ecology and Evolution (1), Emu Austral Ornithology (1), Frontiers of Biogeography (1), Journal of Field Ornithology (1), Molecular Ecology Resources (1), Nature Reviews Biodiversity (1), Ornitología Neotropical (1), Paleobiology(1), Systematic Biology (4)

Book chapters

"*The European Roller (*Coracias garrulus*)-Ecology, Evolution and Conservation"*

Popular Science Magazines

2020– Technical Reviewer for *North American Birds* Magazine (2 issues annually)
2020– Technical Reviewer for Special Issues of *Birding* Magazine (2–3 issues annually)

Media attention

Description of new avian family, Eurocephalidae, June 2023: Following the publication of McCullough et al. 2023 "Ultraconserved elements support the elevation of a new avian family, Eurocephalidae, the white-crowned shrikes" in the Journal *Ornithology*, I was interviewed for three media outlets: the University of New Mexico Newsroom, Albuquerque news station channel 13 KRQE (air date 27 June 2023), and local NPR station KUNM (air date 28 June 2023).

Avian mortality event in the American southwest, September 2020: I wrote an online article, titled "*The data behind mysterious bird deaths in New Mexico*" for the American Birding Association's Field Ornithology on September 18th, 2020. I documented and discussed explanations behind the September 2020 avian mortality event in New Mexico and Colorado. As of October 19th, 2020, it has received 70,000 views and garnered considerable attention from media outlets at the local, national, and international stage. As a result of this story, I have been interviewed/quoted by 15 outlets, including the Albuquerque Journal, Denver Post, New York Times, NPR, and a television interview for CBS Saturday Morning (air date October 24th, 2020).

Scientific & Museum outreach

2025 *'Kingfishers: Through Air & Water'*: temporary exhibit (June–November) in the Grainger Science Hub in the Field Museum of Natural History, Chicago, IL that was funded through kingfisher NSF grant (see Funding section), which receives hundreds of museum visitors each day. During July 28–31, I engaged with 2,300+ visitors in the Science Hub as an advertised "Meet a Scientist".

2025 Four episode guest on the 'Birds of a Feather Talk Together' Podcast, discussing kingfisher diversity, evolution, and conservation efforts of the Guam Kingfisher. Episodes #100, 102, 104, and 106. Available on Apple podcasts and Youtube.

2024–25 Volunteer bander with Taking Flight Next Level, a local STEM-focused environmental education program for home schooled 6–12 graders in Lexington, KY

2017–24 Ten time guest visitor at three different local elementary and high schools in Albuquerque NM, to discuss STEM careers, evolutionary biology, bird diversity, and conservation

2013 Guest lecturer to three TRIO classes on engaging in research during their undergraduate education. Borah High School, Boise, ID

Popular Science Writing

2021 **McCullough, JM.** "CATastrophic effects of free-roaming felines" UNM BioBlog
2020 **McCullough, JM.** "Crabs, birds, and blue blood" UNM BioBlog
2020 **McCullough, JM.** "Documenting the natural history of a secretive Neotropical bird" Gradientes Colombia Blog
2019 Contributed figure to *Kingfisher* book by Ildiko Szabo. Published by Reaction Books LTD
2019 **McCullough, JM.** "Will history repeat itself?" UNM BioBlog
2019 **McCullough, JM.** "The not so special 'hot duck'" UNM BioBlog
2018 **McCullough, JM.** "Predatory Songbirds: the case of the murderous tits" UNM BioBlog
*** This article has been viewed >60,000 times online
2017 **McCullough, JM.** "Feathered Dinosaurs" UNM BioBlog

Activities in Professional Societies

University of New Mexico during graduate school

2020 Graduate Policy Chair, Biology Graduate Student Association
2018–20 Co-president, Biology Graduate Student Association
2018–19 Faculty Hire Search Committee (Bioinformaticist), student representative
2019 Research Day Chair, Biology Graduate Student Association
2017–20 Secretary, Advancing Women in Science Student group

University of Idaho during undergraduate degrees

2012–2014 President, Student Chapter of the Wildlife Society

Leadership positions in professional societies

2018–2020 Student Association Committee member, American Ornithological Society

Society memberships

American Ornithological Society, International Ornithologist's Union, Society for Integrative and Comparative Biology, Society of Systematic Biologists, Wilson Ornithological Society

Honors and Awards

2024 Society of Systematic Biologists Ernst Mayr Award finalist

Industry Experience

2021–2023 Academic Consultant for the Wild Bird Feeding Institute, an industry trade group focused on supplemental feeding of birds. I gave four invited presentations on avian diseases and produced informational material on the same topic to be circulated by bird feeding stores for the general public.

Invited industry-related presentations

2022, November 2: "Avian Diseases and Feed Smart Practices," 45-min presentation at the Wild Bird Feeding Institute's 2022 Annual Meeting in Clearwater Beach, FL
2022, February 4: "Wild Bird Diseases and their Prevention", hour-long webinar for the Wild Bird Feeding Institute
2021, November 12: "Diseases that impact feeder bird species," hour-long presentation at the Wild Bird Feeding Institute's 2021 Annual Meeting in Lost Pines Resort, Austin, TX
2021, April 28: "How to prevent Salmonellosis at bird feeders," webinar for the Wild Bird Feeding Institute