

Jenna M. McCullough, Ph.D

NSF Postdoctoral Fellow

Department of Ornithology, Natural History Museum of Los Angeles County &
Department of Ecology & Evolutionary Biology, University of California Los Angeles
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EDUCATION

2024 **Doctor of Philosophy, Ph.D**, in Biology

Department of Biology, University of New Mexico, Albuquerque, NM
Advisor: Dr. Michael J. Andersen

Dissertation title: *Unraveling the Paradox of the 'Great Speciators': Evolutionary Dynamics of a Geographic Radiation of Island Kingfishers (Todiramphus)*

2018 **Master of Science, MSc**, in Biology

Department of Biology, University of New Mexico, Albuquerque, NM
Advisor: Dr. Michael J. Andersen

Thesis title: *Systematics and Diversification of the Pantropical Avian Order Coraciiformes*

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

2025– NSF Postdoctoral Fellow, the Natural History Museum of Los Angeles County (NHMLAC) & University of California Los Angeles (UCLA)

Advisors: Drs. Allison Shultz (NHMLAC) and Stepfanie Aguillon (UCLA)

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

2014–2015 Laboratory Technician for Dr. David Tank, University of Idaho

PEER-REVIEWED PUBLICATIONS

[Google Scholar Profile](#)

I have published 31 peer-reviewed studies with 12 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:

34. Machado-Stredel, F, **JM McCullough**, CM Eliason, S Hackett, MJ Andersen, & CE Myers. *In review*. Phylogenetic niche conservatism in rapid radiations: time and space as factors of conservatism in a “Great Speciator” (*Todiramphus*, Alcedinidae). *Nature Ecology & Evolution*
33. Rodríguez-Ortíz, ZC, R Zenil-Ferguson, **JM McCullough**, SM Rovito. *In review*. The influence of colonization time and diversification rate variation on regional amphibian species richness in Mesoamerica. *Journal of Biogeography*
32. Vinciguerra, NT, B Benz, **JM McCullough**, RJ Moyle, & MJ Andersen. *In revision*. Phylogenomics and biogeography of honeyeaters in the genus *Myzomela* (Meliphagidae). *Molecular Phylogenetics and Evolution*.

PUBLISHED:

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. 2025. Efficient Inference of Macrophylogenies: Insights from the Avian Tree of Life. *Systematic Biology*. DOI:10.1093/sysbio/syaf080
30. **McCullough, JM**, CM Eliason, S Hackett, CE Myers, & MJ Andersen. 2025. Phylogenomics of a genus of ‘Great Speciators’ reveals rampant incomplete lineage sorting, gene flow, and mitochondrial discordance in island systems. *Systematic Biology*. DOI:10.1093/sysbio/syaf075
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* 4(1).
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* 8(6): 813–827.
27. Vinciguerra, NT, **JM McCullough**, & K Burns. 2024. Punctuated evolution of bill morphology in the tanagers (Thraupidae), the largest family of songbirds. *Ornithology* 141(2):ukae001
Editor’s Choice
26. Eliason, CM, LE Mellenthin, T Hains, **JM McCullough**, S Pirro, MJ Andersen, & SJ Hackett. 2023. Adaptive convergence of brain and sensory genes in plunge-diving kingfishers (Aves: Alcedinidae). *Communications Biology* 6:1011.
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* 32(17): 4844–4862.
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* 140(3):ukad025.
Media attention: [NPR](#), [KROQ local news interview](#), [UNM newsroom](#)
22. Eliason, CE, **JM McCullough**, S Hackett, & MJ Andersen. 2023. Complex plumages spur rapid color diversification in island kingfishers (Aves: Alcedinidae). *eLife* 12:e83426.
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):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 Corvidae. *Systematic Biology* 71(6): 1423–1439.
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* 121(4): 365–371.

17. Andersen, MJ, JM **McCullough**, XM Mapel, EF Gyllenhaal, KA Jönsson, & L Joseph. 2021. Complex histories of gene flow and a mitochondrial capture event in a nonsister pair of birds *Molecular Ecology* 30(9): 2087–2103.
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* 197(5): 576–591.
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* 132(4): 1028–1034.
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*. 195(2): 435–451.
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 Neotropicalica* 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 Guinea and Indo-pacific avifauna) 119(3): 218–232.
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, AWARDS, & HONORS

I have been directly awarded >\$300,000 for research and conference travel and was heavily involved in the writing, research, and dissemination of a NSF DEB (\$1.36 million) during my PhD.

RESEARCH FUNDING (\$319,670 DIRECTLY AWARDED / \$1,698,657 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 RA 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)

HONORS

- 2026* Fulbright Specialist (upcoming for March–April 2026 in Colombia, see Teaching section)
- 2024 Society of Systematic Biologists Ernst Mayr Award finalist

MUSEUM AND FIELD WORK EXPERIENCE

I have performed fieldwork in the Western US, Colombia and conducted domestic and international collecting expeditions. I have prepared >830 bird specimens that are housed in nine collections across the USA.

NATURAL HISTORY COLLECTIONS EXPERIENCE

- 2017–18, 20–21 Curatorial Assistant, Division of Genomic Resources, Museum of Southwestern Biology
- 2017 Curatorial Assistant, Division of Birds, Museum of Southwestern Biology
- 2016 Volunteer Digitization Technician of New Mexico avian syntopic series, Museum of Southwestern Biology
- 2015 Curatorial Assistant, Division of Birds, Burke Museum of Natural History & Culture, University of Washington

COLLECTION-BASED EXPEDITIONS

- 2019 **Solomon Islands.** Six-week general collecting expedition to Rendova, Tetepare, and Kolombangara Islands.
- 2018 **Solomon Islands.** Six-week general collecting expedition to Isabel and Makira Islands.
- 2017 **New Mexico, USA.** Collecting in mountainous regions in 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.** Radio telemetry and tracking of post-breeding Sage Grouse.
PI: Dr. Courtney Conway
- 2014 **Utah.** Bird banding at the Rio Mesa Research Station, University of Utah
Lead Bander: Laura Doll
- 2013, 14 **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 and taught several workshops served as instructor of record for three graduate-level courses (12 semester total) and as a teaching assistant for numerous courses during my undergraduate and graduate degrees (10 semesters).

TEACHING

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

2024 BIOL 303 Honors Introduction to Evolution, Guest lecture (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 lecture (20 undergrad/grad students)
2017– 22***† 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)
2013–14* BIOL 115 Cells and the Evolution of Life (24 undergrad students each semester)
2012–13* BIOL 116 Organisms and Environments (24 undergrad students each semester)

WORKSHOPS

Universidad Nacional Autónoma de Mexico

2025*** Inferencia filogenética Bayesiana con RevBayes (26 UNAM grad students). 9–11 January 2025. One of four Co-leaders. Taught in Spanish.

Cincinnati Natural History Museum

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

University of Kentucky

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

MENTORSHIP

I have formally mentored one high school student on her senior capstone project. Informally, I have mentored three undergraduate students, one masters’, and five PhD students. One undergraduate mentee’s independent research project was published in 2019 (Guo et al. 2019, publication #15).

SELECTED PRESENTATIONS

I have given 22 presentations and contributed 26 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 (OUT OF 18)

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. *Invited* 15-min presentation for the Evolution of Birds in Australasia symposium at the Australasian Ornithological Conference in Perth, Australia. 18–20 November 2025.

McCullough, JM, CE Eliason, SJ Hackett, S Aguillon, A Shultz, MJ Andersen. Is structural white color rare in Birds? August 2025. American Ornithological Society (AOS) Conference, contributed 15 min. oral presentation. *Session moderator.*

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**, 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 resequencing 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 *Symptiachrus 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.

SYNERGISTIC ACTIVITIES AND SERVICE

I engage in service through scientific peer-review (15 articles, one book chapter) and scientific outreach, as well as serving in leadership roles of academic and professional societies. I’ve been interviewed for 18 different media outlets and written nine popular science articles. I frequently participate in scientific communication with the public, including participating as a guest for a podcast series and museum outreach events.

ORGANIZED CONFERENCE SYMPOSIA

‘Microanatomy of color: Novel discoveries from hierarchical scales of color production in feathers’
Upcoming for the American Association for Anatomy’s annual conference; 17–20 April 2026. Co-organized with Dr. Rosalyn Price-Waldman.

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), Proceedings of the Royal Society B (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)

POPULAR SCIENCE WRITING

- 2026* **McCullough, JM**, NJ Moore, R Vanbuskirk. “*Becards, Bitterns, Bat Falcons, and Beyond: Brilliant Birdlife in Belize*” upcoming in the American Birding Association’s *Birding* magazine, special travel issue 2026.
- 2021 **McCullough, JM**. “*CATastrophic effects of free-roaming felines*” UNM BioBlog
- 2020 **McCullough, JM**. “*The data behind mysterious bird deaths in New Mexico*” American Birding Association’s *Field Ornithology*: I documented and discussed explanations behind the September 2020 avian mass mortality event in New Mexico and Colorado. As of September 2025, it has received >150,000 page views and garnered media attention from 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 24 October 2020).

- 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 as of January 2021
- 2017 **McCullough, JM.** “Feathered Dinosaurs” UNM BioBlog

SCIENTIFIC & MUSEUM OUTREACH

- 2025 Avian specimen preparation for Haunted Museum, a Member’s only Halloween event at the Natural History Museum of Los Angeles County. 4 October (1,284 attendees total)
- 2025 ‘Collections Revealed’ presentation series at the Natural History Museum of Los Angeles County for K–12 school groups and visitors (~300 attendees, 9 & 16 October 2025).
- 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 the featured “Meet a Scientist”.
- 2025 “Feathered Palettes: The Science of Bird Colors”. Invited speaker for the Yolo County Bird Alliance, formerly Yolo Audubon Society. 17 September 2025.
- 2025 Evolutionary history of avian theropod dinosaurs outreach event for “Dino Days” event at the Natural History Museum of Los Angeles County (~6,000 event attendees total)
- 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 bird bander with Taking Flight Next Level, a local STEM-focused environmental education program for home schooled 6–12th 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

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

INDUSTRY EXPERIENCE

2021–2023 Academic Consultant for the Wild Bird Feeding Institute: an industry trade group focused on supplemental feeding of birds. In addition to invited presentations, I also produced informational material on the prevention of avian diseases at bird feeders to be circulated for the general public in bird feeding stores, such as Wild Birds Unlimited.

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