

MATTHEW G. GIRARD

Zoologist
 Division of Fishes
 Department of Vertebrate Zoology
 National Museum of Natural History
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EDUCATION

2021	Ph.D.	Ecology and Evolutionary Biology with Honors, University of Kansas
2014	B.S.	Biology with an Ecology Emphasis, Loyola University Chicago

CURRENT PROFESSIONAL APPOINTMENTS

2024–	Zoologist, Division of Fishes, Department of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution
2021–	Research Affiliate, Ichthyology, Biodiversity Institute and Natural History Museum, University of Kansas

PAST PROFESSIONAL EXPERIENCE

2021–2024	Postdoctoral Fellow, Division of Fishes, Department of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution; Supervisor: Carole C. Baldwin
2018	Graduate Research Assistant, Department of Ecology and Evolutionary Biology, University of Kansas; Supervisor: Mark T. Holder
2016–2021	Graduate Teaching Assistant, University of Kansas; Supervisor(s): see Teaching section
2015–2016	Graduate Research Assistant, Ichthyology, Biodiversity Institute and Natural History Museum, University of Kansas; Supervisor: W. Leo Smith
2015	Graduate Collections Assistant, Ichthyology, Biodiversity Institute and Natural History Museum, University of Kansas, Supervisor; Andrew C. Bentley
2014	Graduate Teaching Assistant, University of Kansas; Supervisor(s): see Teaching section
2013–2014	Collections Intern, Fishes Division, Field Museum of Natural History; Supervisors: Susan Mochel and Mark Westneat
2012–2013	Collections Volunteer, Fishes Division, Field Museum of Natural History; Supervisor: Susan Mochel

RESEARCH QUESTIONS

- ✦ What are the relationships among teleost fishes?
- ✦ How do we integrate and arbitrate genotypic and phenotypic data in phylogenetics?
- ✦ When do morphological characters evolve across the phylogeny of fishes?
- ✦ What are the macroevolutionary patterns behind spatial distributions?
- ✦ How do we leverage modern genomic methods to understand larval- and adult-fish biodiversity?

GRANTS AND FELLOWSHIPS (Research funds as PI = \$25,787; Stipends = \$183,600; Travel funds = \$1,950)EXTERNAL FUNDING AS PRINCIPAL INVESTIGATOR:

2023	Postdoctoral Fellowship Extension, National Museum of Natural History, Smithsonian Institution. Stipend—\$31,000; Research funds as PI—\$2,500.
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- 2022 Postdoctoral Fellowship Extension, National Museum of Natural History, Smithsonian Institution. Stipend—\$56,000; Research funds as PI—\$4,000.
- 2022 United States Government Contract, National Oceanic and Atmospheric Administration/Food and Drug Administration. Stipend—\$20,100.
- 2020 Postdoctoral Fellowship, National Museum of Natural History, Smithsonian Institution. Stipend—\$56,000; Research funds as PI—\$4,000.
- 2017 Raney Research Award, American Society of Ichthyologists and Herpetologists. Research funds as PI—\$1,000.
- 2017 Clark Hubbs' Student Travel Award, American Society of Ichthyologists and Herpetologists. Travel award—\$600.
- 2016 Lerner-Gray Grant for Marine Research, American Museum of Natural History. Research funds as PI—\$1,600.
- 2016 Clark Hubbs' Student Travel Award, American Society of Ichthyologists and Herpetologists. Travel award—\$600.
- 2015 Travel Award, Society for Systematic Biologists. Travel award—\$500.

INTERNAL FUNDING AS PRINCIPAL INVESTIGATOR:

- 2022 Smithsonian Institution Barcode Network Grant, National Museum of Natural History, Smithsonian Institution. Research funds as PI—\$8,687 (Co-PIs Carole C. Baldwin and Katherine E. Bemis).
- 2020 Panorama Small Grant Program, Biodiversity Institute, University of Kansas. Research funds as PI—\$1,000.
- 2020 Summer Fellowship, Department of Ecology and Evolutionary Biology, University of Kansas. Stipend—\$3,500.
- 2019 Summer Fellowship, Department of Ecology and Evolutionary Biology, University of Kansas. Stipend—\$2,000.
- 2019 Ecology and Evolutionary Biology Graduate Student Organization Scholarship, Department of Ecology and Evolutionary Biology, University of Kansas. Travel award—\$250.
- 2018 Summer Fellowship, Department of Ecology and Evolutionary Biology, University of Kansas. Stipend—\$3,000.
- 2017 Doctoral Student Research Fund, University of Kansas. Research funds as PI—\$2,000.
- 2017 Summer Fellowship, Biodiversity Institute, University of Kansas. Stipend—\$1,750.
- 2017 Summer Fellowship, Department of Ecology and Evolutionary Biology, University of Kansas. Stipend—\$1,750.
- 2016 Research Fellowship, Department of Graduate Studies, University of Kansas. Stipend—\$5,000.
- 2016 Summer Fellowship, Department of Ecology and Evolutionary Biology, University of Kansas. Stipend—\$3,500.
- 2016 Panorama Small Grant Program, Biodiversity Institute, University of Kansas. Research funds as PI—\$1,000.

AWARDS AND HONORS

- 2024 April 2024 edition of *Top & Trending Research* in BioOne journals: Girard, M. G. 2024. Convergent evolution and the Red Sea rover: *Emmelichthys marisrubri* (Teleostei: Emmelichthyidae) is a species of fusilier (Lutjanidae: *Dipterygonotus*). *Ichthyology & Herpetology* 112:41–52.
- 2024 Chosen as cover image for *Ichthyology & Herpetology* volume 112 issue 1.
- 2023 Editor's Choice Award: Girard, M. G., et al. 2023. Cusk-eel confusion: revisions of larval *Luciobrotula* and *Pycnocraspedum* and re-descriptions of two bythitid larvae (Ophidiiformes). *Ichthyological Research* 70: 474–489.
- 2023 Chosen as cover image for *Ichthyology & Herpetology* volume 111 issue 2.
- 2021 Tracy I. Storer Award (Best Student Poster Presentation), *Ichthyology*: Girard, M. G. Evolution of the Archerfishes (Toxotidae). Joint Meeting of Ichthyologists and Herpetologists.
- 2021 Honors distinction for dissertation research, Department of Ecology and Evolutionary Biology, University of Kansas.
- 2020 Carlin Graduate Teaching Assistant Award (University Level), Department of Graduate Studies, University of Kansas.
- 2019 Frederick H. Stoye Award (Best Student Oral Presentation), *Ichthyology*: Girard, M. G. Morphological support for the relationships among carangiform fishes. Joint Meeting of Ichthyologists and Herpetologists.
- 2018 The best science images of the year: 2018 in pictures—[Roosterfish] X-ray vision: *Nature* 564:318–323.
- 2017 Honors distinction for advancement to candidacy, Department of Ecology and Evolutionary Biology, University of Kansas.
- 2017 Kenneth B. Armitage Award for Excellence in Teaching (Department Level), Department of Ecology and Evolutionary Biology, University of Kansas.

PUBLICATIONS (See [Google Scholar](#) for citation information; “*” denotes equal-authorship contributions; “^” denotes mentee author; 9 first authored, 18 total)

- Girard, M. G.**, A. Nonaka, C. C. Baldwin, and G. D. Johnson. 2024. Discovery and description of elaborate larval cusk-eels and the relationships among *Acanthonus*, *Tauredophidium*, and *Xyelacyba* (Teleostei: Ophidiidae), p. 20–42. In: *Early Life History and Biology of Marine Fishes: Research inspired by the work of H Geoffrey Moser*. J. M. Leis, W. Watson, B. C. Mundy, and P. Konstantinidis (eds.). *NOAA Professional Paper NMFS* 24.
<https://doi.org/10.7755/PP.24.3> [link to PDF]
- Girard, M. G.**, M. D. Santos, and K. E. Bemis. 2024. New species of redbait from the Philippines (Teleostei: Emmelichthyidae: *Emmelichthys*). *ZooKeys* 1196:95–109.
<https://doi.org/10.3897/zookeys.1196.111161> [link to PDF]
- Girard, M. G.** 2024. Convergent evolution and the Red Sea rover: *Emmelichthys marisrubri* (Teleostei: Emmelichthyidae) is a species of fusilier (Lutjanidae: *Dipterygonotus*). *Ichthyology & Herpetology* 112:41–52.
<https://doi.org/10.1643/i2023048> [link to PDF]
- Girard, M. G.**, H. J. Carter, and G. D. Johnson. 2023. New species of *Monomitopus* (Ophidiidae) from Hawai‘i, with the description of a larval coiling behavior. *Zootaxa* 5330:265–279.
<https://doi.org/10.11646/zootaxa.5330.2.5> [link to PDF]

- Bemis, K. E.*, **M. G. Girard***, M. D. Santos, K. E. Carpenter, J. R. Deeds, D. E. Pitassy, N. A. L. Flores, E. S. Hunter, A. Driskell, K. MacDonald, L. A. Weigt, and J. T. Williams. 2023. A DNA barcode reference library of Philippine market fishes based on ten years of biodiversity sampling. *Scientific Data* 10. <https://doi.org/10.1038/s41597-023-02306-9> [link to PDF]
- Bemis, K. E., J. C. Tyler, A. Kaneko, K. Matsuura, K. Murakumo, V. C. Espíndola, J.-L. Justine, D. M. Tyler, **M. G. Girard**, and W. E. Bemis. 2023. Pelvic-fan flaring and inflation in the Three-Tooth Puffer, *Triodon macropterus* (Tetraodontiformes: Triodontidae). *Ichthyology & Herpetology* 111:222–240. <https://doi.org/10.1643/i2022022> [link to PDF]
- Girard, M. G.**, B. C. Mundy, A. Nonaka, and G. D. Johnson. 2023. Cusk-eel confusion: revisions of larval *Luciobrotula* and *Pycnocraspedum* and re-descriptions of two bythiid larvae (Ophidiiformes). *Ichthyological Research* 70: 474–489. <https://doi.org/10.1007/s10228-023-00906-4> [link to PDF]
- Pastana, M. N. L., **M. G. Girard**, M. Bartick, and G. D. Johnson. 2022. A novel association between *Erythrocles schlegelii* (Teleostei: Emmelichthyidae) and pelagic tunicates. *Ichthyology & Herpetology* 110:675–679. <https://doi.org/10.1643/i2022008> [link to PDF]
- Smith, W. L., M. J. Ghedotti, O. Domínguez-Domínguez, C. D. McMahan, E. Espinoza, R. P. Martin, **M. G. Girard**, and M. P. Davis. 2022. Investigations into the ancestry of the Grape-eye Seabass (*Hemilutjanus macrophthalmos*) reveal novel limits and relationships for the Acropomatiformes (Teleostei: Percomorpha). *Neotropical Ichthyology* 20:e210160. <https://doi.org/10.1590/1982-0224-2021-0160> [link to PDF]
- Girard, M. G.**, M. P. Davis, Tan H. H., D. J. Wedd, P. Chakrabarty, W. B. Ludt, A. P. Summers, and W. L. Smith. 2022. Phylogenetics of archerfishes (Toxotidae) and the evolution of the toxotid shooting apparatus. *Integrative Organismal Biology* 4:obac013. <https://doi.org/10.1093/iob/obac013> [link to PDF]
- Girard, M. G.**, M. P. Davis, C. C. Baldwin, A. Dettai, R. P. Martin, and W. L. Smith. 2022. Molecular phylogeny of the threadfin fishes (Polynemidae) using ultraconserved elements. *Journal of Fish Biology* 100:793–810. <https://doi.org/10.1111/jfb.14997> [link to PDF]
- Girard, M. G.**, M. P. Davis, and W. L. Smith. 2020. The phylogeny of carangiform fishes: morphological and genomic investigations of new fish clades. *Copeia* 108:265–298. “Stoye Award” contribution. <https://doi.org/10.1643/CI-19-320> [link to PDF]
- Smith, W. L., C. A. Buck[^], G. S. Ornav, M. P. Davis, R. P. Martin, S. Z. Gibson, and **M. G. Girard**. 2018. Improving vertebrate skeleton images: fluorescence and the non-permanent mounting of cleared-and-stained specimens. *Copeia* 106:427–435. <https://doi.org/10.1643/CG-18-047> [link to PDF]
- Strotz, L. C., M. Simões, **M. G. Girard**, L. Breitkreuz, J. Kimmig, and B. S. Lieberman. 2018. Getting somewhere with the red queen. *Biology Letters* 14:20170734. <https://doi.org/10.1098/rsbl.2017.0734> [link to PDF]
- Martin, R. P., E. E. Olson, **M. G. Girard**, W. L. Smith, and M. P. Davis. 2018. Light in the darkness: new perspective on lanternfish relationships and classification using genomic and morphological data. *Molecular Phylogenetics and Evolution* 121:71–85. <https://doi.org/10.1016/j.ympev.2017.12.029> [link to PDF]

- De Silva, T., A. T. Peterson, J. M. Bates, S. W. Fernando, and **M. G. Girard**. 2017. Phylogenetic relationships of weaverbirds (Aves: Ploceidae): a first robust phylogeny based on mitochondrial and nuclear markers. *Molecular Phylogenetics and Evolution* 109:21–32.
<https://doi.org/10.1016/j.ympev.2016.12.013> [link to PDF]
- Girard, M. G.** and W. L. Smith. 2016. The phylogeny of marine sculpins of the genus *Icelinus* with comments on the evolution and biogeography of the Pseudoblenninae. *Zootaxa* 4171:549–561.
<http://doi.org/10.11646/zootaxa.4171.3.9> [link to PDF]
- Smith, W. L., J. H. Stern, **M. G. Girard**, and M. P. Davis. 2016. Evolution of venomous cartilaginous and ray-finned fishes. *Integrative and Comparative Biology* 56:950–961. “Integrative and Comparative Biology of Venom” symposium contribution.
<http://doi.org/10.1093/icb/icw070> [link to PDF]

MEDIA COVERAGE OF PUBLICATIONS (Representative but not exhaustive)

POPULAR PRESS:

- Seafood Source*, “[US FDA, NOAA release DNA barcode library to identify fish](#),” by Nathan Strout.
- NOAA Fisheries*, “[Raising the bar\(codes\): New dataset will help fight seafood fraud and protect consumer safety](#),” by Haley Randall.
- Discover Magazine*, “[Hit me with your best shot](#),” by Samantha Hill.
- NBC News*, “[How did archerfish learn to shoot down their prey? A new study has an idea](#),” by Tom Metcalfe.
- SYFY WIRE*, “[Robin Hood of the river! How archerfish evolved to shoot insects out of the air](#),” by Cassidy Ward.
- Popular Science*, “[An archerfish family tree is the best shot yet at the evolution of sniper fish](#),” by Ella Weaver.
- Phys.org*, “[Researchers publish most thorough study yet of ‘smart,’ spitting archerfishes](#),” by Brendan Lynch.
- ScienceShots*, “[Inner ‘blowpipe’ explains how archerfish spit water with such deadly force](#),” by Devin Reese.
- Smithsonian Magazine*, “[Meet the expert studying fishes that spit water to hunt](#),” by Abigail Eisenstadt.
- National Geographic*, “[Skeleton photos are getting a boost with the help of gelatin](#),” by Misha Jones.
- Discover Magazine*, “[New Way to Image Skeletons Helps Research, Looks Creepy](#),” by Earnie Mastroanni.
- The Verge*, “[How scientists captured a stunning, hellish menagerie of half-dissolved creatures](#),” by Rachel Becker.
- Science Magazine*, “[These eerie new images reveal the insides of fish and snakes like never before](#),” by Lakshmi Supirya.
- CNET*, “[Skeletons shine under eerie new imaging techniques](#),” by Amanda Kooser.
- Science News*, “[Venomous fish have evolved many ways to inflict pain](#),” by Amber Dance.

MUSEUM EXHIBITS:

Bruce Museum (Greenwich, CT), featured in exhibition *Under the Skin*, February 1–November 29, 2020.

OTHER MEDIA

PBS NOVA, participated in television special *Ocean Invaders: Lionfish*. First aired October 26, 2022.

PRESENTATIONS (“*” Denotes presenter[s]; “^” denotes mentee presenter[s])

INVITED ORAL PRESENTATIONS:

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| 2021 | Girard, M. G.*. Evolution and morphology of the archerfish water-shooting apparatus. Smithsonian Vertebrate Zoology Seminar, Washington, DC (virtual). |
| 2021 | Girard, M. G.*. Evolution of the archerfishes (Toxotidae). Smithsonian Virtual Ichthyology Seminar, Washington, DC (virtual). |

- 2019 Smith, W. L.* and **M. G. Girard***. Skeletons reimagined. Board of Directors of the Biodiversity Institute, Lawrence, KS.
- 2018 **Girard, M. G.***. Approachability and professionalism in the classroom. Invited presentation at the Center for Teaching Excellence Conference for New GTAs, Lawrence, KS.
- 2017 **Girard, M. G.***. Teaching an audience of a similar age. Invited presentation at the Center for Teaching Excellence Conference for New GTAs, Lawrence, KS.

ORAL PRESENTATIONS:

- Forthcoming **Girard, M. G.*** and G. D. Johnson. Hole-y moly: Morphology and evolution of the genus *Monomitopus* (Ophidiidae). Joint Meeting of Ichthyologists and Herpetologists, Pittsburgh, PA.
- 2023 **Girard, M. G.***, C. C. Baldwin, and K. E. Bemis. Evolution of the Rovers, Redbaits, and Bonnetmouths. Joint Meeting of Ichthyologists and Herpetologists, Norfolk, VA.
- 2023 **Girard, M. G.**, J. H. Carter*, and G. D. Johnson. New Species of *Monomitopus* from Hawai'i, with the description of a larval coiling behavior. Joint Meeting of Ichthyologists and Herpetologists, Norfolk, VA.
- 2022 **Girard, M. G.***, A. Nonaka, C. C. Baldwin, and G. D. Johnson. Larva of the Gargoyle cusk (*Xyelacyba myersi*) and its relationship with the Bony-eared assfish (*Acanthonus armatus*). Joint Meeting of Ichthyologists and Herpetologists, Spokane, WA.
- 2019 **Girard, M. G.***. Morphological support for the relationships among carangiform fishes. Joint Meeting of Ichthyologists and Herpetologists, Snowbird, UT.
- 2018 **Girard, M. G.***. Untangling threadfins: Relationships of Polynemidae using a total evidence approach. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.
- 2017 **Girard, M. G.*** and W. L. Smith. Relationships of carangiform fishes: a total evidence approach. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX.
- 2016 Smith, W. L.* and **M. G. Girard**, J. H. Stern, and M. P. Davis. Phylogenetic and anatomical diversity of venomous, cartilaginous and ray-finned fishes. Joint Meeting of Ichthyologists and Herpetologists, Reno, NV.
- 2016 Smith, W. L.* and **M. G. Girard**, and J. H. Stern. Phylogenetic and anatomical diversity of venomous, cartilaginous and ray-finned fishes. Society for Integrative and Comparative Biology, Portland, OR.

POSTER PRESENTATIONS:

- Forthcoming Tang, K. L.*, R. Farr, S. Ingersoll, and **M. G. Girard**. Phylogeny of Ophidiiformes. Joint Meeting of Ichthyologists and Herpetologists, Pittsburgh, PA.
- Forthcoming MacLeod, L. M. F.*, J. K. Galbraith, **M. G. Girard**, and K. E. Bemis. The deep-water Freckled Stargazer, *Xenocephalus egregius* (Uranoscopidae): New records, photographs, and mitochondrial genome. Joint Meeting of Ichthyologists and Herpetologists, Pittsburgh, PA.
- Forthcoming Rose, N. E.*, **M. G. Girard**, and K. E. Bemis. New species of flathead (Platycephalidae: *Elates*) from the Philippines, with notes on the biology of the genus. Joint Meeting of Ichthyologists and Herpetologists, Pittsburgh, PA.

- 2023 Bemis, K. E., **M. G. Girard**, Mudjekeewis D. S., K. E. Carpenter, J. R. Deeds, D. E. Pitassy*, N. A. L. Flores, E. S. Hunter, A. Driskell, K. MacDonald, L. A. Weigt, N. Rose^, and J. T. Williams. Biodiversity of Philippine Fishes: A DNA barcode reference library based on voucher specimens highlights remaining taxonomic questions in the region. Joint Meeting of Ichthyologists and Herpetologists, Norfolk, VA.
- 2022 Smith, W. L.*, H. J. Walker, **M. G. Girard**, and M. P. Davis. The phylogeny and taxonomy of the stomiiform Bristlemouths and Portholefishes. Joint Meeting of Ichthyologists and Herpetologists, Spokane, WA.
- 2021 **Girard, M. G.***. Evolution of the Archerfishes (Toxotidae). Joint Meeting of Ichthyologists and Herpetologists, Phoenix, AZ (virtual).
- 2019 Smith, W. L.*, K. R. Smith*, and **M. G. Girard***. *Copeia* improvements: open access, publication time, and other changes. Joint Meeting of Ichthyologists and Herpetologists, Snowbird, UT.
- 2017 Smith, W. L.*, C. A. Buck, S. Z. Gibson, M. P. Davis, R. P. Martin, and **M. G. Girard**. Techniques for the improved visualization of vertebrate anatomy. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.
- 2016 **Girard, M. G.*** and W. L. Smith. Carangiformes: relationships and anatomical investigation. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA.
- 2016 **Girard, M. G.*** and W. L. Smith. Intra- and interspecific relationships of sculpins in genus *Icelinus*. Society for Integrative and Comparative Biology, Portland, OR.
- 2015 **Girard, M. G.*** and W. L. Smith. Intra- and interspecific relationships of sculpins in genus *Icelinus*. Joint Meeting of Ichthyologists and Herpetologists, Reno, NV.

INSTITUTIONAL SERVICE AND OUTREACH

NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION:

- 2024 Vertebrate Zoology Speaker, Science Snacks (Advisory Board and Museum Staff)
- 2024 Vertebrate Zoology Selection Committee, Natural History Research Experiences (NHRE).
- 2022 Speaker and Instructor, Albert Einstein Distinguished Educator Fellows from the U.S. Department of Energy (18 Fellows).

SMITHSONIAN TROPICAL RESEARCH INSTITUTE, SMITHSONIAN INSTITUTION:

- 2023 Review Committee, D. Ross Robertson Research Award Fellowship for Field Studies on Neotropical Deep-reef Fishes.
- 2023 Review Committee, D. Ross Robertson Research Award Fellowship for Field Studies on Neotropical Shore Fishes.
- 2023 Review Committee, D. Ross Robertson Research Award Fellowship for Field Studies on Neotropical Deep-reef Fishes.

BIODIVERSITY INSTITUTE, UNIVERSITY OF KANSAS:

- 2019 Videography Team, [One-Day-One-KU Fund Raising Event](#).
- 2019 Speaker, Discovery Day: Marine Life (~350 Museum patrons).
- 2018 Speaker, Stand Up for Science (~600 Museum patrons).
- 2016–2017 Student Representative (Elected), Research Planning Committee.
- 2016–2017 Selection Committee, Panorama Grant.
- 2014 Speaker, Party in the Panorama.

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY, UNIVERSITY OF KANSAS:

2018–2019	President (Elected), Graduate Student Organization.
2018–2019	Student Representative (<i>ex officio</i> , without voting rights), Executive Committee.
2018–2019	Student Representative (Elected, with voting rights), Strategic Planning Committee.
2017–2018	Vice President (Elected), Graduate Student Organization.
2017–2018	Student Representative (with voting rights), Self-Study and External Review Committee.
2015–2016	Social Committee (Elected), Graduate Student Organization.

FIELD MUSEUM OF NATURAL HISTORY:

2015	Speaker, Members' Night (~8,000 Museum members).
2014	Speaker, Members' Night (~7,000 Museum members).
2013	Speaker, Members' Night (~10,000 Museum members).

MUSEUM EXHIBITS

CONTENT ADVISOR:

2022	<i>The Complicated Tale of Salmon and Trout</i> (Virtual), Ocean Portal, Smithsonian Institution.
2020	<i>Under the Skin</i> (Hybrid), Bruce Museum (Greenwich, CT).
2019	<i>Deep-Scattering Layer: Daily Migration of Ocean Animals</i> (In person), University of Kansas Natural History Museum.

CONTENT PREPARATOR:

Forthcoming	<i>Objects of Wonder</i> (for objects from the Division of Fishes; In person), National Museum of Natural History, Smithsonian Institution.
2020	<i>Under the Skin</i> (Hybrid), Bruce Museum (Greenwich, CT).
2013	<i>The Machine Inside: Biomechanics</i> (In person), Field Museum of Natural History.
2013	<i>Opening the Vaults: Wonders of the 1893 World's Fair</i> (In person), Field Museum of Natural History.

ADDITIONAL OUTREACH

2016–2018	Speaker, Marine Biology Modules, Girl Scouts of America. Five one-day events with ~40 Girl Scouts each. Girl Scouts learned about life in a marine environment, marine organismal diversity, the value of organismal collections, conservation of natural resources, and types of research that can be conducted in an aquatic environment. This module contributes to the Scout's requirements for the "Water Badge."
2016	Speaker, Carnival of Chemistry, University of Kansas. One-day event with ~500 families. Attendees learned about the evolution of venomous fishes through exhibition of Museum specimens.
2016	Speaker, DNA Day, Basehor-Linwood High School, KS. One-day event with ~50 students from Basehor-Linwood High School. Students learned about biogeography, phylogeny, and how these subjects can be used to explore evolutionary history of birds, fishes, and beetles.

SOCIETAL SERVICE

AMERICAN FISHERIES SOCIETY/AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS:

2023– Names of Fishes Committee.

AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS:

2023– Ichthyological and Herpetological Collections Committee.
2021– Illustration Editor (Elected), *Ichthyology & Herpetology*.
2018– Board of Governors (*ex officio* with voting rights).
2018– Publication Policy Committee (*ex officio* with voting rights).
2025 Chair, Selection Committee, John G. Lundberg and Lucinda McDade Dissertation Award in Comparative and Phylogenetic Ichthyology.
2024 Selection Committee, John G. Lundberg and Lucinda McDade Dissertation Award in Comparative and Phylogenetic Ichthyology.
2023 Selection Committee, Best Ichthyological Paper in *Ichthyology & Herpetology* 2022.
2022–2023 Inaugural Selection Committee, John G. Lundberg and Lucinda McDade Dissertation Award in Comparative and Phylogenetic Ichthyology.
2022 Judge, Frederick H. Stoye Award in Genetics, Development, and Morphology.
2021 Selection Committee, Best Ichthyological Paper in *Copeia* 2020.
2020 Selection Committee, Best Ichthyological Paper in *Copeia* 2019.
2018–2020 Illustration Editor (Elected), *Copeia*.
2018–2020 Student Representative (Elected, with voting rights), Long Range Planning and Policy Committee.
2018 Chair (Elected), Committee on Student Participation.
2017 Acting Chair (Elected), Committee on Graduate Student Participation.
2016 Chair (Elected) Clark Hubbs' Travel Award and Book Raffle Board, Committee on Graduate Student Participation.

JOURNAL SERVICE

2015– Served as reviewer for 52 manuscripts in the following 15 journals:
Acta Zoologica (2) *Journal of Fish Biology* (6)
Copeia (11) *Mitochondrial DNA Part B: Resources* (3)
Evolution NOAA Professional Papers NMFS (2)
Fisheries Research PLoS ONE
Genome Biology and Evolution *Scientific Reports* (2)
Ichthyological Research *Species Diversity*
Ichthyology & Herpetology (11) *Zootaxa* (8)
iScience

CERTIFICATIONS

SCUBA DIVING:

30 December 2023 Advanced Open Water Diver, Professional Association of Diving Instructors (PADI)
17 April 2023 Scientific Diver, American Association of Underwater Scientist (AAUS)
15 April 2023 Nitrox Diver (EAN-40), Technical Diving International (TDI)
22 March 2023 Diving First Aid for Professional Divers Version 3.0, Divers Alert Network (DAN)
6 March 2023 Prepared Diver, Divers Alert Network (DAN)
29 July 2004 Open Water Diver, Professional Association of Diving Instructors (PADI)

RESEARCH INSTRUMENTS:

- 17 February 2023 Operator, General Electric Phoenix V|tomelx M 240/180kV Dual Tube μ CT Scanner, Scientific Imaging, National Museum of Natural History, Smithsonian Institution
- 16 March 2019 Operator, Bruker SkyScan 1173 High-Energy Spiral Scan Micro-CT scanner, Friday Harbor Laboratories, University of Washington

COLLECTIONS CARE AND MAINTENANCE:

- 18 October 2023 Introduction to EMu collections database, Information Technology Office, National Museum of Natural History, Smithsonian Institution
- 19 October 2023 Respirator certification, Office of Safety, Health and Environmental Management, Occupational Health Services Center, Smithsonian Institution

COLLECTIONS AND FIELD WORK (18 total expeditions; 143 total field days; see [Bionomia](#) for additional collections and specimen information)

- Forthcoming Florida: Atlantic coast blackwater diving.
- January 2024 Vietnam: eastern coast. Duration: 17 days. Specimens and tissues of fishes accessioned by the National Museum of Natural History, Smithsonian Institution.
- December 2023 Curaçao: deep reefs of the southern Caribbean using conventional scuba diving and the human-occupied submersible *Curasub*. Duration: 7 days. Specimens and tissues of fishes to be accessioned by the National Museum of Natural History, Smithsonian Institution.
- September 2023 Atlantic Ocean: Mid-Atlantic Bight aboard NOAA Ship *Henry B. Bigelow*. Duration: 23 days. Specimens and tissues of fishes accessioned and cataloged by the National Museum of Natural History, Smithsonian Institution.
- August 2023 Florida: Atlantic coast blackwater diving. Duration: 7 days. Specimens and tissues of fishes accessioned and cataloged by the National Museum of Natural History, Smithsonian Institution.
- June 2023 Curaçao: deep reefs of the southern Caribbean using conventional scuba diving and the human-occupied submersible *Curasub*. Duration: 8 days.
- April 2023 Panama: Scientific Diving training at Smithsonian Tropical Research Institute (STRI), Bocas del Toro Research Station. Duration: 8 days.
- December 2022 Curaçao: deep reefs of the southern Caribbean aboard the human-occupied submersible *Curasub*. Duration: 7 days. Specimens and tissues of fishes accessioned and cataloged by the Burke Museum of Natural History and Culture, University of Washington and National Museum of Natural History, Smithsonian Institution.
- September 2022 Atlantic Ocean: Mid-Atlantic Bight aboard NOAA Ship *Henry B. Bigelow*. Duration: 26 days. Specimens and tissues of fishes accessioned and cataloged by the National Museum of Natural History, Smithsonian Institution and Biodiversity Institute, University of Kansas.
- May 2022 Florida: Atlantic coast blackwater diving. Duration: 4 days. Specimens and tissues of fishes accessioned and cataloged by the National Museum of Natural History, Smithsonian Institution.
- April 2022 Curaçao: deep reefs of the southern Caribbean aboard the human-occupied submersible *Curasub*. Duration: 7 days. Specimens and tissues of fishes accessioned and cataloged by Burke Museum of Natural History and Culture, University of Washington and National Museum of Natural History, Smithsonian Institution.

June 2018	Florida: Gulf coast and mangrove forests. Duration: 2 days. Specimens and tissues of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
June 2017	Florida: Gulf coast and mangrove forests. Duration: 2 days. Specimens of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
May 2016	California: San Diego Trough deep-sea trawling aboard R/V <i>Robert Gordon Sproul</i> . Duration: 5 days. Specimens and tissues of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
December 2016	Florida: Gulf coast and mangrove forests. Duration: 2 days. Specimens of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
December 2015	Florida: Gulf coast and mangrove forests. Duration: 2 days. Specimens of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
November 2014	Taiwan: eastern and southern coasts. Duration: 10 days. Specimens and tissues of fishes accessioned and cataloged by the Biodiversity Institute, University of Kansas.
September 2013	Illinois: Piscasaw and Nippersink creeks. Duration: 3 days. Specimens of fishes and invertebrates housed by Loyola University Chicago.
September 2012	Illinois: Piscasaw and Nippersink creeks. Duration: 3 days. Specimens of fishes and invertebrates housed by Loyola University Chicago.

EXPERIENCE GAINED FROM ASSISTANTSHIPS, INTERNSHIPS, AND VOLUNTEER ACTIVITIES

2017–2020	Dermestid-Beetle Colony Volunteer, Biodiversity Institute, University of Kansas. Responsible for preparing skeletal specimens in and performing maintenance of the KU dermestid beetle colony.
2015	Collections Assistant, Ichthyology Division, Biodiversity Institute, University of Kansas. Responsible for curating KU Ichthyology Teaching Collection, performing collection maintenance, and identification of recent Taiwanese fish collections.
2013–2014	Collections Intern, Division of Fishes, Field Museum of Natural History. Responsible for identification and digitization of deep-sea fishes, Eastern Pacific fishes, and coral reef fishes from Palau.
2012–2013	Collections Volunteer, Division of Fishes, Field Museum of Natural History. Responsible for processing skeletal material of specimens from Gulf of Mexico and Eastern Pacific.

ADVISING AND MENTORING (“*” Denotes work that resulted in a peer-reviewed publication)

NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION:

Forthcoming	Victor Tang, Masters Student, National Taiwan University. Project: Species diversity of the genus <i>Plectranthias</i> .
2023–	Leo MacLeod, Doctoral Student, Howard University. Project: Evolution of stargazers (Uranoscopidae).
2023–	Ned Rose, Undergraduate Student, Virginia Polytechnic Institute and State University. Project: Species diversity of the genus <i>Elates</i> . (Publication in prep.)

BIODIVERSITY INSTITUTE, UNIVERSITY OF KANSAS:

2020	Eric Fuqua, Undergraduate Student, University of Kansas. Project: Identification of North American freshwater fishes.
2019–2020	David Wolf, Undergraduate Student, University of Kansas. Project: Interrelationships of bristlemouth fishes (Gonostomatidae).

- 2018–2019 Xavier Urbina, Undergraduate Student, University of Kansas. Project: Morphometrics of mail-cheeked fishes.
- 2016–2018 Chesney Buck—Re-imagination of wet- and dry-skeleton photography*.

FIELD MUSEUM OF NATURAL HISTORY:

- 2013–2014 Nicole Gracias, Undergraduate Student, Loyola University Chicago. Project: Digitization of Palauan fishes.

TEACHING

PEDAGOGICAL TRAINING:

- Spring 2017 BIOL 801: Scientific Teaching in Biology, University of Kansas.

DEVELOPMENT OF COURSE CONTENT:

- Spring 2021 BIOL 150: Introductory Biology, University of Kansas. Development of Biology of SARS-CoV-2 lab activities (virtual).
- Fall 2020 BIOL 152: Introductory Biology, University of Kansas. Development of Biology of SARS-CoV-2 lab activities (virtual).
- Spring 2020 BIOL 592: Ichthyology, University of Kansas. Development of 11 lab lectures and the anatomy lab activity (partially virtual due to COVID-19 pandemic).
- Spring 2018 BIOL 592: Ichthyology, University of Kansas. Development of 11 lab lectures, the anatomy lab activity, and study tools.
- Fall 2017 BIOL 413: History and Diversity of Organisms, University of Kansas. Development of six lab lectures and activities on opisthokonts.
- Fall 2016 BIOL 413: History and Diversity of Organisms, University of Kansas. Development of five lab lectures and activities on metazoans.
- Spring 2016 BIOL 592: Ichthyology, University of Kansas. Development of six lab lectures and study tools.

GUEST LECTURES:

- Spring 2022 BIOL 412: Evolution and Diversity of Fishes, Professor Jacqueline F. Webb, University of Rhode Island. Title: Phylogeny and function of archerfishes (virtual).
- Fall 2021 BIOL 102: Introductory Zoology, Professor Lukas B. Klicka, Peru State College. Title: The diversity of fishes (virtual).
- Spring 2021 BIOL 153: Principles of Organismal Biology Honors, Professor Mark E. Mort, University of Kansas. Title: Did you know you are a fish? (virtual).
- Spring 2019 BIOL 152: Principles of Organismal Biology, Professors Jenny Archibald and W. Leo Smith, University of Kansas. Title: Animal skeletal and muscular systems.
- Spring 2018 BIOL 592: Ichthyology, Professor W. Leo Smith, University of Kansas. Title: Dichotomy of predators and prey.
- Fall 2017 BIOL 413: History and Diversity of Organisms, Professors Christopher H. Haufler and Richard E. Glor, University of Kansas. Title: There's no such thing as a jellyfish: evolution and diversity of Cnidaria and Ctenophora.
- Fall 2016 BIOL 122: Principles of Organismal Biology, Professor Lukas B. Klicka, Haskell Indian Nations University. Title: Your sarcopterygian self: how phylogeny helps us understand life.
- Spring 2016 BIOL 592: Ichthyology, Professor W. Leo Smith, University of Kansas. Title: Fishes as predators and prey.

GRADUATE TEACHING POSITIONS (“*” Denotes M. G. Girard listed as an instructor of record; 4,194 students):

Spring 2021	Laboratory Assistant*, BIOL 150: Introductory Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 235 students.
Spring 2021	Laboratory Assistant*, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 409 students.
Spring 2021	Laboratory Assistant*, BIOL 153: Principles of Organismal Biology Honors, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 42 students.
Fall 2020	Laboratory Assistant*, BIOL 150: Introductory Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 620 students.
Fall 2020	Laboratory Assistant*, BIOL 151: Introductory Biology Honors, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 36 students.
Fall 2020	Laboratory Assistant*, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 223 students.
Spring 2020	Laboratory Assistant*, BIOL 150: Introductory Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 239 students.
Spring 2020	Laboratory Assistant*, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 414 students.
Spring 2020	Laboratory Assistant*, BIOL 153: Principles of Organismal Biology Honors, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 54 students.
Spring 2020	Lecture and Laboratory Assistant, BIOL 592: Ichthyology, University of Kansas, Supervisor: W. Leo Smith. Enrollment: 17 students.
Fall 2019	Laboratory Assistant*, BIOL 150: Introductory Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 613 students.
Fall 2019	Laboratory Assistant*, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 152 students.
Spring 2019	Lecture Assistant, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisors: Jenny Archibald and W. Leo Smith. Enrollment: 462 students.
Spring 2018	Lecture and Laboratory Assistant, BIOL 592: Ichthyology, University of Kansas, Supervisor: W. Leo Smith. Enrollment: 24 students.
Fall 2017	Lecture Assistant and Laboratory Instructor*, BIOL 413: History and Diversity of Organisms, University of Kansas, Supervisors: Christopher H. Haufler and Richard E. Glor. Enrollment: 36 students.
Spring 2017	Lecture Assistant, BIOL 428: Introduction to Systematics, University of Kansas, Supervisors: Kirsten Jensen and Michael S. Engel. Enrollment: 40 students.
Spring 2017	Lecture Assistant, BIOL 152: Principles of Organismal Biology, University of Kansas, Supervisors: Mark E. Mort and W. Leo Smith. Enrollment: 369 students.
Fall 2016	Lecture Assistant and Laboratory Instructor*, BIOL 413: History and Diversity of Organisms, University of Kansas, Supervisors: Christopher H. Haufler and Robert M. Timm. Enrollment: 65 students.
Spring 2016	Lecture and Laboratory Assistant, BIOL 592: Ichthyology, University of Kansas, Supervisor: W. Leo Smith. Enrollment: 17 students.
Fall 2014	Laboratory Instructor*, BIOL 150: Introductory Biology, University of Kansas, Supervisor: Julie A. Campbell. Enrollment: 127 students.

LEARNING MANAGEMENT SYSTEMS AND SOFTWARE:

Proficient with: [Blackboard](#), [Canvas](#), [Gradescope](#), [iClicker](#), [Launchpad](#), [Moodle](#), and [ZipGrade](#).