## MATTHEW G. GIRARD

Postdoctoral Fellow 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

#### PROFESSIONAL APPOINTMENTS

2021–	Postdoctoral Fellow, 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

#### PROFESSIONAL EXPERIENCE

2021–	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 THEMES**

- + Phylogenetics and systematics of fishes based on integrative datasets
- + Character evolution, particularly in fishes
- Macroevolutionary patterns and processes behind spatial distributions
- + Fish larval and adult biodiversity

# **GRANTS AND FELLOWSHIPS** (Research funds as PI = \$23,287; Stipends = \$152,600; Travel funds = \$1,950) EXTERNAL FUNDING AS PRINCIPAL INVESTIGATOR:

2022	Smithsonian Postdoctoral Fellowship, 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	Smithsonian 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 Fun	IDING AS PRINCIPAL INVESTIGATOR:
2022	Smithsonian Institution Barcode Network, 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 I	Honors
2021	Tracy I. Storer Award (Best Student Poster Presentation): Ichthyology, American Society 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, American Society of Ichthyologists and Herpetologists.
2018	The best science images of the year: 2018 in pictures—[Roosterfish] X-ray vision: <i>Nature</i> 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; 6 first authored, 15 total)
  - Girard, M. G., H. J. Carter, and G. D. Johnson. 2023. New species of *Monomitopus* (Ophidiidae) from Hawaiʻi, 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, 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, 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 bythitid larvae (Ophidiiformes). Ichthyological Research 70.

    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 lchthyology 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. Dettaï, 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. Ornay, 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:**

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, 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.

<b>PRESENTATIONS</b>	("*" Denotes presenter	r[s]; "^" denotes mentee presenter	[s]	])
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•	(2021(1)(1)(1)(1)(1)	denotes presenter(s),
	INVITED ORAL PRESENT	ATIONS:
	2021	<b>Girard, M. G.*</b> . Evolution and morphology of the archerfish water-shooting apparatus. Smithsonian Vertebrate Zoology Seminar, Washington, DC (virtual).
	2021	<b>Girard, M. G.*</b> . Evolution of the archerfishes (Toxotidae). Smithsonian Virtual Ichthyology Seminar, Washington, DC (virtual).
	2019	Smith, W. L.*, <b>M. G. Girard</b> *. Skeletons reimagined. Board of Directors of the Biodiversity Institute, Lawrence, KS.
	2018	<b>Girard, M. G.*</b> . Approachability and professionalism in the classroom. Invited presentation at the Center for Teaching Excellence Conference for New GTAs, Lawrence, KS.
	2017	<b>Girard, M. G.*</b> . Teaching an audience of a similar age. Invited presentation at the Center for Teaching Excellence Conference for New GTAs, Lawrence, KS.
	ORAL PRESENTATIONS:	
	2023	<b>Girard, M. G.*</b> , C. C. Baldwin, K. E. Bemis. Evolution of the Rovers, Redbaits, and Bonnetmouths. Joint Meeting of Ichthyologists and Herpetologists, Norfolk, VA.
	2023	<b>Girard, M. G.</b> , J. H. Carter*, G. D. Johnson. New Species of <i>Monomitopus</i> from Hawai'i, with the description of a larval coiling behavior. Joint Meeting of Ichthyologists and Herpetologists, Norfolk, VA.
	2022	<b>Girard, M. G.*</b> , A. Nonaka, C. C. Baldwin, G. D. Johnson. Larva of the Gargoyle cusk ( <i>Xyelacyba myersi</i> ) and its relationship with the Bony-eared assfish ( <i>Acanthonus armatus</i> ). Joint Meeting of Ichthyologists and Herpetologists, Spokane, WA.
	2019	<b>Girard, M. G.*</b> . Morphological support for the relationships among carangiform fishes. Joint Meeting of Ichthyologists and Herpetologists, Snowbird, UT.
	2018	<b>Girard, M. G.*</b> . Untangling threadfins: relationships of Polynemidae using a total evidence approach. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.
	2017	<b>Girard, M. G.*</b> , W. L. Smith. Relationships of carangiform fishes: a total evidence approach. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX.
	2016	Smith, W. L.*, <b>M. G. Girard</b> , J. H. Stern, 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.*, <b>M. G. Girard</b> , J. H. Stern. Phylogenetic and anatomical diversity of venomous, cartilaginous and ray-finned fishes. Society for Integrative and Comparative Biology, Portland, OR.

## **POSTER PRESENTATIONS:**

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, <b>M. G. Girard</b> , M. P. Davis. The phylogeny and taxonomy of the stomiiform Bristlemouths and Portholefishes. Joint Meeting of Ichthyologists and Herpetologists, Spokane, WA.
2021	<b>Girard, M. G.*</b> . Evolution of the Archerfishes (Toxotidae). Joint Meeting of Ichthyologists and Herpetologists, Phoenix, AZ (virtual).
2019	Smith, W. L.*, K. R. Smith*, <b>M. G. Girard</b> *. <i>Copeia</i> 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, <b>M. G. Girard</b> .  Techniques for the improved visualization of vertebrate anatomy. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.
2016	<b>Girard, M. G.*</b> , W. L. Smith. Carangiformes: relationships and anatomical investigation. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA.
2016	<b>Girard, M. G.*</b> , W. L. Smith. Intra- and interspecific relationships of sculpins in genus <i>Icelinus</i> . Society for Integrative and Comparative Biology, Portland, OR.
2015	<b>Girard, M. G.*</b> , W. L. Smith. Intra- and interspecific relationships of sculpins in genus <i>Icelinus</i> . Joint Meeting of Ichthyologists and Herpetologists, Reno, NV.

### INSTITUTIONAL SERVICE AND OUTREACH

## NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION:

Speaker and Instructor, Albert Einstein Distinguished Educator Fellows from the U.S.

Department of Energy (18 Fellows).

## SMITHSONIAN TROPICAL RESEARCH INSTITUTE, SMITHSONIAN INSTITUTION:

2023	Selection Committee, D. Ross Robertson Research Award Fellowship for Field Studies
	on Neotropical Deep-Reef Fishes.
2023	Selection 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 (ex officio, 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:

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

#### **MUSEUM EXHIBITS**

**CONTENT ADVISOR:** 

2022 The Complicated Tale of Salmon and Trout (Virtual), Ocean Portal, Smithsonian

Institution.

2020 Under the Skin (Hybrid), Bruce Museum (Greenwich, CT).

2019 Deep-Scattering Layer: Daily Migration of Ocean Animals (In person), University of Kansas

Natural History Museum.

#### **CONTENT PREPARATOR:**

2020 Under the Skin (Hybrid), Bruce Museum (Greenwich, CT).

2013 The Machine Inside: Biomechanics (In person), Field Museum of Natural History.

2013 Opening the Vaults: Wonders of the 1893 World's Fair (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 46 manuscripts in the following 15 journals:

Acta Zoologica (2) Journal of Fish Biology (4)

Copeia (11) Mitochondrial DNA Part B: Resources (3) Evolution NOAA Professional Papers NMFS

Fisheries Research PLoS ONE

Genome Biology and Evolution Scientific Reports (2)
Ichthyological Research Species Diversity
Ichthyology & Herpetology (10) Zootaxa (6)

iScience

## **CERTIFICATIONS**

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)
17 February 2023	Operator, General Electric Phoenix V tomel x M 240/180kV Dual Tube µCT Scanner,
	Scientific Imaging, National Museum of Natural History, Smithsonian Institution
29 July 2004	Open Water Diver, Professional Association of Diving Instructors (PADI)

## COLLECTIONS AND FIELD WORK (See Bionomia for additional collections and specimen information)

Forthcoming	Curaçao (December): deep reefs of the southern Caribbean using conventional scuba diving and the human-occupied submersible <i>Curasub</i> .
2023	Atlantic Ocean: Mid-Atlantic Bight aboard NOAAS <i>Henry B. Bigelow</i> . Specimens and tissues of fishes accessioned by Smithsonian Institution National Museum of Natural History.
2023	Florida: Atlantic coast blackwater diving. Specimens and tissues of fishes accessioned by Smithsonian Institution National Museum of Natural History.
2023	Curaçao (June): deep reefs of the southern Caribbean using conventional scuba diving and the human-occupied submersible <i>Curasub</i> .
2023	Panama: Scientific Diving training at Smithsonian Tropical Research Institute (STRI), Bocas del Toro Research Station.

2022	Curação (December): deep reefs of the southern Caribbean aboard the human- occupied submersible <i>Curasub</i> . Specimens and tissues of fishes accessioned by Smithsonian Institution National Museum of Natural History and University of Washington Burke Museum of Natural History and Culture.
2022	Atlantic Ocean: Mid-Atlantic Bight aboard NOAAS <i>Henry B. Bigelow</i> . Specimens and tissues of fishes accessioned by Smithsonian Institution National Museum of Natural History and University of Kansas Biodiversity Institute.
2022	Florida: Atlantic coast blackwater diving. Specimens and tissues of fishes accessioned by Smithsonian Institution National Museum of Natural History.
2022	Curaçao (April): deep reefs of the southern Caribbean aboard the human-occupied submersible <i>Curasub</i> . Specimens and tissues of fishes accessioned by University of Washington Burke Museum of Natural History and Culture.
2018	Florida: Gulf coast and mangrove forests. Specimens and tissues of fishes accessioned by University of Kansas Biodiversity Institute.
2017	Florida: Gulf coast and mangrove forests. Specimens accessioned of fishes by University of Kansas Biodiversity Institute.
2016	California: San Diego Trough deep-sea trawling aboard R/V Robert Gordon Sproul.  Specimens and tissues of fishes accessioned by University of Kansas Biodiversity Institute.
2016	Florida: Gulf coast and mangrove forests. Specimens of fishes accessioned by University of Kansas Biodiversity Institute.
2015	Florida: Gulf coast and mangrove forests. Specimens of fishes accessioned by University of Kansas Biodiversity Institute.
2014	Taiwan: eastern and southern coasts. Specimens and tissues of fishes accessioned by University of Kansas Biodiversity Institute.
2013	Illinois: Piscasaw and Nippersink creeks. Specimens of fishes and invertebrates housed by Loyola University Chicago.
2012	Illinois: Piscasaw and Nippersink creeks. Specimens of fishes and invertebrates housed by Loyola University Chicago.

## EXPERIENCE GAINED FROM ASSISTANTSHIPS, INTERNSHIPS, AND VOLUNTEER ACTIVITIES

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MENTORSHIP ("\*" Denotes work that resulted in a peer-reviewed publication)

NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION CONTRACTOR:

2023 Ned Rose—Species diversity of Philippine fishes.

#### University of Kansas Undergraduate Students:

2020 Eric Fuqua—Identification of North American freshwater fishes.

2019–2020 David Wolf—Interrelationships of bristlemouth fishes (Gonostomatidae).

2018–2019 Xavier Urbina—Morphometrics of mail-cheeked fishes.

#### **BIODIVERSITY INSTITUTE VOLUNTEER:**

2016–2018 Chesney Buck—Re-imagination of wet and dry skeleton photography\*.

#### FIELD MUSEUM OF NATURAL HISTORY INTERN:

2013–2014 Nicole Gracias—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): 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.