

Jimena Golcher-Benavides

Iowa Cooperative Fish and Wildlife Research Unit
 Department of Natural Resource Ecology and Management,
 2310 Pammel Drive, 201 Science Hall II, Ames, Iowa, 50011
 Cel: +1 (307) 223-6804 | Office: 515-294-9682 | jgolcher@uwyo.edu
 Website: <http://jgolcher.github.io>

EDUCATION

- 2015-2021** PhD in Ecology. Program in Ecology, University of Wyoming, Laramie, WY.
 Advisor: Dr. Catherine E. Wagner.
- 2012-2015** MSc. in Biological Sciences at University of Konstanz, Konstanz, Germany.
 Advisors: Dr. Axel Meyer & Dr. Mark van Kleunen.
- 2006-2011** Bachelor of Biological Sciences, emphasis on Tropical Biology, National University (UNA), Heredia, Costa Rica.

ACADEMIC EXPERIENCE

- 2022-2023** **Postdoctoral Research** | “Early life environment and recruitment of invasive carp” Dr. Michael J. Weber and Dr. Michael J. Moore.
- 2022 – Summer** **Postdoctoral Research** | “Monitoring anthropogenic impacts on Lake Tanganyikan fishes” Dr. Catherine E. Wagner and Dr. Peter B. McIntyre.
- 2021-2022** **Visiting Assistant Professor** | Biology Program, Lees-McRae College.
- 2015-2021** **Graduate Research** | PhD Dissertation Thesis “Eco-evolutionary drivers of diversity in East African cichlid fishes” Committee members: Dr. Catherine E. Wagner (PhD Advisor), Dr. Peter B. McIntyre, Dr. Robert O. Hall, Dr. Amy C. Krist, Dr. Carlos Martínez del Río & Dr. Craig W. Benkman. *Field work, data, and specimen collection in four expeditions to Lake Tanganyika, Tanzania 2016-2019.*
- 2019-2020** **Graduate Research** | “Monitoring Critical Habitat for Fish Fauna” The Nature Conservancy’s Tuungane Project advised by Craig Leisher, Director of Monitoring and Evaluations at The Nature Conservancy and Dr. Peter B. McIntyre, Cornell U.
- 2012-2015** **Graduate Research** | MSc Thesis “The effects of predation on the stability of a color polymorphism in Midas cichlids from Nicaraguan crater lakes” Universität Konstanz, Germany. Dr. Axel Meyer & Dr. Mark van Kleunen. *Field work providing aquatic biodiversity survey data for the Water Authority in Managua, Nicaragua.*
- 2013** **Graduate Research** | Universität Konstanz, Germany. Dr. Helen Gunter.
- 2012** **Undergraduate Internship** | Veterinary School (TiHo) Hannover, Germany.
- 2011** **Undergraduate Internship** | Smithsonian Tropical Research Institute, Panama.

2009-2011 **Undergraduate Research** | Organization for Tropical Studies and Environmental impact assessment with Universidad Nacional (UNA).

TEACHING EXPERIENCE

2022 – Spring **Instructor** | Lees-McRae College **BIO 361 Genetics** lecture and lab sections (*15 students*), **BIO 211 General Zoology** lecture (*18 students*) and lab sections (*19 students*), and **BIO 122 Introduction to Evolution** lecture (*28 students*).

2021 – Fall **Instructor** | Lees-McRae College **BIO 114 Introductory Biology for Majors I** Two lecture sections (*48 students*) and three lab sections (*57 students*).

2021 – Spring **Guest Lecturer** | Two lectures “Animal World: Fishes” Lees-McRae College **General Zoology** Dr. Porter.

2021 – Spring **Guest Lecturer** | Oklahoma State University **Introduction to Natural History** Dr. Duchardt.

2020 – Fall **Guest Lecturer** | Adams College **Gen. Biology** Dr. Gibson-Reinemer.

2020 – Spring **Teaching Assistant (TA)** | University of Wyoming **Gen. Ecology** Dr. Barber. In charge of lectures on evolutionary ecology and biodiversity.

2019 – Fall **TA** | University of Wyoming **Marine Biology** Dr. North. In charge of lectures on biodiversity metrics.

2018 – Spring **TA** | University of Wyoming **Genetics** Dr. Weinig. In charge of lectures on population genetics, ecological speciation and two study groups.

2016 & 2017 **TA** | University of Wyoming **Evolution** Dr. Wagner. In charge of lectures on evolutionary research in zoological and geological museums.

2015 – Fall **Lab Instructor & Lecture TA** | University of Wyoming **Biology** Dr. J. Willford and Dr. North in charge of two General Biology laboratory sections.

2013 – 2014 **TA** | University of Konstanz **Zoology** Dr. Kleineidam & Dr. Woltering (2014) Dr. Gunter (2013) in charge of two study groups.

WORKSHOP PARTICIPATION & TRAINING

2021 - 2022 Learning Actively Mentoring Program Summer Institute - University of Wyoming

2021 Virtual Machine Learning using Python Workshop WEST 11-15 January 2021

2021 Virtual OTS Scientific Illustration 27 January-12 February 2021

2020 Virtual Safe Zone Training – University of Wyoming – 10 August 2020

2017 National Science Foundation Grantsmanship Workshop 14 October 2017

2017 Bodega Applied Phylogenetics Workshop Application 11-18 March 2017

2017 Occupancy Workshop 20-24 March 2017

MENTORING

2022 Miguel Sanchez | LMC Undergraduate research.

2019 – 2021	Shadow T. McKim UW Undergraduate research & manuscript preparation.
2016 – 2020	Msafiry George (Tanzania) Undergraduate academic writing.
2020 – Summer	Carlos Muñoz (Colombia) Academic writing.
2020 – Spring	Nathan T. Barrus UW Undergraduate research.
2018 – Spring	Thyme L. Cook & Reid Olson UW Undergraduate research experience.
2017 – Summer	Brittany Nordberg UW Undergraduate research experience.
2013 – Fall	Gabriel Brenes (Nicaragua) ENACAL Water Enterprise Staff Assistant.
2011 – Fall	Francesca Protti & Miguel Chaves (CR) Undergraduate academic writing.

WORKSHOP ORGANIZER & INSTRUCTOR EXPERIENCE

2020 – Spring	Virtual Intro to Digital Illustration Program in Ecology – <i>Organized and taught.</i>
2019 – Summer	Statistical Analyses and Advanced R Programming for Fisheries Tanzanian Fisheries at Research Institute. <i>Organized and co-taught with Jessica Rick, with help of Masumbuko Semba and Jesse Alston in Dar Es Salaam, Tanzania.</i>
2018 – Summer	Intro to R Computer Programming Tanzanian Fisheries at Research Institute. <i>Organized and co-taught with J. Rick, with help of M. Semba in Kigoma, Tanzania.</i>
2016 – Spring	Career panel for graduate students Program in Ecology – <i>organized with Dr. Lisa Barret at University of Wyoming Laramie, WY.</i>
2015 – Summer	Intro to Scientific Illustration using vector art Program in Ecology – <i>organized and taught at University of Wyoming Laramie, WY.</i>

AWARDS AND FELLOWSHIPS

		\$54,962.36
2021	LAMP Science Initiative Summer Institute and Year-long training.....	<i>\$2,500.00</i>
2021	Workshop Participation Grant, UW.....	<i>\$400.00</i>
2021	The Nature Conservancy (TNC) Stipendium.....	<i>\$2,000.00</i>
2020	Biodiversity Institute 2020 Research Enhancement Grant, UW.....	<i>\$28,018.00</i>
2020	Frederic E. Clements Award, UW.....	<i>\$1,000.00</i>
2019	Women in Conservation Biology, Ecology and Education Fellowship	<i>\$1,000.00</i>
2018	Department of Botany Student Awards.....	<i>\$300.00</i>
2018	Dean’s Graduate Scholars Award, Arts & Sciences UW	<i>\$2,500.00</i>
2018	Center for Global Studies Harris Research Endowment, UW.....	<i>\$2,500.00</i>
2018	Departmental awards, Department of Botany UW	<i>\$300.00</i>
2018	Wilhelm and Ragnhild Solheim Memorial Scholarship,UW	<i>\$1000.00</i>
2017	Rosemary Grant Award, Society for the Study of Evolution	<i>\$2,500.00</i>
2017	Bodega Applied Phylogenetics Workshop, Department of Botany UW....	<i>\$1,000.00</i>
2017	Aven Nelson Award, Department of Botany UW	<i>\$2,000.00</i>
2017	Own-it Award, Celebrating UW Women in STEM Graduate student	

2014	Graduate tuition- Tropical Ecology – Org. Tropical Studies (OTS)
2013	CONICIT-Costa Rican Government Science Incentive.....\$7,944.36
2012	German Academic Exchange Service (DAAD) Tuition & Stipendium
2010	Tuition & Research Experience for Costa Rican Students, OTS/CRUSA

PUBLICATIONS

- Golcher-Benavides, J.**, P.B. McIntyre, C. D. Brock and C. E. Wagner. 2023. Depth as an axis of community organization in Lake Tanganyikan cichlids, East Africa. Manuscript in prep. for journal: *Ecological Monographs*.
- Golcher-Benavides, J.**, P.B. McIntyre, E.G.M. Mandeville and C. E. Wagner. 2023. Ecology as driver of genetic differentiation in Lake Tanganyikan cichlids. Manuscript in prep. for journal: *Evolution*.
- Golcher-Benavides, J.** 2023. Environmental DNA in the classroom – Case Study Manuscript under review in journal: *The Water Cooler Center for Teaching and Learning Appalachian College Association* <https://ctl.acaweb.org/>.
- Rick, J.R., C.D. Brock, A.L., Lewanski*, **J. Golcher-Benavides**, and C. E. Wagner. 2022. Reference genome choice and filtering thresholds jointly influence phylogenies. Manuscript under review in journal: *Systematic Biology** graduate student co-author.
- Golcher-Benavides, J.**, S. M. McKim*, and C. E. Wagner. 2023. Aggression bias in *Tropheus brichardi* population “Kalemie”. Manuscript under review: *Evolution** Undergraduate student co-author.
- Porter, C.K., **J. Golcher-Benavides**, and C. W. Benkman. 2022. Seasonal patterns of dietary partitioning in vertebrates. *Ecology Letters*. 25(11): 2463-2475, DOI:10.1111/ele.14100
- Lewanski, A.L.*, **J. Golcher-Benavides**, J.A. Rick, and C. E. Wagner. 2022. Variable hybridization between two Lake Tanganyikan cichlid species in recent secondary contact. *Molecular Ecology*. 31(19):5041-5059, DOI: 10.1111/mec.16636 *Graduate student co-author.
- Golcher-Benavides, J.** and C. E. Wagner. 2019. Playing out Liem's Paradox: opportunistic piscivory in the Lake Tanganyikan cichlid fishes. *The American Naturalist*. 194(2):260-7, DOI: 10.1086/704169
- Torres-Dowdall, J.*, **Golcher-Benavides, J.***, Machado-Schiaffino, G. and A. Meyer. 2017. The role of rare morph advantage and conspicuousness in the stable gold-dark colour polymorphism of a crater lake Midas cichlid fish. *Journal of Animal Ecology*. 86:1044–1053, DOI: 10.1111/1365-2656.12693. *Co-first authorship.
- Golcher-Benavides, J.** and M. Protti Quesada. 2011. Fish Species Richness in Lowland Streams with a Geothermal Input Phenomenon, Sarapiquí de Heredia. Open Access ISRN Ecology. *ISRN Ecology*. Volume 2011: 695492, DOI:10.5402/2011/695492.

SCIENTIFIC TALKS & POSTERS

- Golcher-Benavides, J.** 2022. Genetics in the real world: Exploring undergraduate student's perception of learning in an experiential learning context. Learning Actively Mentoring Program Poster Session (poster)

- Golcher-Benavides, J.,** Leisher, C. 2021. The Nature Conservancy Tuungane Global and Africa Fish Conservation Interdisciplinary Team Meeting. "Fish Survey comparison" with Dr. Walter Salzburger and Dr. Peter B. McIntyre. (30 min talk)
- Golcher-Benavides, J.,** Mandeville, E.G., McIntyre, P.B.M and C.E. Wagner. 2021 Virtual Asilomar American Society for Naturalists Meeting. "Predictors of population genetic differentiation in Lake Tanganyikan cichlids". (15 min talk starts at min 40)
- Golcher-Benavides, J.** and C.E. Wagner. 2019. Invited Speaker in Research Seminar Series. Center for Limnology and Marine Biology, Universidad de Costa Rica (UCR). "Eco-evolutionary drivers of cichlid fish diversity." (50 min talk)
- Golcher-Benavides, J.** and C.E. Wagner. 2019. Talk at Departmental Botany/Ecology Seminar Series University of Wyoming "Eco-evolutionary drivers of cichlid fish diversity." (10 min talk)
- Golcher-Benavides, J.,** P.B. McIntyre, C. Brock and C.E. Wagner. 2019. Poster presentation at Wyoming Goes Global, University of Wyoming. "Is cichlid fish community diversity energy-driven in Lake Tanganyika."
- Golcher-Benavides, J.** and C.E. Wagner. 2018. PhD Proposal Talk in Program in Ecology University of Wyoming "Diversity and coexistence in East African Cichlids." (50 min talk)
- Golcher-Benavides, J.,** P.B. McIntyre, C. Brock and C.E. Wagner. 2018. Poster presentation Student Symposium Program in Ecology, University of Wyoming. "Examining patterns of community diversity within an adaptive radiation."
- Golcher-Benavides, J.,** P.B. McIntyre, C. Brock and C.E. Wagner. 2017. Talk at the Guild of Rocky Mountain Ecologists and Evolutionary Biologists Meeting at UC Mountain Research Station, Colorado "Resource availability as driver of community assembly in Lake Tanganyika." (15 min talk)
- Golcher-Benavides, J.,** Torres-Dowdall, Machado-Schiaffino, G. and A. Meyer. 2015. Talk at CIMAR and UNA Costa Rica (UNA) "Midas cichlids viewed from the predators perspective." (50 min talk)
- Golcher-Benavides, J.,** Torres-Dowdall, Machado-Schiaffino, G. and A. Meyer. 2015. Poster at National Biology Meeting EAWAG Zürich, Switzerland "Midas cichlids viewed from the predators perspective".
- Golcher-Benavides, J.,** Torres-Dowdall, Machado-Schiaffino, G. and A. Meyer. 2014. Poster at Evolution Meeting 2014 North Carolina "Midas cichlids viewed from the predators perspective."
- Golcher-Benavides, J.** and Protti-Quesada. 2011. Talk at the National Biology Meeting, in San José, Costa Rica. "Fish species richness in Caribbean lowland streams." (15 min talk)

PEER REVIEW SERVICE, MEMBERSHIPS & OUTREACH

Peer review International Journal of Tropical Biology and Conservation (Rev. Biol. Trop. 2016-2022), Functional Ecology (2017), Journal of Great Lakes Research (2019), Hydrobiologia (2020).

Memberships/ American Society of Naturalists, Society for the Study of Evolution, Society for Freshwater Science, American Society of Ichthyologists and Herpetologists (2022).

Outreach

- 2022 "Wimblu" Podcast guest discussing biodiversity and evolution with Alessandra Baltodano. March 2022 (en español).
- 2021 "Patagonia Film and lecture" Discussing Patagonia's documentary "Drop" during Welcome Week 2021.
- 2021 "Freshwater fish conservation" guest lecture at European High School, CR.
- 2020 "Aquatic biodiversity and cichlid fishes" guest lecture at European High School, CR.
- 2019 Tutor at Program in Ecology Odyssey for incoming students, Wyoming 2019.
- 2019 "Lake Tanganyika Underwater" Speaker at Rocky Mountain Cichlid Association in Colorado, 2017 and 2019.
- 2019 "Cichlid fish diversity" public talk at Laramie Audubon Society, Wyoming.
- 2019 "Science Café" public talks at Sublette and Albany County Public Libraries in Wyoming.
- 2019 Panelist at Shepard Symposium on Social Justice-Panel on Science-Policy Interface.
- 2018 & 2019 "Fish evolution in East Africa" exhibition for Fossil Fish Day at UW Geological Museum.
- 2016 "Conducting research in Lake Tanganyika" public talk at the American Fisheries Society -University of Wyoming Chapter.
- 2021 Publication of 4th Grade Educational Material- Module 1: Fish adaptations to thrive underwater: <http://freshwater.wyomingbiodiversity.org>
- 2021 Organizer at "I Simposio #CienciaTica 2021" Friday, 15 January 2021.
- 2020 Organizer and mentor at PiE Mentor Mentee Program.
- 2020 Contributor for "Guidelines and advice for incoming UW graduate students".
- 2019 Organizer at Fossil Fish Day at the UW Geological Museum.
- 2018 Organizer at Symposium, VIIth Student Symposium Program in Ecology.
- 2018 Organizer at Fossil Fish Day at the UW Geological Museum 2018 and 2019.
- 2017 Organizer at Symposium, VIth Student Symposium Program in Ecology.
- 2017 Judge for the Wyoming State Science Fair 2017.
- 2017 Master of Ceremonies for UW International Students Office events.
- 2016 Organizer at student talks in Departmental Seminar Series.
- 2016 University of Wyoming – Mentor at Latina Youth Conference.
- 2016 University of Wyoming – Organizer at Women in Math, Science and Engineering.
- 2016 Judge for the Wyoming State Science Fair 2016.
- 2015 Guide for High School Students Irazú Volcano National Park.

INTERESTS & LANGUAGES

Interests | Citizen Science | Ecology | Evolution | Ichthyology| Conservation | Stable isotopes | Data Science | Genomics | Ichthyology collections | SCUBA CMAS* PADI Advanced Open Water 100+ hours of experience in scientific diving | Fishing | Birdwatching | Data Visualization | Art | iNaturalist (+2,500 obs.)

Languages | Spanish, English & French (fluent)| German (intermediate) | Swahili (basic)