**Molly A. Hirst**

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Last update: June 2021

**Education**

2016 - 2022 **Doctor of Philosophy in Ecology and Evolutionary Biology**

**Master of Science in Ecology and Evolutionary Biology** (embedded, 2018)

University of Michigan, Ann Arbor, MI, USA

Thesis: *Working title: Sperm competition and hybridization in* Alouatta

Co-Advisors: Dr. Liliana Cortés-Ortiz, Dr. Patricia J. Wittkopp

Committee: Dr. Cody W. Thompson, Dr. Jacob L. Mueller

2011 - 2015 **Bachelor of Science in Biological Sciences**

**Bachelor of Arts in Anthropology and French Studies**

Graduated with High Distinction

University of Michigan-Dearborn, Dearborn, MI, USA

Research Advisor: Dr. Orin G. Gelderloos

2009 - 2011 **Associate in Science in Liberal Arts** (2012)

Schoolcraft College, Livonia, MI, USA

**Grants, Honors, and Awards**

2021 Visiting Predoctoral Fellowship at STRI, Panama

2021 Featured in the 2020-21 President’s Notable Alumnus Report, *Schoolcraft College*

2020 International Primatological Society Research Grant ($1,500)

2020 Evolution and Human Adaptation Program Research Award ($1,000), *University of Michigan*

2020 American Society of Mammalogists Grants-in-Aid of Research ($1,500)

2020 EEB Block Grant for Research ($1,849), *University of Michigan*

2019 Rackham Graduate Student Research Grant ($1,500), *University of Michigan*

2019 Dr. Nancy Williams Walls Award for Field Research ($1,704), *University of Michigan*

2019 Genetics Training Program Conference Travel Grant ($500), *University of Michigan*

2019 EEB Conference Travel Grant ($400), *University of Michigan*

2018 EEB Block Grant for Research ($1,745), *University of Michigan*

2018 Rackham Graduate Student Research Grant ($1,500), *University of Michigan*

2018 Rackham Conference Travel Grant ($1,300), *University of Michigan*

2018 Genetics Training Program Conference Travel Grant ($500), *University of Michigan*

2018 EEB Conference Travel Grant ($400), *University of Michigan*

2018 - 2019 Michigan Pre-Doctoral Training Program in Genetics Fellowship ($23,844), *University of Michigan*

2017 - 2018 Michigan Pre-Doctoral Training Program in Genetics Fellowship ($23,844), *University of Michigan*

2017 Rackham Conference Travel Grant ($800), *University of Michigan*

2017 EEB Conference Travel Grant ($400), *University of Michigan*

2017 EEB Block Grant for Research ($1,496), *University of Michigan*

2016 Rackham Merit Fellowship (RMF), *University of Michigan*

2015 Claren C. Jones Science Award, *Schoolcraft College*

2014 Biology Honor Scholar, *University of Michigan-Dearborn*

One student is selected per academic year.

2014 Institutional Honors, *University of Michigan-Dearborn*

2014 Garden Club of Dearborn Scholarship ($1,000), *University of Michigan-Dearborn*

2014 University Grant ($2,100), *University of Michigan-Dearborn*

2013 University Grant ($1,625), *University of Michigan-Dearborn*

2013 University Honors, *University of Michigan-Dearborn*

2012 - 2013 Garden Club of Dearborn Scholarship ($1,500), *University of Michigan-Dearborn*

2012 University Grant ($1,300), *University of Michigan-Dearborn*

2011 University Honors, *University of Michigan-Dearborn*

2012 UMASCH Scholarship ($150), *University of Michigan-Dearborn*

2011 UMASCH Scholarship ($150), *University of Michigan-Dearborn*

**Peer-Reviewed Journal Publications**

In prep. MA Hirst, JD Curlis, AF Kahrl, N Gripshover, CL Cox, ML Logan, WO McMillan. Sperm morphology in *Anolis apletophalus* after several generations as island transplants.

In prep. MA Hirst, JD Curlis, AF Kahrl, N Gripshover, CL Cox, ML Logan, WO McMillan. Sperm morphology and dewlap color in *Anolis apletophalus.*

In prep. MA Hirst, AZ Rodas-Martínez, L Cortés-Ortiz. Sperm morphology in hybrid howler monkeys (*Alouatta palliata* x *A. pigra*) and implications for reproductive isolation.

In prep. MA Hirst, AZ Rodas-Martínez, L Cortés-Ortiz. Differences in sperm morphology support distinct intensities of sperm competition between two howler monkey species with divergent mating systems.

In revision MA Hirst, SK Campbell, MD Baiz. Primate hybrid zones as models for understanding speciation in the genomic era.

Biodiversity Publications

2019 JD Curlis, MA Hirst, MD Baiz. Second observation of *Dermatemys mawii* in the upper Yucatán peninsula: a new population or an old individual? *The Herpetological Bulletin*. 149: 47-48.

**Conference Abstracts** (1st author only)

2022 Invited Symposium Presentation at the 28th International Primatological Society Congress in Quito, Ecuador.

2021 Virtual Presentation at The Evolution Conference

2019 Podium Presentation at the Midwest Primate Interest Group Meeting in DeKalb, Illinois, USA.

2018 Poster at The Genetics Training Program Retreat in Ann Arbor, MI, USA.

2018 Poster at the 27th International Primatological Society Congress in Nairobi, Kenya.

2017 Poster at The Genetics Training Program Retreat in Ann Arbor, MI, USA.

2017 Poster at The Evolution Conference in Portland, OR, USA.

2014 - 2015 Posters at the University of Michigan – Dearborn Natural Sciences Research Symposium (2014) and University of Michigan –Dearborn CASL Undergraduate Research Showcase (2014, 2015) in Dearborn, MI, USA.

2013 Podium Presentation at the Stewardship Network’s Science, Practice, and Art of Restoring Native Ecosystems Conference, Michigan State University in Lansing, MI, USA.

2013 Poster at the Michigan Academy Annual Conference, Hope College in Holland, MI, USA.

2013 Poster at the University of Michigan-Dearborn Natural Sciences Research Symposium in Dearborn, MI, USA.

Virtual Conferences Attended due to the COVID-19 Pandemic

2021 Enriching Scholarship: Teaching and Technology Collaborative, *University of Michigan*

2020 The Allied Genetics Conference, the North American Ornithological Conference.

**Teaching Assistantships**

2019 Evolution (EEB 390), *University of Michigan*

2017 Genetics Laboratory (MCDB 306), *University of Michigan*

2016 Introductory Biology: Ecology, Genetics and Evolution (BIOL 171), *University of Michigan*

2011 Introductory Biology (BIO 101) Winter Semester, *Schoolcraft College*

2011 Introductory Biology (BIO 101) Summer Semester, *Schoolcraft College*

2010 Introductory Biology (BIO 101) Fall Semester, *Schoolcraft College*

**Mentoring**

2021 Pinqing Hu, undergraduate senior in EEB, *University of Michigan*

2018-2019 Ecology and Evolutionary Biology “Big Sib” graduate student mentor, *University of Michigan*

2012-2015 Rotating undergraduate students in Biology, *University of Michigan-Dearborn*

**Research and Museum Fellowships and Assistantships**

2021 Smithsonian Tropical Research Institute Fellow, Gamboa and Barro Colorado Island, Panama

2020 Graduate Student Curatorial Assistantship: Bird Division, *University of Michigan Museum of Zoology*

Advisor: Dr. Brett W. Benz

2016 Museum technician: Mollusk Division, *University of Michigan Museum of Zoology*

Advisor: Dr. Tae Hwan Lee

2015 - 2016 Museum technician: Mammals Division, *University of Michigan Museum of Zoology*

Advisor: Dr. Cody W. Thompson

2015 - 2016 Phylogenetics of *Alouatta*, *University of Michigan*

Advisor: Dr. Liliana Cortés-Ortiz

2014 - 2015 Phylogenetics of African *Tomopterna* frogs, *University of Michigan-Dearborn*

Advisor: Dr. Matthew P. Heinicke

2012 - 2015 Environmental research of the Rouge River Floodplains and the Jens Jensen Landscape, *University of Michigan-Dearborn*

Advisor: Dr. Orin G. Gelderloos

**Fieldwork Assistantships and Skills**

2021 Panama Canal, Gamboa, and Barro Colorado Island, Panama

*Anolis apletophalus* sperm collection and analysis under the main project: Genomic basis of thermal adaptation: a large-scale field-transplant experiment in the Panama Canal.

2021 Texas, U.S.A.

Colubrid and elapid snake collection for ongoing venom research and museum curation.

2020 Mojave, California, U.S.A.

Lizard lassoing for ongoing phenotypic diversity research.

2019 Tabasco, Mexico

Sampled various tissues from wild howler monkeys (*Alouatta*) for ongoing genetic and morphological analysis.

2012 - 2015 Dearborn, Michigan, U.S.A.

Collection, management, and analysis of plant and wildlife data from the Jens Jensen landscape and the Rouge River Floodplains. Data include species identification, sampling species richness and succession, soil composition and cores, and elevational transects.

**Certifications**

In progress Graduate Teacher Certificate, *University of Michigan* Center for Research on Learning and Teaching (CRLT)

2021 Responsible Conduct of Research and Scholarship Training, *University of Michigan*

2020 Certified Planet Blue Ambassador for Sustainability, *University of Michigan*

2020 Covid 19: Working Safely in U-M Research Labs, *University of Michigan*

2020 Introduction to the Non-Human Primate and Zoonoses Training, *University of Michigan*

2020 Introduction to Wildlife Training, *AALAS Learning Library*

2020 Orientation to Animal Care and Use at the University of Michigan

2019 Cultivating a Culture of Respect, *University of Michigan*

2015 General Laboratory Safety Training, *University of Michigan*

2015 Bloodborne Pathogens Training, *University of Michigan*

**Professional Societies and Memberships**

2020 - 2021 Society for the Study of Evolution

2020 American Society of Primatologists

2020 American Society of Mammalogists

2020 American Society of Naturalists

2020 International Primatological Society

2018 American Society of Primatologists

2018 International Primatological Society

2017 American Society of Naturalists

2017 American Association for the Advancement of Science

2012 - 2015 Tau Sigma National Honor Society

Golden Key International Honour Society

**Service, Outreach, and Broader Impact Activities**

2021 The Evolution Conference Session Moderator: Sex/Recombination

2021 Ecology and Evolutionary Biology Science Fun Fact Blog Contributor, *University of Michigan*

2020 - 2021 Michigan Science Writers Blog Contributor, *University of Michigan*

2018 - 2020 Elected GREEBs (Graduate Researchers in Ecology and Evolutionary Biology) Seminar Committee Member, *University of Michigan*

2019 MI DNA Day Epigenetics Instructor, *Martin Luther King Jr. High School*, Detroit, Michigan

2019 Ask A Scientist at the Museum of Natural History, *University of Michigan*

2019 F.E.M.M.E.S. (Females Excelling More in Math, Engineering, and Science) Capstone: Phylogenetics and Biodiversity Instructor, *University of Michigan*

2018 International Primatological Society Congress Session Moderator: Genetics and Population Dynamics, United Nations Office at Nairobi, Kenya

2018 Spring into Science: Michigan Owl Ambassador with Stage Nature Center, *Cranbrook Institute of Science*

2018 F.E.M.M.E.S. Capstone: Phylogenetics Instructor, *University of Michigan*

2018 Elected MI DNA Day Board Member: Marketing Chair, *University of Michigan*

2017 - 2018 MI DNA Day Genetics and Inheritance Instructor, *Skyline High School*, Ann Arbor

2017 - 2018 BioBlitz Biodiversity Ambassador, Detroit, Michigan

2014 Medicine Bear Native American Advocacy Group, *University of Michigan-Dearborn*

2012 - 2013 Maple Breakfast and Festival Naturalist, *Cranbrook Institute of Science*

**Workshop and Seminar Participation**

2021 Discussing Genetics: Reproductive Genetics, Genetics Society of America and pgED (Personal Genetics Education Project)

2021 Discussing Genetics: History of Eugenics, Genetics Society of America and pgED

2021 Strategies for Equitable Engagement in Online Classes, University of Michigan

2021 Teaching for Equity and Inclusion in Remote Contexts, University of Michigan

2020 ECR^2 (Evolution Community Resources for Early-Career Researchers): Leveraging your PhD

2020 CVs, Resumes, and Cover Letters – Two-Part Series, University of Michigan

2020 The Allied Genetics Conference Workshop: Everything You Ever Wanted to Know About Sex

2020 The Allied Genetics Conference Workshop: Reproducibility for Everyone

2020 The Allied Genetics Conference Workshop: Raising a Woke Generation of Geneticists: How and Why to Include Eugenics History in Genetics Classes

2020 The Allied Genetics Conference Workshop: How to Write a Review Paper

2020 Advanced Research Computing on the Great Lakes Cluster, University of Michigan

2020 Research Computing on the Great Lakes Cluster, University of Michigan

2020 The Allied Genetics Conference Workshop: Career Development

2020 Creating Figures and Diagrams in Adobe Illustrator: Beyond the Basics, University of Michigan

2020 Creating Figures and Diagrams in Adobe Illustrator: The Basics, University of Michigan

2020 Intensive 3-day R Workshop with Dr. Pat Schloss, University of Michigan

2020 Social Media for Scientists, NIH: Intramural Training & Education Webinar

2020 Rubrics 101: Content, Transparency, and Grading, *University of Michigan*

2020 Selection-Based Species Delimitation Workshop by Drs. L. Lacey Knowles and Arnaud Becheler, *University of Michigan*

2019 Disrespect and Disruption in Teaching-Learning Sessions (DEI Workshop), *University of Michigan*

2019 Developing your Teaching Philosophy, *University of Michigan*

2018 Introduction to the Flux Cluster and Batch Computing, *University of Michigan*

2018 Introduction to the Command Line, *University of Michigan*

2018 Marketing Workshop, *University of Michigan*

2018 Competence and Confidence, *University of Michigan*

2017 Time Management for Graduate Students, *University of Michigan*

2017 Preparing Manuscripts for Publication: Increasing your Chances for Success, *University of Michigan*

2016 Importation of Biological Materials (certified), *University of Michigan*

2016 MORE Mentoring Planning, *University of Michigan*

2016 Introduction to R, *University of Michigan*

**Selected Skills & Hobbies**

Coding Languages: Basic Linux, intermediate R, beginner Python

Languages: English, French

Natural History: World wildlife identification and photography, succulent farming, fungi hunting

Museum Collections: Natural history collections maintenance, bird preparation (skeleton, skin, and tissue), dermestarium maintenance

**References**

Dr. Liliana Cortés Ortiz

Research Assistant Professor

Ph.D. Co-Advisor

Ecology and Evolutionary Biology

University of Michigan

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Dr. Cody W. Thompson

Mammal Collections Manager; Assistant Research Scientist

Mammal collections advisor; committee member

Museum of Zoology

University of Michigan

[cwthomp@umich.edu](mailto:cwthomp@umich.edu)

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Dr. Brett W. Benz

Bird Collections Manager; Assistant Research Scientist

Museum of Zoology

University of Michigan

[bwbenz@umich.edu](mailto:bwbenz@umich.edu)

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Dr. Orin G. Gelderloos

Professor of Biology and Professor of Environmental Studies

Undergraduate Research Advisor

College of Arts, Sciences, and Letters

University of Michigan-Dearborn

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Dr. Matthew P. Heinicke

Associate Professor of Biology

Undergraduate Research Advisor

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University of Michigan-Dearborn

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