

Mark S. Hibbins

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Current Appointment

EEB Postdoctoral Fellow

June 2022 - Present

Department of Ecology & Evolutionary Biology
University of Toronto, Toronto, ON, CA

Education

Doctor of Philosophy in Evolutionary Biology (Minor in Bioinformatics)

May 2022

Indiana University, Bloomington, IN, USA.

Advisor: Matthew Hahn

Honours Bachelor of Science with High Distinction

June 2017

Specialist in Ecology & Evolutionary Biology
University of Toronto, Toronto, ON, Canada.

Senior thesis advisor: Aneil Agrawal

Peer-Reviewed Journal Articles

Hibbins M.S., Hahn M.W. 2021. Phylogenomic approaches to detecting and characterizing introgression. *Genetics* 220(2): iyab173.

Hibbins M.S., Hahn M.W. 2021. The effects of introgression across thousands of quantitative traits revealed by gene expression in wild tomatoes. *PLoS Genetics* 17(11): e1009892.

Vanderpool D., Minh B.Q., Lanfear R., Hughes D., Murali S., Harris R.A., Raveendran M., Muzny D.M., **Hibbins M.S.**, Williamson R.J., Gibbs R.A., Worley K.C., Rogers J., Hahn M.W. 2020. Primate phylogenomics uncovers multiple rapid radiations and ancient interspecific introgression. *PLoS Biology* 18(12): e3000954

Hibbins M.S., Gibson M.J.S, Hahn M.W. 2020. Determining the probability of hemiplasy in the presence of incomplete lineage sorting and introgression. *eLife* 9: e63753.

Hamlin J.A.P., **Hibbins M.S.**, Moyle L.C. 2020. Assessing biological factors affecting post-speciation introgression. *Evolution Letters* 4(2): 137-154.

Hahn M.W. & **Hibbins M.S.** 2019. A three-sample test for introgression. *Molecular Biology and Evolution*, 36(12): 2878-2882.

Hibbins M.S. & Hahn M.W. 2019. The timing and direction of introgression under the multispecies network coalescent. *Genetics* 211(3): 1059 – 1073.

Rouard M., Droc G., Martin G., Sardos J., Hueber Y., Guignon V., Cenci A., Geigle B., **Hibbins M.S.**, Yahiaoui N., Baurens F.C, Berry V., Hahn M., D'Hont A., Roux N. 2018. Three new genome assemblies support a rapid radiation in *Musa acuminata* (wild banana). *Genome Biology and Evolution* 10(12): 3129 – 3140.

Presentations

Midwest Population Genetics. Madison, WI. Poster. 2021

The effects of introgression across thousands of quantitative traits revealed by gene expression in wild tomatoes

Winner of best late-PhD student poster

Society for Molecular Biology and Evolution. Virtual poster and Q&A session. 2021

The effects of introgression across thousands of quantitative traits revealed by gene expression in wild tomatoes

The Allied Genetics Conference. Virtual poster and Q&A session. 2020

Determining the risk of hemiplasy in the presence of incomplete lineage sorting and introgression

IU EEB Brown Bag Seminar, Bloomington, IN. Talk. 2020

Introgression, genealogical discordance, and the evolution of traits

Evolution Meeting, Providence, RI. Poster. 2019

Introgression substantially increases the risk of hemiplasy in phylogenetic inference

Population, Evolutionary, and Quantitative Genetics Conference, Madison, WI. Talk. 2018

Population genetic tests for the direction and relative timing of introgression

EEB Undergraduate Research Fair, Toronto, ON, CA. Poster. 2017

*Mother knows best: parental effects on fitness in *D. melanogaster**

Teaching & Mentorship Experience

Undergraduate Mentor 2021

Mentee: Lara Breithaupt
Indiana University, Bloomington.

- Mentorship in C++, R, and Bash scripting; planning and carrying out an independent research project; manuscript writing and publication

Teaching Assistant, INFO-I590 SNP Discovery & Population Genetics Fall 2020

Luddy School of Informatics, Computing, & Engineering
Indiana University, Bloomington.

- Delivered a one-hour introduction to basic command line and Python for bioinformatics
- Assisted students with technical issues relating to class assignments
- Aided in coordination of group projects

Assistant Instructor, BIOL-L113 Biology Laboratory Fall 2017
Department of Biology, Indiana University, Bloomington.

- Assisted in the instruction of basic biology laboratory practices, concepts, and principles of experimental design.

Employment History

Research Assistant , Hahn Lab, Indiana University, Bloomington IN.	August 2018 – May 2022
<ul style="list-style-type: none">Developed methods for evolutionary inference in the presence of introgression	
Natural Heritage Educator , Bon Echo Provincial Park, ON, CA	Summers 2014 - 2016
Classroom Tutor , Admaston Township Public School, Renfrew, ON, CA	May 2014
Project Wilderness Instructor , Camp Trillium, Bloomfield, ON, CA	Summer 2013

Grants & Fellowships

EEB Postdoctoral Fellowship	2022
Departmental Fellowship Department of Ecology and Evolutionary Biology University of Toronto, Toronto, ON, CA \$110,000 CAD	

Awards & Recognitions

Best late-PhD student poster	2021
Midwest Population Genetics, Madison, WI, USA	
Edwin J. Crossman Undergraduate Scholarship in Ecology and Evolutionary Biology	2017
University of Toronto, Toronto, ON, Canada	
New College Student Council In-Course Scholarship	2016
University of Toronto, Toronto, ON, Canada	
New College Raptors Foundation In-Course Scholarship	2015
University of Toronto, Toronto, ON, Canada	

Service

Peer reviewer: <i>Systematic Biology</i> (7x), <i>Molecular Biology and Evolution</i> (4x), <i>BMC Plant Biology</i> (3x), <i>Ecology & Evolution</i> (2x), <i>PLoS Genetics</i> (2x), <i>Insect Systematics and Diversity</i> (2x), <i>Genome Biology and Evolution</i>	
Faculty search committee , Graduate student member. Indiana University, Bloomington, IN	2019
Quantitative Methods in EEB Journal Club , Organizer. Indiana University, Bloomington, IN	2019
Graduate student host , Graduate Recruitment Weekend. Indiana University, Bloomington, IN	2018, 2020, 2021

Software

HeIST: Hemiplasy Inference Simulation Tool. Co-author with Matthew J.S. Gibson.
<https://github.com/mhibbins/HeIST>

D-statistics: Various scripts implementing a suite of *D*-statistics developed for introgression analysis in Hahn & Hibbins 2019, Hibbins & Hahn 2019. https://github.com/mhibbins/D1_D2_scripts
https://github.com/mhibbins/D3_introgression