

Mark S. Hibbins

Department of Biology, Indiana University
1001 East Third Street, Bloomington IN 47405
mhibbins@iu.edu
<https://github.com/mhibbins>

Education

PhD Candidate in Evolutionary Biology (Bioinformatics Minor) August 2017 – Present
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

Publications

Peer-Reviewed Journal Articles

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.

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

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

The Allied Genetics Conference¹. 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 Experience

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
- Assisting students with technical issues relating to class assignments
- Aiding 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 – Present

- Developing methods for evolutionary inference in the presence of gene tree discordance
- Assisted in the mentorship of a summer undergraduate working on a project to call *de novo* mutations in squirrel monkeys
- Studied signatures of positive selection in the coding regions of the genome of Nancy Ma's Night Monkey, *Aotus nancymae*.

¹ Conference moved online due to 2020 COVID-19 pandemic.

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

Awards & Recognitions

Edwin J. Crossman Undergraduate Scholarship in Ecology and Evolutionary Biology University of Toronto, Toronto, ON, Canada	2017
New College Student Council In-Course Scholarship University of Toronto, Toronto, ON, Canada	2016
New College Raptors Foundation In-Course Scholarship University of Toronto, Toronto, ON, Canada	2015

Service

Peer reviewer: *Systematic Biology* (4x), *Ecology & Evolution* (2x), *Genome Biology and Evolution*, *Molecular Biology and Evolution*

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

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