

John M. Mola

MOVEMENT ECOLOGY · POLLINATOR ECOLOGY · POPULATION GENETICS

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Education

University of California Davis

PH.D. CANDIDATE IN ECOLOGY

Davis, CA

2014 - PRESENT

Humboldt State University

M.S. IN BIOLOGY

Arcata, CA

2014

Florida State University

B.S. IN ENVIRONMENTAL STUDIES

Tallahassee, FL

2011

Publications

LoPresti, E.F., J. VanWyk, **J. M. Mola**, K. Toll, T.E. Miller, & N.M. Williams. 2018. Effects of wildfire on floral display size and pollinator community reduce outcrossing rate in a plant with a mixed mating system. *American Journal of Botany* 105(7):1154-1164

Mola, J.M. & N.M. Williams. 2018. Fire-induced change in floral abundance, density, and phenology benefits bumble bee foragers. *Ecosphere*. 9(1):e02056

Mola, J.M., J.M. Varner, E.S. Jules, & T. Spector. 2014. Altered community flammability in Florida's Apalachicola ravines and implications for the persistence of the endangered conifer *Torreya taxifolia*. *PLoS ONE* 9(8): e103933.

Kreye, J.K., J.M. Varner, J.K. Hiers, & **J.M. Mola**. 2013. Toward a mechanism for eastern North American forest mesophication: differential litter drying across 17 species. *Ecological Applications* 23:1976-1986.

OTHER PUBLICATIONS

Mola, J.M.. The role of native bees on organic farms in Humboldt County, California. 2014. Master's Thesis. Humboldt State University. <http://hdl.handle.net/2148/1956>

SUBMITTED, IN REVIEW, SUBMITTED

Mola, J.M. & N.M. Williams. Bumble bee movement ecology across life stages. *Submitted*

Funding

FELLOWSHIPS

2018-2019 **University of California Davis, Professors for the Future Fellow** \$3,000

Year-long professional development and pedagogical training fellowship

2013-2018 **National Science Foundation, Graduate Research Fellowship** \$133,500

2014-2016 **University of California Davis, Graduate Group in Ecology Fellowship** \$43,000

2013 **Humboldt State University, Allistair and Judith McCrone Graduate Fellowship** \$3,000

Awarded to one student campus-wide annually

GRANTS AND AWARDS

2015, 2016,
2018 **University of California Davis, Henry A. Jastro Graduate Research Award**

2017 **BOMBUSS Conference, Logan, Utah. Student Scholarship**

2015, 2017 **American Museum of Natural History, Theodore Roosevelt Memorial Grant**

2015, 2016 **University of California Davis, Natural Reserve System Grant**

2016 **Northern California Botanists Graduate Research Scholarship**

2016 **California Native Plant Society, Helen Sharsmith Award**

2016 **University of California, Mathias Graduate Student Grant**

2014 **California Native Plant Society, Callahan Scholarship**

2013 **Humboldt State University, Master's Student Grant**

- 2013 **Humboldt State University, Brusca Invertebrate Zoology Scholarship**
 2010 **National Science Foundation, Research Experience for Undergraduates**
 2010 **Florida State University, Student Star Award**

Presentations

CONTRIBUTED

- 2018 The effect of fire on bumble bees revealed via genetic mark-recapture. *Bay Area Society for Conservation Biology Symposium*, Davis, California.
 2017 SNPs v. MSATs - a comparison of costs, utility, and error in sibship reconstructions. *BOMBUSS Conference*, Logan, Utah. **Awarded a student travel scholarship.**
 2017 Bees benefit from fire due to a lengthened post-fire flowering season. *Ecological Society of America Annual Conference*, Portland, Oregon.
 2017 Bees benefit from fire due to a lengthened post-fire flowering season. *Graduate Student Symposium in Ecology*, Davis, California. **Runner-up "best talk" at conference.**
 2017 Motivational differences and co-foraging behaviors of bumble bee queens and workers. *Student Seminar Series*, Davis, California.
 2014 The role of native bees on organic farms in Humboldt County, California. *Master's Thesis Defense, Humboldt State University*, Arcata, California.

INVITED

- 2013 Diverse crops and diverse pollinators. *Humboldt State University Sponsored Programs Foundation PI Celebration*, Arcata, California. **First-ever student invited to talk at this annual event.**
 2013 The ecology and management of wild bees on Humboldt County organic orchards. *Alistair and Judith McCrone Awards Ceremony, Humboldt State University*, Arcata, California.

POSTERS

- 2018 Bumble bee movement and landscape genetics revealed via high-throughput sequencing. *Keeping Bees Healthy Symposium*, Davis, California. **First place in poster contest.**
 2017 Fire-induced change in flowering phenology benefits bumble bees. *Keeping Bees Healthy Symposium*, Davis, California. **Third place in poster contest.**
 2016 Fine-scale population genetic structure and movement ecology of the yellow-faced bumblebee (*Bombus vosnesenskii*). *Keeping Bees Healthy Symposium*, Davis, California. **Awarded cash prize in poster contest.**
 2015 Constructing a dynamic map of bumblebee colony density and foraging movements. *Keeping Bees Healthy Symposium*, Davis, California.
 2011 Contrasting flammability of adjacent plant communities: Florida's Apalachicola Bluffs and Ravines. *Ecological Society of America Annual Conference*, Austin, Texas.

Teaching

PEDAGOGICAL TRAINING

Seminar on College Teaching

Fall 2018

UNIVERSITY OF CALIFORNIA DAVIS

- Course offered through the Center for Educational Effectiveness designed to teach pedagogical principles, assessments and assignments, active learning, lesson and course design, teaching to diverse students, and preparation through practice.

LEAD OR CO-INSTRUCTOR

Urban Bees: Conserving pollinators in human dominated lands

Spring 2018

UNIVERSITY OF CALIFORNIA DAVIS

Co-instructor with Neal Williams

- I conceptualized, designed, and taught this First-Year Seminar. Gave lectures, guided discussion, and facilitated students through group projects. For many students, this was their first small-group class and first hands-on research experience.

Fire and Forbs Weekly Seminar

Winter 2018

UNIVERSITY OF CALIFORNIA DAVIS

Co-organizer with Eric LoPresti

- Developed the scope of the seminar and the schedule of readings.

GUEST LECTURES

Plant Ecology

Fall 2015

HUMBOLDT STATE UNIVERSITY

- Led unit on plant-insect interactions.

General Botany

Spring 2014

HUMBOLDT STATE UNIVERSITY

- Led unit on floral morphology and pollination.

TEACHING ASSISTANT

ABI50A - Learning Science by Doing

Fall 2018

UNIVERSITY OF CALIFORNIA DAVIS

- Guided students through designing ecological experiments and provided feedback on study design.

General Botany

Fall 2012 - Spring 2013

HUMBOLDT STATE UNIVERSITY

- Wrote lab quizzes and practicals. Lectures to introduce lab unit.

Mentoring

Maya Argaman

University of California Davis

FIELD RESEARCH ASSISTANT

Spring 2016

- Worked on plant quality following wildfire at UC McLaughlin Reserve.

Jared Borba

University of California Davis

FIELD RESEARCH ASSISTANT

Summer 2015

- Worked on plant use by bumble bees in Sierra Meadows.

Grace Blacker

Humboldt State University

FIELD AND LAB ASSISTANT

2013

- Assisted with field collections and pollen identification.

Corey Andrikoplous

Humboldt State University

FIELD RESEARCH ASSISTANT

2013

- Worked on pollinator visitation to crops in Humboldt County. *Currently MS student studying bees at Utah State University.*

Professional and Academic Service

MANUSCRIPT REVIEWER

2018 *Arthropod-Plant Interactions, Journal of Applied Ecology, Ecology and Evolution*

2017 *Ecological Entomology, Explorations*

2016 *California Agriculture*

COLLEGE, PROGRAM, AND DEPARTMENTAL SERVICE

The Aggie Brickyard

<https://aggiebrickyard.github.io>

CREATOR, CO-FOUNDER, & EDITOR

2016 - PRESENT

- A quarterly student/faculty publication on ecology with an emphasis on the GGE community. In print and online.

UC Davis Graduate Group in Ecology Open Lab Meetings

Davis, CA

ORGANIZER, CO-FOUNDER

2015 - PRESENT

- Co-founded and hosted informal series where students could present new ideas, develop a talk, or practice for qualifying exams in a supportive environment.

College of Agriculture and Environmental Science Education Committee

Davis, CA

STUDENT REPRESENTATIVE

2017

UC Davis Graduate Student Association

Davis, CA

REPRESENTATIVE

2014 - Spring 2017

UC Davis Graduate Group in Ecology Admissions Committee

APPLICATION REVIEWER

Davis, CA

2015, 2016

UC Davis Graduate Student Symposium in Ecology

ORGANIZER

Davis, CA

2016-2017

UC Davis Ecology Graduate Student Association

CO-CHAIR

Davis, CA

2015-2016

UC Davis Graduate Group in Ecology

ORIENTATION LEADER

Davis, CA

2015, 2016

Scientific Outreach & Communication

WRITING AND INTERVIEWS

- 2016, 2017 Several articles in *The Aggie Brickyard* available in print and online – <https://aggiebrickyard.github.io>
- 2017 Interview with The California Aggie “Better Bee-lieve it” – about the listing of *Bombus affinus*. <https://theaggie.org/2017/02/02/better-bee-lieve-it-uc-davis-entomologist-helped-list-bee-as-endangered/>
- 2013 The importance of native bees for agriculture – Presentation to Klamath-Trinity Resource Conservation District. *Hoopa Valley Tribal Reservation*. Featured on KIDE radio.
- 2012 Ecology and management of *Osmia lignaria* on Diverse Humboldt County orchards. *Interview with KRFH Humboldt State's Campus Radio*

TOURS, GUIDED TALKS, OUTDOOR INSTRUCTION

- 2018 Where do bees go and how do we know? *2nd Annual California Honey Festival* Woodland, California. **Invited Speaker**
- 2017 Tour Guide for Pollinator-friendly plantings. *Western Apicultural Society Meeting* Davis, California.
- 2015 Pollinator-friendly farming presentation. *Hoes Down Festival* Capay Valley, California
- 2014 Cavity nesting bee workshop (Open to general public. Self-designed and taught.) *Center for Appropriate Technology* Arcata, California
- 2011 Kid's Camp Instructor, Pollination Week and Seed Dispersal and Plant Reproduction *Rocky Mountain Biological Laboratory* Gothic, Colorado