

# MARJORIE G. WEBER

CURRICULUM VITAE (July 2019)

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Lab website: [www.theweberlab.com](http://www.theweberlab.com)

See also: [www.projectbiodiversify.org](http://www.projectbiodiversify.org)

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## CURRENT APPOINTMENT

Assistant Professor, Department of Plant Biology  
*Ecology, Evolutionary Biology, & Behavior Program*  
Michigan State University

2016 - present

## EDUCATION

Center for Population Biology Postdoctoral Fellow

University of California at Davis

September, 2014-August, 2016

PhD: Ecology & Evolutionary Biology,  
Cornell University, Ithaca, NY

August, 2009 – August, 2014

Bachelor of Arts: Biology Major, *with honors*  
Lewis & Clark College, Portland, OR

September, 2003 - May, 2007

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## PUBLICATIONS

(\*mentored authors, e.g., students/postdocs)

### Published or In Press:

27. \*LoPresti, E.F., Goidell, J., Mola, J., Page, M., Stuligross, C., Specht, C., Weber, M.G., Williams, N., and R. Karban. *In press*. A lever action hypothesis for pendulous hummingbird flowers: experimental evidence from a columbine. *Annals of Botany*.
26. \*LoPresti, E.F., Pan, V., Goidell, J., Weber, M.G., and R. Karban. **2019**. Mucilage-bound sand reduces seed predation but not by reducing apparency; a field test of 53 plant species. *Ecology*.
25. \*Foisly, M.R., Albert, L.P., Hughes, D.W.W., and M.G. Weber. **2019**. Do latex and resin spur diversification? Reexamining an early hypothesis of escape and radiate coevolution. *Journal of Ecology*.
24. Chomicki, G., Weber, M.G., Antonelli, A., Bascompte, J., and T. Kiers. **2019**. The Impact of Mutualisms on species richness. *Trends in Ecology and Evolution*.
23. Harmon, L., C., Andreatzi, C., Drury, J.P., Goldberg, E., Martins, A., Melián, C., Narwani, A., Pennell, M., Rudman, S., Seehausen, O., Silvestro, D., Weber, M.G. and B. Matthews. **2019**. Detecting the Macroevolutionary Signal of Species Interactions. *Journal of Evolutionary Biology*.
22. Agrawal, A.A.; Ali, A.; Johnson, M.D.; Hastings, A.; Burge, D.; and M.G. Weber. **2018**. Toxicity of the spiny thick-foot Pachypodium (Apocynaceae). *New Phytologist*. 105(4), 677-686.
21. Weber, M.G., N.I. Cacho, M.J.Q. Phan, C. Disbrow, S.R. Ramírez, S.Y. Strauss. **2018**. The evolution of floral signals in relation to range overlap in a clade of California Jewelflowers (Streptanthus s.l.). *Evolution*. 72(4), 798-807.
20. Afkhami, M., Mahler, L., Burns, J., Weber, M.G., Wojciechowski, M., Sprent, J., and S. Strauss. **2018**.

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- Symbioses with nitrogen-fixing bacteria: Nodulation and phylogenetic data across legume genera. *Ecology*. 99(2), 502-502.
19. Mahler, L., Weber, M.G., Wagner, C. E., and T. Ingram. **2017**. Pattern and process in the comparative study of convergent evolution. *American Naturalist*. 190 (S1): S13-S28.
  18. Weber, M.G., Wagner, C. E., Best, R.J., Harmon, L.J., and B. Matthews. **2017**. Evolution in a community context: on integrating ecological interactions into macroevolution. *Trends in Ecology and Evolution*. 32(4): 291-304.
  17. Weber, M.G., Mitko, L., Eltz, T., and S.R. Ramírez. **2016**. Macroevolution of perfume signaling in orchid bees. *Ecology Letters*. 19 (11), 1314-1323.
  16. Weber, M.G., and S.Y. Strauss. **2016**. Coexistence in close relatives: Beyond competition and reproductive isolation in sister taxa. *Annual Review of Ecology, Evolution, and Systematics*. 47 (1).
  15. Weber, M.G., Porturas, L.D., and S.A. Taylor. **2016**. Foliar nectar enhances plant-mite mutualisms: The effect of leaf sugar on the control of powdery mildew by domatia-inhabiting mites. *Annals of Botany*.
  14. LoPresti, E. and Weber M.G. **2016**. Breaking barriers in evolutionary biology: A pioneering woman in science and her early theory of plant chemical macroevolution. *The American Naturalist*. 188(2), ii-iv.
  13. Mitko, L., Weber M.G., Ramírez, S.R., Hendenström, E., Wcislo, W.T., and T. Eltz. **2016**. Olfactory specialization for perfume collection in male orchid bees. *Journal of Experimental Biology*. 219: 1467-1475.
  12. Pokorny, T., Ramírez, S.R, Weber M.G., and T. Eltz. **2015**. Cuticular hydrocarbons as potential close range recognition cues in orchid bees. *Journal of Chemical Ecology*. 41(12), 1080-1094.
  11. Agrawal, A.A. and M.G. Weber, **2015**. On the study of plant defense and herbivory using comparative approaches: how important are secondary plant compounds? *Ecology Letters*. 18(10),985-991.
  10. Weber, M.G. and A. A. Agrawal, **2014**. Defense mutualisms enhance lineage diversification in plants. *Proceedings of the National Academy of Science*. 111(46), 16442-16447.
  9. Weber, M.G., and K.H. Keeler. **2013**. The phylogenetic distribution of extrafloral nectaries in plants. *Annals of Botany*. 111 (6): 1251-1261.
  8. Weber, M.G., Clement, W.L., Donoghue, M.J., and A.A. Agrawal. **2012**. Phylogenetic and experimental tests of interactions among mutualistic plant defense traits in *Viburnum* (Adoxaceae). *The American Naturalist* 180: 450-463.
  7. Weber, M.G., and A.A. Agrawal. **2012**. Phylogeny, ecology, and the coupling of comparative and experimental approaches. *Trends in Ecology and Evolution* 27: 394-403.
  6. Agrawal, A.A., Petschenka, G., Bingham, R.A., Weber, M.G., and S. Rasmann. **2012**. Toxic cardenolides: chemical ecology and coevolution of specialized plant-herbivore interactions. *New Phytologist* 194: 28-45.
  5. Dalton, C.M., Mokiao-Lee, A., Weber, M.G., Roco, C.A., Han, Z., Dudley, B., MacKenzie, R.A., and N.G. Hairston Jr. **2012**. Anthropogenic disturbance of top-down and bottom-up controls in a highly endemic tropical aquatic food web. *Oikos*. 122(5): 790-800.

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4. Kennedy, P.G., Higgins, L.M., Rogers, R.H., and M.G. Weber. **2011**. Colonization-competition tradeoffs as a mechanism driving successional dynamics in ectomycorrhizal fungal communities. *PLoS ONE* 6: e25126.
  3. Kennedy, P.G., Weber, M.G., and A.A. Bluhm. **2010**. *Frankia* bacteria in *Alnus rubra* forests: genetic diversity and determinants of assemblage structure. *Plant and Soil* 335: 479-492.
  2. Kennedy, P.G., Schouboe, J.L., Rogers, R.H., Weber, M.G., Nadkarni, N.M. **2010**. *Frankia* and *Alnus rubra* canopy roots: An assessment of genetic diversity, propagule availability, and effects on soil nitrogen. *Microbial Ecology* 59: 214-220.
  1. Kursar, T.A., Dexter, K.G., Lokvam, J., Pennington, R.T., Richardson, J.E., Weber, M.G., Murakami, E., Drake, C., McGregor, R., and P.D. Coley. **2009**. The evolution of anti-herbivore defenses and their contribution to species coexistence in the tropical tree genus *Inga*. *Proceedings of the National Academy of Science* 106: 18073-18078.
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## GRANTS & FELLOWSHIPS

NSF DEB-1831164: Dimensions in Biodiversity Grant (\$1,103,146, Single PI) National Science Foundation	2018-2022
Initiation (STINT) grant IB 2018-8066 (10,000 SEK = \$10,785, 3PI), Swedish Foundation For International Cooperation in Research	2019-2020
Center for Population Biology Postdoctoral Fellowship (\$96,000); University of California, Davis	2014-2016
ASN Student Research Award (\$2,000); American Society of Naturalists	2013
NSF Doctoral Dissertation Improvement Grant (\$15,000); National Science Foundation	2012
NSF Graduate Research Fellowship (\$90,000); National Science Foundation	2010-2013
Kieckhefer Adirondack Fellowship (\$4,000); Cornell Graduate School	2010
Sigma Xi National Grant in Aid of Research (\$620); Sigma Xi Assoc., National	2010
Sigma Xi Research Grant (\$776); Sigma Xi Assoc., Cornell Chapter	2010
Orenstein Endowment Grant (\$1,500); Orenstein endowment fund, Cornell University	2009 & 2012
Ecological Society of America Grant (\$700); Fungal Env. Sampling & Informatics Network	2008

## HONORS & AWARDS

Early Career Fellow, Ecology Society of America	2018-2023
Jasper Loftus-Hills Young Investigator Award, The American Society of Naturalists	2015
Ed Ricketts Seminar Award, American Society of Naturalists Conference, Asilomar, CA	2014
LaMont C. Cole Award; Departmental award for best student paper, Cornell Dept. of Ecology & Evolutionary Biology	2012
Rosemary Grant Award; Society for the Study of Evolution	2010
Book Award; Departmental award for best talk by an incoming student, Cornell EEB	2010
Best Student Talk; American Arachnology Society	2008
Biology Prize; (Top dept. student honor); Dept. of Biology, Lewis & Clark College, OR	2007

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## INVITED PRESENTATIONS & SEMINARS

<b>Department of Evolutionary Ecology, Lund University, Sweden</b>	2019
<b>Special symposium on Macroevolution and Species Interactions, Society for the Study of Evolution Meeting, Providence, RI</b>	2019
<b>Gordon Conference on Speciation, Ventura, CA</b>	2019
<b>Ecology Seminar, Duke University</b>	2019
<b>Ecology &amp; Evolutionary Biology Department Seminar, University of Michigan</b>	2019
<b>Entomology Department Seminar, Penn. State University</b>	2018
<b>Biodiversity Center Seminar, University of British Columbia</b>	2018
<b>Ecology and Evolutionary Biology Department, University of Toronto</b>	2018
<b>150 years of the American Naturalist, ASN meeting, Asilomar, CA</b>	2018
<b>Department of Biology, University of Toronto, Mississauga</b>	2017
<b>Department of Ecology &amp; Evolutionary Biology Seminar, University of Arizona, Tucson AZ</b>	2017
<b>Symposium on Indirect Defense, Entomological Society Meeting, Denver, Colorado</b>	2017
<b>Department of Biology Seminar - University of Idaho</b>	2017
<b>EvMorph Seminar Series, University of Chicago &amp; The Field Museum</b>	2017
<b>Horticulture/Plant, Soil, and Microbial Sciences Seminar Series, Michigan State University</b>	2017
<b>Kellogg Biological Station, Michigan State University</b>	2017
<b>Distinguished Speaker Department of Plant Biology Seminar Series, University of Wyoming</b>	2016
<b>Ecology and Evolution 'Eco-Lunch', Stanford University</b>	2016
<b>American Society of Naturalists Young Investigator Symposium, Evolution Meeting, Brazil</b>	2015
<b>Ecology, Evolutionary Biology &amp; Behavior Seminar Series, Michigan State University</b>	2015
<b>Biodiversity Research Center (BLISS) Seminar Series, University of British Columbia</b>	2014
<b>Department of Botany and Plant Pathology Seminar Series, Oregon State University</b>	2014
<b>Department of Organismic &amp; Evolutionary Biology Seminar Series, Harvard University</b>	2014
<b>Center for Population Biology Seminar Series, University of California, Davis</b>	2014
<b>Department of Biology Seminar Series, Ithaca College, Ithaca, NY</b>	2013
<b>Department of Limnology Seminar Series, EAWAG Zurich, Switzerland</b>	2013
<b>Novel Traits and Rapid Evolution Conference, Cornell University</b>	2013
<b>Viburnum Research Summit, Yale University</b>	2012

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## CONTRIBUTED PRESENTATIONS AT PROFESSIONAL MEETINGS

**American Society of Naturalists:** 2014, 2016  
(poster), 2018

**Ecology Society of America:** 2010, 2012, 2017,  
2018

**Society for the Study of Evolution:** 2012,  
2013, 2015, 2017, 2019

**Gordon Conference on Plant Insect  
Interactions:** 2009 (poster)

**American Arachnology Society:** 2006, 2008,  
2018

**Murdock Charitable Trust Conference:** 2006

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## TEACHING & MENTORSHIP

**Graduate Mentees:** *Michael Foisy*, PhD Student (2018-present); *Bruce Martin*, PhD Student (2018-present); *Erika LaPlante*, Masters Student (2017-present); *Carina Baskett*, PhD Student (co-advised with Doug Schemske, 2016-2018)

**Postdoctoral Mentees:** *Ash Zemenick* (2017-present); *Eric LoPresti* (2017-present)

**Undergraduate and Postgraduate Mentees:** *Carolyn Graham* (MSU 2016-present); *Thomas Zambiasi* (MSU 2018-present); *Keegan Mackin* (MSU 2018); *Daniel Hughes*, MSU (2017-present); *Ashley Peer*, MSU (2017-2018); *Lucy Schroeder* MSU (2016-2018); *Abby Sulesky*, MSU (2016-2018); *Susan Gordon*, MSU (2016-2017); *Martin Phan*, University of California, Davis (2015-2016); *Jenna Yonenaga*, University of California, Davis (2014-2017); *Karen Bitan*, Cornell University (2013-2014);

**Graduate Committees:** 13. *Brandon Latorre* MSU-PLB (2019-present); 12. *Lauren Koenig* MSU-IBIO (2018-present); 11. *Devin Lake* MSU-IBIO (2019-present); 10. *Elizeth Cinto Mejia*, MSU-ENT (2018-Present); 9. *Kayleigh Courard*, MSU-ENT (2018-Present); 8. *Malia Santos* U. of Idaho (2018-Present); 7. *Michael Ryskamp*, MSU-PLB (2016-present); 6. *Nicole Wonderlin* MSU-ENT (2016-present); 5. *Caitlyn Bryon*, MSU-PLB (2016 – present); 4. *Christopher Werneke*, MSU-PLB (2016-present), 3. *Klara Scharnagl* MSU-PLB (2016-present); 2. *Susan Magnoli*, MSU-PLB/KBS (2016-2018); 1. *Damian Popovic*, MSU-PLB (2016-2018).

### Courses Taught:

MSU IBIO/PLB/ENT 830: <i>Quantitative Methods in Ecology and Evolutionary Biology I</i>	Fall 2018
MSU IBIO/PLB 355: <i>General Ecology</i>	Fall 2018
MSU ENT 812: <i>Graduate Seminar: The Ecology and Evolution of Plant-Arthropod Interactions</i>	Fall 2018
MSU IBIO/PLB 851: <i>Quantitative Methods in Ecology and Evolutionary Biology</i>	Spring 2017

### Additional teaching:

**Guest Lecturer:** MSU-Plant Genomics REU (2018), Eastern Michigan University Field Arachnology Course (2018), MSU PLB 203 (2017, 2018), MSU IBIO/PLB 355 honors (2017), MSU PLB801 (2017), MSU PLB 203 (2018)

**Teaching Assistant:** *Evolutionary biology and diversity* (Cornell University, BioG1780) Spring, 2011

**Teaching Assistant:** *Evolution for non-majors* (Cornell University, BioEE2070) Fall, 2010

**Science Teaching Intern:** *Elementary Science Partnership- Portland, OR* 2007

**Teaching Assistant:** *Biology 100: Intro Biology*, Lewis & Clark College Spring, 2005

### Teaching development workshops attended:

<b>Cultural Competency Training</b> , Michigan State University	2019
<b>STEM Teaching Essentials Workshop on Backward Design</b> , Michigan State University	2018
<b>QuILL: Queer Inclusive Learning and Leadership</b> , Michigan State University	2017
<b>Effective Teaching and Learning Workshop</b> , Michigan State University	2016
<b>Teaching Workshop: Cornell Center for Teaching Excellence</b> , Cornell University	2009

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## PROFESSIONAL SERVICE

### *National/International Service:*

**Reviewer:** Including *Nature*, *PNAS*, *Ecology Letters*, *American Naturalist*, *Evolution*, *Ecology*, *Plant Ecology*, *Oecologia*, *American Journal of Botany*, *Proceedings of the Royal Society B*, *Journal of Chemical Ecology*, *Biotropica*, *New Phytologist*, *International Journal of Plant Sciences*, *Botany*, *PLOS Computational Biology*.

**Special Symposium co-organizer: "Integrating ecological interactions into macroevolution"** 2019  
*Society for the Study of Evolution meeting, Providence, RI.*

**National Science Foundation Panel Member** 2014, 2017, 2018

**Special Symposium Organizer: "The evolution of mutualism and their evolutionary impact on biodiversity."** 2018  
*Society for the Study of Evolution meeting, Montpellier, France.*

**American Society of Naturalist Society Symposium Committee** 2018-2019

**ASN Young Investigators Special Symposium Organizer, Evolution meeting, Austin, TX** 2016

### *Institutional Service:*

#### Standing committees:

**Space Committee, Department of Plant Biology, MSU** 2019-present

**Diversity, Equity, and Inclusion Committee, Department of Plant Biology, MSU** 2019-present

**Rodman Speaker Committee, Department of Plant Biology, MSU** 2018-present

**Faculty Advisory Committee (DAC), Department of Plant Biology, MSU** 2018-2019

**Seminar Committee Ecology, Evolutionary Biology, and Behavior Program, MSU** 2018-2019

#### Ad-hoc or temporary committees:

**Long Range Planning Faculty Hiring Committee, Department of Plant Biology, MSU** 2018-present

**Work Load Balance Committee, Department of Plant Biology, MSU** 2018-present

**Hiring Committee, MSU PLB/PRI Eco-physiologist search** 2017-2018

**Hiring Committee, UC Davis Center for Population Biology Postdoctoral Fellowship** 2016

**Seminar Series Organizer, Center for Population Biology Seminar Series, UC, Davis** 2015-2016

## COMMUNITY & PUBLIC OUTREACH



**Project Biodiversity**, An online repository of teaching materials to highlight role-models from underrepresented groups in STEM

website: [projectbiodiversify.org](http://projectbiodiversify.org); twitter: @biodiversifying

**(Co-founder & co-director)**

2018-present

**Workshops by Project Biodiversify Team:** University of Idaho (2019); Northern Kentucky University (2019); Association for the Sciences of Limnology and Oceanography (2019); Michigan State University Kellogg Biological Station k-12 Teaching workshop (2018); Ecology Society of America Meeting (2018)

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<b>Keynote Speaker, <i>Girls Math and Science Day, Michigan State University</i></b>	2019
<b>Implicit Bias Workshop, <i>MSU BEACON summit</i></b>	<b>(Co-Organizer)</b> 2017
<b>Workshop on "How to Cope with Failure in Science", <i>UC Davis</i></b>	<b>(Organizer)</b> 2016
<b>Women in Science Group (WiSci), <i>UC Davis</i></b>	<b>(Co-founder and Organizer)</b> 2014- 2016
<b>Expanding Your Horizons: STEM program for middle school girls, <i>Cornell University</i></b>	<b>(Organizational Chair)</b> Annually, 2011-2014
<b>Diversity of insects K-12 course: <i>Cassavant Elementary School, 1<sup>st</sup> grade</i></b>	<b>(Organizer &amp; teacher)</b> Annually, 2012-2014
<b>Media Outreach Organizer: <i>Frontiers symposium for women in the life sciences</i></b>	2012
<b>STEM mentor to middle school girls, <i>Expand Your Horizons, Cornell University</i></b>	2010 - 2011
<b>Scientific American Podcast: "Arachnophilia!" <i>AAAS Annual Meeting, Boston, MA</i></b>	2008