

Eric LoPresti

26-Aug-2020

Marjorie Weber's Lab
Dept. Plant Biology
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CURRENT APPOINTMENT

Assistant Professor: Oklahoma State University, Dept. Plant Biology, Ecology, and Evolution (2020-)

EDUCATIONAL EXPERIENCE

NSF-PRFB Postdoctoral Researcher: Michigan State (2017-2020), Dr. Marjorie Weber, adviser

PhD, Ecology: UC Davis (2012– 2017), Dr. Richard Karban, adviser

B.Sc. Human Biology: Brown University (2006-2010), Drs. Douglass Morse & Christine Janis, advisers

ACADEMIC INTERESTS

Insect-plant interactions	Plant trait evolution
Seed ecology	Fire ecology
Pollination ecology	Community ecology

REFEREED PUBLICATIONS

2020:

(30) Pearse IS, EF LoPresti, J Ali, J Bronstein, M Eubanks, K Mooney, P Ode, R Schaeffer, MG Weber, W Wetzel. Generalising indirect defence and resistance of plants. *Ecology Letters*, early view

(29) LoPresti EF, Goidell J+, Mola JM*, Page ML*, Specht CD, Stuligross C*, Weber MG, Williams NM, Karban R. (2020) A lever action hypothesis for pendulous hummingbird flowers: experimental evidence from a columbine. *Annals of Botany*, 125: 59-65.

2019:

(28) LoPresti, EF, V. Pan+, J. Goidell+, M.G. Weber, & R. Karban. (2019) Mucilage-bound sand reduces seed predation but not by reducing apparency; a field test of 53 plant species. *Ecology*, e02809.

(27) Karban, R. LoPresti, EF; Pepi, A* & P Grof-Tisza. (2019) Induction of the sticky plant defense syndrome in wild tobacco. *Ecology*. 100: e02746.

(26) Karban, R; LoPresti, EF; Vermeij, GJ & R Latta. (2019) Unidirectional grass hairs usher insects away from meristems. *Oecologia*. 189: 711-718.

2018:

(25) LoPresti, EF; Van Wyk, JI*.; Mola, JM*; Toll, K*; Miller TE & NM Williams. (2018) Wildfire lowers outcrossing in an annual mint through altered pollinator communities and changes in plant morphology. *American Journal of Botany*. 105: 1154-1164

(24) LoPresti, EF; Robinson, MR*; Krimmel, BA* & GK Charles*. (2018) The sticky fruit of manzanita; potential functions beyond epizoochory. *Ecology*. 99: 2128-2130

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- (23) LoPresti, EF. (2018) Polyphagy by omnivory: scavenging expands host range of a polyphagous caterpillar. *Oecologia*. 186: 1007-1015
- (22) LoPresti, EF; Krimmel, BA & IS Pearse. (2018) Entrapped carrion increases indirect plant resistance and intra-guild predation on a sticky tarweed. *Oikos*, 127: 1033-1044
- (21) LoPresti, EF; Grof-Tisza, P.*; Robinson, MR.*; Godfrey, J.* & R. Karban. (2018) Entrapped sand as a plant defence: effects on herbivore performance and preference. *Ecological Entomology*. 43: 154-161

2017:

- (20) LoPresti, EF & Morse, DH. (2017). A parasitoid's odd pupal vigil. *Ecology*. 98: 1722-1723
- (19) LoPresti, EF. (2017). Artificial rainfall increases herbivory on an externally-defended forb. *Arthropod-plant Interactions*. 11: 871-874
- (18) LoPresti, EF. (2017). Columbine pollination success not determined by a proteinaceous reward to hummingbird pollinators. *Journal of Pollination Ecology*. 20: 35-39
- (17) Eiseman, CS‡; Feldman, TS; LoPresti, E.F. & MW Palmer. (2017). First North American records of *Porphyrosela minuta* Clarke (Lepidoptera: Gracillariidae), with notes on its native congener, *P. desmodiella* (Clemens). *Proceedings of the Entomological Society of Washington*. 119: 18-23
- (16) Grof-Tisza, P.*; LoPresti, EF; SK Heath* and R Karban. (2017). Plant structural complexity and mechanical defense mediate predator-prey interactions. *Ecology and Evolution*. doi: 10.1002/ece3.2705
- (15) LoPresti, EF & K Toll*. (2017). The three criteria for resistance by carrion provisioning; insect entrapment and predator enrichment on *Mimulus bolanderi*. *Ecological Entomology*. 42: 230-234

2016:

- (14) LoPresti, EF and R. Karban. (2016) Chewing sandpaper: grit, plant apparency and plant defense in sand-entrapping plants. *Ecology*. 97: 826-833
- (13) LoPresti, EF and MG Weber. (2016) Breaking barriers in evolutionary biology: a pioneering woman in science and her early theory of plant chemical macroevolution. *The American Naturalist*. 188: 2-4.
- (12) McKenna-Foster, A‡; Perrotti, L‡; Blyth, J‡., EF LoPresti and R. Kennedy. (2016) Measuring success of a reintroduced population of the American burying beetle (*Nicrophorus americanus* Oliver) to Nantucket Island, MA. *Journal of Insect Conservation* 20:895-904
- (11) LoPresti, EF. (2016) Chemicals on plant surfaces are a heretofore unrecognized, but ecologically-informative, class for investigations into plant defense. *Biological Reviews*. 91: 1102-1117 doi: 10.1111/brv.12212

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(10) LoPresti, EF; Karban, R; Robinson, ML*; Grof-Tisza, P*. and WC Wetzel. (2016) The natural history supplement; furthering natural history study amongst ecologists and evolutionary biologists. *Bulletin of the Ecological Society of America*. 97: 305-310

2015:

(9) LoPresti, EF; Pearse, IS & Charles, GK*. (2015) The siren song of a sticky plant: columbines provision mutualistic arthropods by attracting and killing passerby insects. *Ecology*. 96: 2862-2869

(8) Gidmark, NJ; Taylor, C†; LoPresti, EF & Brainerd, E. (2015) Functional morphology of durophagy in Black Carp, *Mylopharyngodon piceus*. *Journal of Morphology*. 276: 1422-1432

(7) LoPresti, EF; Warren, AW; Stichter, SB‡ & Eastwood, R. (2015) A review of the historical occurrence of *Hesperia attalus* in New England. *Journal of Research on the Lepidoptera*. 48: 9-12

2014:

(6) LoPresti, EF. (2014) Chenopod salt bladders deter insect herbivores. *Oecologia*. 174: 921-930 doi: 10.1007/s00442-013-2827-0

(5) LoPresti, EF & Angulo F‡ (2014) New bird distribution records for Lambayeque, Peru: *Nomonyx dominicus* (Linnaeus 1766) (Aves: Anatidae) and *Incaspiza pulchra* (Sclater, 1886) (Aves: Emberizidae). *Checklist* 10: 618-620

2013:

(4) LoPresti, EF & Morse, DH. (2013) Costly leaf shelters protect moth pupae from parasitoids. *Arthropod-plant Interactions*. 7:445-453

(3) Gidmark, NJ; Konow, N; LoPresti, EF & Brainerd, EL. (2013) Bite force is limited by the length-tension relationship of muscles in the durophagous black carp, *Mylopharyngodon piceus*. *Biology Letters*. doi: 10.1098/rsbl.2012.1181

(2) Celis-Diez, JL; Ippi, S; LoPresti, EF, Salinas D; Diaz, IA & Willson, M.F. 2012. Presencia y nidificación de la tenca (*Mimus thenca*) en el norte de la isla de Chiloe. *Revista La Chiricoca* (Chilean Journal of Ornithology). 14:15-17

2012:

(1) Stager, M*; LoPresti, EF; Angulo F‡; Ardia DR; Caraces-Apaza D*; Cooper CB; Molina J*; Taylor N & Winkler DW. (2012) Reproductive biology of a narrowly endemic *Tachycineta* swallow in dry, seasonal forest in coastal Peru. *Ornitología Neotropical*. 23:1 95-112

*graduate student collaborator; †undergraduate collaborator; ‡amateur naturalist (nonacademic)

TEACHING/MENTORING EXPERIENCE

Teaching assistantships:

Terrestrial Field Ecology, 2016 & 2017, Dr. Richard Karban, UC-Davis

Insect Ecology, 2016, Dr. Louie Yang, UC-Davis

Introduction to Ecology and Evolution, 2014, Dr. Jason Baumsteiger, UC-Davis

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Introduction to Ecology and Evolution, 2013, Dr. David Spiller, UC-Davis

Animal behavior, 2009, Dr. Jonathan Waage, Brown University

Vertebrate evolution, 2008, Dr. Christine Janis, Brown University

Other:

2013, 2015: Grant-writing workshop co-leader, UC Davis

Students mentored:

2020: Caroline Edwards (Oberlin/MSU), research project, reproductive barriers in *Abronia*

2019: Carolyn Graham (MSU), undergraduate research project, grape chemical ecology

2019: Thomas Zambiasi (MSU), undergraduate research project, mite use of grapes

2018: Andrea Lescoe (MSU), undergraduate research project, hummingbird pollination evolution

2018: Vincent Pan (UCD), undergraduate research project, harvester ant foraging

2017: Jake Goidell (Davis HS), columbine pollination mechanics.

2015: Karissa Merritt (UCD), undergraduate research project. "Investigating emergence of dioecy in *Trichostema laxum*"

2014: Jacob Ewald (UCD), capstone project in animal sciences. "Do cowbirds match host egg shape?"

Student's awards:

2014: Jacob Ewald (UCD), provost undergraduate research grant (\$500)

PROFESSIONAL DEVELOPMENT

Courses/workshops:

2018: "Arbor: programming phylogenetic methods" Drs. Chelsea Specht, Luke Harmon & Bob Thacker.
Cornell University

2013: "Phylogenetically corrected statistics" Dr. Luke Mahler. UC Davis

2011: "Curso ecologia de bosques" (Forest Ecology) Drs. Juan Armesto, Juan Celis-Diez & David Wardle.
Universidad Pontificia Catolica, Santiago, Chile, at Senda Darwin field station, Chiloe Island.

PRESENTATIONS

Meetings/conferences:

Ecological Society of America, 2014, 2017, 2018 (oral presentations)

Entomological Society of America, 2017 (invited speaker)

Society for Integrative and Comparative Biology, 2011 (poster)

Neotropical Ornithology Congress, 2011 (oral presentation)

Invited lectures (academic, public & classroom):

2020: Oklahoma State University Plant Biology departmental seminar

2020: Cal Poly, Biology departmental seminar (cancelled, pandemic)

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2020: University of Michigan Natural History symposium (cancelled, pandemic)
2020: North Carolina State University, Plant Biology departmental seminar
2020: University of Missouri, St. Louis, Biology departmental seminar
2019: University of Georgia Plant Biology departmental seminar
2017: Entomological Society of America Meeting special symposium on Indirect Defense
2016: Duke University Population Biology
2015: Davis Botanical Society

FELLOWSHIPS, AWARDS & GRANTS

Awards

2010, James F. Kidwell prize in genetics and population biology, Brown University
2010, election to Sigma Xi

Fellowships & grants

2017-2019, NSF PRFB postdoctoral fellowship in biological collections (~\$140,000)
2013-2017, NSF Graduate Research Fellow (~\$130,000)
2012-2014, UC-Davis Ecology Grad Group block grants (~\$42,000)

Research grants

2017: \$30,000 PRFB Biological Collections research allowance (with fellowship), NSF
2017: \$956 Valentine Reserve Graduate Student Research Award, UC Santa Barbara
2016: \$1,219 Center for Population Biology, Hardman Native Plant Award, UC Davis
2016: \$2,100 Jastro Research Award, UC Davis
2015: \$2,992 Mildred Mathias Research Award, University of California Natural Reserve System
2014: \$1,500 Davis Botanical Society Student Award
2014: \$2,710 Jastro Research Award, UC Davis
2013: \$1,500 Center for Population Biology, Hardman Native Plant Award, UC Davis
2013: \$2,330 Jastro Research Award, UC Davis
2011: \$500 Blyth, J & LoPresti, E. Nantucket Biodiversity Initiative annual research grant.
2009: \$3,000 UTRA undergraduate research award, Brown University

total: ~\$325,000

SERVICE

Student board representative (2016-2017): Davis Botanical Society

Student seminar organizer (2015-2016): Graduate Group in Ecology (I started this seminar – which continues – to fill a need for public speaking and research dissemination among students in such a large program)

Reviewer: *American Journal of Botany*, *Arthropod-plant interactions*, *Behavioral Ecology & Sociobiology*, *Biological Reviews* (2), *Canadian Journal of Zoology*, *Ecology* (5), *Flora*, *Hydrobiologia*, *Journal of Ecology*, *Journal of Insect Behavior*, *Nature: Scientific Reports*, *Oecologia* (3), *Proceedings of the Royal Society: B*

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PROFESSIONAL AFFILIATIONS

Ecological Society of America, Botanical Society of America, American Entomological Society

PRESS & OUTREACH

Press

Siren song of a sticky plant (Ecology, 2015): covered by *Discover*, *Smithsonian*, *Science*, IFL Science.

Chewing sandpaper (Ecology, 2016): covered by *Discover*, *Science*, *Quirks and Quarks* (Canadian Public Radio), *Newsweek*, *Cricket* (science magazine for 3-6 year olds!!!)

Entrapped sand and herbivore performance (Ecological Entomology, 2017): covered by *New Scientist*.

Fire and pollination (AJB, 2018): Sierra magazine

Blog

Natural Musings (naturalmusings.blogspot.com): my ecology/natural history blog. >44,000 page views (12/2017)

Reports and other non-refereed articles:

LoPresti, EF; Mckenna-Foster, AM; Perrotti, L & Blyth, J. American burying beetle (*Nicrophorus americanus*) survey on Nantucket, 2011. Report to US Fish & Wildlife Service, November, 2011.

LoPresti, EF. Nantucket Butterflies: past and present. *Massachusetts Butterflies*. 37: Fall 2011

LoPresti, EF. *Trichostema laxum*. California Native Plant Society Bulletin. April, 2016.

Lopresti, EF. California's bounty of sticky, oily, slimy, and otherwise interesting plants. *Lasthenia*. 46: 4.

Photo contributions:

Odonates of Brazil (Guillermo, R)

Butterflies of America (butterfliesofamerica.com)

Saturniidae of the World (<http://www.silkmoths.bizland.com/indexos.htm>)

In journals: *Ecology*, *Ecological Entomology*, *Oecologia*, *Frontiers in Ecology and Evolution*, *La Chiricoca*, *Cotinga*, *Massachusetts Butterflies*, *Bird Observer*

Diversity and representation

Project Biodiversify, projectbiodiversify.org (2017 - present)

SEED BANKING

Rare species of *Abronia*, *Tripteroalyx*, and *Sairocarpus*, field-collected and lab-raised to:

Rancho Santa Ana Botanic Garden, California Native Plant Society, Idaho Botanic Garden, Denver Botanic Garden

NATURAL HISTORY SPECIMENS

UC-Davis herbarium: voucher specimens for McLaughlin Reserve, *Trichostema laxum* populations across its range, *Abronia* spp. and other assorted interesting plants.

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Maria Mitchell Association; Nantucket, Massachusetts: voucher specimens of Odonata and Orthoptera for comparison to extensive 1920's and 30's collections.

McGuire Center for Lepidoptera, University of Florida: specimens of central Chilean HesperIIDae.

University of Puget Sound (Dennis Paulson collection): Chilean odonate specimens

Charley Eisemann collection, archived in various institutions: leaf miner specimens

REFERENCES

Dr. Richard Karban

UC-Davis

Dissertation major professor

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Dr. Marjorie Weber

Michigan State University

Post-doctoral studies adviser

marjorie.gail@gmail.com

Dr. Jay Rosenheim

UC-Davis

Dissertation committee member

jrosenheim@ucdavis.edu