

Eric LoPresti

15-January-2018

Weber Lab, Dept. Plant Biology
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CURRENT APPOINTMENT

NSF-PRFB Postdoctoral Researcher, Michigan State University, Dr. Marjorie Weber, adviser

EDUCATIONAL EXPERIENCE

PhD, Ecology: UC Davis (2012–2017), Dr. Richard Karban, adviser
B.Sc. Human Biology, *honors*: Brown University (2006-2010), Drs. Douglass Morse & Christine Janis, advisers

ACADEMIC INTERESTS

Plant evolution	Plant Defense
Plant-insect interactions	Fire Ecology
Protective Mutualisms	Parasitoids

REFEREED PUBLICATIONS

2018:

- (23) LoPresti, EF. Polyphagy by omnivory: scavenging expands host range of a polyphagous caterpillar. *Oecologia*
- (22) LoPresti, EF; Krimmel, BA & IS Pearse. Entrapped carrion increases indirect plant resistance and intra-guild predation on a sticky tarweed. *Oikos*
- (21) LoPresti, EF; Grof-Tisza, P.*; Robinson, M.*; Godfrey, J.* & R. Karban. Ingestion of sand by a caterpillar: quantification and consequences. *Ecological Entomology*

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

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- (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
- (10) LoPresti, EF; Karban, R; Robinson, ML*; Grof-Tisza, P*. and WC Wetzal. (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, *Mylopharygodon 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

In revision:

In review:

LoPresti, EF & BA Krimmel*. The damage control hypothesis: plant resource provisioning to non-mutualists ameliorates herbivore damage.

LoPresti, EF; Van Wyk, JI*.; Mola, JM*; Toll, K*; Miller TE & NM Williams. Wildfire lowers outcrossing in an annual mint through altered pollinator communities and changes in plant morphology

Karban, R.; LoPresti, EF; Vermeij, G; Latta, R. Unidirectional grass hairs usher insects off leaves and away from meristems.

In prep, written and nearing submission (manuscripts available upon request):

Morse, DH & EF LoPresti. Deep phylogenetic splits in ferns do not determine performance of a fern-feeding caterpillar.

*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

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

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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:

2017: Jake Goidell, Davis high school student, columbine pollination mechanics.

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

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

Student's awards:

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

PROFESSIONAL DEVELOPMENT

Courses/workshops:

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 (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):

2017: "Integrating predator behavior into sticky plant indirect defense, testing theoretical predictions" Entomological Society of America Meeting special symposium on Indirect Defense

2016: "Plant external defenses" Duke University Population Biology

2015: "Siren song of a columbine" Davis Botanical Society

2013: "Insect reintroduction projects" UC Davis, EVE 198 (conservation seminar)

FELLOWSHIPS, AWARDS & GRANTS

Awards

2010, James F. Kidwell prize in genetics and population biology, Brown University

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2010, election to Sigma Xi

Fellowships

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

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: *Flora*, *Hydrobiologia*, *Journal of Insect Behavior*, *Oecologia* (2), *Proceedings of the Royal Society: B*, *American Journal of Botany*

PROFESSIONAL AFFILIATIONS

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

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*.

Blog

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

Reports and other non-refereed articles:

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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*

NATURAL HISTORY SPECIMENS

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

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 Hesperiiidae.

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

rkarban@ucdavis.edu

*letters submitted to ASN with this application

Dr. Louie Yang

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Dissertation committee member

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Dr. Jay Rosenheim

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Dissertation committee member

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Dr. Marjorie Weber*

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Post-doctoral studies adviser

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Dr. Douglass Morse

Brown University (emeritus)

Undergraduate research adviser

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Dr. Christine Janis

Brown University (emeritus)

Currently: Natural History Museum, London

Undergraduate research adviser

christine_janis@brown.edu