

CURRICULUM VITAE

Adam A. Pepi

Graduate Group in Ecology
Department of Entomology & Nematology
University of California, Davis
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EDUCATION

Ph. D. Candidate, Ecology, **University of California Davis**. Expected 30 June, **2021**.
Major Advisors: Richard Karban & Marcel Holyoak

M. S. Organismic and Evolutionary Biology, **University of Massachusetts Amherst**. **2015**.
Major Advisor: Joseph Elkinton.

B. S. Forestry, *Summa cum laude*, **University of Massachusetts Amherst**. **2014**.

RESEARCH & PROFESSIONAL EXPERIENCE

Associate Instructor, University of California, Davis. **2020**

Fulbright Fellow, University of Tromsø & Norwegian Institute for Nature Research. **2016–2017**.

Biological Science Technician, USDA ARS WRRRC, Invasive Species Unit, Albany, California. **2016**.

Research Assistant, Elkinton Lab, University of Massachusetts, Amherst. **2013–2015**.

Forest Management Assistant (SCA), The Nature Conservancy, Nashville, Indiana. **2013**.

Science & Math Tutor, North Star Learning Center, Hadley, Massachusetts. **2011–2012**.

PUBLICATIONS

1. Karban, R., E. LoPresti‡, **A. Pepi** & P. Grof-Tisza‡. **2019**. Induction of the sticky plant defense syndrome in wild tobacco. *Ecology*, 100:e02746. <https://doi.org/10.1002/ecy.2746>
2. Grof-Tisza, P.‡, **A. Pepi**, M. Holyoak & R. Karban. **2019**. Precipitation-dependent source-sink dynamics in a spatially structured population of an outbreaking caterpillar. *Landscape Ecology*, 34:1131–1143. <https://doi.org/10.1007/s10980-019-00793-z>
3. Grof-Tisza, P.‡, & **A. Pepi**. **2019**. Cannibalism of pupae by caterpillars of the Ranchman's tiger moth, *Arctia virginalis*, (Lepidoptera: Erebidae). *American Midland Naturalist*, 181:139–142. <https://doi.org/10.1674/0003-0031-181.1.139>
4. Vindstad, O. P.‡, J. Jepsen, M. Ek‡, **A. Pepi** & R. Ims. **2018**. Can novel pest outbreaks drive ecosystem transitions in northern-boreal birch forest? *Journal of Ecology*, 107: 1141–1153. <https://doi.org/10.1111/1365-2745.13093>
5. **Pepi, A.**, P. Grof-Tisza‡, M. Holyoak & R. Karban. **2018**. As temperature increases, predator attack rate is

more important to survival than a smaller window of prey vulnerability. *Ecology*, 99:1584-1590.
<https://doi.org/10.1002/ecy.2356>

6. **Pepi, A.**, O.P.L Vindstad†, M. Ek† & J. Jepsen. 2017. Elevationally biased avian predation as a contributor to altitudinal distribution of eruptive geometrids in sub-arctic mountain birch forest. *Ecological Entomology*, 42:430-448. <https://doi.org/10.1111/een.12400>
7. **Pepi, A.**, H. Broadley† & J. Elkinton. 2016. Density-dependent effects of larval dispersal mediated by host plant quality on populations of an invasive insect. *Oecologia* 182:499-509. Erratum 185:533-535.
<https://doi.org/10.1007/s00442-016-3689-z>

Unpublished manuscripts (available upon request):

1. Pan, V.,* **A. Pepi**, J. Goidell & R. Karban. Retention of green leaves not brown leaves increases spring cynipid diversity on large Valley Oaks. *In review, Arthropod-Plant Interactions*
2. **Pepi, A.**, M. Holyoak & R. Karban. Altered precipitation dynamics lead to a shift in herbivore dynamical regime. *Submitted*.
3. **Pepi, A.**, & M. McMunn‡. Predator diversity and thermal niche complementarity attenuate indirect effects of warming on prey survival. *Submitted*. <https://doi.org/10.1101/2020.09.29.319392>
4. **Pepi, A.** & R. Karban. Effects of experimental watering and warming on herbivory across a gradient of precipitation. *Submitted*.
5. **Pepi, A.**, V. Pan* & R. Karban. Influence of delayed density and ultraviolet radiation on caterpillar granulovirus infection & mortality. *In prep*.

* – Undergraduate coauthor; † – Graduate student coauthor; ‡ – Postdoctoral coauthor.

TEACHING & MENTORING

Instructor of Record:

General Ecology (ESP 100, UC Davis), Summer 2020

Teaching assistantships (UC Davis):

Introduction to Biology: Principles of Ecology and Evolution (BIS2B, 3 quarters)

Terrestrial Field Ecology (ENT 225, 2 quarters)

General Ecology (ESP 100)

Population Ecology (ESP 121)

Behavioral Ecology of Insects (ENT 104, online TA Spring 2020)

Guest lecturer, General Ecology (ESP 100, UC Davis), Fall 2018

Undergraduate research mentoring (at UC Davis): Isabelle Gilchrist, Fiona Beyerle, Jasmine Daragahi, Gina Mongiello Lopez, Claire Beck, Vincent Pan

Graduate seminar organizer: ‘Epistemology, Theory & Empiricism: How do we know anything in ecology?’ UC Davis, Winter 2018 & 2019.

QUANTITATIVE TRAINING & SKILLS

- Frequentist generalized linear mixed modelling (2 courses – Kevin McGarigal at UMass Amherst, 2014-15)
- Bayesian generalized linear mixed modelling (1 course – Andrew Latimer at UC Davis, 2018)
- Time series modelling, state-space modelling (self-taught)
- Structural equation modelling (1 short course – Jarret Byrnes at Bodega Marine Lab, 2018)
- Mathematical population modelling: ordinary & partial differential equations, diffusion models, simulation models (3 courses – Alan Hastings, Marissa Baskett & Sebastian Schrieber at UC Davis, 2017-19)
- R statistical language (3 courses – UMass and UC Davis, 2014-2018)
- JAGS and STAN (1 course – Andrew Latimer at UC Davis, 2018)
- ArcGIS and QGIS spatial modelling software (1 course – Charlie Schweik at UMass, 2015)

HONORS & GRANTS

H. A. Jastro Shields Research Scholarship Award, UC Davis. **\$2,000. 2020**

Graduate Group in Ecology Fellowship, UC Davis. **\$12,000. 2019**

Center for Population Biology Research Award, UC Davis. **\$1,000. 2019**

H. A. Jastro Shields Research Scholarship Award, UC Davis. **\$3,000. 2019**

UC Davis Natural Reserves Student Research Grant. **\$2,950. 2019**

Mildred E. Mathias Graduate Student Research Grant. **\$2,500. 2018**

H. A. Jastro Shields Research Scholarship Award, UC Davis. **\$1,000. 2018**

Institute for the Study of Ecological and Evolutionary Climate Impacts Fellowship. **\$10,000. 2017**

J. William Fulbright Student Fellowship. **\$17,000. 2016**

NSF Graduate Research Fellowship, Honorable Mention. **2016**

Commonwealth Honors College Scholar with Greatest Distinction, UMass Amherst. **2014**

Outstanding Senior in Forestry Award, UMass Amherst. **2014**

Arnold D. Rhodes Scholarship, UMass Amherst. **2014**

Herschel G. Abbot Scholarship, UMass Amherst. **2013**

W. Roy Elliot Scholarship, UMass Amherst. **2012**

SELECTED CONFERENCE PRESENTATIONS

Ecological Society of America Annual Meeting. **2020**
Presentation: *Effects of experimental watering & warming on herbivory across a gradient of precipitation*

Climate Change in the UC Reserves: ISEECI Conference, UCSC. 2019.

Invited Presentation: *Thermal asymmetries & predator prey interactions in a warming world*

Joint Entomological Society of America, Ent. Soc. of Canada, and Ent. Soc. of British Columbia Meeting. 2018

Presentation: *Bottom-up vs. top-down mediated effects of temperature and rainfall on population dynamics of the Ranchman's tiger moth (Arctia virginalis)*

Ecological Society of America Annual Meeting. 2018

Poster: *As temperature increases, predator attack rate is more important to survival than a smaller window of prey vulnerability*

Norwegian Ecological Society Conference. 2017

Presentation: *Elevational distribution of geometrid moth outbreaks: role of avian and pupal predation*

XXV International Congress of Entomology. 2016

Invited Presentation: *Role of dispersal in regulating densities of outbreak populations of winter moth in North America*

Ecological Society of America Centennial Meeting. 2015

Presentation: *Effects of dispersal mediated by host plant quality on outbreaking winter moth (Lepidoptera: Geometridae) populations*

Northeast Forest Pest Council. 2015.

Presentation: *Effects of dispersal and host plant interactions on outbreaking winter moth (Lepidoptera: Geometridae) populations in Massachusetts*

USDA Interagency Research Forum on Invasive Species. 2015.

Presentation: *Dispersal as a regulator of outbreaking winter moth (Lepidoptera: Geometridae) populations in Massachusetts*

Entomological Society of America. 2014

Poster: *Survival of larval winter moths (Lepidoptera: Geometridae): Population dynamics of an invasive defoliator*

IUFRO World Congress / Society of American Foresters National Meeting. 2014

Poster: *Survival of larval winter moths (Lepidoptera: Geometridae) in field and laboratory studies*

ACADEMIC SERVICE & PROFESSIONAL MEMBERSHIPS

- Reviewer for *Journal of Animal Ecology*, *Ecology*, *Functional Ecology*, *Ecography*, *Plos One*
- Member of Entomological Society of America & Ecological Society of America
- Panel member for Fulbright application reviews, UC Davis, 2020

REFERENCES

Dr. Richard Karban. Professor, UC Davis, Entomology & Nematology. PhD Advisor. rkarban@ucdavis.edu

Dr. Marcel Holyoak. Professor, UC Davis, Environmental Science & Policy. PhD Advisor. maholyoak@ucdavis.edu

Dr. Susan Harrison. Professor, UC Davis, Environmental Science & Policy. Qualifying exam chair
sharrison@ucdavis.edu