

CURRICULUM VITAE

Adam A. Pepi

Graduate Group in Ecology
Department of Entomology & Nematology
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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. **Pepi, A.** & R. Karban. 2021. Effects of experimental watering but not warming on herbivory vary across a gradient of precipitation. *Ecology and Evolution*, 00: 1– 8. <https://doi.org/10.1002/ece3.7197>
2. 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>
3. 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>
4. 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>
5. 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->

6. **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>
7. **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>
8. **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. *Accepted, Arthropod-Plant Interactions*
2. **Pepi, A.**, M. Holyoak & R. Karban. Altered precipitation dynamics lead to a shift in herbivore dynamical regime. *In review*.
3. **Pepi, A.**, & M. McMunn‡. Predator diversity and thermal niche complementarity attenuate indirect effects of warming on prey survival. *In review*. <https://doi.org/10.1101/2020.09.29.319392>
4. Pan, V.,* **A. Pepi**, & R. Karban. Virus as bodyguards: Leaf retention increases caterpillar infection risk. *In review*.
5. **Pepi, A.**, V. Pan* & R. Karban. Influence of delayed density and ultraviolet radiation on caterpillar granulovirus infection & mortality. *In prep*.
6. **Pepi, A.**, C. Beck*, F. Beyerle*, & W. Hemstrom†. Wing melanism, predation, temperature and solar radiation in Ranchman's tiger moth (*Arctia virginalis*): Darker wings with higher temperature and solar radiation. *In prep*.
7. McMunn, M. & **A. Pepi**. Predicted asymmetrical effects of warming on nocturnal and diurnal soil-dwelling ectotherms. *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

Insect Ecology (BIOL 411, UBC), Winter 2021

Pedagogical Training:

‘Biology Education Research and Evidence-based Teaching’ seminar, UC Davis, Winter 2020

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.

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

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*

QUANTITATIVE TRAINING & SKILLS

- Frequentist multilevel modelling (2 courses – Kevin McGarigal at UMass Amherst, 2014-15)
- Bayesian multilevel 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)

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 grant application reviews, UC Davis, 2020

REFERENCES

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

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

Dr. Susan Harrison. Professor, UC Davis, Environmental Science & Policy.
Relationship: Qualifying exam chair & teaching mentor. Email: spharrison@ucdavis.edu