

## CURRICULUM VITAE

### SEAN DENNIS SCHOVILLE, PH.D.

University of Wisconsin-Madison, Department of Entomology  
1630 Linden Drive, 637 Russell Labs, Madison, WI 53706, U.S.A.  
Phone: 608-262-2956, E-mail: [sean.schoville@wisc.edu](mailto:sean.schoville@wisc.edu),  
Website: <http://labs.russell.wisc.edu/molecularecology>  
[Google Scholar](#) [ORCID](#) [SCOPUS](#)

### PERSONAL STATEMENT

---

My research focuses on how organisms evolve in response to environmental change. I approach these problems using population genomics and functional genomics techniques, while integrating ecological and physiological data, to address fundamental and applied research questions in the fields of evolution, ecology, conservation and agriculture.

### EDUCATION

---

University of California, Berkeley, Ph.D. in Environmental Science Policy and Management	May 2009
State University of New York, Stony Brook Doctoral Student	2001-2002
University of California, Berkeley B.A. with Honors in Integrative Biology	May 2000
University of California, Berkeley B.A. in English Literature	May 2000

### PROFESSIONAL POSITIONS

---

Associate Professor, Department of Entomology, University of Wisconsin Madison	Fall 2019-present
Assistant Professor, Department of Entomology, University of Wisconsin Madison	Fall 2013-2019
NSF IRFP Postdoctoral Fellow, Université Joseph Fourier Grenoble	2011-2013
Postdoctoral Scholar, University of California, San Diego	2010-2011
JSPS Postdoctoral Fellow, University of Tsukuba, Japan	2009-2010

### SECONDARY AFFILIATIONS

---

Affiliate Faculty Member, Agroecology Program	Fall 2022-present
Affiliate Faculty Member, Nelson Institute for Environmental Studies	Spring 2021-2024
Affiliate Faculty Member, Integrative Biology UW-Madison	Fall 2017-present
Temporary Member of Graduate Faculty, Iowa State University	Spring 2016-2017
Temporary Member of Graduate Faculty, University of Alabama	Fall 2013-2019
Permanent Faculty Member, J. F. Crow Institute for the Study of Evolution, UW-Madison	Fall 2013-present
Permanent Faculty Member, Wisconsin Ecology Group	Fall 2013-present

### AWARDS & FELLOWSHIPS

---

The Royal Entomological Society Best Paper Award 2020-2021	2022
Hilldale Undergraduate/Faculty Research Scholarship to E. Rogers	2022
Wisconsin Potato Industry Board Dist. Graduate Fellowship to Z. Cohen	2020-2021
University Housing's Honored Instructor, UW Madison	2020
Holstrom Undergraduate/Faculty Research Scholarship to B. Veire	2020
Wisconsin Sophomore Research Fellowship to E. Fischer	2019
CALS ARS Summer Internship Award to M. Magnusson	2019
USDA-ELI Graduate Fellowship to M. Crossley	2018-2019
Holstrom Undergraduate/Faculty Research Scholarship to W. Rosenthal	2017

Hilldale Undergraduate/Faculty Research Scholarship to Z. Beethem	2016
Wisconsin Sophomore Research Fellowship to M. Hubert	2016
Madison Teaching and Learning Excellence Fellowship	2015-2016
CALS ARS Summer Internship Award to T. Valle	2015
National Geographic Young Explorers Grant to R. Slatyer	2014
Hilldale Undergraduate/Faculty Research Scholarship to Z. Boor	2014
NSF IRFP Postdoctoral Fellowship	2011-2013
Japan Society for the Promotion of Science Postdoctoral Fellowship	2009-2010
Graduate Student Instructor Teaching Award, UC Berkeley	2007
Society for the Study of Evolution Travel Award	2007
White Mountain Research Station Graduate Student Minigrant	2006, & 2007
Edward A. Steinhaus Memorial Award, UC Berkeley	2006
Harvey L. Magy Memorial Scholarship, UC Berkeley	2005
Walker Fund Award, UC Berkeley	2004-2008
GK12 Teaching Fellowship, National Science Foundation	2003
Honorable Mention, National Science Foundation Graduate Research Fellowship	2002, & 2004
University Fellowship, Department of Ecology and Evolution, State University of New York, Stony Brook	2001
Jewell H. and James T. Bonner Fellowship, Conservation and Research for Endangered Species (CRES), San Diego Zoological Society.	2001
Dean's List, University of California, Berkeley	2000

## GRANT SUPPORT

### Research support since joining University of Wisconsin-Madison

Title. Agency. PI(s).	Total Award/Total my Lab	Funding Period
<b>Extramural (Total Received \$2,655,300/Total my Lab \$1,257,312):</b>		
Precision pest management: spatiotemporal modeling of insecticide resistance in Colorado potato beetle. <b>DATCP Specialty Crop Block Grant Covid-19 Stimulus.</b> Schoville, S. (PI), R. Groves	\$85,803/\$85,803	2022-2024
Soil sentinels: the biodiversity and evolution of Caribbean earthworms. <b>Ford Foundation Predoctoral Fellowship.</b> Carrera-Martinez, R., S. Schoville (co-PI)	\$81,000	2022-2025
Evaluating the role of epigenetics in the evolution of insecticide resistance. <b>USDA-AFRI Foundational.</b> Chen, Y, S. McKay, R. Groves, S. Schoville (co-PI).	\$683,490/\$19,957	2022-2027
Spatiotemporal modeling of insecticide resistance in Colorado potato beetle. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b> Schoville, S. (PI), R. Groves	\$12,743/\$12,743	2022-2023
Climate Change in the North Cascades: understanding declines of riparian and alpine beetle ground beetles. <b>Seattle City Light Wildlife Research Grant.</b> Schoville, S. (PI).	\$11,684/\$11,684	2021-2022
Collaborative Research: RoL: Detecting and predicting the relative contributions of fecundity and survival to fitness in changing environments. <b>National Science Foundation, DEB Evol.</b>	\$1,079,151/\$382,700	2020-2023

<p><b>Processes.</b> Buckely, L.B., S. Schoville (co-PI), C. Williams.</p> <p>Spatiotemporal modeling of insecticide resistance in Colorado potato beetle. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b></p> <p>Schoville, S. (PI), R. Groves</p>	\$13,615/\$13,615	2021-2022
<p>Identification and knock-down of pesticide resistance genes in Colorado potato beetle. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b></p> <p>Schoville, S. (PI), R. Groves</p>	\$15,000/\$15,000	2020-2021
<p>The response of Colorado potato beetle to host plant resistance derived from wild potato species. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b></p> <p>Jansky, S.H., S. Schoville (co-PI)</p>	\$15,000/\$15,000	2019-2020
<p>Understanding the population dynamics of spotted-wing drosophila (<i>Drosophila suzukii</i>) in the landscape. <b>DATCP Specialty Crop Block.</b></p> <p>Guedot, C., B. Jaffe, S. Schoville (co-PI)</p>	\$97,961/\$97,961	2019-2021
<p>Identification and knock-down of pesticide resistance genes in Colorado potato beetle. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b></p> <p>Schoville, S. (PI), R. Groves</p>	\$15,000/\$15,000	2019-2020
<p>Renewal: Identification and knock-down of pesticide resistance genes in Colorado potato beetle. <b>USDA-ARS Potato Proposal.</b></p> <p>Jansky, S.H. (USDA-PI), S. Schoville (PI), R. Groves, Y. Chen, D. Hawthorne, A. Alyhokin, S. Rondon</p>	\$79,780/\$69,780	2018-2019
<p>Factors driving adaptation to insecticides in agricultural landscapes. <b>USDA-ELI Graduate Fellowship.</b></p> <p>Crossley, M., S. Schoville (co-PI)</p>	\$43,739/\$43,739	2018-2019
<p>Measuring the impacts of fire management on butterfly genetic connectivity. <b>Department of Interior, National Park Service CESU, Fire Reserve Fund.</b></p> <p>Jackson, B. (NPS-PI), S. Schoville (PI)</p>	\$15,000/\$9,753	2018-2019
<p>Butterfly Brilliance and Resilience. <b>Yosemite Conservancy.</b></p> <p>Jackson, B. (NPS-PI), S. Schoville (PI)</p>	\$41,527/\$28,770	2018-2019
<p>Identification and knock-down of pesticide resistance genes in Colorado potato beetle. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b></p> <p>Schoville, S. (PI), R. Groves</p>	\$15,000/\$15,000	2018-2019
<p>SG: Linking climate to global biogeographical patterns and diversification rates in ice-crawlers. <b>National Science Foundation, DEB Syst. and Biodiversity.</b></p> <p>Schoville, S. (PI)</p>	\$156,663/\$156,663	2017-2020
<p>Identification and knock-down of pesticide resistance genes in Colorado potato</p>	\$89,000/\$79,000	2017-2018

beetle. <b>USDA-ARS Potato Proposal.</b> Jansky, S.H. (USDA-PI), S. Schoville (PI), R. Groves, Y. Chen, D. Hawthorne, A. Alyhokin, S. Rondon		
Characterizing habitat connectivity and gene flow of the montane butterfly, <i>Parnassius clodius</i> , in the North Cascades. <b>Seattle City Light Wildlife Research Grant.</b> Schoville, S. (PI)	\$7,000/\$7,000	2017-2018
The population genetics of <i>Lygus hesperus</i> in alfalfa seed-production fields. <b>USDA- ARS.</b> Brunet, J., S. Schoville (co-PI)	\$22,500/\$22,500	2017-2018
Evaluating and Communicating the Effects of Climate on Cold-Adapted Insects in Park Ecosystems. <b>Department of Interior, National Park Service CESU.</b> Rocheftort, R. (NPS PI), S. Schoville (PI)	\$11,750/\$11,750	2016-2017
Cold Tolerance Adaptations in Subterranean Termites. <b>USDA Forest Service.</b> Arango, R., S. Schoville (co-PI)	\$15,000/\$15,000	2016-2018
Adaptation in spatially structured agroecosystems: managing Colorado potato beetles in working landscapes. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b> Schoville, S. (PI), R. Groves	\$12,000/\$12,000	2016-2017
Do hyper-diverse genomes run the pesticide treadmill: Resequencing Colorado Potato beetle genomes to understand rapid pest evolution. <b>USDA AFRI Exploratory Grant.</b> Schoville, S. and Y. Chen	\$99,994/\$99,994	2015-2016
Adaptation in spatially structured agroecosystems: managing Colorado potato beetles in working landscapes. <b>Wisconsin Potato and Vegetable Growers Association Competitive Grant.</b> Schoville, S., R. Groves	\$12,000/\$12,000	2015-2016
Heating up in the high country: predicting the impacts of climate change on alpine beetles. <b>National Geographic Young Explorers Grant.</b> R. Slatyer, R., S. Schoville (co-PI)	\$4,900/\$4,900	2014

---

<b>Intramural (Total Received \$1,727,786/Total my Lab \$782,921):</b>		
Using genomics to enhance management of tick- borne diseases in the Midwestern USA. <b>Hatch Grant, National Institute of Food and Agriculture.</b> Paskewitz, S., S. Schoville (co-PI)	\$153,222/\$153,222	2021-2025
<b>Wisconsin Potato Industry Board Wisconsin Distinguished Graduate Fellowship.</b> Cohen, Z., S. Schoville (co-PI)	\$31,118/\$31,118	2020-2021
Establishing proof-of-principle models for animal biodiversity biobanking. <b>UW2020.</b> Peligri, F., E. Hennessy, W. Murphy, P. Robbins, W. Culberson, C. Gratton, S. Paskewitz, S. Schoville (co-I), J. Thomson	\$430,399/\$0	2020-2022

Improving risk assessment of emerging tick-borne diseases in North America by considering tick population biology. <b>UW Madison Global Health Institute SEED Grant.</b> Schoville, S. (PI), S. Paskewitz	\$21,735/\$21,735	2020-2022
Local adaptation and the genetic basis of desiccation tolerance in alpine ground beetles. <b>Wisconsin Holstrom Undergraduate/Faculty Research Scholarship.</b> Veire, B., S. Schoville (co-PI)	\$4,000/\$4,000	2020-2021
<b>International Research and Training Grant for incoming graduate students from IRIS.</b> Carrera-Martinez, R., S. Schoville (co-PI)	\$5,000/\$5,000	2020-2022
Olfactory-based pest control of the Colorado potato beetle. <b>UW System Applied Research Grant.</b> Mitchell, R., S. Schoville (co-PI)	\$49,907/\$35,441	2019-2020
Using RNAi to examine color genes in the Colorado potato beetle. <b>Wisconsin Sophomore Research Fellowship.</b> Fischer, E., S. Schoville (co-PI)	\$3,000/\$3,000	2019-2020
All about Yosemite Butterflies: A mobile natural history guide. <b>Baldwin Wisconsin Idea Endowment seed grant.</b> Schoville, S. (PI)	\$3,997/\$3,997	2019-2020
<b>CALS ARS Summer Internship Award.</b> Magnusson, M., S. Schoville (co-PI)	\$5,500/\$5,500	2019-2020
Acquisition of an Illumina NovaSeq DNA Sequencer for UW- Madison Campus. <b>UW2020.</b> Sussman, M., et al. [S. Schoville] (co-PI)	\$500,000/\$0	2018-2020
Rapid evolutionary diversification and the genetic basis of color variation in beetles. <b>UW-Madison Fall Research Competition.</b> Schoville, S. (PI)	\$52,960/\$52,960	2018-2019
Testing the polygenic basis of insecticide resistance in Colorado potato beetle. <b>Wisconsin Agricultural Experiment Station, Individual Hatch Grant.</b> Schoville, S. (PI)	\$127,433/\$127,433	2017-2021
Ecological and genetic mechanisms of <i>Drosophila suzukii</i> cold tolerance and implications for over-wintering in Wisconsin. <b>Wisconsin Agricultural Experiment Station, Individual Hatch Grant.</b> Schoville, S. (PI), C. Guedot, J. Pool	\$155,433/\$155,433	2017-2022
Population structure and evolutionary change in guppies across a century of invading the Hawaiian archipelago. <b>Wisconsin Holstrom Undergraduate/Faculty Research Scholarship.</b> Rosenthal, W., S. Schoville (co-PI)	\$5,000/\$5,000	2017-2018
Phylogenomic analyses of transcriptomic data: exploring computational tools in the Grylloblattodea tree of life. <b>Wisconsin</b>	\$5,000/\$5,000	2016-2017

	<b>Hilldale Undergraduate/Faculty Research Scholarship.</b> Beethem, Z., S. Schoville (co-PI)		
What maintains color pattern variation within the <i>Parnassius clodius</i> butterfly?	<b>Wisconsin Sophomore Research Fellowship.</b> Hubert, M., S. Schoville (co-PI)	\$3,500/\$3,500	2016-2017
Spatially explicit modeling of insecticide adaptation in Colorado potato beetles in Wisconsin.	<b>UW Consortium for Extension and Research in Agriculture and Natural Resources.</b> Schoville, S. (PI), R. Haasl	\$23,227/\$23,227	2015-2017
	<b>Madison Teaching and Learning Excellence Fellowship.</b> Schoville, S. (PI)	\$4,500/\$4,500	2015-2016
Mechanisms of community assembly in a radiation of alpine beetles.	<b>UW Fall Research Competition.</b> Schoville, S. (PI)	\$41,324/\$41,324	2015-2016
Genetic and environmental factors driving the evolution of neonicotinoid resistance in Colorado potato beetles in Wisconsin.	<b>CALS ARS Summer Internship Award.</b> Schoville, S. (PI), M. Crossley, T. Valle	\$5,500/\$5,500	2015
Adaptation in spatially structured agroecosystems: managing Colorado potato beetles in working landscapes.	<b>Wisconsin Agricultural Experiment Station, Individual Hatch Grant.</b> Schoville, S. (PI)	\$92,531/\$92,531	2014-2017
Testing Pleistocene glacial cycles as a mechanism of genetic differentiation.	<b>Wisconsin Hilldale Undergraduate/Faculty Research Scholarship.</b> Boor, Z., S. Schoville (co-PI)	\$3,500/\$3,500	2014-2015

### Research support prior to joining University of Wisconsin-Madison

Title. Agency. PI(s).	Total Award	Funding Period
<b>Extramural (Total Received \$285,963):</b>		
Alpine insect biodiversity of the Altai and Sayan Mountains and links to the diversification of cold-adapted insect lineages in North America. <b>National Geographic Research &amp; Exploration Grant.</b> Schoville, S. (PI), D.H. Kavanaugh	\$19,290	2011-2013
Modeling alpine population histories with approximate Bayesian computation. <b>NSF IRFP Postdoctoral Fellowship.</b> Schoville, S. (PI), O. François	\$130,704	2011-2013
Historical and contemporary climate change effects on the evolutionary diversification of rockcrawlers ( <i>Galloisiana</i> spp.) in the Japanese archipelago. <b>Japan Society for the Promotion of Science Postdoctoral Fellowship.</b> Schoville, S. (PI), R. Machida	Yen 2,078,500 (~\$27,000)	2009-2010
Alpine Butterfly Resurvey. <b>Yosemite Fund Research Grant.</b> Roderick, G., S. Schoville (PD)	\$108,969	2007-2009

## Pending Extramural research support

Title. Agency. PI(s).	Total Award	Funding Period
Determining the role of admixture and the genetic basis of ecomorphological traits in an alpine radiation. NSF DEB. Schoville, S. (PI)	\$498,263	2022-2027
Spatiotemporal modeling for precision pest management of insecticide resistance. USDA AFRI. Schoville, S. (PI), J. Zhu, R. Groves, Y. Chen.	\$750,000	2023-2028

## PROFESSIONAL SERVICE

Associate Editor: <i>Molecular Ecology</i> (2012-present) and <i>Molecular Ecology Resources</i> (2015-present)
Section Editor 2017, <i>Current Opinion in Insect Science</i> , Ecological Adaptation in Agroecosystems, Y.H. Chen and S.D. Schoville.
Guest Editor 2019, <i>Scientific Data</i> .
Grant Reviews: NSF DEB Evolutionary Processes and CAREER, USDA NIFA, Swiss National Science Foundation, National Geographic, Netherlands Organization for Scientific Research, BARD - The US-Israel Agricultural Research & Development Fund
Selected as Top Reviewer for <i>Molecular Ecology</i> 2012. Other journals include: <i>PNAS</i> , <i>PLoS Genetics</i> , <i>Ecol. Lett.</i> , <i>eLife</i> , <i>Genome Biol. Evol.</i> , <i>Evol.</i> , <i>Hered.</i> , <i>eLife</i> , <i>BMC Evol. Biol.</i> , <i>J. Biogeog.</i> , <i>Biol. J. Linn. Soc.</i> , <i>Amer. J. Botany</i> , <i>PLoS One</i> , <i>Conserv. Genet.</i> , <i>Conserv. Lett.</i> , <i>Conserv. Phys.</i> , <i>J. Econ. Ent.</i> , <i>Insect Sci.</i> , <i>Insect Conserv. Divers.</i> , <i>Canadian Entomol.</i> , <i>Freshwater Sci.</i> , <i>Curr. Opin. Insect Sci.</i>
President of the Entomological Students Organization, UC Berkeley 2006-2007

## TEACHING

Insects and Human Culture (ENT 201), UW Madison	Spring, Summer, Fall 2018-2022
Community Assembly Seminar (ENT 875), UW Madison	2019
Distributed Graduate Seminar in Landscape Genetics	2016,2018,2020,2022
Molecular Ecology (ENT/ZOO/GEN 624), UW Madison	2017, 2019
Genome Evolution (ENT 875), UW Madison	2017
Landscape Genomics (ENT 875), UW Madison	2015
Molecular Evolution (ENT/GEN 472), UW-Madison	2015
Instructor Juneau Icefield Research Program	2014
Instructor Field Biology Section Biology 1B University of California, Berkeley	2005-2006
Instructor NSF GK12 Program High-school outreach program on California Biodiversity	2003-2004
Laboratory instructor for Biology 150 (Foundations of Scientific Research), SUNY Stony Brook	2001
Laboratory instructor for Biology 201 (Foundations of Ecology) SUNY Stony Brook	2001

## UNIVERSITY SERVICE

CALS Academic Planning Council	2022-present
Graduate Program Review Committee (Forest and Wildlife Ecology)	2022-present
Dean Paul Robbins 5-year review committee	2021-2022
Nelson Institute Governance and Executive Committees	2021-present
Nelson Institute Academic Planning Council	2021-present
Director, Center for Ecology and the Environment	2020-present
CALS Research Advisory Committee	2019-2022
Russell Labs IT Committee	2021-present
Entomology Merit Committee	2021
Entomology Diversity, Equity and Inclusion Committee	2020-present
Entomology Post-tenure Review Committee	2020

Entomology Graduate Student Director	2019-present
Chair, Entomology Academic Affairs Committee	Fall 2019-present
Entomology Graduate Student Coordinator	Fall 2018
Wisconsin Ecology Executive Committee	2018-2020
Conservation Biology Major Advisor	2018-present
Entomology Redesign, Ad Hoc Committee	2018-2019
Entomology Diversity and Inclusion Representative	2017-2019
CALS Equity and Diversity Committee	2017-2019
Faculty Senate	2014-2019
Crow Institute Executive Coordinating Committee	2015-present
UW Day Research Panel	2017, 2018
UW Hilldale Undergraduate Awards Review Committee	2016-2022
Entomology Colloquium Committee	2014-2015
Entomology Academic Affairs Committee	2015-present
Entomology Undergraduate Major, Ad Hoc Committee, Chair	2015
Entomology Awards Committee	2014-2015
Entomology Research Committee	2013-2014
Entomology International Committee	2016-2020

## STUDENT MENTORSHIP

---

### Postdoctoral Advisor- 2 scholars (U. Wisconsin)

2016-2017 Rachel Slatyer (AAAS Fellow)  
 2016-2019 Benjamin Pélissié (USDA Research Associate)

### PhD. Major Advisor- 7 students (U. Wisconsin)

2021- Dahn-young Dong (Integrative Biology)  
 2020- Roberto Carrera-Martinez (Integrative Biology)  
 2018- Jillian Schat (Entomology)  
 2017-2022 Yi-Ming Weng (Entomology): Evolutionary genomics of an alpine ground beetle: the *Nebria ingens* complex in the Sierra Nevada, California  
 2016-2021 Zachary Cohen (Entomology): Genome evolution of the Colorado potato beetle, *Leptinotarsa Decemlineata* Say  
 2014-2019 Michael Crossley (Entomology): Colorado potato beetle adaptation to changing agricultural landscapes and management practices  
 2014-INC Khuram Zaman (Entomology)

### Masters Major Advisor- 4 student (U. Wisconsin)

2022- Ebony Taylor (Entomology)  
 2022- Emma Terris (Agroecology and Entomology)  
 2022- Michael Troutman (Entomology)  
 2018-2020 Samuel DeGrey (Entomology): *Drosophila suzukii* (Diptera: Drosophilidae) cold tolerance evolution from a physiological and population genomics perspective.

### PhD. Committee Member- 31 students (U. Wisconsin, U. Alabama, Iowa State U.)

2022- Monica Cooper (Forest and Wildlife Ecology)  
 2022- Jade Kochanski (Entomology)  
 2022- Jassim Al-Oboudi (Microbiology)  
 2022- Emily Kerns (Integrative Biology)  
 2020-2022 Ting Fung Ma (Statistics): Statistical Methods for Data with Complex Dependence Structure  
 2020- Soleil Young (Bacteriology)  
 2020 Teresa Popp (Zoology)  
 2019- Christopher Blume (Entomology)



- 2019-2021 Jeremey Lange (Genetics): Natural selection in *Drosophila melanogaster*: a new detection method, impact on demographic inference, and short-term evolution
- 2018-2022 Yen-Wen (Denny) Wang (Botany): Phylogenomics and population genomics of *Amanita*: the evolution of new genes, reproductive systems and mitochondria
- 2018-2020 Donny Hoang (Bacteriology)
- 2018-2020 Lan Luo (Statistics): Multivariate statistical methods for the detection of local adaptation and meta-analysis study of genetic pleiotropy
- 2017-2021 Andrew Ontano (Zoology): The diagnosis and resolution of long branch taxa among Chelicerata
- 2017-2022 Lucas Nell (Integrative Biology): Interactions between ecological and evolutionary processes in experimental, theoretical, and wild populations
- 2017-2021 Quentin Sprengelmeyer (Genetics): The population history of *Drosophila melanogaster* and the evolution of ethanol tolerance and body size, adaptive traits
- 2016-2020 Connor Wood (Forest and Wildlife Ecology): Using bioacoustics for landscape-scale species conservation
- 2016-2017 Tiago Ribeiro (Zoology)
- 2016-2017 Audrey McCombs (Iowa State U., EEOB)
- 2015-2019 Lily (Vinícios) Ferreira-de-Freitas (Entomology): Taxonomic works on mosquitoes (Diptera: Culicidae) of the Americas
- 2015-2018 Nisa Karimi (Botany): The Evolutionary History of the Baobab Trees
- 2015-2019 Rachel Toczydlowski (Botany): Genetic and phenotypic differentiation in *Impatiens capensis* in riverine networks: identifying patterns and potential drivers of gene flow, local adaptation, and inbreeding
- 2015-2019 Quinn Langdon (Genetics): *Saccharomyces eubayanus* population genomics: wild diversity and contributions to domesticated hybrids
- 2014-2020 Diana Guzmán-Colón (Forest and Wildlife Ecology)
- 2014-2016 Justin Clements (Molecular and Environmental Toxicology): Molecular characterization of insecticide resistance mechanisms in populations of *Leptinotarsa decemlineata*: Potential for pest control using RNA interference and understanding natural phenology of insecticide resistance
- 2014-2015 Joliene Lindholm (Entomology): Elucidating the Molecular Modes of Action of Insect Juvenile Hormone
- 2014-2015 Il Hwan Kim (Entomology): Characterization of a mosquito larvicidal lipopeptide from the bacterium *Xenorhabdus innexi*
- 2014-2019 Danny Minahan (Zoology): Foraging activity and pollen collection by honey bees and bumble bees in a shared landscape
- 2015-2017 Emmanuel Santa-Martínez (Entomology): Movement of pollinators and their impact on selfing and gene flow in alfalfa
- 2013-2018 Hilary (Bultman) Barker (Zoology): Linking plant genetics and environment to associated insect species and community composition
- 2013-2019 Jason Jackson (Univ Alabama, Biology): Investigating the population genomic effects of inhabiting heterogeneous landscapes across multiple spatial and time scales in montane bumble bees.

2013-2019 Vera Pfeiffer (Environment & Resources): The effect of landscape on the distribution and dynamics of pollinators in anthropogenically modified landscapes

**Visiting PhD Scholar Advisor**- 1 scholar (U. Wisconsin)

2014 Rachel Slatyer (Univ. Melbourne)

**Masters Committee Member**- 14 students (U. Wisconsin)

2022- Megan Dudenhoeffer (Forest and Wildlife Ecology)

2021- Max Reynolds (Integrative Biology)

2020-2022 Taylor Peltier (Forest and Wildlife Ecology): Phenotypic plasticity in the molt characteristics of the snowshoe hare (*Lepus americanus*)

2019-2022 Juanita Diaz (Integrative Biology): Local adaptation despite gene flow in copepod populations across salinity and temperature gradients in the Baltic and North Seas

2019-2022 Nicholas Kryshak (Forest and Wildlife Ecology): DNA metabarcoding reveals the threat of rapidly expanding barred owl populations to native wildlife in western North America

2019-2021 Nolan Amon (Entomology): Assessing the impact of supplemental wildflower plantings on wild bees in cranberry, and a survey of cranberry grower pollination practices and attitudes towards managed bumble bees

2018-2020 Jade Kochanski (Entomology): Prairie restoration benefits bumble bees (*Bombus* spp.), regardless of subsequent management and the amount of semi-natural habitat in the broad-scale landscape

2018-2021 Taylor Tai (Zoology): Within-year impacts of prescribed fire on bumble bee communities and floral resources

2018-2020 Ann Marsh (Entomology): A Survey of the Mycetoporini (Coleoptera: Staphylinidae: Tachyporinae) of Wisconsin

2018-2022 Jacki Whisenant (Entomology): A Survey of the Tetratomidae of Wisconsin (Coleoptera: Tenebrionoidea)

2016-2018 Patrick Dunn (Entomology): Characterization of an oomycete growth regulator from *Manduca sexta*-associated *Pluribacter gergoviae*.

2015-2016 Austin Bauer (Entomology): Floral traits influencing plant attractiveness to three bee species: Consequences for plant reproductive success

2014-2015 Emmanuel Santa-Martínez (Entomology): [PhD, see above]

2013-2014 Michael Crossley (Entomology): Rag virulence and population genetics of Soybean Aphid (*Aphis glycines*) occurring in Wisconsin

**Undergraduate Advisor**- 57 undergraduate students (U. Wisconsin)

Mentor of six Senior Theses (U. Wisconsin)

2022- Elizabeth Ehlert (URS)

2022- Maddie Michaelis (URS)

2022- Dima Hamdan

2022- Ava Schassler

2022- Julia Walker

2022 Tre'Von Williams (Biological Interactions Research Fellow)

2021-2022 Alicia Ward

2021- Molly Nooyen

2021 Breanna Hoyt-Glenon

2021 Brenna Rea

2021- Robert Hall (McNair Scholar)

2021 Miguel Mares (Biological Interactions Research Fellow)  
2021 Brianna Moreland  
2021 Emily Maiers  
2021 Yulong Wang  
2021- Luke Wolfe  
2020-2021 Sindhu Shankar  
2020-2021 Evan Woolridge (URS)  
2019- Emelia Rogers (Hilldale Recipient)  
2019-2020 Carolina Zhagnay (URS)  
2019-2020 Corinne Banks (URS)  
2019-2020 Huijun Xiao  
2019 Julianne Dessert  
2019-2020 William Awve  
2019-2020 Benjamin Klementz  
2018-2020 Emma Fischer (High School Intern, Sophomore Fellowship)  
2018-2020 Mary Magnuson (URS, ARS Intern)  
2018-2019 Kyle Vandervere (URS)  
2018-2019 Julien Scribner  
2018-2020 Samuel Goblirsch  
2018 Tyler Benz  
2018 Shelby Ballweg  
2017-2019 Ben Weibel  
2017-2018 Avery Kuhlow (URS scholar)  
2017-2021 Ben Veire (Holstrom Recipient, Senior Thesis)  
2017-2019 Maria Golovkina  
2017-2018 Peter Willadsen (Senior Thesis)  
2017 April Hommerding  
2016-2017 Christian Eken (URS scholar)  
2016-2018 William Rosenthal (Holstrom Recipient, Senior Thesis)  
2016-2018 Kelly Thao (URS scholar)  
2016-2017 Kalene Jasso  
2016-2017 Jack Cook  
2016-2017 Ben Havlicek (ARS summer intern)  
2016 Randall Ruvalcaba  
2016 Alex Williams  
2016 Aoran Wu  
2016 Daniel Matusinec  
2016 Shelby Rivers  
2015-2019 Mryia Hubert (URS scholar, Sophomore Res. Fellow)  
2015-2016 Jack Ralph  
2015-2017 Zack Beethem (Hilldale Recipient, Senior Thesis)  
2015-2016 Bailey Wolding  
2014-2016 Isaiah Rozich  
2014-2017 Glenda Valdez  
2014-2015 Tierney Bougie (Senior Thesis)  
2014-2015 Kira Schlicht  
2013-2015 Zachary Boor (Hilldale Recipient, Senior Thesis)  
2013-2017 Troy Valle (URS scholar, ARS summer intern)

## High School Youth Apprenticeship Program Advisor- 4 students

2021-2022 Sydney Schumacher  
2021 Jewel Sherchok  
2017-2018 Emma Fischer  
2015-2016 Jessiney Bass

## PEER-REVIEWED PUBLICATIONS

---

†denotes undergraduate, \*denotes technician/grad student/postdoc

- 77 Cohen\*, Z. **S.D. Schoville**, and D.H. Hawthorne. 2023. The role of structural variants in pest adaptation and genome evolution of the Colorado potato beetle (Say). *Molecular Ecology* [<https://doi.org/10.1111/mec.16838>]
- 76 Chen, Y.H., Z.P. Cohen\*, E.M. Bueno, B.M. Christensen, and **S.D. Schoville**. 2023. Rapid evolution of insecticide resistance in the Colorado potato beetle, *Leptinotarsa decemlineata*. *Current Opinion in Insect Science* 55: 101000.
- 75 Cohen\*, Z. and **S.D. Schoville**. 2022. Evidence of hard-selective sweeps suggest independent adaptation to insecticides in Colorado potato beetle (Coleoptera: Chrysomelidae) populations. *Evolutionary Applications* **15(10)**: 1691-1705.
- 74 Cohen\*, Z., O. François, and **S.D. Schoville**. 2022. Museum genomics of an agricultural super-pest, the Colorado potato beetle, *Leptinotarsa decemlineata* (Chrysomelidae), provides evidence of adaptation from standing variation. *Integrative and Comparative Biology* **62(6)**: 1827-1837.
- 73 Péliissié\*, B., Y.H. Chen, Z. Cohen\*, M. Crossley\*, D. J. Hawthorne, V. Izzo, and **S.D. Schoville**. Genome resequencing reveals rapid, repeated evolution in the Colorado potato beetle. *Molecular Biology and Evolution* **39(2)**: msac016.
- 72 Schat\*, J., Y-M. Weng\* (co-first author), R.Y. Dudko, D.H. Kavanaugh, L. Luo, and **S.D. Schoville**. 2022. Evidence for niche conservatism in alpine beetles under a climate-driven species pump model. *Journal of Biogeography* **49(2)**: 364-377.
- 71 Carrera-Martínez\*, R., D. Jones, **S.D. Schoville**, B.A. Snyder, M.A. Callahan, Jr. 2021. Two new species of *Bimastos* (Oligochaeta, Lumbricidae) from the Southern Appalachian Mountains, North America. *Zootaxa* **5052 (3)**: 395-405.
- 70 Gates\*, D., B. Jackson, and **S.D. Schoville**. 2021. Impacts of fire on butterfly genetic diversity and connectivity. *Journal of Heredity* **112(4)**: 367–376.
- 69 Weng\*, Y-M., C.B. Francoeur, C.R. Currie, D.H. Kavanaugh, and **S.D. Schoville**. 2021. A high-quality carabid genome assembly provides insights into beetle genome evolution and cold adaptation. *Molecular Ecology Resources* **21(6)**: 2145-2165.
- 68 Arango, R.A., **S.D. Schoville**, C.R. Currie, and C. Carlos-Shanley. 2021. Experimental warming reduces survival, cold tolerance, and gut prokaryotic diversity of the eastern subterranean termite, *Reticulitermes flavipes* (Kollar). *Frontiers in Microbiology* **12**: 1116.
- 67 Kavanaugh, D.H., D.R. Maddison, W.B. Simison, **S.D. Schoville**, J. Schmidt, A. Faille, W. Moore, J.M. Pflug, S.L. Archambeault, T. Huong, and J-Y. Chen. 2021. Phylogeny of the supertribe Nebriitae (Coleoptera: Carabidae) based on analyses of DNA sequence data. In: Spence, J., A. Casale, T. Assmann, J.K. Liebherr, and L.

Penev L (eds.), Systematic Zoology and Biodiversity Science: A tribute to Terry Erwin (1940-2020). *Zookeys* **1044**: 41-152.

- 66 Rosenthal†, W., P. McIntyre, P. Lisi, R. Prather, Jr., K. Moody, M. Blum, J. Hogan, and **S. Schoville**. 2021. Invasion and rapid adaptation of guppies (*Poecilia reticulata*) across the Hawaiian Archipelago. *Evolutionary Applications* **14(7)**: 1747-1761.
- 65 Weng\*, Y.-M., D.H. Kavanaugh, and **S.D. Schoville**. 2021. Drainage basins serve as multiple glacial refugia for alpine habitats in the Sierra Nevada Mountains. *Molecular Ecology* **30(3)**: 826-843.
- 64 Buckley, L.B., **S.D. Schoville**, and C.M. Williams. 2021. Shifts in the relative fitness contributions of fecundity and survival in variable and changing environments. *Journal of Experimental Biology* **224**: jeb228031.
- 63 Marden, E. *et al.* 2021. Sharing and reporting benefits from biodiversity research. *Molecular Ecology* **30(5)**: 1103-1107.
- Among the top 10 most downloaded papers in *Molecular Ecology*.
- 62 Luo, L., **S.D. Schoville**, Z. Tang, and J. Zhu. 2021. Comparative analysis of gene-environmental association methods adjusting for population structure. *Molecular Ecology Resources* **21(3)**: 733-744.
- 61 Cohen\*, Z.P., K. Brevik, Y.H. Chen, D.J. Hawthorne, B. Weibel†, **S.D. Schoville**. 2021. Elevated rates of positive selection drive the evolution of pestiferousness in the Colorado potato beetle (*Leptinotarsa decemlineata*, Say). *Molecular Ecology* **30(1)**: 237-254.
- 60 Crossley\*, M.S., K.D. Burke, **S.D. Schoville**, and V.C. Radeloff. 2021. Recent collapse of crop belts and declining diversity of US agriculture since 1840. *Global Change Biology* **27(1)**: 151-164.
- 59 Brevik, K., E. Bueno, S. McKay, **S. Schoville**, and Y. Chen. 2021. Insecticide exposure affects intergenerational patterns of DNA methylation in the Colorado potato beetle, *Leptinotarsa decemlineata*. *Evolutionary Applications* **14(3)**: 746-757.
- 58 **Schoville, S.D.**, S. Simon, M. Bai, Z. Beethem†, R. Dudko, M.J.B. Eberhard, P.B. Frandsen, S. Küpper, R. Machida, M. Verheij, P. Willadsen†, X. Zhou, and B. Wipfler. 2021. Comparative transcriptomics of ice-crawlers demonstrates cold specialization constrains niche evolution in a relict lineage. *Evolutionary Applications* **14(2)**: 360-382.
- 57 Dively, G.P., M.S. Crossley\*, **S.D. Schoville**, N. Steinhauer, N., and D. J. Hawthorne. 2020. Regional differences in gene regulation may underlie patterns of sensitivity to novel insecticides in *Leptinotarsa decemlineata*. *Pest Management Science* **76(12)**: 4278-4285.
- 56 Weng\*, Y.-M., B.M. Veire†, R.Y. Dudko, M. Medeiros, D.H. Kavanaugh, and **S.D. Schoville**. 2020. Rapid speciation and ecological divergence into North American alpine habitats: the *Nippononebria* (Coleoptera: Carabidae) species complex. *Biological Journal of the Linnean Society* **130(1)**: 18-33.
- 55 Thomas, G.W.C., et al. 2020. Gene content evolution in the arthropods. *Genome Biology* **21(1)**: 1-14.
- 54 Slatyer\*, R.A., **S.D. Schoville** (co-first author), C.R. Nufio, and L.B. Buckley. 2020. Do differential rates of gene flow underlie variation in phenotypic and phenological clines in montane grasshoppers? *Ecology and Evolution* **10(2)**: 980-997.

- 53 Zaman\*, K., M.K. Hubert<sup>†</sup>, and **S.D. Schoville**. 2019. Testing the role of ecological selection on color pattern variation in the butterfly *Parnassius clodius*. *Molecular Ecology* **28(23)**: 5086-5102.
- 52 Rodríguez-Bonilla, L., F. Rodríguez Bonilla, D. Matusinec, E. Wiesman, **S.D. Schoville**, A. Atucha, and J. Zalapa. 2019. Exploring the genetic diversity of wild cranberry populations in the Upper Midwestern U.S. *Crop Science* **59(6)**: 2413-2428.  
Awarded the 2019 Outstanding Genetic Resources Paper.
- 51 Crossley\*, M.S., S. Rondon, and **S.D. Schoville**. 2019. Effects of contemporary agricultural land cover on Colorado potato beetle genetic differentiation in the Columbia Basin and Central Sands. *Ecology and Evolution* **9(16)**:9385-9394.
- 50 **Schoville, S.D.**, T.A. Bougie<sup>†</sup>, R.Y. Dudko, and M.J. Medeiros. 2019. Has past climate change effected cold-specialized species differentially through space and time? *Systematic Entomology* **44(3)**: 571-587.  
Awarded the 2022 Biannual Best Paper.
- 49 **Schoville, S.D.** 2019. Grylloblattodea of Canada. *Zookeys* **819**: 271–276.
- 48 Crossley\*, M., S.I. Rondon, and **S.D. Schoville**. 2019. Patterns of genetic differentiation in Colorado potato beetle correlate with contemporary, not historic, potato land cover. *Evolutionary Applications* **12**: 804-814.
- 47 **Schoville, S.D.**, et al. 2018. A model species for agricultural pest genomics: the genome of the Colorado potato beetle, *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae). *Science Reports* **8**: 1931.
- 46 **Schoville, S.D.**, A. Dalongeville, G. Viennois, F. Gugerli, P. Taberlet, B. Lequette, N. Alvarez, and S. Manel. 2018. Preserving genetic connectivity in the European Alps protected area network. *Biological Conservation* **218**: 99-109.
- 45 Clements, J., **S. Schoville**, A. Clements, D. Amezian, T. Davis, B. Sanchez-Sedillo, C. Bradfield, A.S. Huseh, and R.L. Groves. 2018. Agricultural fungicides inadvertently influence the fitness of Colorado potato beetles, *Leptinotarsa decemlineata*, and their susceptibility to insecticides. *Scientific Reports* **8**: 13282.
- 44 Crossley\*, M.S., **S.D. Schoville**, D.M. Haagenson, and S.H. Jansky. 2018. Plant resistance to Colorado potato beetle (Coleoptera: Chrysomelidae) in diploid F2 families derived from crosses between cultivated and wild potato. *Journal of Economic Entomology* **111(4)**: 1875-1884.
- 43 Brevik, K., **S.D. Schoville**, D. Mota-Sanchez, and Y.H. Chen. 2018. Pesticide durability and the evolution of resistance: A novel application of survival analysis. *Pest Management Science* **74**: 1953–1963.
- 42 Chen, Y.H., and **S.D. Schoville**. 2018. Editorial overview: Ecology: Ecological adaptation in agroecosystems: novel opportunities to integrate evolutionary biology and agricultural entomology. *Current Opinion in Insect Science* **26**: iv-viii.
- 41 Péliissié\*, B., M. Crossley\*, Z. Cohen\*, and **S.D. Schoville**. 2018. Population genomics provide insight on mechanisms of rapid evolution in insect pests. *Current Opinion in Insect Science* **26**: 8-16.
- 40 Izzo, V., Y.H. Chen, **S.D. Schoville**, C. Wang, and D.J. Hawthorne. 2018. Origin of pest lineages of the Colorado potato beetle (Coleoptera: Chrysomelidae). *Journal of Economic Entomology* **111(2)**: 868-878.  
Journal of Economic Entomology Editor's Choice Award runner-up
- 39 Crossley\*, M., S.I. Rondon, and **S.D. Schoville**. 2018. A Comparison of resistance to imidacloprid in Colorado potato beetle (*Leptinotarsa decemlineata* Say) populations collected in the Northwest and Midwest U.S. *American J. Potato Research* **95**:495-503.

- 38 Crossley\*, M.S., Z. Cohen\*, B. Pélissié\*, and **S.D. Schoville**. 2018. *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae) observed feeding on *Chamaesaracha* sp. in Eastern Colorado. *Great Lakes Entomologist* **50(2)**: 10.
- 37 Crossley\*, M., Y. Chen, R. Groves and **S.D. Schoville**. 2017. Landscape genomics of Colorado potato beetle provides evidence of polygenic adaptation to insecticides. *Molecular Ecology* **26(22)**: 6284–6300.
- 36 Rovito, S.M., and **S.D. Schoville**. 2017. Testing models of refugial isolation, colonization, and population connectivity in two species of montane salamanders. *Heredity* **119**: 265-274.
- 35 Clements, J., **S. Schoville**, N. Clements, S. Chapman, R. Groves. 2017. Temporal patterns of imidacloprid resistance throughout a growing season in *Leptinotarsa decemlineata* populations. *Pest Management Science* **73(3)**: 641-650.
- 34 Tojo, K., K. Sekine, M. Takenaka, Y. Isaka, S. Komaki, T. Suzuki, and **S.D. Schoville**. 2017. Species diversity of insects in Japan: Their origins and diversification process. *Entomological Science* **20(1)**: 357-381.
- 33 Medeiros, M.J. and **S.D. Schoville**. 2017. Two new records of wing-reduced Tipulidae from North America. *Proceedings of the California Academy of Sciences, Series 4* **64(2)**: 31-35.
- 32 Clements, J., **S. Schoville**, N. Peterson, A. S. Huseh, Q. Lan, and R. L. Groves. 2017. RNA interference of three up-regulated transcripts associated with insecticide resistance in an imidacloprid resistant population of *Leptinotarsa decemlineata*. *Pesticide Biochemistry and Physiology* **135**: 35-40.
- 31 Slatyer\*, R.S., and **S.D. Schoville**. 2016. Physiological limits are not associated with elevation in a radiation of montane beetles. *PLoS One* **11(4)**: e0151959.
- 30 Clements, J., **S. Schoville**, N. Peterson, R. Groves, and Q. Lan. 2016. Characterizing molecular mechanisms of imidacloprid resistance in select populations of *Leptinotarsa decemlineata* in the Central Sands region of Wisconsin. *PLoS One* **11(1)**: e0147844.
- 29 François, O., H. Martins, K. Caye, **S.D. Schoville**. 2016. Controlling false discoveries in genome scans for selection. *Molecular Ecology* **25(2)**: 454-469.
- 28 **Schoville, S.D.**, R.S. Slatyer\*, J.C. Bergdahl, G.A. Valdez<sup>†</sup>. 2015. Conserved and narrow temperature limits in alpine insects: thermotolerance and supercooling points of the ice-crawlers, *Grylloblatta* (Insecta: Grylloblattodea: Grylloblattidae). *Journal of Insect Physiology* **78**: 55-61.
- 27 Frichot, E., **S.D. Schoville**, P. de Villemereuil, O. Gaggiotti, O. François. 2015. Detecting adaptive evolution based on association with ecological gradients: Orientation matters! *Heredity* **115**: 22-28.
- 26 Barreto, F.S., **S.D. Schoville**, and R.S. Burton. 2015. Reverse genetics in the tidepool: Knockdown of target gene expression via RNA interference in the copepod *Tigriopus californicus*. *Molecular Ecology Resources* **5(4)**: 868–879.
- 25 Wipfler, B., M. Bai, **S. Schoville**, R. Dallai, T. Uchifune, R. Machida, Y. Cui, R.G. Beutel. 2014. Ice Crawlers (Grylloblattodea) – the history of the investigation of a highly unusual group of insects. *Journal of Insect Biodiversity* **2(2)**: 1-25.
- 24 **Schoville, S.D.** 2014. Current status of the systematics and evolutionary biology of Grylloblattidae (Grylloblattodea). *Systematic Entomology* **39(2)**: 197-204.
- 23 **Schoville, S.D.**, I. Widmer, M. Deschamps-Cottin, M. Lizée, L. Després, D. Rioux, L. Gielly, S. Manel. 2013. Morphological clines and weak drift along an urbanization gradient in the butterfly, *Pieris rapae*. *PLoS One* **8(12)**: e83095.

- 22 **Schoville, S.D.** and G.O. Graening. 2013. Updated checklist of the ice-crawlers (Insecta: Grylloblattodea: Grylloblattidae) of North America, with notes on their natural history, biogeography and conservation. *Zootaxa* **3737(4)**: 351-378.
- 21 Joost, S., S. Vuilleumier, J. Jensen, **S. Schoville**, K. Leempoel, I. Widmer, S. Stucki, C. Melo de Lima, J. Roland, S. Manel. 2013. Uncovering the genetic basis of adaptive change: on the intersection of landscape genomics and theoretical population genetics. *Molecular Ecology* **22**: 3659-3665.
- 20 Frichot, E., **S. Schoville**, G. Bouchard, and O. François. 2013. Testing for associations between loci and environmental gradients using latent factor mixed models. *Molecular Biology and Evolution* **30**: 1687-1699.
- 19 **Schoville, S.D.**, T. Uchifune, and R. Machida. 2013. Colliding fragment islands transport independent lineages of endemic rock-crawlers (Grylloblattodea: Grylloblattidae) in the Japanese archipelago. *Molecular Phylogenetics and Evolution* **66**: 915-927.
- 18 Harris, E.S.J., S. Cao, **S.D. Schoville**, C. Dong, W. Wang, Z. Jian, Z. Zhao, D.M. Eisenberg, and J. Clardy. 2012. Selection for high oridonin yield in the Chinese medicinal plant *Isodon* (Lamiaceae) using a combined phylogenetics and population genetics approach. *PLoS One* **7(11)**: e50753.
- 17 Frichot, E., **S. Schoville**, G. Bouchard, and O. François. 2012. Correcting principal component maps for effects of spatial autocorrelation in population genetic data. *Frontiers in Genetics* **3**: 00254.
- 16 **Schoville, S.D.**, A. Bonin, O. François, S. Lobreaux, C. MeloDelima, and S. Manel. 2012. Adaptive genetic variation on the landscape: methods and cases. *Annual Review of Ecology, Evolution and Systematics* **43**: 23-43.
- 15 **Schoville, S.D.**, F.S. Barreto, G.W. Moy, A. Wolff, and R.S. Burton. 2012. Investigating the molecular basis of local adaptation to thermal stress: population differences in gene expression across the transcriptome of the copepod *Tigriopus californicus*. *BMC Evolutionary Biology* **12**: 170.
- 14 **Schoville, S.D.**, A.D. Lam<sup>†</sup>, G.K. Roderick. 2012. A rangewide genetic bottleneck overwhelms landscape heterogeneity and local abundance in shaping genetic patterns of an alpine butterfly (Lepidoptera: Pieridae: *Colias bebrii*). *Molecular Ecology* **21**: 4242-4256.
- 13 **Schoville, S.D.**, G.K. Roderick, and D.H. Kavanaugh. 2012. Testing the “Pleistocene species pump” in alpine habitats: lineage diversification of flightless ground beetles (Coleoptera: Carabidae: *Nebria*) in relation to altitudinal zonation. *Biological Journal of Linnean Society* **107**: 95-111.
- 12 **Schoville, S.D.** 2012. Three new species of *Grylloblatta* Walker (Insecta: Grylloblattodea: Grylloblattidae), from southern Oregon and northern California. *Zootaxa* **3412**: 42–52.
- 11 **Schoville, S.D.**, Flowers, J.M., and R.S. Burton. 2012. Diversifying selection underlies the origin of allozyme polymorphism at the Phosphoglucose-isomerase locus in *Tigriopus californicus*. *PLoS One* **7(6)**: e40035.
- 10 Swei, A., J. J. L. Rowley, D. Rödder, M. L. L. Diesmos, A. C. Diesmos, C. J. Briggs, R. Brown, T. T. Cao, T. L. Cheng, R. A. Chong, B. Han, J.-M. Hero, H. D. Hoang, M. D. Kusini, D. T. T. Le, J. A. McGuire, M. Meegaskumbura, M.-S. Min, D. G. Mulcahy, T. Neang, S. Phimmachak, D.-Q. Rao, N. M. Reeder, **S. D. Schoville**, N. Sivongxay, N. Srei, M. Stöck, B. L. Stuart, L. S. Torres, D. T. A. Tran, T. S. Tunstall, D. Vieites and V. T. Vredenburg. 2011. Is chytridiomycosis an emerging infectious disease in Asia? *PLoS One* **6(8)**: e23179.
- 9 **Schoville, S.D.**, T.S. Tunstall, V.T. Vredenburg, A. R. Backlin, E. Gallegos, D.A. Wood, and R.N. Fisher. 2011. Conservation genetics of evolutionary lineages of the



- endangered mountain yellow-legged frog, *Rana muscosa* (Amphibia: Ranidae), in southern California. *Biological Conservation* **144(2011)**: 2031-2040.
- 8 **Schoville, S.D.**, M. Stuckey<sup>†</sup>, and G.K. Roderick. 2011. Pleistocene origins and population history of a neoendemic alpine butterfly. *Molecular Ecology* **20**:1233-1247.
  - 7 **Schoville, S.D.**, and B-W. Kim. 2011. Phylogenetic relationships and relictualism of rock-crawlers (Grylloblattodea: Grylloblattidae) in cave and mountain habitats of Korea. *Annals of the Entomological Society of America* **104(2)**: 337-347.
  - 6 **Schoville, S.D.**, and G.K. Roderick. 2010. Evolutionary diversification of cryophilic *Grylloblatta* species (Grylloblattodea: Grylloblattidae) in alpine habitats of California. *BMC Evolutionary Biology* **10**: 163.
  - 5 **Schoville, S.D.** 2010. Natural history and biogeography of Grylloblattodea in Japan and North America. *New Entomologist* **59(1,2)**: 1-7.
  - 4 MOLECULAR ECOLOGY RESOURCES PRIMER DEVELOPMENT CONSORTIUM et al. 2010. Permanent Genetic Resources added to Molecular Ecology Resources database 1 October 2009–30 November 2009. *Molecular Ecology Resources* **10(2)**: 404-408
  - 3 **Schoville, S.D.** and G. K. Roderick. 2009. Alpine biogeography of a Parnassian butterfly during Quaternary climate cycles in North America. *Molecular Ecology* **15**: 3471-3485.
  - 2 Kavanaugh, D.H., and **S.D. Schoville**. 2009. A new and endemic species of *Nebria* Latreille (Insecta: Coleoptera: Carabidae: Nebriinae), threatened by climate change in the Trinity Alps of Northern California. *Proceedings of the California Academy of Sciences, Series 4* **60(7)**: 71-82.
  - 1 Vredenburg, V.T., T. Tunstall, H. Nguyen, J. Romansic, and **S. Schoville**. 2001. Natural history notes: *Hydromantes platycephalus* (Mt. Lyell salamander) behavior. *Herpetological Review* **32(3)**: 178.

## BOOK CHAPTERS, NON-PEER REVIEWED ARTICLES AND GOVERNMENT REPORTS

---

- 8 Crossley\*, M.S., Z. Cohen\*, B. Pélissié\*, S. Rondon, Y. Chen, A. Alyokhin, D. Hawthorne, and **S.D. Schoville**. 2022. Ecological and evolutionary factors mitigating Colorado potato beetle (Coleoptera: Chrysomelidae) adaptation to insecticides. in A. Alyokhin and Y. Gao (eds.), *Insect Pests of Potato*, 2<sup>nd</sup> ed.
- 7 **Schoville, S.D.**, Z.P. Cohen\*, and M.S. Crossley\*. 2021. Population genomic insights into insecticide resistance in the Colorado potato beetle. in J.R. Dupuis and O. Rajora (eds.), *Population Genomics*. Springer, Cham. [https://doi.org/10.1007/13836\\_2021\\_91](https://doi.org/10.1007/13836_2021_91)
- 6 **Schoville, S.D.** 2020. Insects on ice: *Grylloblatta*. *Bulletin of the Entomological Society of Canada* **52(1)**: 49-53.
- 5 **Schoville, S.D.**, and S.M. Rovito. 2020. Biogeography of North American Highlands. pp. 530-542 in M.I. Goldstein and D.A. DellaSala (eds.), *Encyclopedia of the World's Biomes*, Volume 1. Oxford: Elsevier.
- 4 Eberhard, M.J.B., **S.D. Schoville**, and K.-D. Klass. 2018. Biodiversity of Grylloblattodea and Mantophasmatodea. pp. 335-357 in R.G. Foottit and P.H. Adler (eds.), *Insect Biodiversity: Science and Society*, Volume 2, 2<sup>nd</sup> Edition. John Wiley & Sons, Hoboken, NJ.
- 3 **Schoville, S.D.** 2014. Ice-Crawlers. pp. 283-286. in J. Roth (ed.), *The Klamath-Siskiyou: Timely Treasures of an Iconic Bioregion*. National Park Service.
- 2 **Schoville, S.D.** 2009. Alpine Butterfly Resurvey, Final Report. Scientific Report to Yosemite National Park, California, U.S.A.

- 1 Vredenburg, V.T., T. Tunstall, R. Bingham, J. Yeh, **S. Schoville**, C. Briggs, and C. Moritz. 2004. Patterns of habitat use and movement of *Rana muscosa* in the northern Sierra Nevada with comparisons to populations in the southern Sierra Nevada, with additional information on the biogeography of the species. California Department of Fish and Game Technical Report P, 185186

## MANUSCRIPTS IN REVIEW AND PREPARATION

---

- In Revision, 2022: Cohen\*, Z., M.S. Crossley\* (co-first author), R.F. Mitchell, P. Engsonia, Y.H. Chen, and **S.D. Schoville**. “Evolution of chemosensory genes in Colorado potato beetle, *Leptinotarsa decemlineata*.” *Journal of Evolutionary Biology*
- In Revision, 2021: Zaman\*, K., A.L. McCombs, D. Debinski, and S.D. Schoville. “Combining multiscale replication in network and landscape genetic analyses to assess functional connectivity and population resilience in *Parnassius clodius* butterflies.” *Journal of Heredity*
- In Revision, 2022: Tunström, K., A. Woronik, J.J. Hanly, P. Rastas, A. Chichvarkhin5, A.D. Warren, A. Kawahara, **S.D. Schoville**, V. Ficarrota, A.H. Porter, W.B. Watt, A. Martin, C.W. Wheat. “A complex interplay between balancing selection and introgression maintains a genus-wide alternative life history strategy.” *Science Advances* [bioRxiv 2021.05.20.445023]
- Submitted, Z. Cohen\*, J. Bamberg, **S. Schoville**, R. Groves, and B. Bradford. “Colorado potato beetle (*L. decemlineata*) prefer *Solanum jamesii* populations on which they were originally observed in the wild.” *American Journal of Potato Research*
- In Prep, 2021: Brevik, K., **S.D. Schoville**, A. Muszewska, B. Péliissié\*, Z. Cohen\*, V. Izzo, and Y.H. Chen. “Transposable elements differ between geographic populations of the Colorado Potato Beetle, *Leptinotarsa decemlineata*”

## ORGANIZED SYMPOSIA AND INVITED PRESENTATIONS

---

- September 16, 2022. Royal Entomological Society Ento22, Systematic Entomology Journal Award Winner. “Has past climate change affected cold-specialized species differentially through space and time?”
- September 15, 2022. Friends of the Arboretum. “Impacts of past and present climate change on alpine insects in western North America.”
- July 2022. XXVI International Congress of Entomology, Helsinki. Organized Symposia: “Adaptation to Agroecosystems.” Y. Chen, L. Lindström, and S.D. Schoville.
- September 2021. Society for Vector Ecology. “Population genomics of blacklegged ticks, *Ixodes scapularis*, in the United States.” S. Schoville, S. Paskewitz, and J. Tsao.
- July 28, 2021. Mitchell, RF, and SD Schoville. Faculty Research Showcase, WiSys SPARK Symposium (virtual). “RNAi of odorant receptor genes disrupts the olfactory system of the Colorado potato beetle, *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae).”
- December 2018. University of Kentucky. “Insights into rapid evolution of insect pests from the Colorado potato beetle.”
- November 2018. Entomological Society of America. Orthopteroid Symposium. “The genetic basis of physiological niche conservatism in ice crawlers (*Grylloblatta*).”
- March 2018. North Central Branch of the Entomological Society of America. Societal Challenges with Entomological Solutions Symposium. “Climate change impacts and the prospect of climate adaptation in insects.”

- November 2017. Entomological Society of America. Arctic, Antarctic, and Alpine Invertebrates Symposium: research from Earth's coldest and most rapidly changing environments. "Do thermal niches evolve in alpine insects?"
- April 2017. University of Washington. "Evolution and ecology of cold-specialized insects in the Cascades Range."
- April 2017. Iowa State University (Graduate Student Invited Lecture). "Landscape genomics approaches in agriculture, conservation and evolutionary research."
- September 2016. XXV International Congress of Entomology. Organized Symposia: "Rapid Evolution of Insect Pests within Agroecosystems." S.D. Schoville and Y. Chen.
- April 2016. Rotary Club of Mt. Horeb, WI. "Using genetics to address problems in agriculture and global change."
- November 2015. Entomological Society of America. Orthopteroid Symposia. "Phylogenetic roots of the Grylloblattodea and implications for past environmental change."
- October 2014. Iowa State University. "Evolutionary responses to climate variation in alpine insects of western North America."
- July 2014. North Cascades National Park. "The biodiversity, natural history and conservation of snow-field insects in the North Cascades."
- April 2014. Southern Wisconsin Butterfly Association. "Past and future climate change impacts on alpine butterflies in the Sierra Nevada, California."
- March 2014. University of Illinois at Urbana-Champaign. "Evolutionary responses to climate variation, with a focus on alpine insects."
- February 2014. University of Vermont. "How are species able to successfully adapt? The genetic basis of local adaptation."
- September 2013. 6th Dresden Meeting on Insect Phylogeny. "Global biogeography of the family Grylloblattidae (Grylloblattodea) and their underappreciated species richness."
- February 2013. University of Wisconsin-Madison. "Genetic approaches to understanding the role of climate in generating biodiversity."
- December 2012. Méthodologies et Statistiques Spatiales Appliquées à la Génétique Environnementale (MESSAGE) workshop. "Detecting adaptive variation on the landscape: environmental correlations."
- March 2009. Pacific Branch of the Entomological Society of America. "Diversification and biogeography of the cryophilous insect family Grylloblattidae."
- August 2008. Yosemite Forum. "Evolutionary history, distributional patterns, and conservation of Sierra Nevada alpine insects."
- April 2007. ESPM Graduate Student Symposium. "Past and present trends in alpine insect diversity."
- March 2007. Pacific Branch of the Entomological Society of America. "Tracing Postglacial Invasions of Sierra Nevada Alpine Insects."

### **SEMINARS & LECTURES AT UNIVERSITY OF WISCONSIN**

---

- July 2022. Global Health Institute webinar, UW Madison. "Population divergence and local adaptation of blacklegged ticks in the United States."
- October 2018. Wisconsin Ecology Seminar ZOO 953. "How do organisms respond to environmental change?"
- November 2017. Climate, People and the Environment Program (CPEP). "Impacts of past and present climate change on alpine insects in western North America."

October 2017. Wisconsin Ecology Seminar ZOO 953. “Evolutionary responses to environmental change.”

September 2017. Forest and Wildlife Ecology. “Evolutionary history and ecology of cold-specialized insects in western North America.”

September 2017. Basic and Applied Insect Ecology ENTOM 450/451. “Abiotic conditions and species distributions.”

February 2017. UW Whitewater Biology Lecture Series. “Evolutionary history and ecology of cold-specialized insects.”

October 2015. Wisconsin Ecology Symposium. “Evolutionary responses to environmental variation.”

September 2015. Basic and Applied Insect Ecology ENTOM 450/451. “Abiotic conditions and species distributions.”

November 2014. Wisconsin Ecology Seminar ZOO 953. “Using molecular methods in ecological research.”

October 2014. University of Wisconsin, Evolution Undergraduate Seminar BIOL 675. “Adaptive genetic variation on the landscape: methods and cases.”

October 2014. University of Wisconsin, Evolution Seminar Series. “Diversification and thermal niche evolution in cold-adapted insects.”

## **OUTREACH ACTIVITIES AND MEDIA COVERAGE**

---

Yosemite Butterflies mobile application field guide.

Youth Science Scholars, Faculty Mentor, University of Wisconsin-Madison.

Wisconsin Insect Fest, 2019.

UW Day Research Panel for incoming students, University of Wisconsin-Madison, 2017-2019.

Yosemite National Park Annual Butterfly Count leader, 2016-2019

North Cascades National Park Bioblitz leader, 2014 & 2016

North Cascades National Park Butterfly Workshop, 2017

Media Coverage: Discover Magazine, “Pesticide puzzler”, June 2018, Ernie Mastroianni.

Media Coverage: UW News, “Colorado potato beetle genome gives insight into major agricultural pest.” 31 Jan. 2018, Eric Hamilton.

Media Coverage: Biographic. “Bugs on ice.” 6 Sept. 2016, Brendan Borrell.

Media Coverage: The Spokesman-Review. “Mount Spokane ice crawler may be a unique species, scientists say.” 10 April 2016, Jonathan Brunt.

Media Coverage: The Why Files? “Climate change: Who is a climate scientist?” 5 Feb. 2015, David Tenenbaum

Media Coverage: National Geographic France; KQED Quest Science television program on Darwin; Berkeley Science Review.

Design of ecological field projects for undergraduate researchers, in collaboration with East Bay Municipal Utilities District and UC Berkeley.

Design of web-based GK-12 teaching modules focused on: California Biodiversity, Food Web Ecology, Cladistics, Insect Identification, Life History and Ecology, and the History of Life.

Content on AmphibiaWeb, an informatics and amphibian conservation website.

## **SECOND LANGUAGES**

---

French

## **PROFESSIONAL MEMBERSHIPS**

---

Society for the Study of Evolution (SSE); Entomological Society of America (ESA); Society for Conservation Biology (SCB); Society of Molecular Biology and Evolution

(SMBE); Alumni Association of the Japan Society for the Promotion of Science (JSPS); National Geographic Explorer (Wisconsin Hub); Ambassade de France aux États-Unis, Service pour la Science et al Technologie (au Chicago); Society for Vector Ecology (SOVE); Sigma Xi