

2019 Curriculum vitae

NAME: Jennifer S. Thaler

DEPARTMENT/UNIT: Entomology

Joint appointment in Ecology & Evolutionary Biology

TITLE: Professor

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WEB PAGE: <http://entomology.cals.cornell.edu/people/jennifer-thaler>

BACKGROUND

EDUCATION

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
1999	Ph.D., Entomology (Advisor: Dr. Richard Karban)	University of California at Davis
1993	B.A., Biology <i>Cum Laude</i>	Wellesley College

ACADEMIC RANK

Professor: 2015 to present, Cornell University

PRIMARY DEPARTMENTAL/UNIT PROGRAM AREA

Insect ecology, 60% research and 40% teaching

AREAS OF EXPERTISE

Population and community ecology, plant-insect interactions, tri-trophic interactions, chemical ecology

PROFESSIONAL EXPERIENCE

<u>Year</u>	<u>Experience</u>
2015-present	Cornell University, Professor of Entomology
2006-2015	Cornell University, Associate Professor of Entomology
2004-2006	Cornell University, Assistant Professor of Entomology
2000-2004	University of Toronto, Assistant Professor of Botany
1999-2000	Wageningen Agricultural University, Postdoctoral Researcher in the Laboratory of Entomology, Wageningen, Advisor: Dr. Marcel Dicke
1999	University of California at Davis, Postdoctoral Researcher in the Department of Plant Pathology, Advisor: Dr. Richard Bostock
1994-1999	University of California at Davis, Teaching and Research assistantships
1992-1993	Harvard Forest, Research Assistant, Dr. Richard Boone and Dr. Richard Lent

SABBATICALS AND STUDY LEAVES

2017-2018	Insect Ecophysiology Lab. University of Missoula (Art Woods) and Oaxaca, Mexico
2010	Insect Physiology Lab. University of Arizona (Goggy Davidowitz): Physiological responses of <i>Manduca sexta</i> to host plant quality and predation risk. (half-year)

2007 Molecular and Biochemical Basis of Plant-Insect Interactions Lab. Michigan State (Gregg Howe): Jasmonate-induced responses in tomato plants. (half-year)

HONORS AND AWARDS

Merrill Presidential Scholar Teaching Impact: 2018. The Cornell Merrill Scholar (top 1% of graduates) identifies the faculty member that has had the most impact on their scholarship while at Cornell. Student: Danielle Rutkowski

Cornell Center for Sustainable Future Faculty Fellow: 2011 to present

Excellence in Ecological Entomology - The Royal Entomological Society's Awards for Scientific Writing, Runner up (2002)

Premiers Research Excellence Award, Government of Ontario (2000)

American Society of Naturalists Young Investigators Award (2000)

Entomological Society of America, 2nd prize, oral presentation (1998)

ARCS Scholar (1996)

Sigma Xi

REPRESENTATIVE ACADEMIC RESPONSIBILITIES

GRANT SUPPORT

Active Grants

Thaler, J and Underwood, N	2018-2021
USDA-AFRI	\$489,107 (\$439,107 Thaler portion)
Using Colorado Potato Beetle Responses To Predators To Maximize Pest Control	

Thaler	2015-2020
Federal Multistate Funds	\$148,000
Harnessing Chemical Ecology to Address Agricultural Pest and Pollinator Priorities	

Thaler	2014-2017
USDA-AFRI	\$380,000
Pest Responses to Predation Risk: Maximizing Biological Control of the Colorado Potato Beetle	

Thaler	2014-2017
Federal Formula Funds	\$88,500
Chemical ecology of predator odors for pests of potato and tomato plants	

PROFESSIONALS SUPERVISED:

Postdoctoral Associates

Natasha Tigreros (2014-2017)

Will Wetzel (2015-2016)

Katja Poveda, Research Associate (2009-2011)

Ian Kaplan, Postdoctoral Researcher (2008- 2009)

Ian Scott, Postdoctoral Researcher (2005- 2007)

Cesar Rodriguez-Saona (2001-2004)

Research Professionals

Todd Ugine (2017-)

Scott Nelson, Research Support Specialist (2010-2012)

Jessica Nix, Technician (2008- 2009)
 Andrew Tucchillo, Technician (2005-2006)
 Andrew McDowell, Technician (2004-2005)
 Lisa Plane, Technician (2001-2003)
 Marc Johnson, Technician (2000-2001)

Past funding awards

Nyrop, Thaler	2012-2014
Federal Formula Funds	\$35,600
Do non-lethal predator effects enable or hinder pest management	
Thaler	2011-2014
Federal Formula Funds	\$63,000
Enhancing Effectiveness of Native Generalist Predators to Reduce Colorado Potato Beetle Damage on Potato Plants	
Thaler, Poveda, Gomez, Jander	2011-2013
Atkinson Center Sustainable Future	\$107,000
Sustainable pest management and yield increase strategies through ecological, genetic, and economic analysis	
Thaler	2006-2010
USDA-NRI	\$383,000
Factors influencing the non-consumptive effects of predators on herbivore performance, plant damage and induced resistance	
Thaler	2008-2011
Federal Formula Funds	\$57,000
Non-consumptive and consumptive effects of native generalist predators on Colorado potato beetle, a major pest of NY potatoes	
Agrawal, Thaler, Fry	2005-2008
Federal Formula Funds	\$90,000
Elicitation of plant defenses as an alternative to pesticides for control of Colorado potato beetle and late blight	
Thaler	2004-2010
NSERC Discovery Grant	CND \$180,500 + overhead
Coordination of Plant Resistance Against Multiple Attackers (declined 2005- funds)	
Thaler, Agrawal, Adler	2004
NSF DEB	CND \$21,000
Award to host an international symposium on plant-insect interactions	
Thaler (co-PI with 7 others)	2002
NSERC Equipment Grant	(CND \$55,000)
C-N Autoanalyzer"	
Thaler	2002-2004
NSERC Discovery Grant	CND \$112,000

Coordination of Plant Resistance Against Multiple Attackers

Thaler (co-PI with 2 others) 2000-2004
 Canadian Foundation for Innovation CND \$488,000
 Facility for the integrative study of plant responses to pathogens and herbivores: Genes, individuals, & populations

Thaler 2000-2002
 Connaught New Staff Matching Grant CND \$30,000
 The influence of plant resistance on pattern of damage by herbivores and rate of enemy attack

Thaler 2000-2001
 Connaught Grant CND \$10,000
 Plant Response to Attack by Pathogens and Herbivores

Thaler 2000-2004
 Premier's Research Excellence Award CND \$100,000

Thaler (co-PI with 4 others) 1998-1999
 California Celery Research Advisory Board \$26,000
 Novel pest management strategies using *Beauveria* and chemical elicitors

TEACHING AND ADVISING RESPONSIBILITIES**Undergraduate Courses**

Ecology and the Environment BIOEE 1610, 2011, 2014, 2015 and Even spring, 3cr
 Insect Ecology ENTOM4550/BIOEE4550, Even fall, 4 cr
 Chemical Ecology ENTOM 3690/BIONB3690/BIOEE3690, Every spring, 3 cr
 Environmental Biology, University of Toronto ENV234, (2001-2004)
 Plant-Animal Interactions, University of Toronto BIO440 (2003, 2004)
 Communication in Species Interactions, University of Toronto BIO 495/496 (2001-2004)
 Terrestrial Ecology of Southern Ontario, University of Toronto BIO305 (2003- 2004)

Graduate Courses

Plant-Insect Interactions Discussion Group, BIOEE/ENTOM 7640 (every semester 2004-present)
 Current Topics in Entomology, ENTOM 7670 (2008-2010)
 Fashionable Concepts in Ecology, University of Toronto BOT1700 (2001)
 Evolution of pesticide resistance, University of Toronto BOT1700 (2002)
 Tri-Trophic interactions, University of Toronto BOT1700 (2004)

International Graduate Courses

Organization for Tropical Studies, Plant Animal Interactions in the Tropics, 2010, La Selva, Costa Rica, Invited Instructor
 Cornell University, Transnational Learning, Insect Ecology 2010
 Nordic Entomology Course, 2002, Sweden, 1 week, Invited instructor
 Harvard University, Insect-Plant Interactions graduate course Spring 2001 1 lecture: Specificity in induced plant responses.

Guest lectures

ENTOM 2120 Insect Biology. Fall 2008, 2013 1 lecture: Herbivory.
 ENTOM 2010 Alien Empire. Spring 2007, 2008, 1 lecture: Herbivory.

HORT/BIOEE 4730 Ecology of Agricultural Systems. Spring 2008 1 lecture: Tritrophic Interactions in Agriculture.
 BIOEE 7670 Current Topics in Ecology and Evolutionary Biology. Fall 2008, 2011 1 lecture: Current research in plant-herbivore interactions.
 BIOEE Herbivores and Plants: Chemical Ecology and Coevolution. 2005 1 lecture: Chemicals to Communities.
 ENTOM 4440 Integrated Pest Management. Fall 2004 5 lectures on Ecology in Agricultural Systems.

Undergraduate Advisees

Biological Science majors present (7): Stephanie Chun, Elias Diakolios+ 5 Freshman

Entomology majors: present (2): Nina Devine and Zoe Kim

Biological Science majors past (30): Elizabeth Keller, Grant Montgomery, Ethan Joseph, Brett McGinnis, Kayleigh Fisher, Abigail Duvall, Laura Hou, Jeffry Petracca, Kathryn Blackley, Kayleigh Chalkowski, Brian Magnier, Michele Parke, Taylor Heaton, Rachel Norris, Laila Abdul, Oksana Bihun, Andrew Cartwright, Cody Clarson, Marissa Martinez, John Tawil, 18 freshman Arts Biology majors

Entomology majors past (10): William Lamorie, Isa Betancourt, Jenna Denicola, Jeffry Petracca, Isaac Rockwell, Grant Montgomery, Serena Schatz, Marina Mann, Rachel Norris, Erin Krichilsky

Undergraduate project students (30)

(*indicates students were co-authors on published papers)

Ari Grele (2017-)

George Stack (2017-)

Sheyla Finkner (2018-)

Abigail Ditmar (2016-)

Fiona MacNeill (2016-)

Danielle Rutkowski (2016-2018)

Dan Pearlstein (2015-2017)

Eugenia Wang* (2015-2017)

Rachel Norris* (2014-2017)

Elizabeth Davidson-Lowe (2014)

Alyssa Cowles (2013-2014)

Stephen Pecylak (2012-2014)

Mariah Slone (2012-2013)

Lucas Gonzales (Biology Research Fellow 2011-2013)

Marie Russell (2011-2013)

Zoya Kauffman (2011-2012)

Ryan Reynolds (2009-2013)

Isa Betancourt (2010-2011)

Micah Freedman (Cornell Presidential Research Scholar 2009-2010)

Chris Roh (2009-2010)

Ordorm Huot (2008-2011)

Elena Olsen* (Cornell Presidential Research Scholar 2008-2011)

Alice Combs (Hughes Fellow 2007)

Liana Nice (Hughes Fellow, 2006)

Gord McNickle* (University of Toronto, NSERC Fellowship, 2004)

Tara Nicholls (University of Toronto, student researcher, 2004)

Olga Lifchits* (University of Toronto, student researcher, 2003)

Abigail Deshman (University of Toronto, NSERC Fellowship, 2003)
Anita Narwani* (McGill University, NSERC Fellowship, 2003)
Jennifer Chalmers* (University of Toronto, NSERC Fellowship, 2002)
Blythe Owen* (University of Toronto, summer research student 2002)
Joseph Dodgson (University of Toronto, NSERC Fellowship, 2001)

Past Teaching Assistants (Graduate & Undergraduate) and Other Teaching Support Professionals Supervised

Julie Davis (2018)
Zoe Getman-Pickering 2016
Yann-Ru 2016
Katie Marchetto 2016
Mary Centrella 2014
Monica Kersch-Becker 2014
Sara Hermann 2014
Suzi Claflin 2012
Scott McArt 2010, 2008
Stuart Campbell, 2006
Gaylord Desurmont 2005

GRADUATE FIELD MEMBERSHIPS

Field of Entomology
Field of Ecology and Evolutionary Biology

GRADUATE MAJORS

Current (3)

Julie Davis (2018-) PhD Entomology
Nicholas Aflitto (2016-) PhD in Entomology
Zoe Getman-Pickering (2014-) PhD in Entomology

Total Completed (6)

Suzi Claflin (2011-2016) PhD in Entomology (co-advised with Alison Power)

Sara Hermann (2012-2015) MS in Entomology. Non-consumptive effects of predatory spined soldier bug on Colorado potato beetle prey

Monica Frank Kersch Becker (2008-2014) PhD in Ecology and Evolutionary Biology.
Interactive Effects of Plant Defenses and Predators on Herbivore Population Dynamics

Scott McArt (2006-2012) PhD in Entomology. Plant genotypic diversity and its influence on arthropod communities.

Danush Viswanathan (2000-2006) PhD in Botany, Botany, University of Toronto. Ecological consequences of specificity in plant phenotypic responses to herbivorous insects.

Celine Muis Griffin (2001-2004) MSc in Botany, University of Toronto. Effects of carnivores on plant defenses against herbivores.

GRADUATE MINORS**Current (6)**

Ethan Bass (2018-) PhD candidate in EEB

Colleen Miller (2018-) PhD candidate in EEB, rotation student

Imperio Real (2018-) PhD candidate in Microbiology

Katherine Holmes (2015-) PhD candidate in Ecology and Evolutionary Biology

Rodrigo Perez (2014-) PhD candidate in Entomology

Lauren Snyder (2013-) PhD candidate in Ecology and Evolutionary Biology

Total Completed (24)

Maxwell Helmberger (2015-2017) MS, Entomology

John Smeda (2012-2017) PhD, Plant Breeding and Genetics

Maya Lim (2013-2015) MS, Ecology and Evolutionary Biology

Leo Stellwag (2008-2015) PhD, Entomology

Kim Morrell (2009-2015) PhD, Ecology and Evolutionary Biology

Elaine Fok (2011-2013) MS, Entomology

Sarah Jandricic (2007-2013) PhD, Entomology

Caroline Couch (2007-2013) PhD, Ecology and Evolutionary Biology

Emily Pollina (2006-2013) PhD, Ecology and Evolutionary Biology

Stuart Campbell (2005-2012) PhD, Entomology

Masanori Seto (2006-2012) PhD, Entomology

Lauren Cator (2006-2011) PhD, Entomology

Doo-Hyung Lee (2006-2011) PhD, Entomology

Florian Eichiner (2006-2011) PhD candidate, Natural Resources

Gaylord Desurmont (2006-2009) PhD, Entomology

Elizabeth Goulet (2003-2008) PhD, Entomology

Caroline Boutard (2006-2008) MS, Entomology

Alongkot Ponlawat (2005-2007) PhD, Entomology

David Clark (2000-2002) MSc, Botany, University of Toronto

Deborah Manners (2001-2003) MSc, Botany, University of Toronto at Mississauga

Nile Kurashige (2001-2004) MSc, Botany, University of Toronto

Nick Rudzik (2001-2004) PhD, Forestry, University of Toronto

Marc Johnson (2001-2006) PhD, Botany, University of Toronto

Diane Stanley-Horn (2001-2004) PhD candidate, Environmental Biology, University of Guelph

EXTENSION/OUTREACH RESPONSIBILITIES: (No formal extension responsibilities)

Annual Participant in Cornell Department of Entomology's "Insectapalooza" (2006-2017)

Insect Demonstration at Belle Sherman Elementary School (2011- 2014)

REPRESENTATIVE PROFESSIONAL ACTIVITIES**PROFESSIONAL SERVICE**

USDA-AFRI, Pest and Beneficials, panelist, 2018

PROFESSIONAL SOCIETIES

Entomological Society of America (1994-)

Ecological Society of America (1998-)

International Society of Chemical Ecology (2008-)

EDITORIAL BOARDS

Oecologia, (2013-present)

Ecological Entomology, (2010- 2013)
Plant Signaling & Behavior, (2008- 2013)
Ecology Letters, (2006-2010)
Annals of the Entomological Society of America, (2002-2004)

COMMITTEE ASSIGNMENTS

University:

Faculty Senate *Ad hoc* Committee on the Cornell Childcare Center (2010)
 University of Toronto Science Committee 2001-2004
 University of Toronto General Committee 2001-2004

College:

CALS Committee on Support of Teaching and Learning (2018-)
 CALS Curriculum Committee (2011-2017)
Ad hoc committee on academic misconduct (2012)
Ad hoc promotion to tenure committee (2007: 2, 2012: 1)
 Mellon Kieckhefer Award Committee, 2006, 2009
 University of Toronto, Botany Chair Search, 2004

Department:

Executive Committee (2014-2017, 2018-)
 Curriculum Committee, Chair (2011-2017)
 Griswold Committee (2010-2013, Chair 2013)
 Admissions Committee (2009-2012)
 7670 Leader (2008-2010)
 Merger Committee, Chair (2009-2010)
 Nominations Committee (2008-2010)
 Newsletter Committee (2006-2010)
 Sarkaria Insect Physiology Search Committee (2007)
 Plant-Microbe Interactions Search Committee, University of Toronto, 2003
 Koffler Scientific Reserve, User's Committee, University of Toronto, 2003
 Koffler Scientific Reserve, Director Search Committee, University of Toronto, 2002
 Plant Ecology Search Committee, University of Toronto, 2001-2002
 Ecology Lunch Seminar Committee, University of Toronto, 2000-2004
 Undergraduate Committee University of Toronto, 2000-2004
 Plant Ecology Search Committee, Scarborough Campus, University of Toronto, 2000-2001

REPRESENTATIVE PROFESSIONAL CONTRIBUTIONS

CONFERENCES/WORKSHOP PRESENTATIONS

2018 Chemical Ecology Multistate Meeting, State College
 2012 Interactions between predation risk and plant resistance for Colorado potato beetle behavior, physiology and performance. Ecological Society of America, Portland
 2010 Salicylate-mediated interactions between pathogens and herbivores. Gordon Research Conference on Plant-Herbivore Interactions, poster
 2004 Gordon Research Conference on Plant-Herbivore Interactions, poster
 2003 Ecological Society of America
 2002 Ecological Society of America
 2002 Ontario Ecology, Ethology, and Evolution Conference
 2001 Ecological Society of America

- 2001 Gordon Research Conference on Plant-Herbivore Interactions, poster
 2000 Ecological Society of America
 1999 Ecological Society of America
 1998 Gordon Research Conference on Plant-Herbivore Interactions, poster
 1998 Ecological Society of America
 1997 Ecological Society of America
 1997 Entomological Society of America
 1996 Entomological Society of America
 1995 Southwest Regional Cotton Meeting

INVITED PRESENTATIONS

2018

University of Wisconsin, Madison, Wisconsin, Keynote Speaker, Ecology Fall Symposium
 Entomological Society of America, Vancouver, Canada, Symposium on Future Challenges to
 Women in Entomology, “Be yourself and other strategies for succeeding in what you love”
 Max Plank for Chemical Ecology, Tritrophic Interactions and the Ecology of Fear, Jena,
 Germany

2017

University of Montana, Missoula, Montana. Tritrophic Interactions and the Ecology of Fear.
 University of Kentucky, Lexington, Kentucky, Tritrophic Interactions and the Ecology of Fear,
 Student Invited Speaker.
 Gordon Research Conference. Plant-Herbivore Interactions. Tritrophic Interactions and the
 Ecology of Fear.

2016

Gordon Research Conference. Predator-Prey Interactions. Chemical ecology of tri-trophic
 interactions.

2014

University of Colorado, Boulder, Colorado. Predicting variation in prey responses to predation
 risk
 Entomology Society of America, Portland, Oregon. P-IE Symposium: “Non-Lethal Effects of
 Predators in Arthropod Food Webs: Ecological Patterns, Behavioral Mechanisms, and
 Agricultural Applications”. Using fear effectively in pest management.

2013

Ecological Society of America, Minneapolis. Symposium: “Ecophysiological consequences of
 predation risk”. Predicting prey responses to predation risk.
 Entomological Society of America, Austin, Symposium: “The Environment as the Sculptor”
 Predicting prey responses to predation risk
 7th New Phytologist Workshop on Chemical Ecology and Coevolution, Ithaca: Predicting prey
 responses to predation risk

2012

Plant-Microbe-Interactions Symposium, Baeza, Spain. Ecological importance of jasmonate-
 salicylate signal crosstalk in plant resistance
 AgriCanada Research Center, London, Canada. Ecological importance of jasmonate-salicylate
 signal crosstalk in plant resistance
 University of California, Davis. Ecological consequences of predation risk.
 Western University, London, Canada. Interactive effects of host plant quality and predation risk

2011

Stockholm U-Cornell U Insect Science Symposium Compensatory responses to predation risk in *Manduca sexta* Stockholm University.

Cornell University, Caterpillar Day. The Ecology of fear in *Manduca sexta*.

Texas A&M. Interactions between host plant resistance and predation risk.

Bittersweet Nightshade Research Symposium, Key Note Speaker, Berlin Germany. Plant-mediated interactions between insect herbivores, unravelling the mechanisms of field patterns.

2010

Impacts of predation risk and plant quality on caterpillar nutritional ecology and physiology.

International Plant Resistance Symposium, Invited Speaker, Charleston, SC

2008

University of Tennessee, Knoxville

2007

Northern Arizona University

Society for Insect-Plant Interactions, Uppsala, Sweden, Plenary Speaker

2006

Pennsylvania State University, Department of Entomology

Cornell University, Geneva Entomology Department

2005

University of Neuchatel, Switzerland

2004

Symposium on Phenotypic Plasticity, Ecological Society of America

University of Toronto at Mississauga, Department of Biology

2003

Symposium on Crosstalk in Plant Signal Transduction, Society for Experimental Biology Meeting, Lancaster University, UK

Cornell University, Molecular and Chemical Ecology Series

Botany Graduate Student Association, Friday Series

2002

Cornell University, Jugatae Series in Entomology

Colorado State University

Western Regional Biological Control Group

BRAIN Symposium: Multitrophic Interactions and Environmentally Benign Pest Management.

Kyoto, Japan

2001

Gordon Research Conference on Plant-Herbivore Interactions, Invited introducer

Entomological Society of America Symposium: Induced resistance: plant-pest interactions mediated by plant induced responses

Center for Plant Health Science and Technology Conference, Texas (Keynote speaker)

Botany Undergraduate Society seminar, University of Toronto

2000

Society for the study of Evolution, Young Investigators Symposium
Wageningen Agricultural University, Department of Entomology
Max-Planck Institute for Chemical Ecology
Queen's University, Department of Biology

1999

Pennsylvania State University, Department of Entomology
Centre for Population Biology, Imperial College, Silwood Park.
IACR- Rothamsted, Entomology and Nematology Department
University of Turku, Department of Biology

1998

University of Toronto, Department of Botany
Joint Symposium of the Phytopathological Society and Entomological Society of
America: Frontiers in the study of induced plant defenses.
USDA-ARS Western Cotton Research Laboratory

MEETINGS ORGANIZED

2017-2019

Vice-Chair of the Gordon Research Conference in Plant-Herbivore Interactions, Ventura,
California

2016

NE1501 Multistate meeting: Harnessing Chemical Ecology in Agriculture

2014

Organized Oral Session at the Ecological Society of America: Ecophysiological Effects of
Predation Risk

2012

Frontiers in Life Sciences, organizer for May Berenbaum's visit

2009

Conference Organizer: Pennsylvania State University-Cornell University 2nd Chemical
Ecology Mini-Symposium

2004

Multi-Trophic Interactions Brainstorm Symposium, (Toronto).

2000

Organised symposium for Joint Meeting of the Entomological Societies of Canada and
America, "Specificity of Host Plant Resistance to Insects"

WORKSHOPS ATTENDED

Panelist at the New Faculty Orientation (August 2014)

Panelist in Cornell Advance Program: Proposal Writing Clinic (May 2008)

Panelist in Ecological Society of America Workshop on How to succeed in ecology: Advice
from current and aspiring eminent ecologists (August 2004).

REVIEWS

Reviewer for Ecology, Oecologia, PLOS, Entomologia Experimentalis et Applicata, NSF-DEB

PUBLICATIONS (peer reviewed) (68 total).

Tigeros, N., R. Norris, and **J.S. Thaler**. 2019. Maternal effects across life stages: larvae
experiencing predation risk increase offspring provisioning. *Oecologia*, in press.

- Claflin, S.B., N. Hernandez, R. Groves, **J.S. Thaler**, A.G. Power. 2019. Intra-annual variation and landscape composition interactively affect aphid community composition. *Ecosphere*, in press. 10.1002/ecs2.2710
- Kersch-Becker, M. and **J.S. Thaler**. 2019. Constitutive and herbivore-induced plant defenses regulate herbivore population growth. *Journal of Animal Ecology*, in press.
- Boege, K., A.A. Agrawal, J.S. Thaler. 2019. Ontogenetic strategies in insect herbivores and their impact on tri-trophic interactions. *Current Opinion in Insect Science*, 32: 61-67.
- Wetzel, W.C., N. Aflitto, **J.S. Thaler**. 2018. Plant genotypic diversity interacts with predation risk to influence an insect herbivore across its ontogeny. *Ecology*, <https://doi.org/10.1002/ecy.2472>
- Hermann, S.L. and **J.S. Thaler**. 2018. The effect of predator presence on the behavioral sequence from host selection to reproduction in an invulnerable stage of insect prey. *Oecologia* 188: 945-952. 10.1007/s00442-018-4202-7.
- Tigreros, N., E. Wang, and **J.S. Thaler**. 2018. Prey nutritional state drives divergent behavioural and physiological responses to predation risk. *Functional Ecology* 32:982-989. 10.1111/1365-2435.13046
- Helmberger, M., **J.S. Thaler**; E. Shields; K. Wickings. 2018. Entomopathogenic nematode performance against *Popillia japonica* (Coleoptera: Scarabaeidae) in school athletic turf: Effects of traffic and soil properties. *Biological Control* 126:177-184.
- Wetzel, W.C. and **J.S. Thaler**. 2017. Host-choice reduces, but does not eliminate, the negative effects of a multi-species diet for an herbivorous beetle. *Oecologia* 1-11. doi.org/10.1007/s00442-017-4034-x.
- Kersch-Becker, M.F., Kessler, A, and **J.S. Thaler**. 2017. Plant defenses limit herbivore population growth by changing predator-prey interactions. *Proceedings of the Royal Society B*. DOI: 10.1098/rspb.2017.1120
- Tigreros, N, R. Norris, E. Wang, **J. S. Thaler**. 2017. Maternally induced intraclutch cannibalism: an adaptive response to predation risk? *Ecology Letters* 20: 487-494. 10.1111/ele.12752
- Garrido, E., Díaz, M.F., Bernal, H., Núñez, C.E., **Thaler, J.**, Jander, G. and K. Poveda. 2017. Costs and tradeoffs of resistance and tolerance to belowground herbivory in potato. *Plos One*, doi.org/10.1371/journal.pone.0169083.
- Claflin, S., A.G. Power, **J.S. Thaler**. 2017. Aphid density and community composition differentially affect apterous aphid movement and plant virus transmission. *Ecological Entomology* 42: 245-254. DOI: 10.1111/een.12381
- Claflin, S, Jones, L, **Thaler, J**, Power, A. 2016. Crop-dominated landscapes have higher vector-borne plant virus prevalence. *Journal of Applied Ecology*. 10.1111/1365-2664.12831
- Wetzel, W. C. and **J.S. Thaler**. 2016. Does plant trait diversity reduce the ability of herbivores to defend against predators? The plant variability-gut acclimation hypothesis. *Current Opinion in Insect Science* 14:25-31.

- Orrock, J.L., A. Sih, M.C.O Ferrari, R. Karban, E.L. Preisser, M.J. Sheriff, and **J.S. Thaler**. 2015. Error management in plant allocation to herbivore defense. *Trends in Ecology and Evolution* 8:441-445. <http://dx.doi.org/10.1016/j.tree.2015.06.005>
- Kersch-Becker, M. and **J.S. Thaler**. 2015. Plant resistance reduces the strength of consumptive and non-consumptive effects of predators on aphids. *Journal of Animal Ecology*, 84:1222-1232. 10.1111/1365-2656.12371 **winner of 2nd place Elton Prize (best paper of the year by a young scientist)
- Claflin, S., **J.S. Thaler**, A. Power. 2015. Predators, host abundance, and host spatial distribution affect the movement of wingless non-colonizing vector *Rhopalosiphum padi* (L.) and PVY prevalence in an oat/potato system. *Arthropod-Plant Interactions* 9:301-309. 10.1007/s11829-015-9370-3
- Thaler, J.S.**, E.L. Olsen, I. Kaplan. 2015. Jasmonate-induced plant defenses and prey availability impact the preference and performance of an omnivorous stink bug, *Podisus maculiventris*. *Arthropod-Plant Interactions*, 9:141-148. DOI: 10.1007/s11829-015-9357-0.
- Raguso, R.A., Agrawal, A.A., Douglas, A.E., Jander, G., Kessler, A., Poveda, K, and **J.S. Thaler**. 2015. The raison d'être of chemical ecology. *Ecology*, 96:617-630. DOI 10.1007/s00442-014-3069-5
- Hermann, S.L. and **J.S. Thaler**. 2014. Prey Perception of Predation Risk: volatile chemical cues mediate non-consumptive effects of a predator on a herbivorous insect. *Oecologia* 176:669-676. DOI 10.1007/s00442-014-3069-5
- Campbell, S.A., R. Halitschke, **J.S. Thaler**, A. Kessler. 2014. Plant mating systems alter adaptive plasticity in response to herbivory. *The Plant Journal* 78:481-490.
- Kaplan, I., S.H. McArt, **Thaler, J.S.** 2014. Plant defenses and predation risk differentially shape patterns of consumption, growth, and digestive efficiency in a guild of leaf-chewing insects. *Plos One*: 9(4) e93714
- Kersch-Becker, M.F. and **J. S. Thaler**. 2014. Virus strains differentially induce plant susceptibility to aphid vectors and chewing herbivores. *Oecologia* 174:883-892.
- Thaler, J.S.**, H. Contreras, G. Davidowitz. 2013. Effects of predation risk and plant resistance on *Manduca sexta* caterpillar feeding behavior and physiology. *Ecological Entomology* 39:210-216.
- McArt, S.H. and **J.S. Thaler**. 2013. Plant genotypic diversity reduces the rate of consumer resource utilization. *Proceedings of the Royal Society B*. 280: 20130639.
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PROFESSIONAL OVERVIEW AND OBJECTIVES

Dr. Thaler's research goals are to develop a predictive framework for understanding the complex interactions that occur between plant and insect species. Studies of fundamental ecological processes, in both agricultural and wild systems, can provide insight into controlling insect pests and understanding the natural world. Thaler's research focuses on ecological interactions between plants, herbivores, and carnivores in agricultural and wild Solanaceous plants. Current research projects focus on understanding the non-consumptive effects of predators on prey and understanding how plants integrate their defenses against multiple attackers. She offers courses in Insect Ecology (ENTOM/BIOEE 4550) and Chemical Ecology (ENTOM/BIOEE/BIONB 3690). She also teaches a graduate seminar in Plant-Insect Interactions. Thaler mentors undergraduate and graduate students in the areas of entomology, ecology, plant sciences and biology.