

SAMANTHA ALGER

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EDUCATION

- 2013-2018** **University of Vermont - Burlington, VT**
PhD, Biology, NSF Graduate Research Fellow, Switzer Fellow
- 2005-2009** **University of Rhode Island - Kingston, RI**
BA Biology, BS General Business; Spanish Minor
Overall GPA: 3.8/4.0
Summa Cum Laude
- 2009** **CIEE, Study Abroad - Monteverde, Costa Rica**
Tropical Ecology & Conservation

EXPERIENCE

- 5/2015-Present** **Vermont Manager and Inspector, National Honey Bee Survey**
Coordinate with state/federal officials and beekeepers, manage survey logistics, inspect hives for diseases and pathogens and collect samples for analysis, present results to apicultural and scientific community
- 9/2013-9/2018** **Graduate Research Fellow, University of Vermont, Burlington, VT**
Conducted field and laboratory experiments to show spillover of RNA viruses from managed honey bees to wild bumble bees through flowers, obtained over \$250,000 in competitive grants and awards
- 9/2013-9/2015** **Teaching Assistant, University of Vermont, Biology Department, Burlington, VT**
Prepared and instructed labs for undergraduate biology courses
- 9/2013-6/2014** **Bee Lab Technician, Taylor Ricketts, UVM Burlington, VT**
Curated native bee collection for ongoing research and long-term bee monitoring project, developed and implemented matrix code labeling system and maintain database.
- 5/2013-8/2013** **EcoWorker, Ocean View Foundation, Block Island, RI**
Instructed environmental public education programs. Independently developed and delivered a weekly 'Native Pollinator' program
- 1/2013-5/2013** **Environmental Educator, Audubon Society of Rhode Island, Bristol, RI**
Presented and taught programs on natural history and environmental topics
- 9/2012-11/2012** **Introduction to Beekeeping course facilitator, Trail's End Apiary, RI**
Organized, advertised, and facilitated an introductory beekeeping course

- 5/2012- 8/2012** **Backcountry Field Biologist**, Institute for Bird Populations, Mt. Rainier, WA
Utilized visual and acoustic bird identification skills to conduct point counts, coordinated field logistics
- 5/2011- 8/2011** **Mountain Birdwatch Technician**, Vermont Center for Ecostudies, Norwich, VT
Mapped survey points, conducted point counts for bird species, collected habitat measurements, coordinated field logistics
- 10/2009- 4/2011** **Conservation Intern**, Roger Williams Park Zoo, Providence, RI
- American Burying Beetle Project**
Assisted with all aspects of this endangered insect’s conservation initiative including captive colony rearing and data collection. Conducted biosurvey of *Nicrophorus* beetles on Naushon Island, MA to assist with land management recommendations: conducted field work, collected and analyzed data, created graphical displays, co-authored in report
- Panama Amphibian Rescue and Conservation Project**
Assisted with husbandry and collection of invertebrate colonies kept for food at the El Valle Amphibian Conservation Center
- Frog Watch USA** (A national citizen science amphibian monitoring program managed by the Association of Zoos and Aquariums)
Helped RWPZ staff facilitate FrogWatch USA training sessions in Rhode Island
- 5/2010-8/2010** **Entomology Intern**, Maria Mitchell Association, Nantucket, MA
Participated in ongoing research on the American burying beetle, assisted with public nature walks, prepared scientific specimens, and participated in the management of the invertebrate collections. Led field research on an ongoing survey of Nantucket’s snake population

PRESENTATIONS AND PUBLIC SPEAKING EVENTS

July 2018: “An Analysis of Vermont Beekeepers’ Practices, Colony Health and Loss,” Addison County Beekeepers Association Club Meeting, Middlebury, VT

June 2018: “An Analysis of Vermont Beekeepers’ Practices, Colony Health and Loss,” Vermont Beekeepers Association Summer Meeting, Swanton, VT

April 2018: “Evidence for RNA Virus Spillover from Managed Honeybees to Wild Bumble Bees,” The Northeast Natural History Conference, Burlington VT

April 2018: “RNA Viruses in Bumble Bees and the Role of Flowers in Virus Transmission,” Plant Soil Science Seminar, University of Vermont, Burlington VT

March 2018: “Homesick- The Role of Migratory Beekeeping on Disease Spread,” BioLunch Presentation, University of Vermont, Department of Biology, Burlington, VT

January 2018: “National Honey Bee Survey Update,” Vermont Beekeepers Association Winter Meeting, Essex, VT

January 2018: “Bee Virus Ecology,” Addison County Beekeepers Association Club Meeting, Middlebury, VT

July 2017: “Homesick- The Role of Migratory Beekeeping on Disease Spread,” Vermont Beekeepers Association Summer Meeting, Middlebury, VT

March 2017: “Bee-Plant-Pathogen Interactions,” Invited guest lecturer, Environmental Science (ENSC095), University of Vermont, Burlington, VT

January 2017: “Bee Virus Ecology,” Vermont Beekeepers Association Winter Meeting, Essex, VT

January 2017: “Ecology of Bee Viruses,” Southern Adirondack Beekeepers Association, Saratoga, VT

October 2016: “Results from National Honey Bee Survey and Bumble bee virus survey,” Vermont Pollinator Protection Committee meeting, Vermont Statehouse, Montpelier, VT

September 2016: “RNA Viruses in Vermont Bumble Bees,” Invited speaker for Garden Club of America Bee Involved Business Meeting, Lenox, Massachusetts

July 2016: “RNA Viruses in Vermont Bumble Bees,” Poster Presentation at the International Pollinator Conference, Penn State University.

June 2016: “Bee Pathogen Workshop,” Hands-on workshop for beekeepers to identify and quantify honey bee pests using laboratory methods, Bennington Beekeeping Club meeting, Bennington, Vermont.

April 2016: “RNA Viruses in Vermont Bumble Bees”, Bumble Bee Working Group Meeting, University of Sussex, UK

February 2016: “ ‘Honey Bee Viruses’ in Vermont’s Bumble Bees” BioLunch Presentation, University of Vermont, Department of Biology

January 2016: Provided testimony at VT Statehouse hearing for two separate bills: H.236: Bill proposes to ban the use, sale, or application of neonicotinoid pesticides; H.539: Bill proposes to establish a Pollinator Protection Committee

January 2016: “Bee Health in Vermont”, Annual Vermont Grazing and Livestock Conference, Fairlee Vermont

January 2016: “Vermont’s National Honey Bee Survey Results”, Invited keynote speaker for Bennington Beekeeping Club meeting, Bennington, Vermont

January 2016: “Vermont’s National Honey Bee Survey Results”, Vermont Beekeeping Association, VT Farm Show, Essex, Vermont

January 2015: “RNA viruses in Bumble bees” Evolution, Ecology, and Environmental Science presentation, University of Vermont

April 2015: “Prevalence, transmission, and effect of RNA viruses on Bumble bees” BioLunch Presentation, University of Vermont Department of Biology

April 2014: “RNA viruses in Vermont’s Bumble bees” EcoLunch Presentation, University of Vermont Department of Biology.

October 2014: “RNA viruses: prevalence, transmission, and effect on native bumble bees in Vermont” EEEB Presentation, University of Vermont Departments of Ecology, Evolution, and Environmental Biology.

July 2010: “*Eciton burchellii*: polymorphism of submajor caste and foraging efficiency”. Sonoran Arthropod Studies Institute, 2010 Invertebrates in Education and Conservation Conference, Rico Rico, Arizona.

PUBLICATIONS

Alger, S.A., Burnham, P.A., Lamas, Z.S, Brody, A.K., Richardson, L.R., 2018. Homesick: Impacts of migratory beekeeping on honey bee (*Apis mellifera*) pests, pathogens, and colony size. PeerJ.

S. Alger, Burnham, P.A., Report of Vermont’s National Honey Bee Survey (APHIS USDA), (2017). *Pollinator Protection Committee Report to the Vermont Legislature as required by Act 83 of 2016 Session.*

Perrotti, L. & **Alger, S.** 2010. American burying beetle (Silphidae: *Nicrophorus americanus*) survey on Naushon Island, Massachusetts. *Invertebrates in Education and Conservation: Sonoran Arthropod Studies Institute Conference Proceedings.*

Alger, S. 2009. *Eciton burchellii*: polymorphism of submajor caste and foraging efficiency. *Invertebrates in Captivity: Sonoran Arthropod Studies Institute Conference Proceedings.*

MANUSCRIPTS IN REVIEW

Alger, S.A., Burnham, P.A. (2017). Role of flowers in RNA virus transmission between honey bees and bumble bees, Manuscript in preparation. (PLOS ONE)

GRANTS AND OTHER AWARDS

2018	NAPPC Honey Bee Health Grant Award, \$9,980
2017	Switzer Fellowship, Robert and Patricia Switzer Foundation, \$15,000
2017	Award to attend American Beekeeping Federation Conference, VT beekeepers \$1,300
2016	Experiment.com, crowdfunding, \$5,970
2016	University of Vermont Minigrant, UVM College of Arts and Sciences, \$300
2015	Sustainable Agriculture Research and Education (SARE), USDA, \$14,600
2015	Graduate Research Fellowship, National Science Foundation, \$138,000
2014	Ronald Suiter Prize, UVM College of Arts and Sciences, \$1,000
2014	Honorable Mention: Graduate Research Fellowship, National Science Foundation
2014	Sophie Danforth Conservation Biology Fund, Roger Williams Park Zoo, \$1,000
2014	Theodore Roosevelt Memorial Fund, American Museum of Natural History, \$2,500
2014	Pollinator Fellowship, Garden Club of America, \$4,000
2014	Roberto Fabri Fiahlo, Michael D. Upton, \$1,500
2013	Ronald Suiter Prize, UVM College of Arts and Sciences, \$1,000

MEDIA APPEARANCES

Northeast SARE Graduate Student Snapshot. Northeast SARE. 7/13/2018.

<https://www.youtube.com/watch?v=6dowG7ZEKkEA&feature=youtu.be>

The National Honey Bee Survey in Vermont. Bee Culture. 3/21/2017.

<http://www.beeculture.com/national-honey-bee-survey-vermont/>

Bees under siege. WCAX TV News. 7/29/15. <http://www.wcax.com/story/29660551/bees-under-siege>

UVM researchers buzzing about the declining bee populations. My Champlain Valley.com.

<http://www.mychamplainvalley.com/news/symposium-on-vt-bee-population-held>

Highgate field becomes bee research site. The St. Albans Messenger. 7/30/2015.

PROFESSIONAL APPOINTMENTS

Scientific Advisor, Vermont Beekeepers Association 2017-present