

## Lisa Chamberland, Ph.D.

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github <https://github.com/lchamberland>

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### Education

- 2015-2020 **Ph.D. in Biology**  
University of Vermont, Burlington, VT  
*Advisor: Dr. Ingi Agnarsson*  
*Dissertation title: From Gondwana to GAARlandia: Molecular phylogenetics and historical biogeography of spiders.*
- 2009-2013 **B.A. in Biology and Anthropology**  
University of Vermont, Burlington, VT

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### Research experience

- 2015-2020 **Postdoctoral Scholar**, Bond lab, University of California, Davis  
*Phylogenetics and species delimitation of trapdoor spiders across the California Floristic Province*
- 2015-2020 **Dissertation Research**, Agnarsson lab, University of Vermont  
*Tested the role of geological events, including breakup of Gondwana and the postulated land bridge GAARlandia, in the dispersal and diversification of spiders.*
- 2019 **Graduate Research Assistant**, Helms Cahan lab, University of Vermont  
*"Epigenetic mechanisms and evolution of thermal plasticity in Drosophila". Reared Drosophila, ran thermal tolerance experiments, and analyzed preliminary data to test thermal plasticity of the fruit flies.*
- 2013-2015 **Laboratory Research Technician**, Agnarsson lab, University of Vermont  
*Performed molecular work (DNA extractions and barcoding, PCR) and phylogenetic analyses for focal arachnid genera in the Caribbean.*

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### Publications

Chamberland L, McHugh A, Kechejian S\*, Binford GJ, Bond JE, Coddington J, Dolman G, Hamilton CA, Harvey MS, Kuntner M, Agnarsson I. 2018. From Gondwana to GAARlandia: Evolutionary history and biogeography of ogre-faced spiders (*Deinopis*). *Journal of Biogeography* 45(11):2442-2457 DOI: 10.1111/jbi.13431

Chamberland L, Salgado-Roa FC, Basco A\*\*, Cranz A\*\*, Binford G, Agnarsson I. 2020. Phylogeography of the widespread Caribbean spiny orb weaver *Gasteracantha cancriformis*. *Peer J*. 8:e8976 DOI: 10.7717/peerj.8976

Salgado-Roa FC, Chamberland L, Pardo-Diaz C, Cisneros-Herdia DF, Lasso E, Salazar C. (in review) Dissecting a geographical colourful tapestry: Phylogeography of the colour polymorphic spider *Gasteracantha cancriformis*

\*undergraduate student

\*\*high school students

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### Awards and Grants

|         |   |
|---------|---|
| 2019/20 | Graduate Teaching Assistant of the Year (UVM Dept. of Biology) - \$100    |
| 2020    | American Arachnological Society Fund for Systematics Research - \$250     |
| 2020    | The John Wheeler Graduate Student Research and Development Award - \$2000 |
| 2019    | UVM Mini Travel Grant - \$450   |
| 2018    | American Arachnological Society Fund for Systematics Research - \$1000    |
| 2016    | Sigma Xi Grant in Research Award - \$1000                                 |
| 2016    | UVM Mini Travel Grant - \$450   |

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### Teaching

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| 2016-2019 | <b>Guest Lecturer</b> , Field Zoology, University of Vermont   |
| 2015-2019 | <b>Graduate Teaching Assistant</b> , Field Zoology lab, University of Vermont  |
| 2015-2020 | <b>Graduate Teaching Assistant</b> , Intro to Biology lab, University of Vermont   |
| 2018      | <b>Lecturer</b> , Field Zoology<br><i>Filled in for as lecturer Professor Agnarsson while he was on leave from October 1 – December 15</i> |
| 2016      | <b>Graduate Teaching Assistant</b> , Ecology and Evolution lab, University of Vermont  |

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### Presentations

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|------|---|
| 2021 | <b>Guest lecture</b> , Arachnology, University of California, Davis<br><i>Spider Sensory Systems</i>  |
| 2020 | Oral presentation, 2020 American Arachnological Society Virtual Summer Symposium<br>Phylogeography of the widespread Caribbean spiny orb weaver <i>Gasteracantha cancriformis</i> |
| 2020 | Biolunch, UVM Department of Biology, Burlington, VT<br>Phylogeography of the widespread Caribbean spiny orb weaver <i>Gasteracantha cancriformis</i>                              |
| 2019 | <b>Guest lecture</b> , Field Zoology, University of Vermont<br><i>Global biogeography of the net-casting spiders (Deinopidae)</i>   |
| 2019 | <b>Invited lecture</b> , Vermont Commons School (high school)<br><i>Introduction to biogeography and spiders of the Caribbean</i>   |
| 2019 | <b>Guest lecture</b> , Field Zoology, University of Vermont<br><i>Distribution, DNA barcoding, and phylogenetics of Caribbean Calliphoridae flies: Tools for forensic studies</i> |
| 2019 | Oral presentation, American Arachnological Society Meeting, Lexington, VA<br><i>Global biogeography and phylogeny of the net-casting spiders (Family: Deinopidae)</i>             |

- 2019 Poster presentation, American Arachnological Society Meeting, Lexington, VA  
*Phylogeography of the widespread Caribbean spiny orb weaver *Gasteracantha cancriformis**
- 2019 Biolunch, UVM Department of Biology, Burlington, VT  
*Global biogeography and phylogeny of the net-casting spiders (Family: Deinopidae)*
- 2019 Oral presentation, 21<sup>st</sup> International Congress of Arachnology, Canterbury, NZ  
*From Gondwana to GAARlandia: Evolutionary history and biogeography of the ogre-faced spiders (Deinopis)*
- 2018 **Invited lecture**, Vermont Commons School (high school)  
*Biogeography of the net-casting spiders (Deinopidae)*
- 2018 Oral presentation, UVM Student Research Conference, Burlington, VT  
*From Gondwana to GAARlandia: Evolutionary history and biogeography of the ogre-faced spiders (Deinopis)*
- 2017 Biolunch, UVM Department of Biology, Burlington, VT  
*Historical biogeography and trait evolution within the net-casting spiders (Deinopidae)*
- 2016 Biolunch, UVM Department of Biology, Burlington, VT  
*Phylogeography of *Gasteracantha* and evidence for a new North American species*
- 2016 Oral presentation, UVM Student Research Conference, Burlington, VT  
*Phylogeography and morphological variation in Caribbean *Gasteracantha cancriformis* and evidence for a new North American species*
- 2016 Poster presentation, 20<sup>th</sup> International Congress of Arachnology, Golden, CO  
*Global biogeography of ogre-faced spider mirrors geologic history*
- 2015 Biolunch, UVM Department of Biology, Burlington, VT  
*Global biogeography of ogre-faced spider mirrors geologic history*

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#### Outreach, museum experience, and mentorship

- 2020 Volunteer coordinator at the Zadock Thompson Zoological Collections  
*Organized volunteer students at the invertebrate collection at the Natural History Museum at the University of Vermont, Burlington, VT*
- 2020 Co-organizer, American Arachnological Society Virtual Summer Symposium  
*Helped organize online symposium talks and abstracts targeting students and early career arachnologists*
- 2018-2019 Vermont Commons School visit to arachnid lab  
*Intro to biogeography and spiders of the Caribbean for 10th graders*
- 2018-2019 Zadock Thompson Museum Invertebrate Collection Open House  
*Hosted an open house for UVM students and the Vermont community to come and visit the collection of arachnids and insects at the zoological collections on campus*
- 2019 "Living Vermont" field taxonomy museum visit  
*Hosted a visit to the Zadock Thompson Museum Invertebrate Collection for 7th graders (16 students)*
- 2018 **Assistant Teacher**, 9<sup>th</sup> Grade Biology, Vermont Commons School

Professor: Peter Goff

- 2013-2014 **Upward Bound Teacher**, Spiders of Vermont course, University of Vermont  
*Upward Bound is a federally funded education program focused on providing opportunities to underrepresented high school students. I introduced students to methods in field collecting and identifying bugs and spiders in addition to DNA extractions. We also discussed concepts in biodiversity and phylogenetics*
- 2014-2020 **Mentor**, Agnarsson Lab, University of Vermont, Burlington, VT  
*As a lab technician and then a graduate student, I trained graduate, undergraduate, and high school students on identifying and taxonomy of spiders and arachnids as well as molecular methods, phylogenetic/omic and biogeographic data analyses, and identifying and photographing specimens*
- 2018-2020 Tess Ruddy\*\*, Vermont Commons School  
*A global biogeographic history and phylogenetic revision of the net-casting spiders (Family: Deinopidae)*
- 2019 Lily Canavan & Baylee Duarte\*  
*Dispersal patterns and diversification of the genus Eriophora in the Caribbean through molecular phylogenetics*  
Cooper Peterson & Jack Walinski\*  
*Exploring the diversity and dispersal history of Caribbean Cyclosa*
- 2018 Alli Nemrow\*  
*Exploring the diversity and dispersal history of Caribbean Cyclosa*
- 2016-2018 Patrick Weinmerk\*, lab technician  
*Exploring the diversity and dispersal history of Caribbean Cyclosa*
- 2016-2017 Sarah Kechejian & Annie Howard\*  
*From Gondwana to GAARlandia: Evolutionary history and biogeography of the ogre-faced spiders (Deinopis)*
- 2015 Austin Dziki\*  
*Spintharus flavidus in the Caribbean—a 30 million year biogeographical history and radiation of a 'widespread species'*  
Stephanie LeQuier\*  
*Phylogeography of a good Caribbean disperser: Argiope argentata (Araneae, Araneidae) and a new 'cryptic' species from Cuba*
- 2014-2015 Alma Basco\*\* and Amanda Crastz\*\*, Puerto Rico  
*Phylogeography of the widespread Caribbean spiny orb weaver Gasteracantha cancriformis*

\*undergraduate students

\*\*high school students

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#### Journal referee

2021 ZooKeys  
2019/2020 Systematic Biology

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### **Professional memberships**

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| 2016-2021       | American Arachnological Society      |
| 2016, 2018-2019 | International Society of Arachnology |

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### **Skills**

#### **Computing**

- Phylogenetics – Phyluce, Bayesian (MrBayes, BEAST), Maximum likelihood (IQ-Tree, RAxML), ASTRAL, phytools,
- Biogeography - model testing in BioGeoBEARS, RASP, LaGrange
- Population genetics - Arlequin, DnaSP, Mega
- Sequence reading, editing, cleanup - Mesquite, Phred and Phrap
- R and (R)Markdown – Data analysis/visualization and word processing
- HTML, CSS
- Microsoft Office – Data preparation, organization, and word processing

#### **Laboratory**

- UCE library preparation
- DNA extractions for standard Sanger sequencing and Next Generation sequencing
- PCR and gel electrophoresis
- RNA extraction
- Taxonomy, insect and arachnid identification
- insect and arachnid dissections
- Visionary Digital BK lab system