

# Curriculum Vitae



**Jacob S. Suissa**

Organismic and Evolutionary Biology  
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## EDUCATION

Harvard University: PhD Candidate  
*Graduate School of Arts and Sciences*  
Department of Organismic and Evolutionary Biology  
Advisor: Dr. William E. Friedman

The University of Vermont, Class of 2016  
*College of Agriculture and Life Sciences*  
Honors: Magna Cum Laude  
Bachelor of Science

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## RESEARCH APPOINTMENTS

**Aug 2017–Present**    **Fellow of the Arnold Arboretum**

Harvard University  
Supervisor: Dr. William E. Friedman  
Thesis: *Evolution, form, and functional implications of vascular construction in ferns*

**Jan 2017–Aug 2017**    **Research Assistant**

The Smithsonian Institution National Museum of Natural History, Washington, DC  
Supervisor: Dr. Elizabeth Zimmer  
Project: *Revealing the evolutionary history of the Isoëtes occidentalis complex*

**Jan 2016–May 2016**    **Research Assistant**

University of Vermont, Burlington, VT  
Supervisor: Dr. David Barrington  
Project: *Molecular systematics of the Polypodiaceae and Dryopteridaceae*

**Aug 2015–Dec 2015**    **Research Assistant**

University of Hawaii, Manoa, Honolulu, HI  
Supervisor: Dr. Kasey Barton  
Project: *Intraspecific and interspecific variation in prickly poppy resistance to non-native generalist caterpillars*

**May 2015–Aug 2015**    **Independent Research Fellow**

University of Vermont, Burlington, VT  
Supervisor: Dr. David Barrington  
Project: *Morphological survey of aquatic fungi in Northeastern Vermont*

**Oct 2014–Apr 2015**    **Independent Research Fellow**

University of Vermont, Burlington, VT  
Supervisor: Dr. Mark Starrett  
Project: *Effects of Fluoride on Dracaena cultivars*

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## TEACHING EXPERIENCE & AWARDS

\*denotes recurring course

- 2021 Course developer and instructor:** *Introduction to Fern Biology*  
Arnold Arboretum of Harvard University. *General public one-day course.*
- 2020 Teaching fellow:** *Biology of Fungi*  
Harvard University, Department of Organismic and Evolutionary Biology.  
*Undergraduate/Graduate, semester-long course. Fall 2020*
- 2020 Extraordinary Teaching in Extraordinary Times Teaching fellow award**  
Harvard University, Harvard College  
*Undergraduate selected award for extraordinary teaching during the Spring 2020*
- 2020 Teaching fellow:** *Biology of Plants*  
Harvard University, Department of Organismic and Evolutionary Biology.  
*Undergraduate/Graduate, semester-long course. Spring 2020*
- 2019 Teaching fellow:** *Plant Diversity and Evolution*  
Harvard University, Department of Organismic and Evolutionary Biology.  
*Undergraduate/Graduate, semester-long course. Spring 2019*
- 2018 Teaching fellow:** *Tropical Plant Systematics*  
The University of Vermont (course offered in Costa Rica). *Undergraduate/Graduate, two-week course. Winter 2019*
- 2018 Teaching fellow:** *Biology of Fungi*  
Harvard University, Department of Organismic and Evolutionary Biology.  
*Undergraduate/Graduate, semester-long course. Fall 2018*
- 2017\* Course developer and instructor:** *Ferns of the Arnold Arboretum*  
Arnold Arboretum of Harvard University. *General public one-day course.*
- 2017 Course instructor:** *Darwin's experiments*  
Harvard University Museum of Natural History. *General public one-day course.*
- 2014 Outstanding Teaching-Assistant Award**  
The University of Vermont  
*Undergraduate selected award for outstanding teaching during the Spring 2014*
- 2014 Teaching assistant:** *Home and Garden Horticulture*  
The University of Vermont, Plant and Soil Science Department.  
*Undergraduate, semester-long course.*

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## INVITED PRESENTATIONS

- 2021 \*Lycopodiopsida 2021: Advances in research on Isoetaceae, Lycopodiaceae and Selaginellaceae. Pteridophyte Symposium 2021. Sao Paulo Brazil,**  
*The evolutionary history of Isoetes from the Pacific Northwest\**

- 2019 **Reticulate evolution and biogeography in ferns and lycophytes - a colloquium honoring Dr. David Barrington. Botany Conference. Botany 2019, Tucson, Arizona**  
*Global patterns of fern diversification*\* (<https://www.youtube.com/watch?v=bPKR6JPYe0c>)
- 2018 **Edmund Niles Huyck Preserve Lecture Series. Rensselaerville, New York.**  
*CAM-like photosynthesis in an aquatic lycophyte*\*
- 2018 **Biology of Isoëtales, a colloquium in honor of Dr. W. Carl Taylor. Botany 2018, Rochester, Minnesota**  
*Revealing the evolutionary history of Isoëtes from the Pacific Northwest*
- 2016 **Arnold Arboretum Seminars. Boston, Massachusetts**  
Reticulate Evolution and Cryptic Parentage in North American *Isoëtes*
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#### CONTRIBUTED TALKS AND POSTERS

\*Denotes presenting authorship; †Denotes poster

- 2020 **Botany 2020, Virtual.**  
*Low atmospheric CO<sub>2</sub> induce nocturnal carbon accumulation in the lycophyte genus Isoëtes*\*  
([https://www.youtube.com/watch?v=BV\\_KcmrWlac&feature=youtu.be](https://www.youtube.com/watch?v=BV_KcmrWlac&feature=youtu.be))
- 2020 **Botany 2020, Virtual.**  
*Revealing the origins of a reticulate complex in the genus Isoëtes.*
- 2020 **Biodiversity synthesis: Linking large phylogenies with species traits and ecologies. Botany Conference. Botany 2020, Virtual.**  
*Fronds in high places: large-scale integrative analyses explain global patterns of fern diversity*
- 2015 **The University of Vermont Student Research Symposium. Burlington, Vermont**  
*Diversity of Aquatic Hyphomycetes in Northeastern Vermont*†
- 2014 **The University of Vermont Student Research Symposium. Burlington, Vermont**  
*Effects of Fluoride on Dracaena cultivars*\*
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#### SELECTED PUBLICATIONS

1. **Suissa, J.S.**, and Friedman, W.E. From cells to stems: the effects of primary vascular construction on drought-induced embolism resistance in fern rhizomes. *New Phytologist*. *in press*.
2. **Suissa, J. S.**, Sylvia P. Kinosian, Peter W. Schafran, Jay Bolin, W. Carl Taylor, Elizabeth A. Zimmer. Revealing the origins of a reticulate complex in the genus *Isoëtes*. *Molecular Phylogenetics and Evolution*, *in review*.
3. **Suissa, J. S.**, Sundue, M. A., Testo, W. L. (2021). Global patterns of fern diversification. *The Journal of Biogeography*, DOI: 10.1111/jbi.14076.
4. **Suissa, J. S.**, Sundue, M. A. Diversity patterns of neotropical ferns: Revisiting Tryon's centers of richness and endemism. *The American Fern Journal*. 110(4), 211-232
5. **Suissa, J.S.** (2020) Polycyclic solenostele, a new synapomorphy for *Pteris* sect. *Litobrochia*. *The American Fern Journal*. 110(3), 127-138

6. **Suissa, J. S.**, and Green, W. A. (2020). CO<sub>2</sub> starvation experiments provide support for the carbon-limited hypothesis on the evolution of CAM-like photosynthesis in *Isoetes*. *Annals of Botany*. mcaal53
  7. Kinoshian, S. P., and **Suissa, J.S.** (2020) The mothers of Pteridology. *The American Fern Journal*. 110 (1), 3-19.
  8. **Suissa, J. S.**, and Barton, K.E. (2018). Intraspecific and interspecific variation in prickly poppy resistance to non-native generalist caterpillars. *Botanical Sciences*. 96 (2), 168-179.
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## FELLOWSHIPS AND GRANTS AWARDED

- 2020 **Graduate Student Research Award** *New England Botanical Club* (\$2,556)
- 2019 **Student Sustainability Grant** *Harvard University* (\$5000)
- 2018 **Graduate Student Research Award** *Society of Systematic Biologists* (\$2000)
- 2018 **Graduate Student Research Grant** *American Society of Plant Taxonomists* (\$1000)
- 2018 **Huyck Research Grant** *Edmund Niles Huyck Biological Research Station* (\$1000)
- 2017 **Graduate Research Grant** *Harvard University Herbaria* (\$2500)
- 2015 **Summer Undergraduate Research Fellowship** *The University of Vermont* (\$5000)
- 2015 **W.H. Darrow Horticulture Prize** *The University of Vermont*
- 2015 **Seymour Horticultural Prize** *The University of Vermont*
- 2015 **Lewis Ralph Jones Award** *The University of Vermont*
- 2015 **Collegiate Scholars Award** *American Society for Horticultural Science*
- 2015 **Outstanding Horticultural Student Award** *American Society for Horticultural Science*
- 2015 **Undergraduate Academic Scholarship** *Burlington Garden Club* (\$1000)
- 2015 **Rachel Butterworth Dietz Scholarship** *The Boston Flower Exchange* (\$5000)
- 2014-15 **Aplin, Bennett, Holzer Scholarships** *The University of Vermont* (\$2000)
- 2014 **National Scholarship Award** *Perennial Plant Association* (\$1000)
- 2013 **Undergraduate Research Grant** *The University of Vermont* (\$1000)
- 2013 **Undergraduate Scholarship** *New England Farm and Garden Association* (\$6000)

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## **OUTREACH (\* indicates recurring yearly)**

- 2021** \*Member of OEB Department Diversity, Inclusion, and Belonging Committee
- 2020** \*Initiated Arnold Arboretum Mentorship Program partnered with Academia Maragrita Muñiz
- 2020** Helped implement Diversity in STEM course requirement in graduate curriculum for OEB
- 2020** \*American Fern Society student representative
- 2020** \*Department Anti-Racism committee member
- 2020** Harvard Museum of Natural History Fungus Fair coordinator
- 2019** Founding member of Native plants at Harvard: Ecosystem, Education, and Community
- 2018** \*Department Representative for the Graduate Student Council of Harvard University
- 2018** Harvard Museum of Natural History Fungus Fair coordinator
- 2017** \*The Evergreen School's 'Scientist of the Month'
- 2017** \*American Society of Plant Biologist (ASPB): Master's in plant science Team mentor

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## **UNDERGRADUATE MENTORING**

**2019–2020** Skylah Reis (Harvard University): *The evolution of vessels in the invasive fern: Lygodium microphyllum*. Recipient of the Harvard Undergraduate Research Award, and the Keasbey Foundation Scholarship. Went on to be accepted into the MSc in Biodiversity, Conservation and Management program at University of Oxford.

**2019** Paul Cervantes (Harvard University)

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## **PROFESSIONAL SOCIETY MEMBERSHIPS**

American Fern Society  
Botanical Society of America  
Torrey Botanical Society  
American Society of Plant Taxonomists  
New England Botanical Club

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