

Curriculum Vitae

Jacob S. Suissa

Organismic and Evolutionary Biology
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RESEARCH INTERESTS

I am an evolutionary biologist broadly interested in ferns and lycophytes at both the organismal and macroevolutionary scale. I work on topics ranging from systematics, anatomy, and physiology, to character evolution, biogeography, and diversification. My current research program applies a multifaceted approach, integrating anatomical, morphological, physiological, and phylogenetic techniques to elucidate the evolution, form, and functional significance of vascular architecture in ferns. Vasculature is one of the most important innovations in land plant evolution and in no other clade of plants do we see such a complexity of vascular architecture as in the ferns. For this reason, it is imperative to study the evolution and functional significance of these architectures in order to understand why this diversity exists, and how it evolved throughout geologic time.

EDUCATION

Harvard University: PhD Student
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
GPA: 3.88 Magna Cum Laude
Bachelor of Science

RESEARCH APPOINTMENTS

- Aug 2016–Present** **Fellow of the Arnold Arboretum**
Harvard University
Supervisor: Dr. William E. Friedman
Project: *Evolution, form, and functional significance of vascular architecture 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*
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RESEARCH APPOINTMENTS (CONT.)

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 Research Assistant

University of Vermont, Burlington, VT

Supervisor: Dr. Mark Starrett

Project: *Effects of Fluoride on Dracaena cultivars*

FELLOWSHIPS AND GRANTS AWARDED

- 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 Teaching Assistant Award *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)
- 2015 Aplin, Bennett, Holzer Scholarship *The University of Vermont*
- 2014 National Scholarship Award *Perennial Plant Association* (\$1000)
- 2014 Aplin, Bennett, Holzer Scholarship *The University of Vermont*
- 2013 Undergraduate Research Grant *The University of Vermont* (\$1000)
- 2013 Undergraduate Scholarship *New England Farm and Garden Association* (\$6000)
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INVITED PRESENTATIONS* & POSTERS⁺

- 2019 Reticulate evolution and biogeography in ferns and lycophytes - a colloquium honoring Dr. David Barrington. 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**
- 2015 The University of Vermont Student Research Fair. Burlington, Vermont**
Diversity of Aquatic Hyphomycetes in Northeastern Vermont⁺
- 2014 The University of Vermont Student Research Fair. Burlington, Vermont**
*Effects of Fluoride on Dracaena cultivars**
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SELECTED PUBLICATIONS

1. 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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TEACHING EXPERIENCE

- 2019 Teaching Fellow: *Plant Diversity and Evolution***
Harvard University, Department of Organismic and Evolutionary Biology
- 2018 Teaching Fellow: *Biology of Fungi***
Harvard University, Department of Organismic and Evolutionary Biology
- 2018 Course developer and instructor: *Ferns of the Arnold Arboretum Summer Course***
Arnold Arboretum of Harvard University
- 2017 Course developer and instructor: *Ferns of the Arnold Arboretum Summer Course***
Arnold Arboretum of Harvard University
- 2017 Course instructor: *Darwins experiments***
Harvard University Museum of Natural History
- 2014 Teaching Assistant: *Home and Garden Horticulture***
The University of Vermont, Plant and Soil Science Department
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SERVICE AND OUTREACH

2018- Founding member of the OEB Student Activities Committee

2018 Department Representative for the Graduate Student Council of Harvard University

2017- The Evergreen School's 'Scientist of the Month'

2017- Science Mentor for high school students through Harvard University's GradWagon

2017- American Society of Plant Biologist (ASPB): Master's in plant science Team mentor

PROFESSIONAL SOCIETY MEMBERSHIPS

American Fern Society

Botanical Society of America

Torrey Botanical Society

American Society of Plant Taxonomists

Sigma Xi Scientific Research Honors Society
