Nicole E. Soltis

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QUALIFICATIONS SUMMARY

Ph.D. Candidate in Plant Biology with experience in plant pathology, genomics, and field ecology. Significant experience mentoring undergraduates and training new researchers. Passion for organizing and leading science communication projects for graduate students.

RELEVANT SKILLS

- Bioinformatics
- Plant and fungal culture
- DNA & mRNA isolation
- Data analysis & statistics (R)
- Presentations: oral/ written
- Develop laboratory protocols
- Troubleshooting
- Project management
- Collaborative work

EDUCATION

Ph.D. Candidate, Plant Biology, University of California, Davis 2013 – present
M.S., Biology, Tufts University May 2013
B.A., Integrative Biology, University of California, Berkeley May 2010

PROFESSIONAL EXPERIENCE

Graduate Researcher, Kliebenstein Lab, University of California, Davis September 2013 – present

- Develop methods, conduct experiments, and write research publications to understand the genetic basis of variation in a common plant disease, *Botrytis cinerea* on eudicot plant hosts
- Communicate progress and coordinate projects with advisor, postdoctoral research associates, and fellow graduate students
- Mentor and manage projects for 7 undergraduate research assistants

Graduate Researcher, Orians Lab, Tufts University May 2011 – June 2013

- Examined biochemistry and biomechanics of Eastern hemlock trees in response to infestation by hemlock woolly adelgid insects and elongate hemlock scale insects
- Designed projects and optimized protocols for novel research questions
- Collaborated with teams of 3 to 10 students and faculty on large field surveys and common garden maintenance of Eastern hemlock trees

Research Associate, Metabolix Inc. August 2010 – April 2011

- Maintained clean and organized stocks of plant materials from large field trial experiments
- Performed sterile technique, DNA isolation, and cloning for propagation of plant materials

Research Assistant: Dawson Lab, University of California, Berkeley January 2008 – August 2010

- Collaborated with many graduate students for efficient processing and data entry of field samples
- Trained new coworkers in laboratory safety, protocols, organization, and record-keeping

Research Assistant: Koehl Lab, University of California, Berkeley August 2009 – August 2010

- Performed digital image analysis to study gliding behavior in arboreal ants
- Learned to conduct experiments using robotics and a flow tank to model ant behaviors

LEADERSHIP AND PUBLIC SPEAKING

President, Science Says, University of California, Davis Summer 2017 – 2018

- Coordinate leaders and projects in a club focused on science communication and policy training
- Plan and implement new events, recruit speakers and new club members
- Collaborate to plan, write, edit, and post science blog content

Co-Lead, Sacramento Science Distilled September 2016 - present

- Build network with local science education groups to design a new event series
- Lead a team to organize and run a public science talk event each month
- Develop and disseminate social media content for event promotion

Teaching Assistant, Plant Physiology, University of California, Davis Fall 2016, Fall 2017

- Design and implement active learning activities for classrooms of 20 students
- Assess student learning through quizzes and written examinations

Mentor, Undergraduate Research Projects, University of California, Davis August 2014 - 2018

- Train students in laboratory safety, relevant protocols, data entry and organization
- Coordinate teams of 2 to 6 students on large data-collection research projects

Teaching Assistant, Environmental Biology, Tufts University Fall 2012

- Train students in science communication through digital storytelling
- Offer feedback and instruction on critical assessment of science in media

RECENT SCIENTIFIC PUBLICATIONS AND PRESENTATIONS

- **Soltis NE**, Atwell S, Shi G, Fordyce R, Gwinner R, Gao D, Shafi A, Kliebenstein D. Interactions of tomato and Botrytis genetic diversity: Parsing the contributions of host differentiation, domestication and pathogen variation. The Plant Cell 857 (2019).
- Fordyce R, **Soltis NE**, Caseys C, Gwinner R, Corwin J, Atwell S, Copeland D, Feusier J, Subedy A, Eshbaugh R, Kliebenstein D. Digital imaging combined with genome-wide association mapping links loci to plant-pathogen interaction traits. Plant Physiology 178 (2018), 1406-1422.
- **Soltis NE** and Kliebenstein DJ. Natural variation of plant metabolism: genetic mechanisms, interpretive caveats, evolutionary and mechanistic insights. Plant Phys., 169 (2015): 1456-1468.
- Atwell S, Corwin J, **Soltis NE**, Subedy A, Denby K, Kliebenstein D. Whole genome resequencing of *Botrytis cinerea* isolates identifies high levels of standing diversity. Frontiers in microbiology 6 (2015): 996.
- **Soltis NE,** Gómez S, Gonda‐King L, Preisser EL and Orians CM. Contrasting effects of two exotic invasive hemipterans on whole‐plant resource allocation in a declining conifer. Entomologia Experimentalis et Applicata, 157.1 (2015): 86-97.
- **Soltis NE**, Gomez S, Leisk GG, Sherwood P, Preisser EL, Bonello P, Orians CM. Failure under stress: The effect of the exotic herbivore *Adelges tsugae* on biomechanics of *Tsuga canadensis*. Annals of Botany, 113.4 (2014): 721-730.
- **Soltis NE,** Atwell S, Corwin JA, Shi G, Zhang W, Fordyce R, Gwinner R, Gao D and Kliebenstein DJ. 2015. Evolution and domestication in eudicot resistance to *Botrytis cinerea*. 11th US- Japan Scientific Seminar: Molecular Contact Points in Host-Pathogen Coevolution, Kagawa, Japan. *Poster presentation.*