

RICHARD P. SHEFFERSON
CURRICULUM VITAE

RESEARCH INTERESTS

I am an internationally renowned plant evolutionary ecologist particularly focused on evolutionary demography. I study senescence, eco-evolutionary dynamics, trade-offs, and life histories, and also conduct some research on the evolution of ecological interactions, particularly symbioses. My research is in the news on *INSIDE SCIENCE* at

<http://www.insidescience.org/?q=content/maturing-science-getting-old/778>), and on the *Journal of Ecology Blog* (<http://jecologyblog.wordpress.com/2013/05/21/on-plant-senescence-interview-with-the-editors-of-the-recent-special-feature/>).



POSITIONS

- **Associate professor (tenured).** Organization for Programs in Environmental Science, University of Tokyo, Tokyo, Japan. June 2016 – Present.
- **Associate professor (3yr term).** Dept. of General Systems Science, University of Tokyo, Tokyo, Japan. May 2014 – June 2016.
- **Adjunct associate professor.** Odum School of Ecology, University of Georgia, Athens, Georgia, USA. May 2014 – Present.
- **Assistant professor** of evolutionary ecology. Odum School of Ecology, University of Georgia, Athens, Georgia, USA. Aug 2008 – May 2014.
- **Visiting professor.** Center for Ecological Research, Kyoto University, Kyoto, Japan. Summer 2013.
- **Adjunct assistant professor.** Dept. of Plant Biology, University of Georgia, Athens, Georgia, USA. Feb 2009 – Present.
- **Affiliated professor.** Toxicology program, University of Georgia, Athens, Georgia, USA. Jan 2012 – Present.
- **Affiliated professor.** Integrative Conservation program, Center for Integrative Conservation Research, University of Georgia, Athens, Georgia, USA. Dec 2010 – Present.
- **Affiliated professor.** Integrative Life Sciences program, University of Georgia, Athens, Georgia, USA. Jan 2009 – Dec 2011.

EDUCATION

- **Post-doctoral scientist.** Dept. of Biology, Univ. of Virginia, Charlottesville, Virginia. Sept 2007 – Aug 2008. Advisor: Deborah A. Roach.
- **NSF-JSPS (Japan Society for the Promotion of Science) Post-doctoral fellow.** Forestry and Forest Products Research Institute, Tsukuba, Japan. Jul 2004 – Jul 2007.
- **Ph.D.** Integrative Biology, Univ. of California, Berkeley, May 2004. Advisor: Ellen L. Simms.
- **M.S.** Range Management, Univ. of California, Berkeley, May 2000. Advisor: Steven R. Beissinger.

- **B.A.** Environmental Studies/Biology, Northeastern Illinois University, Aug 1998. Advisor: Robert Easton.

PUBLICATIONS (Google Scholar *h*-index as of 18 Nov 2015 = 16; *i*-index = 18; total citations: 1010; mentees in *bold italics*)

Books

1. **Shefferson, R.P.**, R. Salguero-Gomez, and O. Jones (eds.). *In press* (expected release in Jan 2017). *The Evolution of Senescence in the Tree of Life*. Cambridge University Press.

Reviews, Editorials, and Opinion Pieces

2. **Shefferson, R.P.** and R. Salguero-Gómez. 2015. Eco-evolutionary dynamics in plants: interactive processes at overlapping timescales and their implications. *Journal of Ecology* 103:789-797.
3. Salguero-Gómez, R., **R.P. Shefferson**, and M.J. Hutchings. 2013. Plants don't count... or do they? New perspectives on the universality of senescence. *Journal of Ecology* 101:545-554.
4. **Shefferson, R.P.** 2010. Why are life histories so variable? *Nature Education Knowledge* 1(12):1.
5. **Shefferson, R.P.** 2009. The evolutionary ecology of vegetative dormancy in mature herbaceous perennial plants. *Journal of Ecology* 97: 1000-1009.

Research Articles

6. **Kellett, K.M.** and **R.P. Shefferson**. *In review*. The influence of seasonal and annual variation in demography on population growth of a Neotropical milkweed, *Asclepias curassavica*. *Journal of Ecology*.
7. **Shefferson, R.P.**, R. Mizuta, and M.J. Hutchings. *In review*. The evolution of sprouting probability in response to climate change in three dormancy-prone orchid species. *Proceedings of the Royal Society B: Biological Sciences*.
8. Kull, T., U. Selgis, M.V. Peciña, M. Metsare, A. Ilves, K. Tali, K. Sepp, K. Kull, and **R.P. Shefferson**. *In review*. Factors influencing IUCN threat levels to orchids across Europe on the basis of national red lists. *Ecology and Evolution*.
9. **Shefferson, R.P.**, M. Roy, U. Puttsepp, and M.-A. Selosse. *In press*. Demographic shifts related to mycoheterotrophy and their fitness impacts in two *Cephalanthera* species. *Ecology*.
10. **Shefferson, R.P.**, R.J. Warren II, and H.R. Pulliam. 2014. Life history costs make perfect sprouting maladaptive in two herbaceous perennials. *Journal of Ecology* 102:1318-1328. (In the news at <http://jecologyblog.wordpress.com/2014/07/02/life-history-costs-and-sprouting-by-richard-shefferson/>)
11. **Kartzinel, T.R.**, **R.P. Shefferson**, and D.W. Trapnell. 2013. Relative importance of pollen and seed dispersal across a Neotropical mountain landscape for an epiphytic orchid. *Molecular Ecology* 22:6048-6059.
12. **Kartzinel, T.R.**, D.W. Trapnell, and **R.P. Shefferson**. 2013. Highly diverse and variable mycorrhizal symbiosis in a rare epiphyte is unrelated to broad biogeographic or environmental features. *Molecular Ecology* 22:5949-5961.
13. **Bunch, W.D.**, **C.C. Cowden**, N. Wurzbarger, and **R.P. Shefferson**. 2013. Geography and soil nutrients drive the distribution of fungal associations in a lady's slipper orchid, *Cypripedium acaule*. *Botany* (formerly *Canadian Journal of Botany*) 91:850-856.
14. **Kartzinel, T.R.**, D.W. Trapnell, and **R.P. Shefferson**. 2013. Critical importance of large native trees for conservation of a rare Neotropical epiphyte. *Journal of Ecology* 101:1429-1438.

15. **Cowden, C.C.** and **R.P. Shefferson**. 2013. Diversity of root-associated fungi of mature *Habenaria radiata* and *Epipactis thunbergii* colonizing manmade wetlands in Hiroshima Prefecture, Japan. *Mycoscience* 54:327-334.
16. **Shefferson, R.P.** and D.A. Roach. 2013. Longitudinal analysis in *Plantago*: strength of selection and reverse age analysis reveal age-indeterminate senescence. *Journal of Ecology* 101:577-584.
17. **Shefferson, R.P.**, T. Kull, K. Tali, and **K.M. Kellett**. 2012. Linking vegetative dormancy to fitness in two long-lived herbaceous perennials. *Ecosphere* 3:13.
18. **Shefferson, R.P.** and D.A. Roach. 2012. The triple helix of *Plantago lanceolata*: genetics and the environment interact to determine population dynamics. *Ecology* 93:793-802.
19. Brys, R., **R.P. Shefferson**, and H. Jacquemyn. 2011. Impact of intrinsic and extrinsic variables on flowering and reproductive allocation patterns in a perennial iteroparous grassland herb: a ten-year experiment. *Oecologia* 166:293-303.
20. **Shefferson, R.P.**, M.K. McCormick, D.F. Whigham, and J.P. O'Neill. 2011. Life history strategy in herbaceous perennials: inferring demographic patterns from aboveground dynamics of a primarily subterranean, myco-heterotrophic orchid. *Oikos* 120:1291-1300.
21. **Shefferson, R.P.**, **C.C. Cowden**, M.K. McCormick, T. Yukawa, Y. Ogura-Tsujita, and T. Hashimoto. 2010. Evolution of host breadth in broad interactions: mycorrhizal specificity in East Asian and North American rattlesnake plantains (*Goodyera* spp.) and their fungal hosts. *Molecular Ecology* 19:3008-3017.
22. **Shefferson, R.P.** and D.A. Roach. 2010. Longitudinal analysis of *Plantago*: adaptive benefits of iteroparity in a short-lived, herbaceous perennial. *Ecology* 91:441-447.
23. Yukawa, T., Y. Ogura-Tsujita, **R.P. Shefferson**, and J. Yokoyama. 2009. Mycorrhizal diversity in *Apostasia* (Orchidaceae) indicates the origin and evolution of the orchid mycorrhiza. *American Journal of Botany* 96: 1997-2009.
24. Mesipuu, M., **R.P. Shefferson**, and T. Kull. 2009. Weather and herbivores influence fertility in the endangered fern *Botrychium multifidum* (S.G. Gmel.) Rupr. *Plant Ecology* 203:23-31.
25. **Shefferson, R.P.**, T. Kull, and K. Tali. 2008. Mycorrhizal interactions of orchids colonizing Estonian mine tailings hills. *American Journal of Botany* 95:156-164.
26. **Shefferson, R.P.**, D.L. Taylor, M. Weiß, S. Garnica, M.K. McCormick, S. Adams, H.M. Gray, J.W. McFarland, T. Kull, K. Tali, T. Yukawa, T. Kawahara, K. Miyoshi, and Y.-I. Lee. 2007. The evolutionary history of mycorrhizal specificity among lady's slipper orchids. *Evolution* 61:1380-1390.
27. **Shefferson, R.P.** and E. L. Simms. 2007. Costs and benefits of fruiting to future reproduction in two dormancy-prone orchids. *Journal of Ecology* 95:865-875.
28. **Shefferson, R.P.** and K. Tali. 2007. Dormancy is associated with decreased adult survival in the burnt orchid, *Neotinea ustulata*. *Journal of Ecology* 95:217-225.
29. **Shefferson, R.P.** 2006. Survival costs of adult dormancy and the confounding influence of size in lady's slipper orchids, genus *Cypripedium*. *Oikos* 115:253-262.
30. Simms, E.L., D.L. Taylor, J. Povich, **R.P. Shefferson**, M. Urbina, and Y. Tauszick. 2006. An empirical test of partner choice mechanisms in a legume-rhizobium interaction. *Proceedings of the Royal Society of London Series B, Biological Sciences* 273:77-81.
31. **Shefferson, R.P.**, T. Kull, and K. Tali. 2006. Demographic response to shading and defoliation in two woodland orchids. *Folia Geobotanica* 41:95-106.
32. **Shefferson, R.P.**, M. Weiß, T. Kull, and D.L. Taylor. 2005. High specificity generally characterizes mycorrhizal association in rare lady's slipper orchids, genus *Cypripedium*. *Molecular Ecology* 14:613-626.

33. **Shefferson, R.P.**, T. Kull, and K. Tali. 2005. Adult whole-plant dormancy induced by stress in long-lived orchids. *Ecology* 86:3099-3104.
34. Bruns, T. and **R.P. Shefferson**. 2004. Evolutionary studies of ectomycorrhizal fungi: milestones and future directions. *Canadian Journal of Botany* 82:1122-1132.
35. **Shefferson, R.P.**, J. Proper, S.R. Beissinger, and E.L. Simms. 2003. Life history trade-offs in a rare orchid: the costs of flowering, dormancy, and sprouting. *Ecology* 84:1199-1206.
36. **Shefferson, R.P.**, B. K. Sandercock, J. Proper, and S. R. Beissinger. 2001. Estimating dormancy and survival of a rare herbaceous perennial using mark-recapture models. *Ecology* 82:145-156.

Book Chapters

37. **Shefferson, R.P.** and **C.C. Cowden**. *In press*. Senescence in the wild: plant-fungal symbioses. Pages XX-YY in Shefferson, R.P., R. Salguero-Gomez, and O. Jones (eds). *The Evolution of Senescence in the Tree of Life*. Cambridge University Press.
38. **Shefferson, R.P.**, O. Jones, and R. Salguero-Gómez. *In press*. Wilting leaves and rotting branches: reconciling evolutionary perspectives on senescence. Pages XX-YY in Shefferson, R.P., R. Salguero-Gomez, and O. Jones (eds). *The Evolution of Senescence in the Tree of Life*. Cambridge University Press.
39. **Shefferson, R.P.** 2002. Dormancy and survival in rare terrestrial orchids. Pages 53-66 in Kindlmann, P., J.H. Willems, and D.F. Whigham (eds.). *Trends and Fluctuations and Underlying Mechanisms In Terrestrial Orchid Populations*. Backhuys Publishers, Leiden, The Netherlands.

Special Issues

40. **Shefferson, R.P.** and R. Salguero-Gomez. 2015. *Eco-evolutionary feedbacks in plants*. *Journal of Ecology*.
41. Salguero-Gomez, R. and **Shefferson, R.P.** (eds.). 2013. *New perspectives in whole-plant senescence*. *Journal of Ecology* 101:3.

Other Articles (General Interest, Public, Magazine Articles, etc.)

42. **Shefferson, R.P.** 2013. Introduction to virtual issue: In honour of Michael Hutchings. *Journal of Ecology*. http://www.journalofecology.org/view/0/Michael_Hutchings.html.
43. **Shefferson, R.P.** 2013. Living the ecological good life in Kyoto. *Kyoto University Center for Ecological Research News* 122:3.

Dissertations and Theses

44. **Shefferson, R.P.** 2004. Evolutionary ecology of rare geophytes: dormancy and mycorrhizae in *Cypripedium* species. Ph.D. dissertation, University of California at Berkeley, Berkeley, California. 199p.
45. **Shefferson, R.P.** 2000. Demographic applications of mark-recapture models to populations of rare herbaceous perennials. M.S. thesis, University of California at Berkeley, Berkeley, California. 95p.

FELLOWSHIPS AND GRANTS

Awarded

1. **JSPS Grant-In-Aid (Kakenhi)**. 2016. ¥5,070,000. Log-term eco-evolutionary impacts of the mycorrhiza on plant population dynamics.
2. **OVPR Young Faculty Seed Grant**. 2013. \$10,744. Competitive award providing seed money to develop new research projects on campus at UGA.
3. **OVPR Young Faculty Seed Grant**. 2011. \$10,750. Competitive award providing seed money to develop new research projects on campus at UGA.
4. **OVPR Young Faculty Seed Grant**. 2009. \$8060. Competitive award providing seed money to develop new research projects on campus at UGA.
5. **NSF-JSPS Post-doctoral Fellowship**, Japan Society for the Promotion of Science. \$120,000. 2004-2006. Competitive fellowship screened by NSF and funded by the Japanese government through JSPS.
6. **Graduate Research Assistantship**, University of California, Berkeley. \$10,000. 2003-2004. Research assistantship provided for research related to *Rhizobium* evolutionary ecology.
7. **American Orchid Society / Furniss Foundation Conservation Research Fellowship**. \$27,000. 2001-2004. Competitive fellowship offered to American graduate students pursuing orchid-related research.
8. **Genetics NIH Training Grant**, University of California, Berkeley, \$36,000. 2001-2003. Competitive training grant offered to students at UC Berkeley conducting genetics-related research.
9. **Budweiser Conservation Scholarship**. \$10,000. 2001. Competitive scholarship awarded to American graduate students dealing with conservation research.
10. **United States Forest Service Research Contract**. \$15,000. 2000. Contract offered to fund research into California state-threatened species occurring on USFS lands.
11. **Graduate Research Assistantship**, University of California Botanic Garden. \$5000. 2000. Competitive assistantship offered to botany students at UC Berkeley.
12. **Grant-In-Aid**, Sigma Xi, Berkeley Chapter. \$300. 2000. Competitive research grant offered by the Berkeley Chapter of Sigma Xi.
13. **ESPM Departmental Research Grant**, University of California, Berkeley. \$5000. 1999. Competitive research grant offered to students of the Dept. of ESPM at UC Berkeley.
14. **Regents' Fellowship**, University of California. \$10,000. 1998-1999. Competitive fellowship offered to exceptional out-of-state entrants into the graduate program at UC Berkeley.

AWARDS AND HONORS

1. **Odum School of Ecology Outstanding Teacher**. 2013.
2. **AAAS/Science Program for Excellence in Science Membership**. 2008. Membership awarded to outstanding post-doctoral research associates by nomination from the University of Virginia.
3. **Sigma Xi National Research Society**. Full membership. 2003. Membership awarded to American scientists deemed exceptional by their peers. I was the first graduate student awarded this honor at UC Berkeley.
4. **Outstanding Graduate Student Instructor**, University of California, Berkeley. 2000. For teaching Resource Assessment in the Dept. of Environmental Science, Policy, and Management.

TEACHING EXPERIENCE

As professor

1. **ES Statistics** (UT, Senior Division). Oct 2014 – Present. English language computer lab course on advanced applied statistics.
2. **Evolution (進化学)** (UT, Junior Division). Oct 2014 – Present. Japanese language lecture course on the fundamentals of evolution.
3. **Ecology (生態学)** (UT, Junior Division). Oct 2015 – Present. Japanese language lecture course on the fundamentals of ecology.
4. **PEAK Ecology** (UT, Junior Division). May 2014 – Present. English language lecture course.
5. **ES Presentation Course** (UT, Senior Division). Apr 2015 – Present. English language course on presentation methods.
6. **ES Practical Lab Course** (UT, Senior Division). Apr 2015 – Present. Molecular ecological methods component of major lab course.
7. **Perspectives in Evolutionary Ecology** (UGA, ECOL 8100). Spring 2011 and on. Graduate course at UGA. Most recent evaluations: 4.5/5.0
8. **Life History Evolution** (UGA, ECOL8145). Fall 2010 and on. Graduate course at UGA. Most recent evaluations: 4.6/5.0
9. **Evolutionary Ecology** (UGA, ECOL4500/6500). Spring 2010 and on. Undergraduate/graduate course at UGA. Most recent evaluations: 4.7/5.0
10. **Cross-disciplinary Ecology** (UGA, ECOL 8030). Fall 2010 and on. Co-taught. Most recent evaluations: 4.2/5.0
11. **First-Year Odyssey Seminar** (UGA, FYOS 1001). Topic: *Contemporary Human Evolution*. Spring 2013 and Fall 2012. Most recent evaluations: 4.6/5.0
12. **First-Year Odyssey Seminar** (UGA, FYOS 1001). Topic: *Evolution and Conservation*. Spring 2012. Most recent evaluations: 4.0/5.0
13. **Problems in Ecology** (UGA, ECOL8990). Spr 2009. UGA. Weekly mentoring of graduate students via discussions, readings, and lab training. Most recent evaluations: 4.6/5.0
14. **Senior Seminar** (UGA, ECOL3990). Fall 2009, Spr 2011. UGA. Most recent evaluations: 4.2/5.0
15. **Freshman Honors Seminar** (UGA, ECOL1990H). Fall 2009. UGA. Short seminar on evolutionary ecology. Most recent evaluations: 4.6/5.0

As teaching assistant

16. **Resource Assessment / Statistical Sampling Design (ESPM102B)**. Fall 1999, 2001. UC Berkeley. Prof. Greg Biging, Dept. of Environmental Science, Policy, and Management. Job: Graduate Student Instructor. Course focus: Sampling Theory. I helped to develop labs, and lectured nearly two months in total.
17. **Ecological Genetics (IB162)**. Fall 2000, 2002. UC Berkeley. Prof. Ellen L. Simms, Dept. of Integrative Biology. Job: Graduate Student Instructor. Course focus: Population and Quantitative Genetics. I developed the material for and taught all Discussion sections, and lectured several times each semester.
18. **Demographic Methods for Population Viability Analysis (ESPM284)**. Prof. Steven Beissinger, Dept. of Environmental Science, Policy, and Management. Job: Guest lecturer. Course focus: Demographic Methods. I gave a guest lecture on mark-recapture theory and analysis, and developed a computer lab.

SERVICE**1. Editorships**

- a. **Associate editor** of *Journal of Ecology*. Aug 2012 – Present.
- b. **Special issue editor**. *Journal of Ecology*, Special Issue on Plant Eco-Evolutionary Dynamics, Winter 2015.
- c. **Special issue editor**. *Journal of Ecology*, Special Issue on Senescence, May 2013.
- d. **Series editor**. 2010 – 2012. Nature Knowledge Ecology Project, Evolution series. (<http://www.nature.com/scitable/knowledge/evolution-13228138>)

2. University/Departmental Service and Committees

- a. **Global Faculty Development Committee**. University of Tokyo. 2015 – Present.
- b. **GPES Admissions Committee**. University of Tokyo. 2015 – Present.
- c. **Darwin Poster Week and Reception** (http://www.redandblack.com/ugalife/evolution-s-in-the-air-at-darwin-day-uga/article_2584a98a-74b5-11e2-b992-001a4bcf6878.html). University of Georgia. Main organizer. 2013.
- d. **Strategic Planning Committee**. University of Georgia. Odum School of Ecology. 2012 – 2014.
- e. **Instructional Faculty Search Committee**. University of Georgia. Odum School of Ecology. 2012 – 2013.
- f. **Analytical chemistry laboratory oversight committee**. University of Georgia. Odum School of Ecology. 2011 – 2014.
- g. **UGA Greenhouse Advisory Committee**. University of Georgia. 2011 – 2014.
- h. **Graduate Program Committee**. University of Georgia. Odum School of Ecology. 2009-2014.
- i. **Graduate admissions committee**. University of Georgia. Integrative Life Sciences Program. 2009 – 2011.
- j. **Integrative Life Sciences Full Committee**. University of Georgia. Integrative Life Sciences Program. Departmental representative. 2009 – 2011.

3. Society Board Membership

- a. Evolutionary Demography Society. November 2014 – Present.

4. NSF Funding Advisory Panelist

- a. Evolutionary Genetics Preliminary Proposal Panel (DEB). April 2012.
- b. Population and Community Ecology DDIG panel (DEB). March 2011.

5. Funding/Scientific Agency Reviewer

- a. **Japan Society for the Promotion of Science (JSPS)** reviewer. 2016 – Present.
- b. **Australian Research Council Assessor**. 2015 – Present.
- c. **NSF merit reviewer**. 2006 – Present.

- d. **University-level fellowship application reviewer** for the Graduate School, University of Georgia. 2012 – 2014.
- e. **Sigma Xi At-Large/Full Membership Application Reviewer**. 2011 – Present.
- f. **Fellowship application reviewer** for the Lewis and Clark Fellowship, American Philosophical Society. 2008 – Present.

6. Advisory Service

- a. **Member**, IUCN Species Survival Commission. June 2011 – Present.
- b. **Scientific committee**. 2010 – Present. 4th International Orchid Conservation Congress. Hluboka, Czech Republic. 29 May – 4 Jun 2011.
- c. **Natural area management advisor**. Lake Co. Forest Preserve District, Illinois, USA. 2000 – Present.

7. Language Editor

- a. **English language editor**. 2009. Ohdachi (ed.). *Wild Mammals of Japan*.
- b. **English language proofreader** for *Mammal Study*, the journal of the Japanese Mammalogical Society. 2006 – Present.
- c. **Author help volunteer for non-native English speakers** submitting manuscripts to *Ecology* and other journals of the Ecological Society of America. 2004 – Present.

8. Journal Referee

- a. *American Naturalist*, *American Journal of Botany*, *Australian Journal of Botany*, *Biodiversity and Conservation*, *Biological Conservation*, *Biology Letters*, *BMC Evolutionary Biology*, *Central European Journal of Biology*, *Ecological Applications*, *Ecology*, *Ecology Letters*, *European Journal of Environmental Sciences*, *Functional Ecology*, *Heredity*, *International Journal of Plant Sciences*, *Journal of Animal Ecology*, *Journal of Applied Ecology*, *Journal of Ecology*, *Mycorrhiza*, *Population Ecology*, *Proceedings of the Royal Society B: Biological Sciences*.

9. Other Service

- a. **Natural area restoration volunteer**. 1994-1998. Lake County Forest Preserve District, Illinois. Duties included invasive shrub removal, herbiciding, and controlled burns.

ADVISING

Post-doctoral advisees

1. **Charles Cowden**. Mar 2009 – Dec 2012. Post-doctoral scientist.

As major advisor (all of my PhD students have been awarded full ride fellowships)

2. **Eric Goolsby**. PhD Toxicology student. NSF GRFP winner. Aug 2012 – Present.
3. **Erin Coughlin**. MS Ecology. Aug 2013 – Jul 2015.
4. **Kimberly Kellett**. PhD Ecology. UGA Presidential Fellowship. Aug 2010 – Jul 2015.

5. **Tyler Kartzinel**. PhD Ecology. NSF DDIG & UGA Presidential Fellowship. Aug 2008 – Dec 2012. Co-advised with Dr. Dorset Trapnell.
6. **William Bunch**. MS Ecology. Aug 2010 – May 2012.

As committee member: 14 graduate students at the University of Georgia

Undergraduate research assistants: 16 undergraduate students at the University of Georgia

SKILLS

Computer programming (R, Basic, C++), **DNA laboratory skills** (DNA extraction, PCR, RFLP, sequencing, cloning), **Experimental design**, **Foreign languages** (French, Japanese, and Polish), **Laboratory skills** (Microscopy, sterile culture), **Mathematical modeling** (Matlab, Maple, PVA), **Phylogenetic analysis** (Clustal, Mesquite, PAUP, PhymI, etc.), **Scuba diving** (licensed PADI Open Water Diver), **Statistical analysis** (R, SAS, S+)

FIELD WORK LOCATIONS

Asia: China (Guangxi, Guizhou, Yunnan), Japan, Russia (Primorskij Kraj, Siberian Far East), Taiwan, Thailand, Vietnam; **Europe:** Estonia; **North America:** USA (Alaska, California, Illinois, Kentucky, Maryland, Massachusetts, Michigan, New York, Virginia, West Virginia).

SYMPOSIA, CONFERENCE PRESENTATIONS, POSTERS, AND SPEAKING ENGAGEMENTS

Symposium Organization - Funded

1. Aug 2013. **R.P. Shefferson** and R. Salguero-Gomez. Eco-evolutionary dynamics and the contemporary convergence of ecology and evolution. Annual Meeting of the British Ecological Society/INTECOL, London, UK.
2. Aug 2012. R. Salguero-Gomez and **R.P. Shefferson**. Universal senescence? New theories and experimental approaches across the tree of life. 97th Annual Meeting of the Ecological Society of America, Portland, Oregon, USA. (IN THE NEWS ON INSIDE SCIENCE AT <http://www.insidescience.org/?q=content/maturing-science-getting-old/778>)

Plenary Papers

1. May 2016. **R.P. Shefferson**. Symbiosis and fitness: the orchid mycorrhiza and its role in orchid microevolution. 6th International Orchid conservation Congress (IOCC), Hong Kong, China.
2. 17 Oct 2010. **R.P. Shefferson**. Some ideas on the evolution of the orchid mycorrhiza, with an emphasis on the slipper orchids. Symposium on the Mycorrhizal Ecology of Medicinal Orchids, Guizhou Forestry Institute, Guiyang, China.
3. 6 Nov 2005. **R.P. Shefferson**. Conservation of *Cypripedium* species: the interplay of symbiosis and life history variation on the future viability of a rare plant genus. 1st Int'l Symposium on Diversity and Conservation of Asian Orchids, Tsukuba, Japan.
4. 1 Dec 2000. **R.P. Shefferson**. Mycorrhizal associations and dormancy in conservation of North American *Cypripedium* species. 2000 US Forest Service Region 5 Annual Botany Meeting. San Diego, CA, USA.

Invited Oral Papers

5. Jan 2016. **R.P. Shefferson**. The phylogenetic dimensions of interaction specificity. 日本生態学会関東地区会・公開シンポジウム, Tokyo, Japan.
6. Jan 2016. **R.P. Shefferson**. 生態学者と科学雑誌：最近のトレンド. 日本生態学会関東地区会・公開シンポジウム, Tokyo, Japan.
7. Jan 2016. **R.P. Shefferson**. Evolutionary patterns in community ecology: interactions networks and the influence of phylogeny. 植物RNA研究ネットワークシンポジウム, Tokyo, Japan.
8. Aug 2015. **K.M. Kellett** and **R.P. Shefferson**. How a drier climate will impact populations of a Neotropical weed (*Asclepias curassavica*) in Monteverde, Costa Rica. 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
9. Aug 2015. J.E. Mohan, P.T. Frankson, S. Khan, K. Bridges, C.C. Cowden, and **R.P. Shefferson**. Forests of the future: from Harvard Forest to Costa Rican cloud forests, the eco-evo role of mycorrhizae for determining ecosystem responses to climate warming. IGNITE presentation at 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
10. Aug 2015. **R.P. Shefferson**. How does evolution drive biogeochemical cycles? IGNITE presentation at 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
11. Aug 2015. **R.P. Shefferson**. Predicting evolution in response to climate change using matrix models. 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
12. Mar 2014. **R.P. Shefferson**. Unseen orchids underfoot: why do some orchids shun the sunlight? 16e Colloque de la SFO Exposition Internationale, Blois, France.
13. Sep 2013. **R.P. Shefferson**. How does genetic variation impact population dynamics? Joint British Ecological Society 100th Anniversary Meeting and INTECOL 2013, London, United Kingdom.
14. Sep 2013. **R.P. Shefferson**. Spitze 1991 – a turning point in studies of trade-offs. Working group meeting of the International Network of Next Generation Ecologists. Joint British Ecological Society 100th Anniversary Meeting and INTECOL 2013, London, United Kingdom.
15. Sep 2013. **R.P. Shefferson**. Demography and evolution in herbaceous plants: complex life cycles, sprouting, ageing, and symbiosis. CER Special Seminar, Center for Ecological Research, Kyoto University, Kyoto, Japan.
16. Jul 2013. **R.P. Shefferson**. Reconstructing the evolutionary history of specificity in interactions. CER Fungal Metagenomics Workshop, Center for Ecological Research, Kyoto University, Kyoto, Japan.
17. Sep 2012. **R.P. Shefferson**. The adaptive context of sprouting schedules in plants. EvoDemo Seminar Series, Max Planck Institute for Demographic Research, Rostock, Germany.
18. Jul 2012. **R.P. Shefferson**. The evolutionary ecology of long-lived perennials: reproduction and inconsistent sprouting in a demographic context. Tokyo University Komaba Evolutionary Ecology Seminar, Tokyo, Japan.
19. Jul 2012. **R.P. Shefferson**. The evolution of long-lived plants: sprouting and reproduction in a demographic context. Weekly Seminar Series, National Environmental Research Institute, Tsukuba, Japan.
20. Jul 2012. **R.P. Shefferson**. The evolution of long-lived plants: sprouting and reproduction in a demographic context. MICHINOKU Evolutionary Biology Seminar, Tohoku University, Sendai, Japan.

21. Jun 2012. **R.P. Shefferson**. The evolution of long-lived plants: sprouting and reproduction in a demographic context. Hokkaido University Graduate School of Environmental Earth Sciences Trendy Seminar, Hokkaido University, Sapporo, Japan.
22. Jun 2011. **R.P. Shefferson**. Life histories of wild, terrestrial orchids: dormancy, shrinkage, and other bizarre phenomena. Native Orchid Conference, Mt. Cuba Center, Hockessin, Delaware.
23. May 2011. **R.P. Shefferson**. Dormancy, shrinkage, and fitness in two orchids. 4th International Orchid Conservation Congress, Hluboká, Czech Republic.
24. 16 Oct 2010. **R.P. Shefferson**. Some ideas on the evolution of the orchid mycorrhiza, with an emphasis on the slipper orchids. Beijing Forestry University, Beijing, China.
25. 15 Jun 2009. **R.P. Shefferson**. The evolutionary ecology of vegetative dormancy: orchids, sprouting, and mycorrhizae. FFPRI Afternoon Seminar Series, Tsukuba, Japan.
26. 26 Feb 2009. **R.P. Shefferson**. The evolutionary ecology of vegetative dormancy: orchids, sprouting, and mycorrhizae. USDA Forest Service Fire Disturbance Ecology Center Weekly Lunch Series, Athens, Georgia, USA.
27. 13 Dec 2008. **R.P. Shefferson**. The role of mycorrhizal fungi in determining the distribution of temperate, terrestrial orchid species. 4th Int'l Symposium on Diversity and Conservation of Asian Orchids, Tsukuba, Japan.
28. 8 Dec 2008. **R.P. Shefferson**. Recent advances and breakthroughs in the evolutionary history of the orchid mycorrhiza. Dept. of Plant Biology, University of Georgia, Athens, Georgia, USA.
29. 6 Mar 2008. **R.P. Shefferson**. Underground and unseen: long-lived perennials and the costs of sprouting. Kansas State University, Manhattan, Kansas USA.
30. 20 Feb 2008. **R.P. Shefferson**. Vegetative dormancy in lady's slipper orchids: the interplay of life history and biotic interaction in a rare plant genus. University of New Orleans, New Orleans, Louisiana, USA.
31. 31 Jan 2008. **R.P. Shefferson**. Vegetative dormancy in lady's slipper orchids: life history and biotic interaction in a rare plant genus. University of North Carolina, Wilmington, North Carolina, USA.
32. 10 Dec 2007. **R. P. Shefferson**. Underground and unseen: long-lived perennials and the costs of sprouting. Odum School of Ecology, University of Georgia, Athens, Georgia, USA.
33. 6 Dec 2007. **R.P. Shefferson**. Life history traits impacted by biological interactions in long-lived perennials. Smithsonian Environmental Research Center, Edgewater, Maryland, USA.
34. 1 Feb 2007. **R.P. Shefferson**. Life histories and symbiosis in rare plants: conserving the lady's slipper orchids (genus *Cypripedium*). Bio 203 Seminar Series, Dept. of Biological Sciences, North Dakota State University, Fargo, North Dakota, USA.
35. 20 Oct 2006. **R.P. Shefferson**. Dormancy and mycorrhizal specialization in lady's slipper orchids (genus *Cypripedium*). Bio 265 Lunch Bunch Seminar, EEOB Graduate Program, University of California, Riverside, California, USA.
36. 3 Feb 2005. **R.P. Shefferson**. Adult dormancy in geophytes: integrating approaches to explore a complex life history phenomenon. Archbold Research Station, Lake Placid, Florida, USA.

Recent Oral Papers

37. Aug 2015. **E.M. Coughlin**, N. Wurzburger, **R.P. Shefferson**, and Stacy L. Clark. Plant-soil interactions in American chestnut restoration. 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
38. Mar 2015. R.P. Shefferson. アメリカの大学への就職事情. 62nd Annual Meeting of the Ecological Society of Japan, Kagoshima, Japan.

39. Mar 2015. **R.P. Shefferson**, M.J. Hutchings, and D.A. Roach. Environmental drivers of demographic patterns, and evolutionary response, in long-lived plants. 62nd Annual meeting of the Ecological Society of Japan, Kagoshima, Japan.
40. Nov 2014. **R.P. Shefferson** and D.A. Roach. Plasticity stabilizes the demography of a short-lived perennial against stochastic environmental variation and selection. 2nd Meeting of the Evolutionary Demography Society, Stanford University, Palo Alto, California, USA.
41. Oct 2014. **R.P. Shefferson** and D.A. Roach. Natural selection, genetic variation, and plasticity in eco-evolutionary dynamics: a case study with *Plantago lanceolata*. 30th Annual Meeting of the Society for Population Ecology, University of Tsukuba, Tsukuba, Japan.
42. Oct 2013. **K. Kellett** and **R.P. Shefferson**. How do seasonal patterns and stochastic variation in demographic rates affect fitness of a continuously flowering Neotropical milkweed (*Asclepias curassavica*)? 1st Meeting of the Evolutionary Demography Society, University of South Denmark, Odense, Denmark.
43. Oct 2013. **R.P. Shefferson**. The evolution of sprouting: why do some plants shun the sunlight? 1st Meeting of the Evolutionary Demography Society, University of South Denmark, Odense, Denmark.
44. Jun 2013. **Goolsby, E.W.** and **R.P. Shefferson**. Evolution of metal hyperaccumulation in vascular plants. Evolution 2013, Snowbird, Utah, USA.
45. May 2013. T. Kull, M. Hirv, **R.P. Shefferson**, and K. Tali. Consequences of prolonged dormancy in perennial plants. 26th Conference of the Plant Population Biology Society of Germany, Austria, and Switzerland, Tartu, Estonia.
46. Aug 2012. **R.P. Shefferson** and **C.C. Cowden**. The evolution of broad interactions: specificity and symbiont community are phylogenetically determined in lady's slipper orchids (*Cypripedium* spp.). 97th Annual Meeting of the Ecological Society of America, Portland, Oregon, USA.
47. Aug 2012. **T.R. Kartzinel**, **R.P. Shefferson**, and D.W. Trapnell. Phylogeographic structure of the Neotropical epiphytic orchid *Epidendrum firmum* corresponds to differences in symbiotic fungal communities. 97th Annual Meeting of the Ecological Society of America, Portland, Oregon, USA.
48. Aug 2011. **C.C. Cowden** and **R.P. Shefferson**. Microbial community development on an Estonian ash hill. 96th Annual Meeting of the Ecological Society of America, Austin, Texas, USA.
49. Mar 2011. **R.P. Shefferson**. Vegetative dormancy as a bet-hedging trait. 58th Annual Meeting of the Ecological Society of Japan, Sapporo, Japan.
50. Aug 2010. **R.P. Shefferson** and D.A. Roach. Longitudinal analysis of *Plantago*: the impacts of age and genetics on population dynamics. 95th Annual Meeting of the Ecological Society of America, Pittsburgh, Pennsylvania, USA.
51. April 2010. **R.P. Shefferson**. Coevolution in broad interactions: mycorrhizal specificity in the rattlesnake plantains and their mycorrhizal fungi. 54th Annual Meeting of the European Ecological Genetics Group, Stirling, Scotland, UK.
52. June 2008. **R.P. Shefferson** and D.A. Roach. Is polycarpy adaptive in a short-lived polycarpic perennial, *Plantago lanceolata*. Evolution 2008, Minneapolis, Minnesota, USA.
53. Sept 2007. T. Yukawa, Y. Tsujita-Ogura, **R.P. Shefferson**, and J. Yokoyama. Origin and evolution of the orchid mycorrhiza. 2. Mycorrhizal diversity in the genus *Apostasia*. 71st Annual Meeting of the Botanical Society of Japan, Noda, Japan.
54. Sept 2006. T. Yukawa, Y. Tsujita-Ogura, **R.P. Shefferson**, and J. Yokoyama. Origin and evolution of the orchid mycorrhiza. 1. Strikingly narrow fungal partnership in *Apostasia nipponica*, the basal orchid clade. 70th Annual Meeting of the Botanical Society of Japan, Kumamoto, Japan.

55. Oct 2004. **R.P. Shefferson**. Re-assessing orchid mycorrhizae: the promise of DNA phylogenetic methods, and taxonomic and geographic sampling biases. International Conference on the Evolutionary Botany of Certain Plant-Groups of the East Eurasian Floristic Element Related to Japanese Flora on the Basis of Chromosomes, Hiroshima, Japan.
56. Jun 2004. **R.P. Shefferson**, T. Kull, and K. Tali. Effects of reduced photosynthesis on future growth and reproduction of the forest clonal herbs, *Cypripedium calceolus* and *Cephalanthera longifolia*. 3rd International Workshop on Orchid Population Dynamics, Haapsalu, Estonia.
57. Aug 2002. **R.P. Shefferson**. Life history interpretations of dormancy to conservation of endangered geophytes. 8th International Congress of Ecology, Seoul, South Korea.
58. Aug 2001. Kasmer, J. and **R.P. Shefferson**. Effects of removing an understory shrub on growth of canopy trees in northeastern Illinois. 86th Annual Meeting of the Ecological Society of America, Madison, Wisconsin, USA.
59. May 2001. **R.P. Shefferson**. Dormancy and survival in rare terrestrial orchids. 2nd International Workshop on Orchid Population Dynamics, Česke Budějovice, Czech Republic.
60. Sept 2000. P.L. Fiedler, E.L. Simms, and **R.P. Shefferson**. Demography in the service of conservation: past achievements and future challenges. Chicago Botanic Garden, Chicago, Illinois, USA.

Recent Poster Presentations

61. Aug 2015. E.M. Coughlin, N. Wurzbarger, **R.P. Shefferson**, and S. Clark. Plant-soil feedbacks of *Castanea dentata* (American chestnut) reintroduction. 100th Annual Meeting of the Ecological Society of America, Baltimore, Maryland, USA.
62. Oct 2014. **R.P. Shefferson** and D.A. Roach. Natural selection, genetic variation, and plasticity in eco-evolutionary dynamics: a case study of *Plantago lanceolata*. 30th Annual Meeting of the Society of Population Ecology, Tsukuba, Japan.
63. Aug 2012. K.K. Kellett and **R.P. Shefferson**. Well-seasoned demography: the importance of intra-annual variation in populations of a Neotropical milkweed. 97th Annual Meeting of the Ecological Society of America, Portland, Oregon, USA.
64. Jan 2012. T.R. Halle, T.R. Kartzinel, and **R.P. Shefferson**. Analyzing genetic diversity among individuals of two rare North American orchid species. 18th Annual Graduate Student Symposium, Odum School of Ecology, University of Georgia, Athens, Georgia, USA.
65. Aug 2011. K.M. Kellett and **R.P. Shefferson**. Evaluating effects of stress on long-lived plant populations with integral projection models. 96th Annual Meeting of the Ecological Society of America, Austin, Texas, USA.
66. Aug 2011. W.D. Bunch and **R.P. Shefferson**. Linking soil nutrient availability and fungal association in a rare orchid, *Cypripedium acaule*. 96th Annual Meeting of the Ecological Society of America, Austin, Texas, USA.
67. Aug 2011. T.R. Kartzinel, W.D. Bunch, C.C. Cowden, D.W. Trapnell, and **R.P. Shefferson**. Diverse suites of mycorrhizal fungi vary among populations of the rare Neotropical lady's slipper orchid, *Phragmipedium longifolium*. 96th Annual Meeting of the Ecological Society of America, Austin, Texas, USA.
68. Apr 2011. S. Willis and **R.P. Shefferson**. Diversity of mycorrhizal fungi colonizing Estonian mine tailings. Conference for Undergraduate Research Opportunities, University of Georgia, Athens, Georgia, USA.
69. Aug 2010. **R.P. Shefferson** and C.C. Cowden. Mycorrhizal species dominate the soil-fungal community in Estonian oil shale-ash hills. 95th Annual Meeting of the Ecological Society of America. Pittsburgh, Pennsylvania, USA.

70. Aug 2005. **R.P. Shefferson**, D.L. Taylor, and S. Adams. Lady-slipper orchid mycorrhizal associations reveal specificity suggestive of resource fragmentation and resource tracking. The Mycological Society of America / The Mycological Society of Japan Joint Meeting 2005, Hilo, Hawai'i, USA.
71. Mar 1999. **R.P. Shefferson**. Rethinking rare plant monitoring with mark-recapture analysis. Population Viability Analysis: Assessing Models for Recovering Endangered Species, San Diego, California, USA.

MEMBERSHIPS

American Society of Naturalists, Botanical Society of America, British Ecological Society, Ecology Society of America, Ecological Society of Japan, European Society of Evolutionary Biology, Evolutionary Demography Society, International Biometrics Society, Mycological Society of America, Mycological Society of Japan, Sigma Xi, Society for Conservation Biology, Society for Integrative and Comparative Biology, Society for the Study of Evolution.