

Lesley G. Campbell
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EDUCATION

- 2007 Ph.D. Department of Evolution, Ecology & Organismal Biology, Ohio State University, Columbus, OH (Mentor: Dr. Allison Snow)
- 2001 M.Sc. Department of Botany, University of Guelph, Guelph, ON (Mentor: Dr. Brian Husband)
- 1998 B.Sc. Department of Botany, University of Guelph (Mentor: Dr. Robert Sheath)

PROFESSIONAL PREPARATION

- 2008 – 2010 *Huxley Faculty Fellow in Evolution: Rice University* (Host: Dr. Ken Whitney). Holding a competitive fellowship that allows me to pursue my research interests in plant evolutionary biology and teach one undergraduate course per year.
- 2007 *Post-doctoral fellow: University of Maryland* (Mentors: Drs. Maile Neel, Bill Fagan). Following an eco-informatics approach, I collated species biology and threat information of endangered species to aid mass species recovery.

ACADEMIC HONOURS

- 2007 Huxley Fellow in Evolution, Rice University (2008-2010)
- 2007 Invited “Outstanding Young Scientist” Speaker at The Young Scientists’ Symposium, University of Michigan
- 2007 Natural Sciences and Engineering Research Council of Canada Postdoctoral Fellowship (2008-2010, Declined)
- 2006 Mary S. Muellhaupt Presidential Fellow in Biology, Ohio State University
- 2006 Darwin Award for Best Graduate Student Poster, Ohio State University
- 2005 Darwin Award for Best Oral Presentation, Ohio State University
- 2005 Graduate Associate Teaching Award, Ohio State University
- 2004 Best Student Poster, American Institute of Biological Sciences, Washington, D.C.
- 2004 Summer Statistical Institute Travel Fund, North Carolina State University
- 2000 Graduate Student Advancement Fund, University of Guelph
- 1999 Botany Scholarship, University of Guelph
- 1999 University Graduate Scholarship, University of Guelph
- 1998 Access Registrar’s Entrance Award, University of Guelph

PUBLICATIONS

Peer-reviewed journal articles

- Campbell, L. G.**, A. A. Snow, P. M. Sweeney. In press. When divergent life histories hybridize: insights into adaptive life-history traits in an annual weed. *New Phytologist*. Accepted July 29, 2009.
- Campbell, L. G.**, A. A. Snow. 2009. Can feral weeds evolve from cultivated radish (*Raphanus sativus*, Brassicaceae)? *American Journal of Botany*. 96: 498-506.
- Campbell, L. G.**, A. A. Snow, P. M. Sweeney, J. M. Ketner. 2009. Rapid evolution in crop-weed hybrids under selection for divergent life histories. *Evolutionary Applications*. 2: 172-186.
- Waite, T. A., S. J. Corey, **L. G. Campbell**, A. K. Chhangani, J. Rice, P. Robbins. 2009. Satellite sleuthing: Does remotely sensed land-cover change signal ecological degradation in a protected area? *Diversity & Distributions*. 15: 299-309.
- Weiner, J., **L. G. Campbell**, J. Pino, and L. Echarte. 2009. The allometry of reproduction within plant populations. *Journal of Ecology*. doi: 10.1111/j.1365-2745.2009.01559.x.
- Whitney, K. D., J. R. Ahern, **L. G. Campbell**. 2009. *Invited paper*: Hybridization frequencies do not predict numbers of invasives across plant families. *Biological Invasions*. 11: 1205-1215.
- Campbell, L.G.**, B.C. Husband. 2007. Small populations are mate-poor but pollinator-rich in a rare, self-incompatible plant, *Hymenoxys herbacea* (Asteraceae). *New Phytologist* 174: 915-925.
- Campbell, L.G.**, A.A. Snow. 2007. Competition alters life-history traits and increases the relative fecundity of crop-wild hybrids (*Raphanus* spp.). *New Phytologist* 173: 648-660.
- Waite, T.A., **L.G. Campbell**, A.K. Chhangani, P. Robbins. 2007a. La Niña's signature: parallel die-off of mammals in a protected area in India. *Diversity and Distributions* 13: 752-760.
- Waite, T.A., A.K. Chhangani, **L.G. Campbell**, L.S. Rajpurohit, S.M. Mohnot. 2007b. Sanctuary in the city: urban monkeys buffered against catastrophic die-off during ENSO-related drought. *Ecohealth* 4: 278-286.
- Campbell, L.G.**, A.A. Snow, C.E. Ridley. 2006. Weed evolution after crop gene introgression: greater survival and fecundity of hybrids in a new environment. *Ecology Letters* 11: 1198-1209.
- Waite, T.A., **L.G. Campbell**. 2006. Controlling the false discovery rate in molecular ecology: an alternative to Bonferroni. *Ecoscience* 13: 439-442.
- Campbell, L.G.**, B. C. Husband. 2005. Impact of clonal growth on effective population size in *Hymenoxys herbacea* (Asteraceae). *Heredity* 94: 526-532.

Other peer-reviewed publications

- Snow, A.A., **L.G. Campbell**. 2005. Can feral radishes become weeds? In Crop Fertility and Volunteerism. Ed. J. Gressel. CRC Press. Pp. 193-208.
- Husband, B.C., **L.G. Campbell**. 2004. Population genetic and demographic responses to novel environments: implications for ex situ plant conservation. In Ex Situ Plant Conservation Symposium: Strategies for Survival. Eds E. Guerrant Jr., K. Havens, M. Maunder. Island Press. pp. 231 - 266.
- Campbell, L.G.**, B.C. Husband, M.J. Oldham. 2001. Status report on the Lakeside Daisy, *Hymenoxys herbacea*, in Canada. Endangered Wildlife in Canada Status Report. [Note: This Canadian federal legislation lists *H. herbacea* as a threatened species.]

Potential publications currently in process

- Campbell, L. G.**, T. A. Waite, S. J. Corey, A. K. Chhangani, and P. Robbins. Uphill battle: elevation impedes invasion by *Prosopis juliflora* into a protected area. Biological Invasions. Resubmission due: November 12, 2009.
- Snow, A. A., T. M. Culley, **L. G. Campbell**, S. G. Hegde, and N. C. Ellstrand. Long-term persistence of crop alleles in weed populations. Resubmitted in September, 2009 – New Phytologist.
- Whitney, K. D., J. R. Ahern, **L. G. Campbell**, L. P. Albert, M. S. King. Patterns of hybridization in plants. Submitted in September, 2009 – Perspectives in Plant Ecology, Evolution and Systematics,.

Highlights of my published work

- Rieseberg, L. Faculty of 1000 Biology, 27 Jul 2009. <http://f1000biology.com/article/id/1162698>
- Wolfe, L.M., and A. C. Blair. 2007. Born to run: competition enhances the spread of genes from crops to wild relatives. New Phytologist 173: 450–452.
- Hoffman, A. Faculty of 1000 Biology, 30 Oct 2006. <http://www.f1000biology.com/article/id/1046776/evaluation>

RESEARCH

Funding (~\$293,500 including fellowships above, \$50,000 pending)

- 2009 (Pending) Shell Center for Sustainability, Rice University. “Response of native plant mating systems to global change” with K. D. Whitney, C. A. Masiello, \$50,000 (2010).
- 2009 SEEDS: Ohio Agricultural Development and Research Center, “Adaptive importance of flowering time for agricultural production under global change” with K. L. Mercer, \$50,000 (2009-2011).
- 2008 ADVANCE NSF Mini-Grant, Rice University. “Assessing Women’s Participation in Ecology” \$5,000 (2008-2009).
- 2008 Agricultural weeds: Bridging the gap between evolutionary ecology and crop science,

- University of Georgia, “Travel award: When divergent life histories hybridize: insights into adaptive life-history traits in an annual weed” \$500 (2008).
- 2008 Rice University, “Faculty start-up funds”, \$8,000 (2008-2011).
- 2006 National Science Foundation, Doctoral Dissertation Improvement Grant “Does Crop-to-Wild Hybridization Shift Life History Toward Increased Invasiveness?” with A. A. Snow, \$10,370 (2006).
- 2006 Henry Gleason Fellowship, University of Michigan Biological Station “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$6,615 (2006).
- 2005 Janice Carson Beatley Herbarium Award, Ohio State University “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$1,000 (2005).
- 2004 Graduate Researcher Fellowship, The Nature Conservancy – University of Michigan Biological Station “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$3,008 (2004).
- 2004 Graduate Researcher Fellowship, The Nature Conservancy – University of Michigan Biological Station “Travel award: Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$1,000 (2004).
- 2003 “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” Graduate Researcher Fellowship, The Nature Conservancy – University of Michigan Biological Station, \$4,600 (2003).
- 2002 Graduate Researcher Fellowship, The Nature Conservancy – University of Michigan Biological Station “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$2,000 (2002).
- 2002 Janice Carson Beatley Herbarium Award, Ohio State University “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$1,449 (2002).
- 2002 Graduate Research Award, Sigma Xi “Does Increased Invasiveness Evolve from Crop-to-Wild Hybridization?” \$500 (2002).

Invited Research Lectures

- 2010 Ecological Society of America, ADVANCE and Ecology Symposium
- 2007 Univ. Maryland, Dept. of Biology
Trent University, Dept. of Biology
Rice University, Dept. of Ecology and Evolution
Univ. Michigan, Young Scientists Symposium
- 2006 Univ. Maryland, Dept. of Plant Sciences & Landscape Architecture
Notre Dame Univ., Dept. of Biology
- 2005 Otterbein College, Life and Earth Sciences Dept.
- 2002 – 2006 Three lectures at the Ohio State Univ., EEOB Dept.
- 2002 – 2005 Four lectures at the Univ. Michigan, Biological Station

Research Presented at Scientific Meetings

- 2009 “Correlates of Hybridization Propensity in Plants.” Ecological Society of America.
- 2008 “Confronting dogma: Does habitat fragmentation really lead to genetic differentiation?” Society for the Study of Evolution Annual Conference.
- “Genetic risk and endangered species: strengthening links between science and recovery.” Society for the study of Conservation Biology Annual Conference.
- “Uphill battle: elevation impedes invasion and minimizes impacts of *Prosopis juliflora* in a protected area.” Society for the study of Conservation Biology Annual Conference.
- “When divergent life histories hybridize: insights into adaptive life-history traits in an annual weed.” Agricultural weeds: Bridging the gap between evolutionary ecology and crop science. September 11-13th, 2008, University of Georgia.
- 2007 “Persistent crop allele introgression after rapid evolution of crop-wild hybrids.” Canadian Society for Ecology and Evolution Annual Conference.
- “Crop-wild hybridization and the rate of evolution in weeds.” Annual meeting of the North Central Weed Science Society.
- “Will gene flow assist the evolution of feral weeds?” Botanical Society of America Annual Conference.
- 2006 “Selective pressures on and fitness consequences of divergent life-histories.” Society for the Study of Evolution Annual Conference.
- “A decade of introgression: crop alleles persist in experimental populations of wild radish (*Raphanus raphanistrum*).” Botanical Society of America Annual Conference; North Central Weed Science Society Annual Conference.
- 2005 “Can hybridization alter evolutionary potential?” Society for the Study of Evolution Annual Conference.
- “The life of a social radish – Competition and its fitness consequences for advanced generation, crop-wild hybrids.” Botanical Society of America Annual Conference; North Central Weed Science Society Annual Conference.
- “Heritability of two life-history traits in wild, crop and crop-wild hybrid radishes.” Botanical Society of America Annual Conference.
- 2004 “Can feral radishes become weedy?” Rockefeller Foundation Workshop on Fertility and Volunteerism in Crop Plants.
- “Impacts of crop-to-wild gene flow: Beyond conventional metrics of genetic diversity” Botanical Society of America Annual Conference; American Institute of Biological Sciences Society Annual Conference.
- 2002 “Genetic drift and effective population size of the self-incompatible plant *Hymenoxys herbacea*.” Society of the Study of Evolution Society Annual Conference.

TEACHING

Mentoring Undergraduate Researchers

Eco-informatics research – M. Dozier, J. Fang, S. Mehtani, S. Millsap, L. Templeton, K. Turner

Field experience – K. Alofs (now in graduate school at UT Austin), A. Babayan, N. Curiel, A. DeCamp, E. Hill (now research assistant at Michigan State Univ.), N. Marsh, R. Rajbhandari, N. Smith, J. Waterbury, P. Zelnick.

Laboratory methods – E. Gumuser, M. Burlison, S. Clark, H. Eisel, S. Gifford, J. Ketner, N. Masuda, K. Mollohan, S. Pflingsten, M. Schneider, N. Smith, K. Toth, K. Vedam.

Teaching Experience

- 2009 Conservation Biology (BIOS 323, Spring, Fall), Lead Instructor, Rice University.
Research methods and writing for Undergraduate Research (Spring, Fall), Lead Instructor, Rice University.
Core Course in EEB Graduate Studies, Lecturer, Rice University
- 2008 Introduction to Genes & Genomes (BIOS 328), Lead Instructor, Rice University.
Teaching Technology Lecture Series, Guest Lecturer, Rice University.
- 2005 NSF-REU, Mentor, University of Michigan Biological Station.
Honor's Intro. to Evolution (EEOB H400) Teaching Assistant, Ohio State University.
Plant Population Ecology (EEOB 671), Guest Lecturer, Ohio State University.
- 2004 Independent Study (EEOB 693), Mentor, Ohio State University.
Introduction to Evolution (EEOB 400), Teaching Assistant, Ohio State University
- 2003 Introduction to Evolution (EEOB 400), Teaching Assistant, Ohio State University
Independent Study (EEOB 693), Mentor, Ohio State University.
Honor's Introduction to Ecology (EEOB H413), Guest Lecturer, Ohio State University
Introduction to Ecology (EEOB 413), Guest Lecturer, Ohio State University
- 2002 Plant Population Ecology (EEOB 671), Teaching Assistant, Ohio State University
- 2001 Introduction to Evolution (EEOB 400), Teaching Assistant, Ohio State University
- 2000 General Biology I, II (BIOL 103, 104), Senior teaching assistant, University of Guelph
- 1999 Population biology (BIOL 311), Teaching assistant, University of Guelph
General Biology I (BIOL 103), Teaching assistant, University of Guelph
- 1998 General Biology I (BIOL 103), Teaching assistant, University of Guelph

Guest Teaching Opportunities

- 2008 Teaching Technology Lecture Series, Guest Lecturer, Rice University.
- 2005 Plant Population Ecology (EEOB 671), Guest Lecturer, Ohio State University.
- 2003 Honor's Introduction to Ecology (EEOB H413), Guest Lecturer, Ohio State University
Introduction to Ecology (EEOB 413), Guest Lecturer, Ohio State University

SERVICE AND MEMBERSHIP

Professional Affiliations

Ecological Society of America, Society for the Study of Evolution, Society for Conservation Biology, Canadian Society for Ecology and Evolution, Botanical Society of America

Service

Peer Reviewer: American Journal of Botany, Biological Conservation, Botany, Conservation Biology, Conservation Letters, Ecology, Evolution, Journal of Agricultural and Food Chemistry, National Science Foundation, New Phytologist, Oikos, Plant Systematics & Evolution, Physiologia Plantarum.

Departmental Contributions:

- 2009 Departmental Hiring Search Committee (EEB, Rice)
2003-2004 Departmental Chair Advisory Committee (EEOB, OSU)
Departmental Communication Committee (EEOB, OSU)
2002-2003 Departmental Graduate Student Committee (EEOB, OSU)
1999-2000 Departmental Graduate student representative (Botany, Univ. Guelph)
Departmental Curriculum Committee (Botany, Univ. Guelph)
Departmental Scholarship Committee (Botany, Univ. Guelph)

Outreach:

- 2009 Darwin Day Celebration, Guest Lecturer, Houston Church of Free Thought
Host of a learning event for Partnership for the Advancement and Immersion of
Refugees, Houston, TX
2008 Darwin Day Celebration, Guest Lecturer, Rice University
Guest commentator, "The Next Industrial Revolution", Citizens League for
Environmental Action Now, Houston, TX
2005 Guest lecturer, Strategies for Ecology Education, Development and Sustainability
(SEEDS) conference, "The life of a social radish – Competition and its fitness
consequences for advanced generation, crop-wild hybrids." Pellston, MI.
2003-4 Research demonstrations, Public open house at the University of Michigan
Biological Station, "Rapid evolution in weed populations" Pellston, MI.

Referees:

Dr. H. Lisle Gibbs (Evolutionary molecular ecology, Ph. D. mentor)

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Dr. Allison A. Snow (Plant population ecology, Ph. D. advisor)

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318 West 12th Ave., Columbus, OH, USA, 43210.
phone: 614-292-3445, fax: 614-292-2030, e-mail: snow.1@osu.edu

Dr. Joan Strassman (Microbial Evolution, Behavioral Ecology, Post-doc. mentor)

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6100 Main Street, MS-170, Houston, TX 77005-1892.
phone: 713-348-3261, fax: 713-348-5232, e-mail: strassm@rice.edu

Dr. Kenneth D. Whitney (Plant evolutionary ecology, Post-doc. mentor)

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