

LESLEY G. CAMPBELL

Curriculum Vitae

Ohio State University

Department of Evolution, Ecology, & Organismal Biology

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Professional preparation

- 2007 Post-doctoral fellow, Plant Science & Landscape Architecture, Univ. Maryland
Mentor: Maile Neel (February – December, 2007)
Project: Endangered species and scientifically defensible recovery goals
- 2007 Visiting scholar, Evolution, Ecology & Organismal Biology, Ohio State Univ.
Mentors: Allison Snow, Maria Miriti (January – December, 2007)
Project: Enhanced weediness: linking individual fecundity and population growth.
- 2006 Ph.D. Evolution, Ecology & Organismal Biology (EEOB), Ohio State Univ.
Mentor: Allison Snow
Dissertation title: Rapid evolution in a crop-weed complex (*Raphanus* spp.)
- 2001 M.Sc. Botany, University of Guelph
Mentor: Brian Husband
Thesis title: Pollen limitation in small populations of a self-incompatible plant
- 1998 B.Sc. Plant Biology, University of Guelph
Mentor: Robert Sheath
Thesis title: Biogeography and systematics of the Lemnaceae

Academic Honours

- 2007 Young Scientists' Symposium – One of eight outstanding, young scientists invited to speak, University of Michigan
- 2006 Mary S. Muellhaupt Presidential Fellow, Ohio State University (\$17,300)
Darwin Award (Best Poster), EEOB, Ohio State University (\$500)
- 2005 Darwin Award (Best Presentation), EEOB, Ohio State University (\$500)
Graduate Associate Teaching Award, EEOB, Ohio State University (\$500)
- 2004 Best Student Poster, American Institute of Biological Sciences, Washington, D.C.
Summer Statistical Institute Travel Fund, North Carolina State University (\$750)
- 2000 Graduate Student Advancement Fund, Biol. Sci., University of Guelph (\$500)
- 1999 Intradepartmental Scholarship, Dept. Botany, University of Guelph (\$1,000)
University Graduate Scholarship, University of Guelph (\$1,500)
- 1998 Access Registrar's Entrance Award, University of Guelph (\$1,500)

Publications

Peer-reviewed articles

- 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(3): 648-660.
- 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** (*in press*).
- 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 (9): 1198-1209.
- Waite, T.A., L.G. Campbell. 2006. Controlling the false discovery rate in molecular ecology: an alternative to Bonferroni. **Ecoscience** 13(4): 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.

Edited book chapters

- 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.

Potential publications currently in review

- Campbell, L.G., A.A. Snow, P.M. Sweeney. When divergent life histories hybridize: insights into adaptive life-history evolution in an annual weed. **Evolution**, Jan. 6, 2007 [Submission #07-013, 51 ms. pp., 6 figs, 4 tables, 3 appendices].
- Campbell, L.G., A.A. Snow. Radish dedomestication (*Raphanus sativus*; Brassicaceae) – will gene flow assist the evolution of feral weeds? **Journal of Applied Ecology**, Jan. 13, 2007 [Submission # JAPPL-2007-00030, 43 ms. pp., 3 figs, 2 tables, 3 appendices].
- Campbell, L.G., A.A. Snow, P.M. Sweeney, J.M. Ketner. Crop alleles persist in hybrids rapidly evolving wild phenotypes. **Proceedings of the Royal Society of London, Series B**, Feb. 6, 2007 [Submission #RSPB-2007-0172, 28 ms. pp., incl. 3 figures and 4 appendices].

Waite, T.A., L.G. Campbell, A.K. Chhangani, P. Robbins. (Encouraged resubmission pending suitable revision, Jan. 11, 2007) La Niña's signature: parallel die-off of mammals in a protected area in India. **Diversity and Distributions** [Submission # DDI-2006-0015, 21 ms. pp., 3 figs, 3 tables].

Waite, T.A., A.K. Chhangani, L.G. Campbell, L.S. Rajpurohit, S.M. Mohnot. Sanctuary in the city: urban monkeys buffered against catastrophic die-off during ENSO-related drought. **Ecohealth**, Feb. 5, 2007 [Submission #ECH-07-0013, 23 ms. pp., 2 figs, 2 tables].

Potential publications currently in preparation

Campbell, L.G., A.A. Snow, C.E. Ridley. Reaction norms of life-history traits predict invasiveness of crop-wild hybrids. Target: **Evolution** [Expected submission date: March 31, 2007].

Snow, A.A., Culley, T.M., Campbell, L.G., Ellstrand, N.C., Uthus, K.L., Hegde, S. A decade of introgression: crop alleles persist in experimental populations of wild radish (*Raphanus raphanistrum*). Target: **PNAS** [Expected submission date: March 15, 2007].

Sweeney, P.M., A.A. Snow, L.G. Campbell. Fitness of F₂ hybrids between weedy and cultivated radishes (*Raphanus raphanistrum* x *R. sativus*, Brassicaceae): effects of parental diversity. Target: **American Journal of Botany**. [Expected submission date: February 28, 2007, 35 ms. pp., 2 tables, 2 figs., 2 appendices].

Technical report

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**.

Highlights of my published work

Hoffman, A. Faculty of 1000 Biology, 30 Oct 2006.
<http://www.f1000biology.com/article/id/1046776/evaluation>

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.

Research program

Funding Obtained

- 2005 Doctoral Dissertation Improvement Grant, National Science Foundation (\$10,370)
Henry Gleason Fellowship, Univ. Michigan Biological Station (UMBS) (\$6,615)
- 2004 Janice Carson Beatley Herbarium Award, Ohio State University (\$1,000)
Graduate Researcher Fellowship, The Nature Conservancy – UMBS (\$3,008)
Travel Award, The Nature Conservancy – UMBS (\$1000)
- 2003 Graduate Researcher Fellowship, The Nature Conservancy – UMBS (\$4,600)
- 2002 Graduate Research Fund, UMBS (\$2,000)
Janice Carson Beatley Herbarium Award, Ohio State University (\$1,449)
Graduate Research Award, Sigma Xi (\$500)

Grant and fellowship applications pending

- 2007 – 2009 **Natural Sciences & Engineering Research Council, Canada – Fellow**
Title: Global climate change and rapid life history evolution
Funding: \$80,000
Collaborator: John Stinchcombe, Univ. Toronto.
- 2007 – 2011 **USDA NRI – Biology of weedy and invasive species in agroecosystems**
Title: Enhanced weediness of crop-wild hybrids: a test for associations between greater fitness and population-level projections.
Budget: \$380,000
Collaborators: Allison Snow, Maria Miriti, Ohio State Univ.; Susan Mazer, UC – Santa Barbara
- 2008 – 2010 **Huxley Fellow in Evolution, Rice University**
Title: The role of hybridization in evolution
Funding: 2 years of salary + \$6,000 research funds
Collaborator: Ken Whitney, Rice Univ.

Recent Research Presentations at Scientific Meetings (indicates presenter)*

- Campbell LG*, Snow AA. 2006. Selective pressures on and fitness consequences of divergent life-histories: complementary insights from natural and artificial selection studies after hybridization. Society for the Study of Evolution Annual Meeting, Stony Brook, NY.

- Snow AA*, Culley TM, Campbell LG, Ellstrand NC, Uthus KL, Hegde S. 2006. A decade of introgression: crop alleles persist in experimental populations of wild radish (*Raphanus raphanistrum*). American Botanical Society Annual Meeting.
- Snow AA*, Culley TM, Campbell LG, Ellstrand NC, Uthus KL, Hegde S. 2005. A decade of introgression: crop alleles in experimental populations of wild radish (*Raphanus raphanistrum*). Crop gene flow & the occurrence and consequences of gene introgression between crops and their sexually compatible relatives. North Central Weed Science Society. Kansas City, MO.
- Campbell LG*, Snow AA. 2005. The life of a social radish. Competition and its fitness consequences for advanced generation, crop-wild hybrids. Crop gene flow & the occurrence and consequences of gene introgression between crops and their sexually compatible relatives. North Central Weed Science Society. Kansas City, MO.
- Campbell LG*, Snow AA. Do neighbors affect individual weediness? Presented to underrepresented students participating in Strategies for Ecology Education, Development and Sustainability (SEEDS) conference at UMBS, Pellston, MI.
- Campbell LG*, Snow AA, Ketner JM, Sweeney, PM. 2005. Can hybridization alter evolutionary potential? Society for the Study of Evolution Annual Meeting, Fairbanks, AK.
- Campbell LG, Snow AA*. 2005. The life of a social radish. Competition and its fitness consequences for advanced generation, crop-wild hybrids. American Botanical Society Annual Meeting, Austin, TX.
- Ketner JM*, Campbell LG, Snow AA. 2005. Heritability of two life-history traits in wild, crop and crop-wild hybrid radishes (*Raphanus* spp). American Botanical Society Annual Meeting, Austin, TX.
- Snow AA*, Campbell LG. 2004 OECD/Rockefeller Foundation Workshop on Ferality and Volunteerism in Crop Plants, “Can Feral Radishes Become Weedy?” Bellagio, ITALY. (May 23, 2004)

Invited Research Lectures

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| 2007 | Univ. Michigan, Young Scientists Symposium |
| 2006 | Univ. Maryland, Dept. of Plant Sciences & Landscape Architecture |
| 2006 | Notre Dame Univ., Dept. of Biology |
| 2005 | Otterbein College, Life and Earth Sciences Dept. |
| 2002 – 2005 | Four lectures at the Univ. Michigan, Biological Station |
| 2002, 2005 | Two lectures at the Ohio State Univ., EEOB Dept. |

Teaching and Mentoring of Undergraduate Researchers

Field experience – K. Alofs, A. Babayan, N. Curiel, A. DeCamp, E. Hill, N. Marsh, R. Rajbhandari, N. Smith, J. Waterbury.

Greenhouse, experimental pollination, and laboratory methods – M. Burleson, S. Clark, H. Eisel, S. Gifford, J. Ketner, N. Masuda, K. Mollohan, S. Pflingsten, S. Sekharan, M. Schneider, D. Smith, K. Toth, K. Vedam, D. Yang.

Independent research projects – J. Ketner (award-winner for her project), M. Schneider, N. Smith (NSF – REU program).

Recent Past Experience

- 2005. NSF-REU mentor for one undergraduate student, Univ. Michigan Biol. Station
EEOB H400 – Honor’s Evolution – Teaching Assistant and Guest Lecturer
EEOB 671 – Plant Population Ecology – Guest Lecturer
- 2004. EEOB 693 – Independent Study – Mentored two undergraduate researchers
EEOB 400 - Evolution – Teaching Assistant
- 2003. EEOB 400 – Evolution – Teaching Assistant
EEOB 693 – Independent Study – Mentored an undergraduate researcher (student won an award for her poster in the College of Biological Sciences Undergraduate Research Symposium and she participated in the OSU Denman Forum for Undergraduate Research).
EEOB H413 – Honor’s Introduction to Ecology – Guest Lecturer
EEOB 413 – Introduction to Ecology – Guest Lecturer
- 2002. EEOB 671 – Plant Population Ecology – Teaching Assistant
- 2001. EEOB 400 – Evolution – Teaching Assistant
- 2000. General Biology I, II (University of Guelph) – Senior teaching assistant
- 1999. Population biology (University of Guelph) – Teaching Assistant
General Biology I, II (University of Guelph) – Teaching Assistant
- 1998. General Biology I (University of Guelph) – Teaching Assistant

Service and Membership

Professional Affiliations

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

Service:

Reviewer of Manuscripts: *Evolution, American Journal of Botany, Conservation Biology, Heredity, New Phytologist.*

Departmental Contributions:

- 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)
Departmental Public Relations Committee (Botany, Univ. Guelph)