

Brad Oberle

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Education

- 2003** - Ph.D. Candidate, Department of Biology, Washington University in St. Louis. Dissertation title: "Tempo and Mode in Adaptation to Climate." Advisors: Barbara A. Schaal and Peter H. Raven. (expected defense, September 2009)
- 1999** - BA Biology, *Summa Cum Laude*. Concentration in Environmental Studies. Kenyon College.
2003

Publications

- Oberle, B., J.B. Grace and J.M. Chase. 2009. Beneath the veil: plant growth form influences the strength of species richness—productivity relationships in forests. *Global Ecology and Biogeography*. Published online: DOI: 10.1111/j.1466-8238.2009.00457.x
- Allan, B.F., R.B. Langerhans, W.A. Ryberg, W.J. Landesman, N.W. Griffin, R.S. Katz, B.J. Oberle, M.R. Schutzenhofer, K.N. Smyth, A. de St. Maurice, L. Clark, K.R. Crooks, D.E. Hernandez, R.G. McLean, R.S. Ostfeld, and J.M. Chase. 2009. Ecological correlates of risk and incidence of West Nile virus in the United States. *Oecologia* 158: 699-708.
- Croat, T.B., and B Oberle 2004. New species of Araceae from Columbia. *Aroideana* 27: 64-89

Manuscripts in Preparation

- Oberle B., I Jimenez and T. Consiglio. Genetic structure influences climate tolerance in European plants. To be submitted to *American Naturalist*. (Draft available upon request)
- Oberle B. and B. A. Schaal. Adaptation to climate through migration, selection, hybridization and polyploidy in Eastern *Dodecatheon*. To be submitted to *Proceedings of the National Academy of Sciences USA*.
- Oberle B. and B. A. Schaal. Climate change and regional climatic heterogeneity contribute to different forms of rarity in *Dodecatheon* (Primulaceae). To be submitted to *Evolution*.
- Oberle B., J. B. Beck and E. E. Esselman. Relative fitness of apparent hybrids suggests dynamic ploidy in *Dodecatheon*. To be submitted to *The American Journal of Botany*.

Grants

- 2006** U.S. National Science Foundation Doctoral Dissertation Improvement Grant (DDIG) to B. Schaal and B. Oberle for Dissertation Research: Tempo and Mode in Adaptation to Climate: Insights from the Phylogeny and Phylogeography of the Plant Genus *Dodecatheon* (Primulaceae). \$11,987
- 2006** Sigma Xi Grant in Aid of Research: Inferring the rate of adaptation to climate from the diversity and distribution of *Dodecatheon* (Primulaceae). \$400

Awards, Honors and Achievements

- 2008** First Prize Poster Presentation, Botany Division, Illinois Academy of Sciences Annual Meetings.
- 2007** Second Prize Poster Presentation, Botany Division, Illinois Academy of Sciences Annual Meetings.
- 2006** Midwest Ecology and Evolution Conference Organizing Committee.
- 2004** NSF Graduate Research Fellowship Program, Honorable Mention.
- 2003** Maxwell Eliot Power Prize for a Kenyon student showing “unusual promise in biology.”
Sigma Xi
- 2002** *Phi Beta Kappa*
- 2001** NSF REU Internship, Phylogeography of the South African Chameleon *Bradypodion transvaalense* (Washington University)

Presentations

- 2009** Oberle B. The Curious Case of *Dodecatheon frenchii*. Southern Illinois University Carbondale, Plant Biology Department Seminar.
- 2008** Oberle B. and E. Esselman. Relative fitness of apparent hybrids suggests dynamic ploidy evolution in Eastern *Dodecatheon* (Primulaceae). Botanical Society of America Annual Meetings. Vancouver, BC.

Oberle B., I Jimenez, T. Consiglio. The effect of population structure on climatic niche breadth in plants. Society for the Study of Evolution Annual Meetings. Minneapolis, MN.
- 2007** Beck J., B. Oberle and B.A. Schaal. Distributional data indicate recent, human-mediated range expansion of *Arabidopsis thaliana*, an accidentally introduced species in North America. Botanical Society of America Meetings. Chicago, IL.
- 2005** Oberle B. and J.M. Chase. Do trees get dibs?: North American forest architecture and species-energy relationships. Midwest Ecology and Evolution Conference. Carbondale, IL.

Teaching Experience

- 2008** Teaching Assistant, *Plants and People*, Washington University BIO 523
Teaching Assistant, *Evolution*, Washington University BIO 525
- 2007** Teaching Assistant, *Population Genetics*, Washington University, BIO 4181
Teaching Assistant, *Plants and People*, Washington University BIO 523
Teaching Assistant, *Evolution*, Washington University BIO 525
- 2006** Teaching Assistant, *Introduction to Environmental Studies: Biology*, Washington University, BIO 295
- 2004** Teaching Assistant, *Evolution*, Washington University, BIO 3051
- 2003** Teaching Assistant, *Ecology Laboratory*, Kenyon College, BIOL 229

Mentoring Experience

- 2008** - *Project:* The evolution of isolation based on spatial analysis of ploidy level in *Dodecatheon*.
2009 *Student:* Jordon Bell. (SIUE biology major, co-mentor Betsy Esselman)
Outcome: Presented as a poster at the Illinois Academy of Sciences Annual Meetings 2009. Manuscript in preparation.
- 2008** - *Project:* Directionality of gene flow across a polyploid hybrid zone in Southern Illinois.
2009 *Student:* Robert Montgomery (Washington University honors Biology Major)
Outcome: Manuscript in preparation.
- 2007** - *Project:* Examining evolutionary relationships between *Dodecatheon frenchii* and *Dodecatheon media* on the basis of seed production.
2008 *Student:* Anjoli Martinez-Singh (SIUE biology major, co-mentor Betsy Esselman)
Outcome: Presented as a poster at the Illinois Academy of Sciences Annual Meetings 2008. Manuscript in preparation.
- 2007** - *Project:* New patterns of ploidy in eastern *Dodecatheon* inferred from range-wide pollen size distributions.
2008 *Student:* Christina Rogenski (SIUE Biology Masters Student with Betsy Esselman)
Outcome: Winner of first prize poster presentation in the Botany division at the Illinois Academy of Sciences Annual Meetings 2008. Manuscript in preparation.
- 2005** - *Project:* Comparative Phylogeography of the Evolutionary Rates Hypothesis in Mexico
2007 *Student:* Anne Greenberg (Washington University Honors Environmental Studies major)
Outcome: Received the Washington University Achievement in Natural Science in Environmental Studies Award. Project ongoing.
- 2006** - *Project:* The use of seed morphology as a taxonomic character for delimiting *Dodecatheon* (Primulaceae) species in Illinois.
2007 *Student:* Robert Brammeier: (SIUE biology major, co-mentor Betsy Esselman)
Outcome: Winner of second prize poster presentation in the Botany division at the Illinois Academy of Sciences Annual Meetings 2008. Manuscript in preparation.

Notable Skills & Advanced Coursework

Language Proficiency: English, French, Spanish

Computer Software Proficiency: R, SAS, JMP, Minitab, ArcGIS, PAUP, Mr. Bayes, STRUCTURE, MEGA, Arlequin, TCS, GeneMapper, Photoshop

Advanced Coursework: Ecology, Tropical Community Ecology, Tropical Diversity, Evolution, Population Genetics, Macroevolution, Seminar in Floristic Taxonomy, Seminar in Population Biology, Seminar in Size and Scaling of Biological Systems, Environmental Spatial Data Analysis, Data Analysis, Microscopy and Image Analysis, Experimental Genetic Analysis

Outreach and Community Service

- 2007** - NSF Life Science for a Global Community Institute for High School Biology Teachers
2008 (http://www.so.wustl.edu/life_sciences/index.htm). Teaching Assistant for Plants and People and Evolution courses, responsible for designing and conducting inquiry-based laboratory activities related to course materials.

- 2006,** Washington University Biomedical Research Apprenticeship Program
2008 (<http://biomedrap.wustl.edu/>). Chalk Talk Presenter, lead discussion on research during a weekly meeting among aspiring biology students from diverse backgrounds.
- 2007** NSF Debating Science (<http://www.umt.edu/ethics/programs/debatingscience.html>). Scholarship participant in an interdisciplinary course on the ethics of climate change hosted by the Center for Ethics at the University of Montana, Missoula.
- 2006 -** Young Scientist Program (<http://medicine.wustl.edu/~ysp/>). Evolution Teaching Team
2004 Coordinator, responsible for organizing classroom presentations illustrating evolutionary principles for St. Louis City High School and Middle School students.