

JENNIFER A. LAU
CURRICULUM VITAE (7/2008)

Kellogg Biological Station and Department of Plant Biology
Michigan State University
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ACADEMIC APPOINTMENTS

June 2007 – present: Assistant Professor, Michigan State University, Kellogg Biological Station and Department of Plant Biology

June 2005- June 2007: Postdoctoral research associate, University of Minnesota; advised by Drs. Peter Tiffin, Ruth Shaw, and Peter Reich.

EDUCATION

2005 Ph.D. University of California, Davis; Population Biology, advised by Dr. Sharon Strauss

1999 B.S. Duke University (summa cum laude); Biology major

FELLOWSHIPS

2004 ARCS Foundation Fellowship, University of California, Davis

2000 National Science Foundation Pre-doctoral Fellow

1997 National Science Foundation Research Experiences for Undergraduates Fellowship, Mountain Lake Biological Station

1996 Howard Hughes Research Fellows Program, Duke University

1995 National Merit Scholar

AWARDS AND HONORS

American Society of Naturalists Young Investigator's Award 2008

Murray F. Buell Award for outstanding student oral paper, Ecological Society of America (honorable mention, 2004)

Graduated with Distinction in Biology, Duke University, 1999

Honorary Botany Award, Duke University, 1999

Phi Beta Kappa, 1998

GRANT SUPPORT OF RESEARCH

Proposals in review:

National Science Foundation, DEB—Ecological Biology Panel. *The community context of genotype-by-genotype interactions: Implications for biological invasions* (\$468,142).

Funded grants:

- 2007 Michigan State University, New Faculty Grant. *Ecological Genetics and Genomics of Adaptation to Climate Change* (\$38,967).
- 2002 National Science Foundation Doctoral Dissertation Improvement Grant. *The ecological and evolutionary effects of an exotic plant on a co-occurring native* (\$9961).
- 2002-2003 UC Davis: Biological Invasions IGERT Research Grant (\$8900)
- 2002 UC Davis: Graduate and Humanities Research Award (\$1500)
- 2002 University of California, Natural Reserve System Research Grant (\$750)
- 2001-2002 UC Davis: McLaughlin Research Consortium Grant (\$4995)
- 2001 California Native Plant Society Research Grant (\$800)
- 2001 UC Davis: Bodega Marine Lab Travel Grant (\$990)
- 2000-2001 UC Davis: Center for Population Biology Research Support Grant (\$1200)
- 1999 Duke University Undergraduate Research Support Grant (\$250)

PUBLICATIONS AND COMPLETED MANUSCRIPTS

Published manuscripts:

- J. A. Lau, J. Peiffer, P. B. Reich, and P. Tiffin. (Accepted, pending minor revision). Transgenerational effects of global environmental change: Long-term CO₂ and nitrogen treatments influence offspring growth response to elevated CO₂. Oecologia.
- J. A. Lau, R. E. Miller, and M. D. Rausher. 2008. Selection through male function favors smaller floral display size in the common morning glory, *Ipomoea purpurea* (Convolvulaceae). American Naturalist 172:63-74.
- J. A. Lau. 2008. Beyond the ecological: Biological invasions alter natural selection on a native plant species. Ecology 89:1023-1031.
- J. A. Lau, A. C. McCall, K. F. Davies, J. K. McKay, and J. W. Wright. 2008. Herbivores and edaphic factors constrain the realized niche of a native plant. Ecology 89:754-762.
- J. A. Lau, K. P. Puliafico, J. A. Kopshever, H. Steltzer, E. P. Jarvis, M. Schwarzländer, S. Y. Strauss, and R. A. Hufbauer. 2008. Effects of activated carbon on plant growth complicate the inference of allelopathic effects. New Phytologist 178:412-423.
- S. Y. Strauss, J. A. Lau, T. W. Schoener, and P. Tiffin. 2008. Evolution in ecological field experiments: implications for effect size. Ecology Letters 11:199-207.
- J. A. Lau, J. Strengbom, L. R. Stone, P. B. Reich, and P. Tiffin. 2008. Direct and indirect effects of CO₂ enrichment, N fertilization, and community diversity on plant-enemy interactions. Ecology 89:226-236.

- J. A. Lau, R. G. Shaw, P. B. Reich, F. H. Shaw, and P. Tiffin. 2007. Strong ecological but weak evolutionary effects of elevated CO₂ on a recombinant inbred population of *Arabidopsis thaliana*. New Phytologist 175:351-362.
- B. Qin, J. A. Lau, J. Kopshever, R. M. Callaway, H. McGray, L. G. Perry, T. L. Weir, M. W. Paschke, J. L. Hierro, J. Yoder, J. M. Vivanco, and S. Y. Strauss. 2007. No evidence for root-mediated allelopathy in *Centaurea solstitialis*, a species in a commonly allelopathic genus. Biological Invasions 9:897-907.
- A. A. Agrawal, J. A. Lau, and P. A. Hambäck. 2006. Community heterogeneity and the evolution of interactions between plants and insect herbivores. Quarterly Review of Biology 81:349-376.
- J. W. Wright, K. F. Davies, J. A. Lau, A. C. McCall, and J. K. McKay. 2006. Experimental verification of ecological niche modeling in a heterogeneous environment. Ecology 87:2433-2439.
- J. A. Lau. 2006. Evolutionary responses of native plants to novel community members. Evolution 60:56-63.
- S. Y. Strauss, J. A. Lau, and S. P. Carroll. 2006. Evolutionary responses of natives to introduced species: What do introductions tell us about natural communities? Ecology Letters 9:357-374.
- J. A. Lau and S. Y. Strauss. 2005. Insect herbivores drive important indirect effects of exotic plants on native communities. Ecology 86:2990-2997.
- J. A. Lau and L. F. Galloway. 2004. Effects of low-efficiency pollinators on plant fitness and floral trait evolution in *Campanula americana* (Campanulaceae). Oecologia 141:577-583.
- S. Y. Strauss, J. A. Rudgers, J. A. Lau, and R. E. Irwin. 2002. Direct and ecological costs of resistance to herbivory. Trends in Ecology and Evolution 17:278-284.

Manuscripts in review (manuscripts available upon request):

- J. A. Lau. (In review). Trophic consequences of invasion: an exotic plant indirectly increases predator abundance. Biological Invasions.
- K. Heath and J. A. Lau. (In review). Herbivores alter the fitness benefits of a plant-rhizobium mutualism. Oecologia.
- J. A. Lau, E. J. Bowling, L. E. Gentry, P. A. Glasser, E. A. Monarch, W. M. Olesen, J. Waxmonsky, R. T. Young. (In review). Environmental dependence of species interactions: Legume-rhizobium interactions shift from mutualism to parasitism depending on resource availability. Ecology.
- J. A. Lau and P. Tiffin. (In review). Elevated CO₂ concentrations indirectly affect plant fitness by altering plant defenses. Ecology.

TEACHING EXPERIENCE

- 2007 ZOL 355: Introduction to Ecology, Michigan State University
- 2008 PLB 802: Invasion Biology
- 2008 PLB 802: Ecology of functional traits

GRADUATE STUDENT ADVISEES

Kane Keller
Elizabeth Schultheis (co-advised with Dr. Frank Telewski)
Tomomi Suwa (starting Fall 2009)

PRESENTATIONS

Invited seminars:

- 2008 Department of Genetics, University of Georgia; Department of Biology, Western Michigan University; Department of Ecology and Evolution, Cornell University.
- 2007 Department of Ecology and Evolutionary Biology, University of Michigan; Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara.
- 2006 Kellogg Biological Station and Department of Plant Biology, Michigan State University; Department of Integrative Biology, University of California, Berkeley; Department of Biology, University of Rhode Island.
- 2004 Gordon Research Conference on Plant-Herbivore Interactions.
- 2004 Ecological Society of America Annual Meeting, Organized Oral Session on Natural Enemy Escape as a Mode of Exotic Species Invasions: Theory, Evidence, and Implications.

Contributed presentations:

- 2007 Competitor-mediated indirect effects of elevated CO₂ on plant evolution. *Ecological Society of America Annual Meeting.*
- 2006 Evolutionary responses to global climate change: how rising CO₂ concentration influence natural selection on ecologically important plant traits. *Ecological Society of America Annual Meeting.*
- 2004 Competitors and herbivores interact to drive selection on plant traits. *Joint Meeting of the Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists.*
- 2003 Evolutionary responses of native species to novel community members: direct and indirect effects of invasion. *Joint Meeting of the Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists.*
- 2003 Ecological and evolutionary responses of native species to novel community members: Direct and indirect effects of invasion. *Ecological Society of America Annual Meeting.*
- 2002 The herbivore-mediated indirect effects of an invasive plant on a co-occurring native plant. *Ecological Society of America Annual Meeting.*

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Naturalists

Ecological Society of America
Society for the Study of Evolution

SCIENTIFIC JOURNALS REVIEWED FOR

Acta Oecologia, American Journal of Botany, American Naturalist, Biological Invasions, Botany, Ecological Monographs, Ecology, Evolution, Evolutionary Ecology, Insect Conservation and Diversity, Journal of Ecology, New Phytologist, Oecologia, Oikos, PLoS Biology, Restoration Ecology, Trends in Plant Science, Wetlands.

Ad hoc reviewer: National Science Foundation DOB Ecology panel & Population and Evolutionary processes panel; Louisiana Board of Regents' Research Competitiveness Subprogram; Czech Science Foundation Ecology and Ecosystems Program.

SERVICE

2002-2003 Population Biology Graduate Group Admissions Committee, UC Davis
2004 Diversity Program Mentor, Evolution Meeting
2004-2005 Co-organizer Evolution Workshop Series, Center for Population Biology, UC Davis
2005 Center for Population Biology, Post-doctoral Selection Committee, UC Davis
2007-2008 Michigan State University Undergraduate Research Scholarship Review Committee, KBS Faculty Advisory Committee, KBS Graduate Student Committee, KBS Fellowship Awards Committee, MSU Invasive Species Research Consortium Advisory Panel

OUTREACH

2008 Guest Lecture, Michigan Botanical Society