

Curriculum Vitae

JOHANNA SCHMITT
 Department of Ecology and Evolutionary Biology, Box G-W
 Brown University
 Providence, Rhode Island 02912

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Education:

1974 Swarthmore College: B.A. with distinction in biology
 1981 Stanford University: Ph.D. in biological sciences (advisor: Ward Watt)

Academic Positions:

1981 Postdoctoral Research Affiliate, Stanford University
 1981-1982 Postdoctoral Research Associate, Duke University (advisor: Janis Antonovics)
 1982-1987 Assistant Professor of Biology, Brown University
 1987-1994 Associate Professor of Biology, Brown University
 1993 Academic visitor, Imperial College at Silwood Park
 1994- Professor of Biology, Brown University
 2000- Professor of Environmental Studies, Brown University
 2001-2003 Harrison S. Kravis University Professor, Brown University
 2003- Stephen T. Olney Professor of Natural History

Research interests:

Plant evolutionary ecology and ecological and evolutionary genomics: the adaptive evolution of developmental plasticity, especially photomorphogenic shade avoidance and responses to seasonal cues; mechanisms of local adaptation and response to environmental change; the ecology and evolution of maternal effects; the genetic basis and adaptive evolution of developmental, physiological and life-history traits; conservation biology of New England plants.

Academic Honors:

1974-1977 National Science Foundation Graduate Fellowship
 1991-1996 NSF Faculty Award for Women in Science and Engineering
 1992-1993 NSF Midcareer Fellowship in Environmental Biology
 2003 AAAS Fellow

Elected offices:

Elected Member of the Council, Society for the Study of Evolution, 1990-1992.
 Executive Vice President, Society for the Study of Evolution, 1994-1996.
 Vice-President Elect (1996), Vice-President (1997), American Society of Naturalists
 Vice President, Society for the Study of Evolution, 1999.
 President Elect (2001), President (2002), Past-President (2003-2005) American Society of Naturalists

Research Grants

Current grants:

- “ABR: Response to crowding and vegetation shade in *Impatiens capensis*: genetic basis and fitness consequences”, National Science Foundation (2002-2005).
- “Function-valued traits in natural populations: variation, selection, and evolution”, National Science Foundation (senior personnel, PIs Patrick Carter and Richard Gomulkiewicz, WSU, 2003-2007)
- “FIBR: Molecular evolutionary ecology of developmental signaling pathways in complex environments, National Science Foundation (PI; co PIs Michael Purugganan, NCSU, Richard Amasino, U. Wisconsin, and Stephan Welch, KSU, 2004-2009).

Completed grants:

- "Intraspecific competition and the evolution of breeding systems in *Impatiens capensis*." National Science Foundation (1984-1985)
- "Intraspecific competition and the evolution of breeding systems in *Impatiens capensis*." National Science Foundation 1986-1989)
- "Ecological consequences of environmental maternal effects in *Plantago lanceolata*." National Science Foundation (with Renata Wulff; 1989-1992)
- "Potential for persistence of engineered genes escaped from canola, USDA 1991).
- "Risk of persistence and establishment of engineered genes escaped from canola", (Calgene, Inc. 1992)
- "The evolutionary significance of physiological and morphological plasticity in *Plantago lanceolata*" (NSF Faculty Award for Women in Science and Engineering, 1991-1996)
- "Response to crowding and vegetation shade in *Impatiens capensis*: genetic variation and fitness consequences", National Science Foundation (with Renata Wulff, 1993- 1997).
- “Ecological genetics of response to light in *Arabidopsis thaliana* (Brassicaceae)”, National Science Foundation (collaborative research with Massimo Pigliucci, 1995-1998)
- “Response to crowding and vegetation shade in *Impatiens capensis*: genetic variation and fitness consequences”, National Science Foundation 1997-1998).
- “Response to crowding and vegetation shade in *Impatiens capensis*: genetic variation and fitness consequences”, National Science Foundation 1998-2002).
- “Collaborative research: QTL and field selection studies of parental effects on seasonal dormancy in *Arabidopsis thaliana* “, National Science Foundation (with Lisa Dorn and Kathleen Donohue, 1999-2003).
- “Molecular evolutionary ecology of developmental plasticity in *Arabidopsis thaliana*”, National Science Foundation (IRCEB, co-PI with Michael Purugganan and Trudy Mackay, NCSU, 1999-2004)

Publications:

- Schmitt, J. 1980. Pollinator foraging behavior and gene dispersal in *Senecio* (Compositae). *Evolution* 34: 934-943.
- Schmitt, J. 1983. Individual flowering phenology, plant size, and reproductive success in *Linanthus androsaceus*, a California annual. *Oecologia* 59: 135-140.
- Schmitt, J. 1983. Flowering plant density and pollinator visitation in *Senecio*. *Oecologia* 60: 97-102.
- Schmitt, J. 1983. Density dependent pollinator foraging, flowering phenology, and temporal pollen dispersal patterns in *Linanthus bicolor*. *Evolution* 37: 1247-1257.

- Abbott, R. J., and J. Schmitt. 1985. Effect of environment on percentage of female florets per capitulum and outcrossing potential in a self-compatible composite (*Senecio vulgaris* L. var *hibernicus* Syme). *New Phytologist* 101: 219-229.
- Morse, D. H., and J. Schmitt. 1985. Propagule size, dispersal ability, and seedling performance in *Asclepias syriaca*. *Oecologia* 67: 372-379.
- Schmitt, J., D. Ehrhardt, and D. Swartz. 1985. Differential dispersal of self-fertilized and outcrossed progeny in jewelweed (*Impatiens capensis*). *American Naturalist* 126: 570-575.
- Antonovics, J., and J. Schmitt. 1986. Paternal and maternal effects on propagule size in *Anthoxanthum odoratum*. *Oecologia* 69: 277-282.
- Schmitt, J., and J. Antonovics. 1986. Experimental studies of the evolutionary significance of sexual reproduction. III. Maternal and paternal effects during seedling establishment. *Evolution* 40: 817-829.
- Schmitt, J., and J. Antonovics. 1986. Experimental studies of the evolutionary significance of sexual reproduction. IV. The effect of neighbor relatedness and aphid infestation on seedling performance. *Evolution* 40: 830-836.
- Schmitt, J., D. W. Ehrhardt, and M. Cheo. 1986. Light-dependent dominance and suppression in experimental radish populations. *Ecology* 67: 1502-1507.
- Antonovics, J., K. Clay, and J. Schmitt. 1987. The measurement of small-scale environmental heterogeneity using clonal transplants of *Anthoxanthum odoratum* and *Danthonia spicata*. *Oecologia* 71: 601-607.
- Schmitt, J., and D. W. Ehrhardt. 1987. A test of the sib competition hypothesis for outcrossing advantage in *Impatiens capensis*. *Evolution* 41: 579-590.
- Schmitt, J., J. Eccleston, and D. W. Ehrhardt. 1987. Dominance and suppression, size-dependent growth, and self-thinning in a natural *Impatiens capensis* population. *Journal of Ecology* 75: 651-665.
- Schmitt, J., J. Eccleston, and D. W. Ehrhardt. 1987. Density-dependent flowering phenology, outcrossing, and reproduction in *Impatiens capensis*. *Oecologia* 72: 341-347.
- Kelley, S. E., J. Antonovics, and J. Schmitt. 1988. A test of the short-term advantage of sexual reproduction. *Nature* 331: 714-716.
- Schmitt, J., and D. W. Ehrhardt. 1990. Enhancement of inbreeding depression by dominance and suppression in *Impatiens capensis*. *Evolution* 44: 269-278.
- Schmitt, J., and S. E. Gamble. 1990. The effect of distance from the parental site on offspring performance and inbreeding depression in *Impatiens capensis*: a test of the local adaptation hypothesis. *Evolution* 44:2022-2030.
- Argyres, A. Z., and J. Schmitt. 1991. Microgeographic genetic structure of morphological and life history traits in a natural population of *Impatiens capensis*. *Evolution* 45:178-189.

- Morse, D. H., and J. Schmitt. 1991. Maternal and paternal effects on follicle production in the milkweed *Asclepias syriaca* (Asclepiadaceae). *American Journal of Botany* 78:1304-1309.
- Argyres, A. Z., and J. Schmitt. 1992. Neighbor relatedness and competitive performance in *Impatiens capensis* (Balsaminaceae): a test of the resource partitioning hypothesis. *American Journal of Botany* 79:181-185.
- Schmitt, J., J. Niles, and R. D. Wulff. 1992. Norms of reaction of seed traits to maternal environments in *Plantago lanceolata*. *American Naturalist* 139:451-466.
- Bowers, M. D., S. K. Collinge, S. E. Gamble, and J. Schmitt. 1992. Effects of genotype, habitat, and seasonal variation on iridoid glycoside content of *Plantago lanceolata* (Plantaginaceae) and the implications for insect herbivores. *Oecologia* 91:201-207.
- Schmitt, J., and R.D. Wulff. 1993. Light spectral quality, phytochrome, and plant competition. *Trends in Ecology and Evolution* 8:47-51.
- Adler, L. S., K. Wikler, F. S. Wyndham, C. R. Linder, and J. Schmitt. 1993. Potential for persistence of genes escaped from canola: germination cues in crop, wild, and crop-wild hybrid *Brassica rapa*. *Functional Ecology* 7:736-745.
- O'Neil, P., and J. Schmitt. 1993. Genetic constraints on the independent evolution of male and female reproductive characters in the tristylous plant *Lythrum salicaria*. *Evolution* 47:1457-1471.
- Schmitt, J. 1993. Reaction norms of morphological and life history traits to light availability in *Impatiens capensis*. *Evolution* 47:1654-1668.
- Linder, C. R., and J. Schmitt. 1994. Assessing the risks of transgene escape through time and crop-wild hybrid persistence. *Molecular Ecology* 3:23-30.
- Schmitt, J., and C. R. Linder. 1994. Will escaped transgenes lead to ecological release? *Molecular Ecology* 3:71-73.
- Wulff, R.D., A. Cáceres, and J. Schmitt. 1994. Seed and seedling responses to maternal and offspring environments in *Plantago lanceolata*. *Functional Ecology* 8:763-769.
- Adler, L.S., J. Schmitt, and M.D. Bowers. 1995. Genetic variation in defensive chemistry in *Plantago lanceolata* (Plantaginaceae) and its effect on the specialist herbivore *Junonia coenia* (Nymphalidae). *Oecologia* 101:75-85.
- Schmitt, J. 1995. Genotype-environment interaction, parental effects, and the evolution of plant reproductive traits. *In* *Experimental and Molecular Approaches to Plant Biosystematics*, Peter Hoch, ed., Monographs in Systematic Botany, Missouri Botanical Garden pp. 199-214.
- Linder, C.R., and J. Schmitt. 1995. Potential persistence of escaped transgenes: seed and seedling performance in transgenic oil-modified canola and wild x canola hybrids. *Ecological Applications* 5:1056-1068.
- Dudley, S.A., and J. Schmitt. 1995. Genetic differentiation in morphological responses to simulated foliage shade between populations of *Impatiens capensis* from open and woodland sites. *Functional Ecology* 9:655-666.

- Purrington, C.B., and J. Schmitt. 1995. Sexual dimorphism of dormancy and survivorship in buried seeds of *Silene latifolia*. *Journal of Ecology* 5:795-800.
- Schmitt, J., A.C. McCormac, and H. Smith. 1995. A test of the adaptive plasticity hypothesis using transgenic and mutant plants disabled in phytochrome-mediated elongation responses to neighbors. *American Naturalist* 146:937-953.
- Young, K.A., and J. Schmitt. 1995. Genetic variation and phenotypic plasticity of pollen release and capture height in *Plantago lanceolata*. *Functional Ecology* 9:725-733.
- Dudley, S.A., and J. Schmitt. 1996. Testing the adaptive plasticity hypothesis: density dependent selection on manipulated stem length in *Impatiens capensis*. *American Naturalist* 147:445-465.
- Schmitt, J., and S. A. Dudley. 1996. Testing the adaptive plasticity hypothesis for plant responses to neighbors. *Plant Species Biology* 11:59-67.
- Schmitt, J. 1997. Is photomorphogenic shade avoidance adaptive? Perspectives from population biology. *Plant, Cell & Environment* 20:826-830.
- Donohue, K., and J. Schmitt. 1998. Maternal environmental effects in plants: adaptive plasticity? In T. Mousseau and C. Fox, eds., *Maternal effects as adaptations*, Oxford U. Press, pp.137-158.
- Purrington, C.B., and J. Schmitt. 1998. Consequences of sexually dimorphic timing of emergence and flowering in *Silene latifolia*. *Journal of Ecology* 86:397-404.
- Pigliucci, M., and J. Schmitt. 1999. Genes affecting phenotypic plasticity in *Arabidopsis*: pleiotropic effects and reproductive fitness of photomorphogenic mutants. *Journal of Evolutionary Biology* 12:551-562.
- Pigliucci, M., K. Cammell, and J. Schmitt. 1999. Evolution of phenotypic plasticity: a comparative approach in the phylogenetic neighborhood of *Arabidopsis thaliana*. *Journal of Evolutionary Biology* 12:779-791.
- Maliakal, S., K. McDonnell, S.A. Dudley, and J. Schmitt. 1999. Effects of red to far-red ratio and density on biomass allocation and gas exchange in *Impatiens capensis*. *International Journal of Plant Science* 160:723-733.
- Schmitt, J., S.A. Dudley, and M. Pigliucci. 1999. Manipulative approaches to testing adaptive plasticity: phytochrome-mediated shade avoidance responses in plants. *American Naturalist* 154: S43-S54.
- Donohue, K., and J. Schmitt. 1999. The genetic architecture of plasticity to density in *Impatiens capensis*. *Evolution* 53:1377-1386.
- Ackerly, D.A., S.A. Dudley, S.E. Sultan, J. Schmitt, J.S. Coleman, R. Linder, D.R. Sandquist, M.A. Geber, A.S. Evans, T.E. Dawson, and M.J. Lechowicz. 2000. The evolution of plant ecophysiological traits: recent advances and future directions. *Bioscience*, 50:979-995.
- Donohue, K., D. Messiqua, E. Hammond Pyle, M.S. Heschel, and J. Schmitt. 2000. Evidence of adaptive divergence in plasticity: density- and site-dependent selection on shade avoidance responses in *Impatiens capensis*. *Evolution* 54:1956-1968.

- Donohue, K., E. Hammond Pyle, D. Messiqua, M. S. Heschel, and J. Schmitt. 2000. Density dependence and population differentiation of genetic architecture in *Impatiens capensis* in natural environments. *Evolution* 54:1969-1981.
- Dorn, L.A., E. Hammond Pyle, and J. Schmitt. 2000. Plasticity to light cues and resources in *Arabidopsis thaliana*: testing for adaptive value and costs. *Evolution* 54:1982-1994.
- Donohue, K., E. Hammond Pyle, D. Messiqua, M.S. Heschel, and J. Schmitt. 2001. Adaptive divergence in plasticity in natural populations of *Impatiens capensis* and its consequences for performance in novel habitats. *Evolution*, 55:692-702.
- Munir, J., L.A. Dorn, K. Donohue, and J. Schmitt. 2001. The effect of maternal photoperiod on seasonal dormancy in *Arabidopsis thaliana*. *American Journal of Botany* 88:1240-1249.
- Dixon, P., C. Weinig, and J. Schmitt. 2001. Susceptibility to UV damage in *Impatiens capensis* (Balsaminaceae): testing for opportunity costs to shade avoidance and population differentiation. *American Journal of Botany* 88: 1401-1408
- Heschel, M.S., K. Donohue, N. Hausmann, and J. Schmitt. 2002. Population differentiation and natural selection for water-use efficiency in *Impatiens capensis*. *International Journal of Plant Science* 163:907-912.
- Weinig, C., M.C. Ungerer, L.A. Dorn, N.C. Kane, S.S. Halldorsdottir, Y. Toyonaga, T.F.C. Mackay, M.D. Purugganan, and J. Schmitt. 2002. Novel loci control reproductive timing in *Arabidopsis thaliana* in natural environments. *Genetics* 162:1875-1884.
- Weinig, C., J.R. Stinchcombe, and J. Schmitt 2003. QTL architecture of resistance and tolerance traits in *Arabidopsis thaliana* in natural environments. *Molecular Ecology* 12: 1153-1163
- Weinig, C., , L.A. Dorn, N.C. Kane, M.C. Ungerer, S.S. Halldorsdottir, Z.M. German, Y. Toyonaga, T.F.C. Mackay, M.D. Purugganan, and J. Schmitt. 2003. Heterogeneous selection at specific loci in natural environments in *Arabidopsis thaliana*. *Genetics* 165:321-329.
- Weinig, C., J.R. Stinchcombe, and J. Schmitt. 2003. Evolutionary genetics of resistance and tolerance to herbivory in *Arabidopsis thaliana*. *Evolution* 57:1270-1280.
- Gravuer, K, E.J. von Wettberg, and J. Schmitt. 2003. Dispersal biology of *Liatris scariosa* var. *novae-angliae* (Asteraceae), a rare New England grassland perennial. *American Journal of Botany* 90:1159-1167.
- Schmitt, J., J.R. Stinchcombe, M.S. Heschel, and H. Huber. 2003. The adaptive evolution of plasticity: phytochrome-mediated shade avoidance responses. *Integrative and Comparative Biology* 43:459-469.
- Pigliucci, M., and J. Schmitt. 2004. Phenotypic plasticity in response to foliar and neutral shade in gibberellin mutants of *Arabidopsis thaliana*. *Evolutionary Ecology Research* 6:1-17.
- Stinchcombe, J.R., L.A. Dorn, and J. Schmitt. 2004. Flowering time plasticity in *Arabidopsis thaliana*: a reanalysis of Westerman and Lawrence (1970). *Journal of Evolutionary Biology* 17: 197-207.

- Stinchcombe, J.R., C. Weinig, M. Ungerer, K.M. Olsen, C. Mays, S.S. Halldorsdottir, M.D. Purugganan, and J. Schmitt. 2004. A latitudinal cline in flowering time in *Arabidopsis thaliana* modulated by the flowering time gene *FRIGIDA*. *Proceedings of the National Academy of Science* 101: 4712-4717.
- Huber, H., N. Kane, M.S. Heschel, E. J. von Wettberg, J. Banta, A.-M. Leuck, and J. Schmitt. 2004. Frequency and microenvironmental pattern of selection on plastic shade avoidance traits in a natural population of *Impatiens capensis*. *American Naturalist* 163 548-563.
- Heschel, M. S., J.R. Stinchcombe, K.E. Holsinger, and J. Schmitt. 2004. Natural selection on light response curve parameters in the herbaceous annual *Impatiens capensis*. *Oecologia*, 139:487-494.
- Weinig, C., K. Gravuer, N. Kane, and J. Schmitt 2004. Testing adaptive plasticity to UV: costs and benefits to stem elongation and light-induced phenolics. *Evolution* 58: 2645-2656
- Gravuer, K, E.J. von Wettberg, and J. Schmitt. 2005. Population differentiation and genetic variation inform translocation decisions for *Liatris scariosa* var. *novae-angliae*, a rare New England grassland perennial. *Biological Conservation*, in press.
- Kelley, J. L., J.R. Stinchcombe, C. Weinig, and J. Schmitt. 2005. Hard and soft selection on plant defense traits in *Arabidopsis thaliana*. *Evolutionary Ecology Research* 7:287-302.
- Von Wettberg, E.J., and J. Schmitt. 2005. Physiological mechanism of population differentiation in shade avoidance responses of *Impatiens capensis*. *American Journal of Botany*, in press.
- Donohue, K. L. Dorn, C. Griffith, E. Kim, A. Aguilera, C. R. Polisetty, and J. Schmitt. 2005. Environmental and genetic influences on the germination of *Arabidopsis thaliana* in the field. *Evolution*, in press.
- Donohue, K. L. Dorn, C. Griffith, E. Kim, A. Aguilera, C. R. Polisetty, and J. Schmitt. 2005. The evolutionary ecology of seed germination of *Arabidopsis thaliana*: variable natural selection on germination timing *Evolution*, in press.
- Donohue, K. L. Dorn, C. Griffith, E. Kim, A. Aguilera, C. R. Polisetty, and J. Schmitt. 2005. Niche construction through germination cuing: life history responses to timing of germination in *Arabidopsis thaliana*. *Evolution*, in press.

Edited special issue:

- Schmitt, J., ed. 1999. Testing Adaptive Hypotheses Through Genetic and Physiological Manipulation. *American Naturalist* 154: S1-S91.

Refereed reports:

Kane, A., and J. Schmitt. 2001. *Liatris scariosa* var. *novae-angliae* (Northern blazing star) Conservation and Research Plan. New England Plant Conservation Program, Framingham, Massachusetts, USA.

Invited talks:

lectures:

- 1979 University of California, Berkeley
- 1980 Oberlin College, University of Pennsylvania, Brown University
- 1981 Duke University
- 1982 Boston University
- 1983 University of Rhode Island, Yale University
- 1985 Princeton University, Holy Cross College, Vassar College, Rutgers University
- 1987 University of Massachusetts, Michigan State University, Kellogg Biological Station, Trinity College, Stanford University, Harvard University
- 1988 Tufts University, University of New Hampshire
- 1989 Princeton University
- 1990 Universidad Central de Venezuela, Harvard University, Boston University, University of Texas, SUNY Stony Brook, University of Connecticut
- 1991 University of Chicago, University of Colorado
- 1992 Kellogg Biological Station, McGill University, University of New Mexico, University of Guelph, Yale University
- 1993 Imperial College at Silwood Park, University of York, Université de Paris Sud, Netherlands Institute of Ecology - Centre for Terrestrial Ecology, Duke University, University of California Davis
- 1994 Washington University, University of Missouri-St. Louis, University of Minnesota, Harvard University, University of Maryland, University of Pennsylvania
- 1995 RI Wild Plant Society, University of Missouri-Columbia, University of New Hampshire, Indiana University.
- 1996 University of Chicago
- 1997 University of California Santa Barbara, University of Washington, Harvard University
- 1998 Stanford University, Amherst College, SUNY Stony Brook, University of New Orleans
- 1999 University of Oregon, Cornell University, Kellogg Biological Station
- 2000 U. of North Carolina, Greensboro; University of Georgia
- 2001 U. of Kentucky, U. of Texas
- 2003 U. of Toronto
- 2004 U. of Pittsburgh Eminent Biologist Series, U. C. Davis

Invited conference presentations:

- 1987 Symposium on pollination ecology, XIV International Botanical Congress, West Berlin
- 1988 Population Biologists of New England (keynote speaker).
- 1990 Symposium on the ecology of sex, V International Congress of Ecology, Yokohama

- 1992 Panel on plant applications, Symposium on Molecular and Mathematical Approaches in Genealogical Analysis and Strain Identification, Rutgers University
- Symposium on plant reproduction, V International Symposium, International Organization of Plant Biosystematists, St. Louis
- Panels on Probability of cross-fertilization and Community response, EPA-sponsored international symposium on Potential Ecological and Nontarget Effects of Transgenic Plant Products on Agriculture, Silviculture, and Natural Ecosystems, College Park, MD
- 1994 Panel on phenotypic expression in novel environments, workshop on The Emerging Relevance of Evolutionary Biology to Applied Problems and Opportunities, Princeton, NJ.; presentation of workshop recommendations at Society for the Study of Evolution meeting, Athens, GA.
- 1996 Symposium on Phenotypic Plasticity and its Evolutionary Implications, Society for the Study of Species Biology, Kyoto
- Symposium on Maternal Effects as Adaptations, Society for the Study of Evolution, St. Louis.
- Plenary Panel Discussion, Common Themes for Ecologists in Global Issues, Ecological Society of America/American Society of Naturalists/Society for Conservation Biology, Providence, RI
- Symposium on the Role of Phenotypic Plasticity in Evolution, International Congress of Systematic and Evolutionary Biology V, Budapest
- Symposium on the Ecology and Evolution of Plant Reproduction, Umeå, Sweden
- 1997 American Society of Naturalists Vice-Presidential Symposium on Testing Adaptive Hypotheses through Genetic and Physiological Manipulation, ASN/SSE/SSB, Boulder, CO (organizer and speaker).
- European Symposium on Photomorphogenesis, Leicester, UK (plenary lecture)
- 1998 Workshop on Phenotypic Plasticity in Plants: Implications of Non-cognitive Behavior, Blaustein Institute for Desert Research, Sede Boker, Israel
- Symposium on Evolutionary Physiology of Plants. Ecological Society of America, Baltimore
- 1999 Symposium on Plant Environmental Perception: the Molecular Biology and Macroevolution of Phenotypic Plasticity. XVI International Botanical Congress, St. Louis
- 2000 Symposium on Plant Physiological Ecology: Linking the Organism to Scales Above and Below. Ecological Society of America, Snowbird.
- 2001 Session on Photomorphogenesis in the Field, US Plant Photomorphogenesis Symposium, Columbia, MO.
- 2002 Session on Control of Flowering, Plant Reproduction 2002, Penn State Symposium in Plant Physiology, State College
- Presidential address, American Society of Naturalists, Banff.

Symposium on “Linking Molecular Insight and Ecological Research”, Ecological Society of America, Tucson August 2002 (given by Cynthia Weinig)

2003 Symposium on “Selection and Evolution of Performance in Nature”, Society of Integrative and Comparative Biology, Toronto

Symposium on “Adapting to a Dynamic Environment”, Plant Biology 2003, Honolulu

Gordon Conference on Ecological and Evolutionary Genomics, Colby-Sawyer College, NH,

2004 University of Massachusetts Amherst Symposium in Plant Biology: “Function and Fate in Plants: Physiological Traits and Ecological Success”.

Professional Service:

Associate Editor, *Evolution*, 1990-1992.

Associate Editor, *The American Naturalist*, 2000-2001

Advisory panel member, NSF Population Biology and Physiological Ecology program, 1989.

Committee of visitors, NSF Systematics and Population Biology cluster, 1996.

Committee of visitors, NSF Division of Environmental Biology, 1999.

Young Investigator Prize Committee, American Society of Naturalists, 1992.

Editor selection committee, American Society of Naturalists, 1994-1995.

Chair, E.O.Wilson Award Committee, American Society of Naturalists, 1997-1998.

Member, RI Task Force. New England Plant Conservation Program 1991-

Member, Regional Advisory Committee, New England Plant Conservation Program 2000-

Scientific Committee, Netherlands Institute of Ecology (NIOO) 1998-2002

Service to University

Executive Committee, Center for Environmental Studies (1982-2001)

Executive Board, Program in Environmental Science (1995-)

Affirmative Action Monitoring Committee (1988-1990; Chair 1990-1991)

Mentor, Women in Science and Engineering (1993-)

Provost search committee (1995)

Academic Priorities Subcommittee, Academic Council (1998-1999)

Coauthor of Environmental Change Initiative (2002)

Chair, Search Committee, Director CES/ECI (2003-2004)

Service to Division of Biology and Medicine:

Herbarium Curator (1982-)

Greenhouse Supervisor (1988-)

Plant Sciences Committee (1982-)

Chair, Plant Sciences Committee (2002-)

Biology Concentration Advisor (1982-)

Biology Curriculum Committee (1986-1989)

Bookshelves in Biology, NSF-sponsored workshop for high-school teachers (1990)

Program in Biology Mission Statement Committee (1993-1994)

Steering Committee for Biomed strategic planning (1994- 1995)

Chair, Biomed strategic planning subcommittee on graduate and MD/PhD education (1995)
 Strategic Planning Work Group (2001-2002)
 Coauthor of Plant Sciences self study (2002)
 Medical School Blueprint Working Group (2002)
 Search Committee: Plant Biology position, MCB (2003-2004)
 Acting Vice-Chair, Department of Ecology and Evolutionary Biology (1995-1996)
 EEB seminar series coordinator (spring, 1984, Fall 1985, Fall 1987, Spring 1992, Spring 1998)
 Search Committee: Population/Community Ecology position (1985, 1987)
 Search Committee: Temporary Population Biology position (1984, 1986)
 Search Committee: Population/Quantitative Genetics position (1986)
 Search Committee: Evolutionary Geneticist position (1988, 1990)
 Search Committee: Marine Population/Community Ecology position (1993)
 Search Committee: Temporary Genetics position (1995)
 Search Committee: Conservation Biology position (2000)
 Chair, Search Committee: Population/Evolutionary Geneticist position (1995-1996)
 Coauthor of academic plan for Ecology and Evolutionary Biology (1992)
 Coauthor of EEB strategic plan (1994)
 Coauthor of EEB self-study (2002)
 Vice Chair, Department of Ecology and Evolutionary Biology (2003-)

Teaching:

Courses:

Diversity and Adaptation of Seed Plants

Plant Ecology

Topics in Ecology and Evolutionary Biology (graduate seminar, rotating)

Global Change: Ecology and Climate (first-year seminar, with T. Herbert, 2004)

Undergraduate research (including 40 senior theses; 1982-2004)

Graduate students:

Laura Graceffa, Sc.M., MAT 1990.

Pamela O'Neil, Ph.D. 1991. Associate Vice Chancellor for Research, University of New Orleans.

Colin Purrington, Ph.D. 1994. Associate Professor, Swarthmore College.

C. Randal Linder, Ph.D. 1994. Associate Professor, U. of Texas, Austin.

M. Shane Heschel, Ph.D. 2000. Postdoctoral research associate, Harvard University

Yuko Toyonaga, Ph.D 2004

Elizabeth Boyd, Ph.D. student 2001-

Eric von Wettberg, Ph.D. student 2001-

Postdocs:

Susan Dudley, 1992-1995; Associate professor, McMaster U.

Massimo Pigliucci, 1994-1995; Professor, SUNY Stony Brook

Kathleen Donohue 1996-1998; Assistant professor, Harvard University

Cynthia Weinig 1999-2002; Assistant professor, U. of Minnesota

Heidrun Huber 2000-2001; Assistant professor, U. of Nijmegen

Josef Stuefer, (visiting postdoc 2000-2001); Assistant professor, U. of Nijmegen

Lisa Dorn 1995-2003; Assistant professor, U. Wisconsin Oshkosh

John Stinchcombe 2001-

Tonia Korves 2002-

Bhoomika Singh 2002-

Undergraduate Honors theses (since 1993):

- Lynn Adler (1993) Defensive chemistry and plant-herbivore interactions in *Plantago*
- Saara DeWalt (1994) Canopy architecture, light capture, and carbon gain in *Impatiens*
- Satya Maliakal (1995) Effects of phytochrome-mediated stem elongation on biomass allocation and gas exchange in *Impatiens capensis*
- Kristin McDonnell (1995) Density-dependent plasticity of light capture traits within *Impatiens capensis* stands
- Sarah Bryson (1996) Variation within and between natural *Impatiens capensis* populations in response of leaf chlorophyll to shade.
- Karima Cammell (1996) Evolution of phenotypic plasticity: a comparative approach in the phylogenetic neighborhood of *Arabidopsis thaliana*
- Sarah McGee (1997) Genetic variation in gibberellin sensitivity within and between natural *Impatiens capensis* populations
- Larkin Strong (1997) Density-dependent selection on flowering time in *Arabidopsis*
- Dinan Messiqua (1998) Density-dependent selection on flowering time in *Impatiens capensis* in sun and woodland sites
- Jamalah Munir (1998) Effects of maternal photoperiod on seasonal dormancy in *Arabidopsis thaliana*
- Elanor Abrams (1998) Conservation biology of a rare New England plant
- Peter Dixon (1999) Do phytochrome-regulated anthocyanins protect plants from ultraviolet radiation?
- Nolan Kane (1999) Maternal photoperiod effects in *Arabidopsis thaliana*
- Corinna Riginos (2000) Maternal effects of drought stress and inbreeding in *Impatiens capensis*
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