

KIM J. BROWN

Curriculum Vitae

Current Title: Assistant Professor of Forest Ecophysiology and Ecosystem Function
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Lab Web: <http://ecophys.plantbio.ohiou.edu/>

Academic Background

1999-2001 Post-Doc **Columbia University**, Lamont-Doherty Earth Observatory, New York, New York
Advisor: Dr. Kevin Griffin
2000 Ph.D. **University of Washington**, Division of Ecosystem Science, College of Forest Resources,
Seattle WA, USA. Forest ecophysiology. Advisor: Dr. Tom Hinckley
1994 M.S. **Duke University**, School of the Environment. Durham NC, USA. Ecotoxicology.
Advisor: Dr. Curtis Richardson
1991 B.S. **University of Memphis**, Memphis TN. Chemistry and Biology (double major)
Advisor: Dr. Steve Klaine

Academic Appointments

2001-pres. **Assistant Professor of Forest Ecophysiology and Forest Ecosystem Function**
Ohio University, Dept. of Environmental and Plant Biology.
Nov. 1999 **Postdoctoral Research Scientist**, Lamont-Doherty Earth Observatory of Columbia University.
- Aug 2001 New Zealand and New York State forests – measures of canopy structure and function
1993-1999 **Research Assistant**. University of Washington, College of Forest Resources, Ecosystem Science Division.
1991-1993 **Research Assistant** Duke University, School of the Environment. Aug 1991-July 1993
1990 **Laboratory technician. (summer)**. Duke University, School of the Environment.
1989 **Lab technician**. U.S. Army Corps of Engineers –with Aquatic Weed Control Team. (summer)
1987-1991 **Undergraduate laboratory technician**. University of Memphis. Ecotoxicology group,
Biology Department. Utilizing *Hydrilla verticillata* as a plant-based toxicity exposure system.

Honors and Awards

2001 Sigma Xi, Scientific Research Honor Society, University of WA - alpha chapter
1999 Agnes Healy Anderson Research Fellowship, University of Washington
1998 Invited panel participant, UW Women in Science and Engineering Conference
1995 Northwest International Women's Conference, Scholarship
1994 Xi Sigma Pi, University of WA - alpha chapter
1991 Mortar Board Honor Society, University of Memphis
1986-1988 Undergraduate Honors Scholarship, University of Memphis

Professional Societies

American Society of Plant Biologists, 1998 – present
American Geophysical Union, 2001 – present
Association for Women in Science, 1990 – present
Botanical Society of America – 2007 - present
Ecological Society of America, 1993 – present
Sigma Xi, 2001 - present

TEACHING

- 2002-pres. **Ohio University**, Honors Tutorial College Tutorials – seven as of Sept '06.
Topics: invasive plants, biodiversity in forests, soils and sustainability (twice)
PBIO209 “Plant Ecology”: General plant ecology, a core majors’ course.
PBIO109 “Americans and Their Forests”: Forest ecology and policy for non-majors.
PBIO103 “Plants and People”: Plant Science for non-majors survey course.
PBIO369/569 “Ecosystem Ecology”: Biogeochemistry and ecosystem dynamics.
PBIO691 “Global Change Biology”: A graduate seminar course.
PBIO426/526 “Physiological Plant Ecology”: Microclimate, biophysics and ecology.
PBIO 369G/693 “Island Biology”: A 3-week summer field course in Hawaii.
PBIO405/693 “Island Biology of Hawaii”: A graduate/undergraduate seminar course.
PBIO 369G/693 “Global Studies NZ”: A 3-week Dec’05 field course in New Zealand.
PBIO405/693 “Global Studies NZ”: A graduate/undergraduate seminar course.
- 1998 **Washington Institute**, Technical Fire Management Course.
Teaching Assistant for the Statistics module. Dr. Bob Loveless, instructor.
- 1997, 1996, 1995 **University of Washington**. Ad-hoc Teaching Assistant for College of Forest Resources, Ecosystem Science Division. Two courses: Dendrology and Autecology, and Forest Ecosystems
- 1996, 1995 **University of Washington**. Teaching Assistant for Botany Dept. - Plant Physiology
- 1993 **Duke University**. Teaching Assistant - Ecophysiology of Productivity and Stress
- 1992 **Duke University**. Teaching Assistant - Applied Ecology

Guest Teaching Lectures

- 2003 **Ohio University**. Department of Geology, Guest of Dr. Mary Stoertz. “Biophysical controls on forest water use from a watershed hydrology context”. GEOL 480/580 - Hydrology.
- 2002 **Ohio University**. Department of Sociology, Guest of Dr. Debra Thornton. “Finding the connections between plants and society”. SOC 101 – Introduction to Sociology.
- 2000 **Barnard College**. Plant Biology, Guest of Dr. Hilary Callahan. “Ecophysiology as a tool for understanding forest communities– a case study of conifer vs. angiosperm dominance in the PNW”
Columbia University. Plant Physiological Ecology, Guest of Dr. Kevin Griffin. Two lectures: “Water relations in plants: theory, ecological inferences, and the turbulent state of current research”
Columbia University – Black Rock Forest component of See-U Field course, Dr. Ann Hoylman, instructor. “Columbia’s forest ecophysiological research program at Black Rock Forest”

RESEARCH ACCOMPLISHMENTS

Publications (Postdoc indicated by \diamond ; graduate students indicated by *; undergraduate students indicated by \blacklozenge)

In preparation for submission

- M. Burgess * and **K.J. Brown**. Water Sources of an Old-Growth Eastern Deciduous Forest: Stable Isotope Methods. *To be submitted to Advances in Water Research*. Spring 2007
- M. Burgess * and **K.J. Brown**. Spatial and Temporal Variation in Soil Water Content in an Old-Growth Deciduous Forest in Ohio. *To be submitted to Agricultural and Forest Meteorology*. Spring 2007
- M. Burgess * and **K.J. Brown**. The Water Holding Capacity of the Soils of an Old-Growth Eastern Deciduous Forest. *To be submitted to Geoderma*. Spring 2007
- M. Avetisyan * and **K.J. Brown**. A cost-minimizing, NPP-predictive economic model for the implementation of forest projects. *To be submitted to Forest Science*. Spring 2007

H. Joesting *, B.C. McCarthy, and **K.J. Brown**. Changes in physiology and leaf characteristics of American chestnut through seedling, sapling, and mature growth stages. *To be submitted to Tree Physiology*. Spring 2007

J. Bascom ♦, D. Lieurance *, and **K.J. Brown**. Contrasting light environments influence morphology and protein content in *Lonicera maackii* fruits. *In preparation for The Ohio Journal of Science*. Spring 2007

R. Giuliani ♦, M.B. Thornton♦, **K.J. Brown**. Monitoring and modeling short-wave radiation in a broad-leaf forest. *In preparation for the peer-reviewed journal Plant, Cell and Environment*. Spring 2007

M. Gathany* and **K.J. Brown**, “Sources of variation in ecosystem carbon pools: A comparison of adjacent old- and second-growth forests” *In prep for resubmission to Forest Ecology and Management*, Spring 2007

D. Lieurance * and **K.J. Brown**, Plant biomass allocation and growth analysis of the invasive shrub Amur honeysuckle in varying light habitats. *In preparation for Biological Invasions*. Spring 2007

Brown, K.J. and T.M. Hinckley. Leaf morphology and biochemistry in two architecturally contrasting hybrid poplar clones: inter-clonal and intra-canopy variation. *In preparation for American Journal of Botany*. Spring 2007

Brown, K.J., Bond, B., and Hinckley, T.M. Photosynthesis in architecturally contrasting *Populus* clones: leaf differences and canopy syntheses. *In preparation for Annals of Botany*. Spring 2007

Cortéz-Palomec, A. * **K.J. Brown** and H.E. Ballard Jr. Environmental correlates between flowering and reproduction in the cleistogamous Neotropical violet *Viola grahamii*. *In prep for resubmission to Plant Ecology*, Spring 2007

Cortéz-Palomec, A. * **K.J. Brown** and H.E. Ballard Jr. Habitat heterogeneity and leaf plasticity in the Neotropical violet *Viola grahamii* *In prep for resubmission to Annals of Botany*, Spring 2007

Submitted or published

J. Chiang * and **K.J. Brown** . Thinning and burning treatments influence within canopy leaf traits in 5 seven hardwood species in Ohio. Submitted June 2007, *Tree Physiology*.

H. Joesting *, B.C. McCarthy, and **K.J. Brown**. The photosynthetic response of American chestnut (*Castanea dentata* (Marsh.) Borkh.) seedlings to either high or low light conditions . *Accepted to the Canadian Journal of Forest Research*, MS# 07-42 Feb 2007

J. Chiang * and **K.J. Brown**. (2007) Evaluation of budburst phenological models in PnET forest carbon simulations. *Ecological Modeling* 515-526.

D. McCarthy* and **K.J. Brown**. (2006) Soil respiration responses to topography, canopy cover, and prescribed burning in an oak-hickory forest in Southeastern Ohio. *Forest Ecology and Management* Vol. 237, pp. 94-102.

A.S. Walcroft , **K.J. Brown** , W.S.F. Schuster, D.T. Tissue, M.H. Turnbull, K.L. Griffin, D. Whitehead (2005) “Radiative transfer and carbon assimilation in relation to canopy architecture, foliage area distribution and clumping in a mature temperate rainforest canopy in New Zealand” *Agricultural and Forest Meteorology*, 135 (1-4): pp. 326-339.

D. Whitehead, K.L. Griffin, M.H. Turnbull, D.T. Tissue, V.C. Engel, **K.J. Brown**, W.F.S. Schuster, A.S. Walcroft (2004) Response of total night-time respiration to differences in total daily photosynthesis for leaves in a *Quercus rubra* L. canopy: Implications for modelling canopy CO₂ exchange. *Global Change Biology* (6): 925-938.

Turnbull, M.H., Whitehead, D., Tissue, D.T., Schuster, W.S.F, **Brown, K.J.**, Griffin, K.L. (2003) Scaling foliar respiration in two contrasting forest canopies. *Functional Ecology* 17: 101-114.

Whitehead, D.; Walcroft, A.S.; Griffin, K.L.; Tissue, D.T.; Turnbull, M.T.; Engel, V.; **Brown, K.J.**; Schuster, W.S.F. (2004) Scaling Carbon Uptake from Leaves to Canopies: Insights from Two Forests with Contrasting Properties. *In: Forests at the Land–Atmosphere Interface*. Edited by M Mencuccini, J Moncrieff, K McNaughton and J Grace of Institute of Ecology and Resource Management, University of Edinburgh, Edinburgh, Scotland. CABI Publishing, Cambridge MA. ISBN: 0851996779

Nagel, J.M., Kevin L. Griffin, William S. F. Schuster, David T. Tissue, Matthew H. Turnbull, **Kim J. Brown** and David Whitehead (2002). Energy and resource investment in leaves of red maple and co-occurring oaks at sites differing in soil moisture availability. *Tree Physiology*, 22: 859–867.

Whitehead, D, Hall, G.M., Griffin, K.L., Walcroft, A.S., Schuster, W., **Brown, K.J.**, Carswell, F.E., Landsburg, J.J., James, I.L., Tissue, D. T., Norton, D.A., Turnbull, M.H. (2002) Analysis of the growth of rimu (*Dacrydium cupressinum*) in south Westland, New Zealand, using process-based simulation models. Intl. Journal of Biometeorology. 46:66–75.

Turnbull, M.H., D. Whitehead, D.T. Tissue, W.S.F. Schuster, **K.J. Brown**, V.C. Engel, and K.L. Griffin. (2002). Photosynthetic characteristics in canopies of *Quercus rubra*, *Quercus prinus* and *Acer rubrum* differ in response to soil water availability. Oecologia, 130:515–524.

Turnbull, M.H., D. Whitehead, D.T. Tissue, W. Schuster, **K.J. Brown**, and K.L. Griffin. (2001) The response of leaf respiration to temperature and leaf characteristics in three deciduous tree species differs at sites with contrasting water availability. Tree Physiology 21: (9) 571-578.

Martin, T. A., **K. J. Brown**, Hinckley, T.M., J. Kucera, F. C. Meinzer, D. G. Sprugel. (2000) Control of transpiration in an old growth *Abies amabilis* forest. Forest Ecology and Management, 152: (1-3) 211-224.

Roberts, D.A., **K. Brown**, R. Green, S. Ustin, and T. Hinckley. 1998. Investigating the Relationship between Liquid water and Leaf Area in Clonal *Populus*, Proc. 7th AVIRIS Earth Science Workshop JPL 97-21, Pasadena, CA 91109, 10 p.

Hinckley, T. M., D.G. Sprugel, J.R. Brooks, **K.J. Brown**, T.A. Martin, D.A. Roberts, W. Schaap, and D. Wang. 1998. Scaling and integration in trees in D. L. Peterson and V. T. Parker, eds. **Ecological Scale: Theory and Application**. Columbia University Press, New York.

Martin, T. A., **K. J. Brown**, J. Cermák, R. Ceulemans, J. Kucera, F.C. Meinzer, J.S. Rombold, D.G. Sprugel, and T. M. Hinckley. 1997. Crown conductance and tree and stand transpiration in a second growth *Abies amabilis* forest. Canadian Journal of Forest Research 27: 797-808.

Dizengremel, P., T.W. Sasek, **K.J. Brown**, C.J. Richardson. 1994. Ozone-induced changes in primary carbon metabolism enzymes of Loblolly pine needles. Journal of Plant Physiology. 144 (300-306)

Brown, K.J. 1994. Diurnal fluctuations in guaiacol peroxidase, Ribulose-1,5-bis-phosphate carboxylase, stomatal conductance and net photosynthesis from chronically ozonated Loblolly pine (*Pinus taeda* L.). MS thesis. Duke University, Durham North Carolina. Dr. C.J. Richardson, Advisor.

Invited Seminars (2000 through present)

K.J. Brown. “Canopies as scaffolds of green: architectural tales from many forest types” Botany Department, University of Hawaii – Manoa August 2006. (Departmental Seminar).

K.J. Brown. “Forest structure and leaf area determination in temperate and boreal forests: methods and applications.” Geography Department, University of North Carolina – Chapel Hill Oct 2004. (Departmental Seminar).

K.J. Brown. “Pattern and process in forests: Architectural tales from Eastern, Boreal, and NZ forests” Indiana University, Bloomington IN, Nov 2003. (Departmental Seminar).

K.J. Brown. “Exploring the structure and light environments of eastern Deciduous, Pacific conifer, and boreal forests”. Indiana University-Purdue University at Indianapolis, IN (IUPUI), Oct 2003. (Departmental Seminar).

K.J. Brown. “Forest architecture and canopy productivity in Eastern, Boreal and Pacific forests” Biology Department, University of Pittsburgh, Pittsburgh PA, Sept 2003. (Departmental Seminar).

K.J. Brown. Invited symposium speaker at “The Ecology of Forest Systems: Challenges and Opportunities” Indiana University, Bloomington IN, April 2003.

K.J. Brown. “Assessing Heterogeneity in Forest Canopies: Lights, Camera, Action!” Dept. of Biological Sciences, West Virginia University, Morgantown West Virginia, March 2003 (Departmental Seminar).

K.J. Brown. “Carbon Sequestration in Forests: the Potential and Pitfalls.” Dept. of Biological Sciences, Wright State University, Dayton Ohio, October 2002 (Departmental Seminar).

K.J. Brown. “There and back again: Capturing the influence of canopy architecture on tree physiology.” Dept. of Ecology and Evolution, The Ohio State University, Columbus Ohio, April 2002 (Departmental Seminar).

K.J. Brown. "Assembling pieces of the carbon puzzle: carbon cycling in "natural" and managed eastern deciduous forests." Dept. of Forestry, University of Kentucky, Lexington KY, March 2002 (Departmental Seminar).

K.J. Brown. "Techniques for improving estimates of forest carbon fluxes: Assessing canopy structure in 3 forest ecosystems." Dept. of Earth, Ecological, & Environmental Sciences, University of Toledo, Toledo Ohio, October 2001 (Departmental Seminar).

K.J. Brown . A place in the sun: considerations of forest architecture when extrapolating from leaf to canopy. Dept. of Botany, University of Wyoming, Laramie, WY, February 2001 (Departmental Seminar).

K.J. Brown . A sliding plate in meters of rain: Unique NZ ecosystems. Dept. of Environmental and Plant Biology, Ohio University, Athens Ohio, February 2001 (Departmental Seminar).

K.J. Brown . From the Hague to New Zealand: Why tree physiology matters. Dept. of Biology, University of The South, Sewanee, TN, December 2000 (Departmental Seminar).

Research Presentations (2000 through present)

* = indicates graduate student or postdoctoral fellow presentation; ♦ = indicates undergraduate

J. Chiang* and **K.J. Brown.** Interactions of changing climate and shifts in forest composition on stand carbon balance . 91st Annual meeting of the Ecological Society of America, Memphis, Tennessee. **August 2006.** (paper with published abstract)

G. Wakeley♦, M. Burgess,* and **K.J. Brown.** Spatial variability of soil water potential and soil physical properties at Dysart Woods, an Old Growth Forest in Ohio . 91st Annual meeting of the Ecological Society of America, Memphis, Tennessee. **August 2006.** (poster with published abstract)

M. Burgess* and **K.J. Brown.** Stable isotope methods for determining the water sources of an old-growth eastern deciduous forest and predicting the effects of longwall coal mining on a forest ecosystem. 91st Annual meeting of the Ecological Society of America, Memphis, Tennessee. **August 2006.** (paper with published abstract)

D. McCarthy* and **K.J. Brown.** Forest management and soil respiration in upland oak-hickory forests of southeastern Ohio. 91st Annual meeting of the Ecological Society of America, Memphis, Tennessee. **August 2006.** (poster with published abstract)

D. McCarthy* and **K.J. Brown.** The effects of small-scale silviculture on soil CO₂ efflux and soil temperature in mixed oak forests of southeastern Ohio. 90th Annual meeting of the Ecological Society of America, Montreal Canada. **August 2005.** (paper with published abstract)

K.J. Brown and H. Joesting. *Within-canopy variance in leaf photosynthesis and leaf density within a mature stand of American Chestnut 90th Annual meeting of the Ecological Society of America, Montreal Canada. **August 2005.** (paper with published abstract)

K.J. Brown and R. Guiliani *. Measurement and application of canopy clumping factors to improve optically-derived LAI estimates in thinned and burned oak forests of southeast Ohio. 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (paper with published abstract)

Patty M. Nally ♦, Harvey E. Ballard, and **Kim J. Brown.** Habitat contrasts, morphological convergence, and ecological speciation in Hawai'ian violets. 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (poster with published abstract)

J. Chiang * and **Kim J. Brown,** How does inter-species variation in phenology impact net primary production in the PnET-II carbon simulation model? 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (paper with published abstract)

H. Joesting * and Kim J. Brown, Thinning promotes the performance of American chestnut seedlings in the understory of southeastern Ohio forests. 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (poster with published abstract)

D.Lieurance * and Kim J. Brown, Physiological and morphological leaf characteristics, biomass accumulation, and the fecundity of the exotic invasive *Lonicera maackii* in contrasting light environments. 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (poster with published abstract)

- M. Gathany * and Kim J. Brown. Sources of variability in soil carbon in adjacent young and old oak forests in Ohio 89th Annual meeting of the Ecological Society of America, Portland OR. **August 2004** (poster with published abstract)
- D. Black * and **K.J. Brown**. Aboveground diversity of ectomycorrhizal fungi in managed oak-hickory forests of southeastern Ohio. Annual meeting of the Mycological Society of America, Ashville NC. **July 2004**. (poster)
- Aurea C. Cortéz-Palomec * **Kim J. Brown** and Harvey E. Ballard Jr. Reproductive biology of the tropical violet species *Viola grahamii*. The annual meeting of the Botanical Society of America, Snowbird UT. **August 2004** BSA
- Aurea C. Cortéz-Palomec * Harvey E. Ballard Jr., and **Kim J. Brown**. Reproductive System of the tropical *Viola* species *Viola grahamii* and the temperate Violet *Viola striata* (Violaceae). The annual meeting of the Botanical Society of America, Snowbird UT. **August 2004** BSA
- R. Guiliani *, E. Magnanini, M. Thornton ♦ and **K.J. Brown**. “Landscape and treatment influences on the spatial heterogeneity in leaf area productivity in thinned and burned oak-hickory forests of SE Ohio”. 4th International Workshop on Functional-Structural Plant Models, Montpellier, France - **June 7-11, 2004** (poster with published abstract in *New Phytologist*)
- J. Bascom ♦, D. Lieurance *, and **K.J. Brown**. Germination success in *Lonicera maackii* seeds from contrasting developmental light environments. 113th Annual Meeting of the Ohio Academy of Science, **March 2004**.
- D. Black * and **K.J. Brown**. The community structure of ectomycorrhiza fungi in oak-hickory forests of southeastern Ohio. 113th Annual Meeting of the Ohio Academy of Science, **March 2004**.
- D. Lieurance * and **K.J. Brown**. “Can leaf physiology, biomass accumulation, and fecundity explain the success of the invasive *Lonicera maackii*?” Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7th International Conference on the Ecology and Management of Alien Plant Invasions (A joint meeting with the Ecological Society of America and the Weed Science Society). Ft. Lauderdale, Florida **November 2003** (poster with published abstract)
- K.J. Brown** and R. Guiliani *. “Landscape and treatment influences on the spatial heterogeneity in leaf area productivity in thinned and burned oak-hickory forests of SE Ohio”. Annual meeting of the Ecological Society of America – Savannah GA - **August 2003** (paper with published abstract)
- J. Chiang *, L. Iverson, A. Prasad, J. Chen and **K.J. Brown**. “Assessing carbon stocks and productivity in current and predicted forest communities using the SHIFT and PnET-II simulation models.” Annual meeting of the Ecological Society of America – Savannah GA - **August 2003** (poster with published abstract)
- D. May *, S. Bohlman, and **K.J. Brown**. “Evaluation of high-resolution, multi-band imagery for determining proportions of oak and maple LAI in Black Rock Forest, NY”. Annual meeting of the Ecological Society of America – Savannah GA - **August 2003** (poster with published abstract)
- D. Black * and **K.J. Brown**. “The effect of forest thinning and burning on ectomycorrhizal fungi and soil carbon storage in mixed oak ecosystems of southeastern Ohio.” 23rd annual Midwestern Ecology and Evolutionary Biology Meeting, Akron Ohio, **March 2003** (poster)
- J. Chiang * and **K.J. Brown**. “Assessing carbon stocks and productivity in current and predicted forest communities using the SHIFT and PnET-II simulation models.” 23rd annual Midwestern Ecology and Evolutionary Biology Meeting, Akron Ohio, **March 2003**. (poster)
- M, Gathany * and **K.J. Brown**. “What is the maximum soil carbon storage baseline in old-growth, oak forests? A case study in eastern Ohio.” 23rd annual Midwestern Ecology and Evolutionary Biology Meeting, Akron Ohio, **March 2003** (poster)
- D. Lieurance * and **K.J. Brown**. “Fruiting and phenological plasticity of invasive Amur honeysuckle (*Lonicera maackii*) in contrasting light environments .” 23rd annual Midwestern Ecology and Evolutionary Biology Meeting, Akron Ohio, **March 2003** (poster)
- K.J. Brown**, “Assessments of potential NPP for thinned and burned oak-hickory forests in SE Ohio.” USDA Symposium on Natural Resource Management to Offset Greenhouse Gas Emissions. Raleigh-Durham NC. Nov 2002 (poster)
- K.J. Brown**. “Considering canopy structure in 3 forest ecosystems improves estimates of forest carbon fluxes”. Seminar for USFS Research Unit # NE-4153. U.S. Forest Service, Delaware Ohio, October 2001.

K.J. Brown, W. Schuster, D. Tissue, M. Turnbull, D. Whitehead, K. Griffin. "Spatial and temporal variability of soil CO₂ efflux from xeric and mesic sites within Black Rock Forest, New York." Annual meeting of the Ecological Society of America - Tuscon AZ - August 2002 (paper)

K.J. Brown, Griffin, K.L., W. Schuster, D. Tissue, M. Turnbull, D. Whitehead. 2001. Stand characterization and leaf area distribution in an old growth conifer-angiosperm forest in south Westland, New Zealand. IUFRO Forest Canopy Processes Meeting, March 2001 (Poster presentation).

K.J. Brown, W. Schuster, J. Simpson, and Griffin, K.L. The Black Rock Forest: A research overview. U.S. Forest Service Forest Sensitivity Workshop, Portsmouth, NH. December 2000. (oral presentation).

K.J. Brown, D. Whitehead., W. Schuster, D. Tissue, M. Turnbull, and K.L.Griffin. Leaf area distribution and canopy clumping in an old-growth mixed-species podocarp New Zealand rainforest. Annual Meeting, Ecological Society of America, August 2000. Snowbird, Utah. (Published abstract and paper).

K.J. Brown, Griffin, K.L., W. Schuster, D. Tissue, M. Turnbull, D. Whitehead. 2000. Seeking randomness in leaves and trees: effects of canopy structure on forest physiology. Biology Group Seminar, LDEO-Columbia. March 2000 (oral presentation).

K.J. Brown, LDEO web page. Describes current research involvement at LDEO-Columbia, Black Rock Forest, and New Zealand, and provides collaborators with new data and research updates.

http://www.ldeo.columbia.edu/~kjbrown/kjb_work.html

Griffin, K.L., W. Schuster, **K.J. Brown**, D. Tissue, M. Turnbull, D. Whitehead. 2000. Physiological and ecological studies in an ancient New Zealand podocarp forest: conservation implications for a changing world. Biology Group Seminar, LDEO-Columbia. March 2000 (oral presentation).

Graduate Students and Postdoctoral Fellows Supervised

Postdoctoral Fellows

- ‡ Dr. Rita Guiliani, University of Bologna, Italy. Oct 2002 – Oct 2003.
Project: Leaf area dynamics and canopy light profiles in thinned and burned oak forests of Ohio.
Currently: Courtesy research fellow at University of Bologna, Italy

Graduate Students supervised by Dr. Brown since 2001 (as director of graduate committee)

- Sarah Polgar, M.S.E.S. student. Start: Sept. 2005 – **current**
Project: Mapping of and a management plan for *Ailanthus altissima* at the Edge of Appalachia TNC preserve
- ‡ Jyh-Min (James) Chiang, Ph.D. student. Start: Sept. 2001 – March 2007
Project: Assessing carbon balance consequences of potential tree species shifts in Eastern US forests
Currently: Accepted a post-doc with the new Taiwan-Long Term Ecological Research program (LTER)
- ‡ Macdonald Burgess, M.S.E.S. student. Start: Sept. 2004 – December 2006
Project: Bio-hydrology of Dysart Woods – the soil:water budget
Currently: PhD student at Montana State University
- ‡ Heather Joesting, M.S. student. Start: March 2002 – June 2004
Project: Ecophysiological dynamics of American Chestnut seedlings
Currently: PhD student at Wake Forest University with Dr. Bill Smith
- ‡ Mark Gathany, M.S.E.S. student. Start: Sept 2002 – Sept 2004
Project: Carbon sequestration in forest soils in Dysart Woods, Ohio
Currently: PhD student at Colorado State University with Dr. Indy Burke
- ‡ Deah Lieurance, M.S.E.S. student. Start: Sept 2002 – November 2004
Project: Ecophysiology, biomass allocation and fecundity in Amur honeysuckle (*Lonicera maackii*)
Currently: Employed at USDA Invasive Plant Lab, Ft. Lauderdale FL.

Other Ohio University Graduate Students working w/ Dr. Brown (committees)

- ‡ (MSES) Cynthia Caldwell - Primary production and ecosystem respiration of AMD streams
- ‡ (MSES) Doug Christen- Road size and density as invasive species conduits
- ‡ (PhD) Aurea Cortes-Palomec - Molecular genetics and evolution of violets
- ‡ (MSES) Sara DeAloia – Forest use of Ancient Ohioans as observed in the archaeological record
- ‡ (MS) Nanda Filkin - Environmental controls on freshwater red algae development
- ‡ (MS) Lance Glasgow – Prescribed forest fires and invasive plant interactions
- ‡ (MS) John Graham – CWD and fuels in thinned and unthinned oak forests
- ‡ (MSES) Jennifer Gray – Biogeography of *Collinsonia verticillata* in Adams County, Ohio
- ‡ (PhD) Kurt Hartman - Amur honeysuckle reproduction and dispersion
- ‡ (MSES) Bob Herendeen – American chestnut as restoration tool for coal mine spoils
- ‡ (MS) Jeff Lombardo – Fire and weevil interactions on oak acorn viability
- ‡ (MS) Audrey Larrimer - Bigtooth aspen & vegetative associations
- ‡ (MS) Dave May - Remote sensing of leaf area index from multi-spatial and multi-spectral images
- ‡ (MSES) Corie McCament - Pilot study: reintroduction of chestnut hybrids in SE Ohio
- ‡ (PhD) Ryan McEwan – Dendrochronology of fire disturbance in Kentucky Oak forests
- ‡ (PhD) Cheryl McCreary - Alpine violets: phylogeny and ecology
- ‡ (PhD) Peter Schweizer - Land use effects on stream biodiversity and water quality
- ‡ (MS) Hemakumar Velugula - Fingerprinting the chemical composition of forest smoke

‡ = student has completed degree as of March 2007

GRANTS

K.J. Brown (PI) with CoPIs: Harvey Ballard, Carol and Jerry Baskin, Lawren Sack. Jan 2007: **\$686,491**. Elucidating processes of adaptive radiation with evolutionary replicates: Niche differentiation, anatomical modifications, and ecophysiological tolerances in the Hawaiian violets. (Prop# 0719300) **in review** with the National Science Foundation, IOB-Evolutionary and Ecological Physiology.

K.J. Brown. 2006 (July): USFS Cooperative Agreement Grant: **\$11,371**. Assessment of growing season leaf area production at the Ohio Hills USFS-FFS sites.

K.J. Brown (and Gar Rothwell). 2006 (June): The Ohio Chapter of the Nature Conservancy: **\$5426**. Prioritizing management of *Ailanthus altissima* at the Edge of Appalachia Preserve.

K.J. Brown. 2005 (June): USFS Supplement to Cooperative Agreement Grant: **\$2500**. Forest carbon consequences of potential global-change driven shifts in tree species distribution.

K.J. Brown. 2005 (June): USFS Cooperative Agreement Grant: **\$5625**. Assessment of 2005 growing season leaf area production at the Ohio Hills USFS-FFS sites.

Ballard, H.E. and **K.J. Brown**. 2005 (April): Ohio University Baker Fund Grant – **\$11,820** Habitat characterization and ecological speciation in Hawaiian violets.

K.J. Brown. 2005 (March) Ohio University: PACE funding to support undergraduate research: **\$1,800**

K.J. Brown. 2004 (November). USFS Research FFS contract: **\$1,500**

K.J. Brown, Dickinson, M., and Kaster, G. 2004 (July). USFS - Agenda 2020 preproposal: “Evaluation of LIDAR and ground-based estimates of LAI and forest structure in mixed-hardwood forests.” *Requested \$150K, not funded.*

Band, L., Moody, A., Song, C., **K.J. Brown**, and Dickinson, M. 2004 (July). USFS - Agenda 2020 preproposal: “Forest information technologies: Ecoregionalization of stand to watershed level productivity and hydrology in the Allegheny Plateau.” *Requested \$150K, not funded.*

Ballard, H.E., in collaboration with 22 others and **K.J. Brown**. 2004. *June '04 submission*: NSF Grant – “Ultra Violet Network” Research Coordination Network (RCN) ; *not funded*. KJB role in grant: physiology group coordinator

K.J. Brown. 2004 (April) Ohio University: OURC Research Challenge: **\$6,000**

K.J. Brown. 2004 (May) Ohio University: PACE funding to support undergraduate research: **\$1,800**

K.J. Brown. 2004. *March '04 submission*: USDA NRI Grant – Managed Ecosystems section. “Above- and belowground carbon consequences of forest management in the Oak-hickory forests of Ohio.” *requested ~ \$350K, not funded.*

- K.J. Brown**, Mary Stoertz, Brian McCarthy. 2003 (October). Ohio University: The Water Balance of Dysart Woods \$ **61,094**.
- K.J. Brown**. 2003 (June). USFS Cooperative Agreement Grant: **\$11,000**
Purpose: assessment of forest carbon consequences of potential global-change driven shifts in tree species distribution.
- K.J. Brown**. 2003 (May) Ohio University: PACE funding to support undergraduate research: **\$1,800**
- D. Black (application mentored by **K.J. Brown**). 2003 (April). Three-year NSF Graduate Fellowship: (\$111,000)
[N.B. This award was the very first NSF graduate fellowship received by an Ohio University student]
- K.J. Brown**. 2003 (January): USFS Cooperative Agreement Grant: **\$18,600** Purpose: To determine the seasonal variance in species-specific production of leaf area and canopy clumping at the Ohio Hills USFS-FFS sites.
- K.J. Brown**. 2002 (September): USFS Cooperative Agreement Grant: **\$15,000** Purpose: To determine the quantity and spatial arrangement of leaf area production at the Ohio Hills USFS-FFS sites.
- K.J. Brown**. 2002 (June) Ohio University: OURC Research Challenge: **\$6,000**
- K.J. Brown**, J. Chen and G. Smith. 2002 (June) NCSSF Forest Ecosystem Function: Requested: \$75,000
Status: Denied.
- K.J. Brown**. 2002 (May) Ohio University: PACE funding to support undergraduate research: **\$1,800**
- K.J. Brown**. 2002 (April): AAAS-NSF WISC Grant. Travel to Estonia for research at the University of Tartu. **\$4,000**
- K.J. Brown**. 2002 (February): Ohio University Postdoctoral Fellowship, Funded; **\$25,000**
- K.J. Brown**. 2002 (February). *Resubmission*: Ohio University Research Challenge grant, Proposed; \$8,000
Status: Denied, advised to resubmit.
- K.J. Brown**. 2001 (November). *Submission*: Ohio University Research Challenge grant, Proposed; \$8,000.
Status: Denied, advised to resubmit.
- K.L. Griffin and **K.J. Brown**. 2000. Remote detection of sun and shade leaf area for three tree species in the Cascade Brook watershed in Black Rock Forest, NY. Granting agency: Black Rock Forest Consortium.
Amount awarded: **\$3900**.
- K.J. Brown**. 1998. Canopy architecture of clonal hybrid Populus: Implications for light reflectance, interception, and physiology. Sigma Xi - University of Washington Chapter. Amount awarded: **\$272**.

SERVICE

- 2006 - **Trustee, The Nature Conservancy, Ohio [resigned from TNC-OH BOT on 20 April 2007]**; Forest Advisory Board for Rural Action (a regional NGO); OU Faculty Senate alternate; OU Faculty senate Energy and Ecology Committee; PBIO Recruitment Committee; PBIO Board rep. to OU's M.S.E.S. program; HTC tutorials; Departmental Colloquium Coordinator
- 2005 - Trustee, The Nature Conservancy, Ohio; Forest Advisory Board for Rural Action (a regional NGO); OU Faculty senate Energy and Ecology Committee; PBIO Awards committee; PBIO Board rep. to OU's M.S.E.S. program; HTC tutorials; Departmental Colloquium Coordinator
- 2004 - Trustee, The Nature Conservancy, Ohio; Forest Advisory Board for Rural Action (a regional NGO); OU Faculty senate Energy and Ecology Committee; PBIO Recruitment Committee (Chair); PBIO Awards committee; PBIO Board rep. to OU's M.S.E.S. program; member of Faculty Working group for OU's Information Technology Leadership Council; HTC tutorials
- 2003 - Program Leader of interdepartmental Ecology and Evolutionary Biology Graduate Program; Recruitment Committee (Chair); Curriculum committee; PBIO Board rep. to OU's M.S.E.S. program; CAS presentation for Enhancing Student Engagement; OU President's Showcase participant; Science Fair judge; Fulbright Scholar mentor; HTC tutorials (two)
- 2002 - Recruitment Committee (Chair); Curriculum committee; PBIO Board rep. to OU's M.S.E.S. program; Departmental rep. to Library; Women In Science volunteer; Spotlight on Learning presenter
- 2001 - Departmental rep. to Library; Curriculum committee; New faculty search committee.

Revised: 6/7/2007