

Curriculum Vitae

August 2006

William T. Peterjohn

Department of Biology
West Virginia University
Morgantown, West Virginia 26506-6057

Birth Date: 25 July, 1957
Birth Place: Berea, Ohio
Marital Status: Married
Nationality: United States

A. Background

1. EDUCATION

- 1979 Bachelor of Science in Biology and Mathematics from Baldwin-Wallace College, Berea, OH
1982 Masters of Environmental Sciences from Miami University, Oxford, OH
1990 Doctor of Philosophy in Botany from Duke University, Durham, NC

2. RESEARCH INTERESTS

Global change, agroecosystems, biogeochemistry, desert ecosystems, nitrogen cycling, and soil microbiology.

3. PROFESSIONAL APPOINTMENTS

- 1979(summer): E.P.A., Laboratory Aide, Wetlands Research Program, Corvallis, Oregon.
1980-1981: Miami University, Research Technician (summers only), Ecology Research Center.
1982-1985: Smithsonian Institution, research assistant, Smithsonian Environmental Research Center.
1985-1988: Duke University, teaching assistant, Department of Botany.
1988-1990: Duke University, research assistant, Department of Botany.
1990-1992: The Ecosystems Center, post doctoral fellowship, Marine Biological Laboratory, Woods Hole, MA.
1993-1999: West Virginia University, Assistant Professor, Department of Biology
1999-present: West Virginia University, Associate Professor, Department of Biology
2002-2005: West Virginia University, Associate Chair, Department of Biology
2005-present: West Virginia University, Associate Chair for Graduate Studies, Department of Biology

4. PROFESSIONAL ORGANIZATIONS

Ecological Society of America
American Association for the Advancement of Science
American Geophysical Union
Soil Science Society of America

B. Research

1. PUBLICATIONS

a. Chapters in books

Correll, D.L., N.M. Goff, and **W.T. Peterjohn**. 1984. Ion balances between precipitation inputs and Rhode River watershed discharges. Pages 77-111. in O.P. Bricker, editor. *Geological Aspects of Acid Deposition*. Butterworth, Stoneham, Massachusetts, U.S.A.

Peterjohn, W.T., and D.L. Correll. 1986. The effect of riparian forest on the volume and chemical composition of baseflow in an agricultural watershed. Pages 244-262. *In* D.L. Correll, editor. *Watershed Research Perspectives*. Smithsonian Press, Washington, D.C., U.S.A.

Weller, D.E., **W.T. Peterjohn**, N.M. Goff, and D.L. Correll. 1986. Ion and acid budgets for a forested coastal plain watershed and their implications for the impacts of acid deposition. Pages 392-421. *In* D.L. Correll, editor. *Watershed Research Perspectives*. Smithsonian Press, Washington, D.C., U.S.A.

Jordan, T.E., D.L. Correll, **W.T. Peterjohn**, and D.E. Weller. 1986. Nutrient flux in a landscape: the Rhode River watershed and receiving waters. Pages 57-76. *In* D.L. Correll, editor. *Watershed Research Perspectives*. Smithsonian Press, Washington, D.C., U.S.A.

Melillo, J.M., D.W. Kicklighter, A.D. McGuire, **W.T. Peterjohn**, and K.M. Newkirk. 1995. Global change and its effects on soil organic carbon stocks. Pages 175-189. *In* R.G. Zepp and Ch. Sonntag, editors. *Role of nonliving organic matter in the Earth's carbon cycle*. John Wiley & Sons

Adams, M.B., D.R. DeWalle, **W.T. Peterjohn**, F.S. Gilliam, W.E. Sharpe, and K.W.J. Williard. 2006. Soil chemical response to experimental acidification. Chapter 3. Pages 41-69 *In* M.B. Adams, D.R. DeWalle, and J.L. Hom, editors. *The Fernow watershed acidification study*. Springer, New York, New York, USA.

Adams, M.B., **W.T. Peterjohn**, and F.S. Gilliam. 2006. Acidification and nutrient cycling. Chapter 7. Pages 207-236 *In* M.B. Adams, D.R. DeWalle, and J.L. Hom, editors. The Fernow watershed acidification study. Springer, New York, New York, USA.

b. Articles in refereed journals

Peterjohn, W.T., J.L. Patterson, G.W. Barrett, and M.P. Farrell. 1981. Comparative accuracy of population estimators for enclosed small mammal populations. *Acta Theriologica* 26: 459-468.

Peterjohn, W.T., and D.L. Correll. 1984. Nutrient dynamics in an agricultural watershed: observations on the role of a riparian forest. *Ecology* 65: 1466-1475.

Schlesinger, W.H., and **W.T. Peterjohn**. 1988. Ion and sulfate-isotope ratios in arid soils subject to wind erosion in the southwestern U.S. *Soil Science Society of America Journal* 52:54-58.

Peterjohn, W.T., and W.H. Schlesinger. 1990. Nitrogen loss from deserts in the southwestern United States. *Biogeochemistry* 10:67-79.

Schlesinger, W.H., and **W.T. Peterjohn**. 1991. Processes controlling ammonia volatilization in Chihuahuan Desert soil. *Soil Biology and Biochemistry* 23:637-642.

Peterjohn, W.T., and W.H. Schlesinger. 1991. Factors controlling denitrification in a Chihuahuan Desert ecosystem. *Soil Science Society of America Journal* 55:1694-1701.

Peterjohn, W.T. 1991. Denitrification: enzyme content and activity in desert soils. *Soil Biology and Biochemistry* 23: 845-855.

Peterjohn, W.T., J.M. Melillo, F. P. Bowles, and P. A. Steudler. 1993. Soil warming and trace gas fluxes: experimental design and preliminary flux results. *Oecologia* 93:18-24.

Castro, M.S., **W.T. Peterjohn**, J.M. Melillo, P.A. Steudler, H.L. Gholz, and D. Lewis. 1994. Effects of nitrogen fertilization on the fluxes of N₂O, CH₄, and CO₂ from soils in a slash pine plantation. *Canadian Journal of Forest Research* 24:9-13.

Peterjohn, W.T., J.M. Melillo, P.A. Steudler, K.M. Newkirk, F.P. Bowles, and J.D. Aber. 1994. Responses of trace gas fluxes and N availability to experimentally elevated soil temperatures. *Ecological Applications* 43:617-625.

Kickligher, D.W., J.M. Melillo, **W.T. Peterjohn**, E.B. Rastetter, A.D. McGuire, P.A. Steudler, and J.D. Aber. 1994. Aspects of spatial and temporal aggregation in estimating regional carbon dioxide fluxes from temperate forest soils. *Journal of Geophysical Research* 99:1303-1315.

- Peterjohn, W.T.**, M.B. Adams, and F.S. Gilliam. 1996. Symptoms of nitrogen saturation in two central Appalachian hardwood forest ecosystems. *Biogeochemistry* 35:507-522.
- Peterjohn, W.T.**, R.J. McGervey, A.J. Sexstone, M.J. Christ, C.J. Foster, and M.B. Adams. 1998. Nitrous oxide production in two forested watersheds exhibiting symptoms of nitrogen saturation. *Canadian Journal of Forest Research* 28:1723-1732.
- Peterjohn, W.T.**, C.J. Foster, M.J. Christ, and M.B. Adams. 1999. Patterns of nitrogen availability within a forested watershed exhibiting symptoms of nitrogen saturation. *Forest Ecology and Management* 119:247-257.
- Cybulski, W.J., and **W.T. Peterjohn**. 2000. Effects of ambient UV-B radiation on the above-ground biomass of seven temperate-zone plant species. *Plant Ecology* 145:171-177.
- Cybulski, W.J., **W.T. Peterjohn**, and J.H. Sullivan. 2000. The influence of elevated ultraviolet-B radiation (UV-B) on tissue quality and decomposition of loblolly pine (*Pinus taeda* L.) needles. *Environmental and Experimental Botany* 44: 231-241.
- Christ, M.J., **W.T. Peterjohn**, J.R. Cumming, and M.B. Adams. 2002. Nitrification potentials and landscape, soil and vegetation characteristics in two Central Appalachian watersheds differing in NO₃⁻ export. *Forest Ecology and Management* 159:145-158.
- Wallenstein, M.D., **W.T. Peterjohn**, and W.H. Schlesinger. 2006. N fertilization effects on denitrification and N cycling in an aggrading forest. *Ecological Applications*. 16: 2168-2176.
- Gress, S.E., T.D. Nichols, C.C. Northcraft, and **W.T. Peterjohn**. 2007. Nutrient limitation in soils exhibiting differing nitrogen availabilities: What lies beyond nitrogen saturation? *Ecology*. 88: 119-130.

c. Manuscripts submitted

d. Manuscripts in preparation

- Manish, C.S., and **W.T. Peterjohn**. *In review*. The effects of varying UV-B on the growth, tissue chemistry and decomposition of non-agricultural plant species. *Oecologia*.

2. ABSTRACTS AND PRESENTATIONS

- 1989 **Peterjohn, W.T.**, and W.H. Schlesinger. Nitrogen loss from deserts in the southwestern United States. The annual meeting of the Ecological Society of America, Toronto, Canada.

- 1990 **Peterjohn, W.T.** Factors controlling denitrification in a northern Chihuahuan Desert ecosystem. The annual meeting of the Ecological Society of America, Snowbird, Utah, USA. Highlighted in *BioScience*. 1990. 40:716-717.
- 1991 **Peterjohn, W.T.**, J.M. Melillo, F.P. Bowles, and P.A. Steudler. Soil warming and trace gas fluxes: experimental design and preliminary gas flux results. The annual meeting of the Ecological Society of America, San Antonio, Texas, USA.
- 1991 **Peterjohn, W.T.**, J.M. Melillo, F.P. Bowles, and P.A. Steudler. Soil warming and trace gas fluxes: experimental design and preliminary gas flux results. NSF sponsored soil warming workshop, Woods Hole, Massachusetts, USA.
- 1991 **Peterjohn, W.T.**, J.M. Melillo, F.P. Bowles, and P.A. Steudler. Soil warming and trace gas fluxes: experimental design and preliminary gas flux results. Annual Harvard Forest Ecology Symposium, Petersham, MA, USA.
- 1992 **Peterjohn, W.T.**, J.M. Melillo, P.A. Steudler, K.M. Newkirk, D.W. Kicklighter, and J.D. Aber. The Harvard Forest soil warming experiment: the influence of the soil environment on trace gas flux. The annual meeting of the Ecological Society of America, Honolulu, Hawaii, USA.
- 1992 **Peterjohn, W.T.**, J.M. Melillo, P.A. Steudler, K.M. Newkirk, D.W. Kicklighter, and J.D. Aber. The Harvard Forest Soil Warming Experiment: influence of the soil environment on trace gas fluxes. Annual Harvard Forest Ecology Symposium, Petersham, MA, USA.
- 1993 **Peterjohn, W.T.**, K.M. Newkirk, J.M. Melillo, P.A. Steudler, and J.D. Aber. Trace gas fluxes and nitrogen availability in a deciduous forest after one year of elevated soil temperatures. The annual meeting of the Ecological Society of America, Madison, Wisconsin, USA.
- 1993 Newkirk, K.M., **W.T. Peterjohn**, J.M. Melillo, F.P. Bowles, and P.A. Steudler. The Harvard Forest Soil Warming Experiment: 1992 update. Annual Harvard Forest Ecology Symposium, Petersham, MA, USA.
- 1994 **Peterjohn, W.T.**, R.J. McGervey, A.J. Sexstone, M.B. Adams. Denitrification and nitrous oxide production in a fertilized and unfertilized deciduous forest. The annual meeting of the Ecological Society of America, Snowbird, Utah, USA.
- 1994 **Peterjohn, W.T.**, R.J. McGervey, and A.J. Sexstone. Denitrification and nitrous oxide production in a fertilized and unfertilized deciduous forest. The annual cooperators' meeting for the Fernow Experimental Forest, Parsons, WV.

- 1995 **Peterjohn, W.T.**, R.J. McGervey, and A.J. Sexstone. Acid rain and forest soils: can they take it anymore? The annual cooperators' meeting for the Fernow Experimental Forest, Parsons, WV.
- 1996 M.J. Christ, J.R. Cumming, M.B. Adams, **W.T. Peterjohn**, and C.J. Foster. Nitrate-reductase activity in two central Appalachian watersheds with different nitrate-leaching regimes. American Geophysical Union Chapman Conference, Sunriver, OR
- 1997 M.J. Christ, **W.T. Peterjohn**, M.B. Adams, C.J. Foster, and J.R. Cumming. Soil acidity and nutrient availability in nitrate-leaky and nitrate-tight watersheds. The annual meeting of the Soil Science Society of America, Anaheim, California, USA.
- 1997 Cybulski, W.J., **W.T. Peterjohn**, J.H. Sullivan, and A.H. Teramura. Ultraviolet-B radiation effects on the tissue chemistry and decomposition of *Pinus taeda*. The annual meeting of the Ecological Society of America, Albuquerque, New Mexico, USA.
- 1998 **Peterjohn, W.T.**, C.J. Foster, M.J. Christ, and M.B. Adams. The variable response of two forested watersheds in central Appalachia to high inputs of atmospheric nitrogen. The annual meeting of the Ecological Society of America, Baltimore, Maryland, USA.
- 1998 Cybulski, W.J., and **W.T. Peterjohn**. Biomass, tissue chemistry, and litter decomposition of wild plants species grown under variable UV-B regimes. The annual meeting of the Ecological Society of America, Baltimore, Maryland, USA.
- 1998 McGraw, J.B., Y.M. Luketic, and **W.T. Peterjohn**. Nitrogen-use efficiency, uptake and growth of *Brassica rapa* genotypes selected under contrasting nutrient conditions. The annual meeting of the Ecological Society of America, Baltimore, Maryland, USA.
- 1999 Cybulski, W.J., and **W.T. Peterjohn**. Chemistry, morphology, and decomposition of leaf litter from deciduous tree species grown under variable UV-B. The annual meeting of the Ecological Society of America, Spokane, Washington, USA.
- 1999 Manish, C.S., and **W.T. Peterjohn**. Effects of increased UV-B levels on the biomass of native plant species using a modulated lamp bank system. The annual meeting of the Ecological Society of America, Spokane, Washington, USA.
- 1999 Christ, M.J., **W.T. Peterjohn**, M.B. Adams, and J.R. Cumming. Watershed-scale spatial patterns in N pools and fluxes. The annual meeting of the American Society of Agronomy, Salt Lake City, Utah, USA.
- 2001 **Peterjohn, W.T.**, M.J. Christ, J.R. Cumming, and M.B. Adams. Patterns of nitrogen availability in Appalachian forests receiving high inputs of atmospheric nitrogen. N2001 The Second International Nitrogen Conference, Potomac, Maryland, USA

- 2002 Gress, S.E., and **W.T. Peterjohn**. Phosphomonoesterase activity in violets (*Viola rotundifolia*) found in watersheds exhibiting varying levels of nitrogen availability. The annual meeting of the Ecological Society of America, Tucson, Arizona, USA.
- 2003 Manish, C., and **W.T. Peterjohn**. Interactive effects of UV radiation and N availability on the growth of *Quercus rubra* seedlings. The annual meeting of the Ecological Society of America, Savannah, Georgia, USA
- 2004 Clark, N., and **W.T. Peterjohn**. A comparison of root respiration rates under hemlock and black birch trees: Will hemlock decline have ecosystem-level effects? The first regional conference of the Mid-Atlantic Chapter of the Ecological Society of America, Lancaster Pennsylvania, USA
- 2004 Manish, C., and **W.T. Peterjohn**. Interactive effects of UV radiation and water availability on the growth of *Quercus rubra* seedlings. The annual meeting of the Ecological Society of America, Portland, Oregon, USA
- 2005 Parker, D.C., A.E. Hessel, **W.T. Peterjohn**, and R.B. Thomas. Linking socioeconomic drivers of timber harvest to carbon sequestration outcomes in Eastern United States deciduous forests. Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Bonn, Germany.
- 2005 Briden, S.C.D., M.B. Adams, A.E. Hessel, **W.T. Peterjohn**, and R.B. Thomas. Foliar nitrogen concentrations of deciduous hardwood trees along an elevation gradient in West Virginia. West Virginia Academy of Science Meeting, Morgantown, WV.
- 2005 Thomas, R.B., S.C.D. Briden, A.E. Hessel, D.C. Parker, and **W.T. Peterjohn**. Land use and carbon storage in eastern deciduous forests: Interactions between human activities and ecosystem processes. DOE/NSF EPSCoR Conference, National Energy Technology Laboratory, Morgantown, WV.
- 2005 Harlacher, M.A., and **W.T. Peterjohn**. The effect of tree species on the nitrate concentration and pH of soil leachate in a common-garden greenhouse experiment. The annual meeting of the Ecological Society of America, Montreal, Canada.
- 2005 **Peterjohn, W.T.**, and S.E. Gress. Testing the association between tree species and soil properties: Do watershed patterns reflect those of individual trees? The annual meeting of the Ecological Society of America, Montreal, Canada. (Poster)
- 2006 **Peterjohn, W.T.**, and M.B. Adams. The Fernow Watershed Acidification Study: Results from the first 15 years. The annual meeting of the Ecological Society of America, Memphis, TN, USA. (Oral presentation)

- 2006 Harlarcher, M.A., and **W.T. Peterjohn**. Species specific N availability patterns: comparing results from a common-garden greenhouse study to field observations. The annual meeting of the Ecological Society of America, Memphis, TN, USA. (Poster)
- 2006 Briden, S.C.D., A.E. Hessel, **W.T. Peterjohn**, and R.B. Thomas. Effects of disturbance on productivity of a Central Appalachian forest: an evaluation of the PnET-CN model. The annual meeting of the Ecological Society of America, Memphis, TN, USA. (Poster)

3. PROFESSIONAL DEVELOPMENT

- 1997 Participated in the PnET workshop held March 5-7 at the University of New Hampshire. This workshop tested predictions from an existing biogeochemical computer model (PnET) against actual data from a variety of field sites. I attended as the representative for the Fernow Experimental Forest.
- 2001 Participated in the Northeastern Nitrogen Saturation Assessment Workshop held April 18-20 at the University of New Hampshire, Durham, New Hampshire, USA
- 2003 Participated in the Fernow Watershed Acidification Workshop held October 20-21 at Wisp Resort and Conference Center, Deep Creek, MD.

4. RESEARCH GRANTS FUNDED

- 1987 Denitrification in desert ecosystems of the southwestern United States. \$12,868 from the National Science Foundation, grant BSR-87-15128.
- 1993 The effect of ultraviolet-b radiation on the decomposition of leaf litter. \$6,182 from West Virginia University, Senate Research Grant R-93-031.
- 1993 Strengthening environmental research at West Virginia University. \$39,800 from United States Department of Agriculture, Cooperative State Research Service 93-37106-9329.
- 1994-1996 Denitrification and nitrous oxide production in a fertilized and unfertilized deciduous forest. \$13,785 from United States Department of Agriculture, Forest Service, Coop. Ag. 23-915. Co-PI with Dr. Alan Sextstone.
- 1996 Assessing the consequences of ozone depletion on ecosystem function: effects of ultraviolet-B radiation on plant litter quality and decomposition. \$22,000 from NASA Earth System Science Graduate Student Fellowship. Awarded to my graduate student, Walter J. Cybulski.

- 1996 Forest ecological assessment program: planning activity proposal. \$50,000 from the National Science Foundation. Co-PI with J. McGraw (lead PI), M. Fajvan, C. Yuill, J. Cumming, K. Garbutt, L. Gribco, R. Thomas, P. Ziemkiewicz, J. Skousen, and R. Arora.
- 1997 New frontiers in high resolution remote sensing for forest ecosystem evaluation in the central Appalachians. \$150,000 for one year from the National Science Foundation EPSCoR. Co-PI with J. McGraw (lead PI), T.A. Warner, R. Thomas, J. Cumming, M.A. Fajvan, C. Yuill, and L. Gribko.
- 1997-2000 The indirect effects of ultraviolet-B radiation on the composition and decomposition of leaf litter from a diverse group of plants. \$240,883 from the National Science Foundation, award began March 1, 1997.
- 1997 Assessing the consequences of ozone depletion on ecosystem function: effects of ultraviolet-B radiation on plant litter quality and decomposition. \$22,000 from NASA Earth System Science Graduate Student Fellowship. A renewal for a second year of the fellowship awarded to my graduate student, Walter J. Cybulski.
- 1997-2000 Investigating the variable response of forest watersheds to chronic N deposition. \$217,000 from the United States Department of Agriculture, Cooperative State Research, Education and Extension Service, award began September 15, 1997. Co-PI with J.R. Cumming
- 1998 Assessing the consequences of ozone depletion on ecosystem function: effects of ultraviolet-B radiation on plant litter quality and decomposition. \$22,000 from NASA Earth System Science Graduate Student Fellowship. A renewal for a third year of the fellowship awarded to my graduate student, Walter J. Cybulski.
- 1999-2000 Elemental analysis for environmental research. \$91,533. WVU Research Corporation Annual Grants Competition. Equipment Grant. Co-PI with J.R. Cumming (lead PI), J.B. McGraw, R.B. Thomas, and K. Garbutt.
- 1999-2000 No cost extension. Assessing the consequences of ozone depletion on ecosystem function: effects of ultraviolet-B radiation on plant litter quality and decomposition. NASA Earth System Science Graduate Student Fellowship. Awarded to my graduate student, Walter J. Cybulski
- 2000-2001 No cost extension. The indirect effects of ultraviolet-B radiation on the composition and decomposition of leaf litter from a diverse group of plants. National Science Foundation, award began January 1, 1997.

- 2000-2001 No cost extension. Investigating the variable response of forest watersheds to chronic N deposition. \$217,000 from the United States Department of Agriculture, Cooperative State Research, Education and Extension Service, award began September 15, 1997. Co-PI with J.R. Cumming.
- 2002-2004 Terrestrial carbon sequestration in old-growth and young forests in West Virginia. \$50,000 from the Eberly College of Arts and Sciences, Awards for Research Team Scholarship (ARTS) program, West Virginia University. Co-PI with A. Hessl (lead PI) and R. Thomas. Award began May 2002. Award will end April 2004. My portion of this grant is \$16,666.
- 2004-2007 Collaborative Research: Land use and carbon sequestration in eastern deciduous forests: Interactions between human activities and ecosystem processes. \$259,118 to WVU from the National Science Foundation. Co-PI with A. Hessl (lead PI) and R. Thomas at WVU. Collaborator is D. Parker at George Mason University. Award began August 2004 and will end July 2007. My portion of this grant is \$86,653.
- 2004-2009 LTREB: Linking long-term alterations in atmospheric chemistry to changes in nutrient dynamics and sustainable productivity in central Appalachian forests. \$300,000 to WVU from the National Science Foundation. Lead PI is Peterjohn. Co-PI is M.B. Adams of USDA Forest Service. Award began August 2004. It is a continuing grant awarded in annual increments of \$60,000 per year. The award will end July 2009.

5. RESEARCH GRANTS PENDING

6. RESEARCH GRANTS UNFUNDED

- 1993 Impact of soil warming on the recovery of a clear-cut forest: intrasystem and atmosphere-biosphere feedbacks. \$286,345 for 3 years. United States Department of Energy, National Institute for Global Environmental Change.
- 1994 UV-B effects on litter decay: coupled laboratory, field and modeling experiments. \$180,201 for 2 years (\$73,740 subcontract to WVU). United States Department of Agriculture. Co-PI with Dr. Daryl Moorhead.
- 1994 The effect of ultraviolet-B radiation on the chemistry and decomposition of leaf litter from a diverse group of plants. \$301,790 for 3 years. National Science Foundation.
- 1995 The effect of liming on nitrogen retention by soils in a temperate forest landscape. \$254,556 for 3 years (\$99,540 subcontract to WVU). United States Department of Agriculture. Co-PI with Dr. Mark Castro.

- 1995 Large-scale estimates of NO_x emissions from soils with different land-uses. \$337,245 for 3 years (\$131,311 subcontract to WVU). United States Environmental Protection Agency. Co-PI with Dr. Mark Castro.
- 1995 Restoration of ecosystem function following disturbance. \$1,536,844 for 3 years. National Science Foundation. Co-PI with Dr. Jim McGraw and 7 others.
- 1995 Effects of UV-B radiation on surface litter degradation in an arid ecosystem: field, laboratory and modeling studies. \$292,658 for 3 years (\$160,901 subcontract to WVU). National Science Foundation. Co-PI with Dr. Daryl Moorhead.
- 1995 The indirect effects of ultraviolet-B radiation on the chemistry and decomposition of leaf litter from a diverse group of plants. \$230,084 for 3 years. National Science Foundation.
- 1996 Effects of UV-B radiation on surface litter degradation in an arid ecosystem: field, laboratory, and modeling studies. \$115,521 for 3 years. United States Environmental Protection Agency. Co-PI with Dr. Daryl Moorhead.
- 1996 Investigating the variable response of forest watersheds to chronic N deposition. \$312,704 for 3 years. The National Science Foundation. Co-PI with Dr. Jonathan R. Cumming.
- 1998 Incorporation of Priority Environmental Pollution Concerns - Global Warming, Endocrine Disruption and Non-point Source Pollution into Technical Tool for Pollution Prevention. \$331,995 for 3 years. USEPA. Co-PI with Robert Whitmore, Michael Miller, Wafik Iskander, and Michael Attfield. Principal investigator is Dr. David Whaley.
- 1998 Appalachian Regional Earth Science Applications Center (ARESAC). \$1,609,361 for 3 years. NASA. Co-PI with Dr. Mary Ann Fajvan, Dr. Jerald J. Fletcher, Dr. Linda S. Gribko, Dr. Steven J. Hollenhorst, Dr. M. Duane Nellis, Dr. Richard B. Thomas, Dr. Timothy A. Warner, and Dr. Charles B. Yuill. Principal investigator is Dr. James B. McGraw.
- 1999 Enhancing environmental change research at West Virginia University. \$28,301. United States Department of Agriculture (NRI). Equipment Grant.
- 2001-2005 Spatial variation and temporal dynamics of canopy trees: the relationship between nitrogen saturation and canopy composition in a forested landscape. \$804,878 from the National Science Foundation. Co-PI with M.B. Adams, J.B. McGraw, and T.A. Warner.

- 2002-2004 Variations in nitrate availability and leaching in forests receiving high inputs of atmospheric nitrogen: Are they linked to the composition of tree species? \$356,658 from the National Science Foundation.
- 2002-2004 Resolving multiple stress effects on forest ecosystem function by analysis of temporal variation in nitrogen and carbon balances. \$19,663 (amount going to WVU) from the United States Department of Energy. Co-PI with J. Aber (Lead PI), S. Ollinger, W. Munger, D. Hollinger, and P. Murdoch. Proposal was submitted through University of New Hampshire.
- 2002-2003 Variations in nitrate availability in forests receiving high inputs of atmospheric nitrogen: Do tree species matter? \$15,000 from West Virginia University Senate Research Grant Program.
- 2002-2005 Variations in nitrate availability and leaching in forests receiving high inputs of atmospheric nitrogen: Are they linked to the composition of tree species? \$303,665 from the United States Department of Agriculture, NRICGP.
- 2003 Nitrate removal in the riparian forest of an agricultural ecosystem: Does abiotic immobilization make a contribution? A Pre-proposal for a SGER grant (Small Grants for Exploratory Research) submitted to the Program Officer of the Ecosystems Studies Program at the National Science Foundation.
- 2003 Partnership for Appalachian region carbon sequestration. \$1,600,000 (\$8,482 would go to me) for 3 years. Department of Energy. Co-PI with Dr. Tom Wilson (lead PI) and more than 10 other individuals from WVU.
- 2003-2008 LTREB: Linking long-term alterations in atmospheric chemistry to changes in nutrient dynamics and sustainable productivity in central Appalachian forests. \$300,000 to WVU from the National Science Foundation. Co-PI is M.B. Adams of USDA Forest Service.

6. RESEARCH MISCELLANEOUS

- 2004 Results from one of my publications (Peterjohn et al. 1999) were highlighted and used as part of the first volume of Teaching Issues and Experiments in Ecology. This is a peer reviewed publication of ecological educational materials by the Ecological Society of America (see <http://tiee.ecoed.net>).

C. Teaching

1. COURSES TAUGHT

- 1993 (Spring) Plant Ecology Seminar (graduate level), 12 students
1993 (Fall) Principles of Biology (undergraduate course for majors), 390 students

1994 (Spring)	Global Ecology (upper-level undergraduates), 17 students
1994 (Spring)	Topics and Problems in Biology (student research), 1 student
1994 (Summer I)	Topics and Problems in Biology (student research), 1 student
1994 (Fall)	Principles of Biology (undergraduate course for majors), 396 students
1994 (Fall)	Graduate Student Lab Rotation, 3 students
1995 (Spring)	Ecosystem Dynamics (graduate level), 15 students
1995 (Spring)	Plant Ecology Seminar (graduate level), 12 students
1995 (Fall)	Principles of Biology (undergraduate course for majors), 356 students
1995 (Fall)	Graduate Student Lab Rotation, 5 students
1996 (Spring)	Global Ecology (upper-level undergraduates), 40 students
1996 (Fall)	Principles of Biology (undergraduate course for majors), 437 students
1997 (Spring)	Ecosystem Dynamics (graduate level), 9 students
1997 (Fall)	Principles of Biology (undergraduate course for majors), 474 students
1997 (Fall)	Undergraduate Research (Bio. 105), 1 student
1998 (Spring)	Release time to organize the Central Appalachian Workshop on Climate Variability and Change - held at WVU May 26-29, 1998 and part of the National Assessment of the Consequences of Climate Variability and Change for the United States.
1998 (Fall)	Ecosystem Dynamics (graduate level), 10 students
1998 (Fall)	Plant Ecology Seminar (graduate level), 10 students
1999 (Spring)	Global Ecology (upper-level undergraduates), 15 students
1999 (Fall)	Global Ecology (upper-level undergraduates), 15 students
2000 (Spring)	Ecology and Evolution (undergraduate course for majors), 145 students
2000 (Spring)	Wetlands Ecology Tutorial (Biol. 109), 1 student (Kristy Garnet)
2000 (Fall)	Ecosystem Dynamics (graduate level), 6 students
2000 (Fall)	Plant Ecology Seminar (graduate level), 10 students
2001 (Spring)	Ecology and Evolution (undergraduate course for majors), 124 students
2001 (Spring)	Undergraduate Research (Biol. 105) for Nicholas Doner, 1 student
2001 (Fall)	Global Ecology (upper-level undergraduates), 24 students
2002 (Spring)	Ecology and Evolution (undergraduate course for majors), 114 students
2002 (Fall)	Ecosystem Dynamics (graduate level), 8 students
2003 (Spring)	Ecology and Evolution (undergraduate course for majors), 96 students
2003 (Spring)	Teaching the Total Science Experience (Biol. 790), 5 students
2003 (Spring)	Graduate Research (Biol. 797), 2 students
2003 (Spring)	Undergraduate Research (Biol. 386), 1 student (Clark)
2003 (Fall)	Global Ecology (upper-level undergraduates), 29 students
2003 (Fall)	Undergraduate Research (Biol. 386), 1 student (Clark)
2003 (Fall)	Graduate Research (Biol. 797), 3 students
2004 (Spring)	Ecology and Evolution (undergraduate course for majors), 160 students
2004 (Spring)	The Total Science Experience (Biol. 321, biology capstone), 122 students
2004 (Spring)	Teaching the Total Science Experience (Biol. 790), 5 students
2004 (Spring)	Graduate Research (Biol. 797), 3 students
2004 (Fall)	Ecosystem Dynamics (graduate level), 9 students
2004 (Fall)	Undergraduate Research (Biol. 386), 1 student (Northcraft)
2005 (Spring)	Ecology and Evolution (undergraduate course for majors), 160 students

2005 (Spring)	Teaching the Total Science Experience (Biol. 790), 6 students
2005 (Spring)	Graduate Research (Biol. 797), 3 students
2005 (Fall)	Sabbatical Leave
2006 (Spring)	Ecology and Evolution (undergraduate course for majors), 184 students
2006 (Spring)	Teaching the Total Science Experience (Biol. 790), 6 students
2006 (Spring)	Graduate Research (Biol. 797), 3 students

2. Graduate Student Committees

a. Masters of Science

Susan Bee	Plant Biology (Graduated 1997)
Cassie Foster	Plant Biology (Chair; Graduated 1997)
Heather Fredrick	Environmental Biology
Stephen Gress	Environmental Biology (Chair; Graduated 2005)
Erin Hackney	Plant Biology (switched from Ph.D.; Graduated 1999)
Maggie Harlarcher	Environmental Biology (Chair)
Heidi Lux	Plant Biology (Graduated 1999)
Prinith Sumudu Munasinghe	Forestry
Chris Rhuland	Plant Biology (Graduated 1995)
Fortune Shonhiwa	Plant Biology (Graduated 1999)
Paul Trammell	Plant Biology (Graduated 1995)
Nicholas Doner	Geography (Graduated 2004)

b. Doctor of Philosophy

Jill Balis-Cook	Plant Biology (Graduated 1999)
Briden, Sarah	Environmental Biology
Walt Cybulski	Plant Biology (Chair, Graduated 2000)
Zack Fowler	Environmental Biology (Chair)
Jeffery Herrick	Plant Biology (Graduated 2002)
William LaMar	Environmental Biology (Graduated 2003)
Chintamani Manish	Environmental Biology (Chair; Graduated 2005)
Sandhya Mohan	Environmental Biology
John Navaratnam	Environmental Biology
Steve Solada	Forestry (Graduated 1997)
Thomas David Nichols	Environmental Biology (Chair)
Benktesh Sharma	Forestry
Clint Springer	Environmental Biology (Graduated 2004)
Todd Stueckle	Integrated Organismal Biology
Teri Tamboia	Plant Biology (Graduated 2000)

3. COURSES AND CURRICULA DESIGNED

- 1994 Global Ecology (designed for upper-level undergraduates)
- 1994 Revised lab manual for Bio. 15 - Principles of Biology
- 1995 Ecosystem Dynamics (designed for graduate students)
- 1995 Revised lab manual and several lab exercises for Bio. 15 - Principles of Biology
- 1996 Revised several lab exercises for Bio. 15 (Principles of Biology) lab manual
- 1997 Developed computer-based (PowerPoint) presentation material for Bio. 15 lectures
- 1997 Developed an internet homepage for my introductory biology course (Bio. 15) - <http://www.as.wvu.edu/biology/bio15/>
- 1997 Developed an internet homepage for my graduate course (Bio. 340) - <http://www.as.wvu.edu/biology/bio340/>
- 2001 Developed an internet homepage for my upper-level undergraduate course (Bio. 463) - <http://www.as.wvu.edu/biology/bio463/>

4. STUDENT ACADEMIC ADVISING

- 1994 22 undergraduates and 2 graduate students
- 1995 17 undergraduates and 3 graduate students
- 1996 21 undergraduates and 3 graduate students
- 1997 22 undergraduates and 3 graduate students
- 1998 20 undergraduates and 2 graduate students
- 1999 32 undergraduates and 2 graduate students
- 2000 29 undergraduates and 3 graduate students
- 2001 24 undergraduates and 2 graduate students
- 2002 25 undergraduates and 2 graduate students
- 2003 20 undergraduates and 3 graduate students
- 2004 23 undergraduates and 3 graduate students
- 2005 28 undergraduates and 3 graduate students
- 2006 28 undergraduates and 3 graduate students

5. GUEST LECTURES AND INVITED SEMINARS

a. Guest lectures

- 1993 To PLSC 420 (Topics in Microbial Ecology/Bioremediation), Division of Plant and Soil Sciences, WVU
- 1993 To the Newman Student Organization, St. John's University Parish, Morgantown, WV
- 1995 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 1996 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 1997 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 1998 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 1999 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 2000 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU
- 2001 To MDS-70 (The Human Environment), Multidisciplinary Studies, WVU

- 2002 To MDS-124 (The Human Environment), Multidisciplinary Studies, WVU
- 2003 To MDS-124 (The Human Environment), Multidisciplinary Studies, WVU
- 2004 To MDS-124 (The Human Environment), Multidisciplinary Studies, WVU

b. Invited seminars

- 1994 To the Department of Geology and Geography, West Virginia University
- 1994 To the Department of Biology at Virginia Polytechnic Institute and State University
- 1995 To the Department of Biology at the University of Pittsburgh
- 1995 To the Earth Day Symposium at West Virginia University
- 1998 To the staff of the Appalachian Laboratory, Frostburg, Maryland
- 1998 To staff of the Timber & Watershed Laboratory, Parsons, West Virginia
- 1999 To the Department of Environmental Sciences, University of Virginia
- 2001 To the Department of Biology, West Virginia University

6. TEACHING GRANTS FUNDED

- 1996 Bringing large classes down to size: using the internet to enhance the learning experience. \$152,034 from the Vice Chancellor for Technology, State Colleges and University Systems of West Virginia. Co-PI with R.Thomas (lead PI), C. Bishop, J. McGraw, R. Thweatt, J. Flores, A. Bidwai, J. Cumming, and K. Garbutt.

D. Service

1. SERVICE TO THE PROFESSION

a. Of national or international scope

Professional Consultant

Consultant to The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, for a soil-warming project in Abisko, Sweden during June 1993.

Advisory Committee (2001-2003)

Representative of academe on a newly formed advisory committee for the Institute of Environmental Sciences (IES) at Miami University in Oxford, Ohio. IES is an interdisciplinary Masters program and probably one of the top two or three programs oriented toward professional practice next to Yale and the University of Wisconsin.

Sessions Chaired

A contributed papers session at The 1993 annual meeting of the Ecological Society of America, Madison, Wisconsin, USA. Fifteen papers were presented in a session entitled "Ecological issues related to global change."

Participant

Climate Science and Education Day on Capital Hill. Sponsored by the Union of Concerned Scientists. June 26-28, 1999. This was an opportunity to brief our congressional representatives about the current scientific understanding of the potential for global climate change. As part of this event I meet with members of the staff of Senators Byrd and Rockefeller and Representative Mollohan. This event also included a scientific and policy briefing, training in media and advocacy skills, and participation in a press conference held on the Capital steps by Rep. Rush Holt (D-NJ).

Workshops Chaired

Co-chair for the Central and Southern Appalachian Workshop on the Impact of Climate Variability and Change that was held from May 26-29, 1998 at West Virginia University. This workshop is part of the US National Assessment of Climate Change that was initiated by the United States Global Change Research Program in close cooperation with a variety of government agencies including the Office of Science and Technology Policy at the White House. This is one of eighteen regional workshops being held nationally and is being supported by a cooperative grant from the US Forest Service for \$97,500.

Workshops Attended

1997 Participant in a workshop entitled: U.S. Climate Forum: The Consequences of Global Change for the Nation. This was part of the U.S. National Assessment of Climate Change and was held from November 12-13 at the U.S. Department of Commerce in Washington, D.C.

Grant Review Panels

1997 Reviewed 15 proposals for a week-long panel meeting for the NASA program entitled "The Effects of Tropical Forest Conversion: Ecological Research in the Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA-Ecology). The panel reviewed 104 proposals competing for >1 million dollars in research funds.

2002 Reviewed 15 proposals for the 3-day Fall panel meeting for the Ecosystems Studies Program of the National Science Foundation.

2003 Reviewed 15 proposals for the 3-day Spring panel meeting for the Ecosystems Studies Program of the National Science Foundation.

2003 Reviewed 16 proposals for the 3-day Fall panel meeting for the Ecosystems Studies Program of the National Science Foundation.

2004 Reviewed 15 proposals for the 3-day Spring panel meeting for the Ecosystems Studies Program of the National Science Foundation.

2005 Reviewed 15 proposals for the 3-day Fall panel meeting for the Ecosystems Studies Program of the National Science Foundation.

2005 Reviewed 14 proposals for the 3-day Spring panel meeting for the Ecosystems Studies Program of the National Science Foundation.

Colleague Evaluations

2003 Reviewed and wrote evaluation letter for a performance assessment of a research scientist at the Smithsonian Environmental Research Center, Edgewater, MD.

2006 Reviewed 1 WVU Research Corporation PSCoR proposal

Activities for Professional Societies

Served as a judge for the Buell and Braun Student Awards at the 1993 annual meeting of the Ecological Society of America held in Madison, WI

Served as a judge for the Buell and Braun Student Awards at the 1995 annual meeting of the Ecological Society of America held in Snowbird, UT

Journal Articles Reviewed Since 1993

8 for Biogeochemistry

1 for Biotropica

6 for Ecological Applications

3 for Ecology

2 for The Journal of Environmental Quality

2 for Soil Science Society of America Journal

1 for Global Change Biology

1 for Oecologia

1 for Water, Air and Soil Pollution

1 for the Proceedings of the National Academy of Sciences

Book Chapters Reviewed Since 1993

One chapter to be included in *Standard Soil Methods for Long-Term Ecological Research*, Oxford University Press, edited by G. Robertson, D. Coleman, C. Beldsoe, and P. Sollins.

Proposals Reviewed Since 1993

15 for NASA (15 for review panel)

15 for the United States Department of Agriculture

97 for the National Science Foundation (90 for review panels)

1 for the United States Department of Energy

1 for the National Geographic Society

b. Of regional scope

Invited Workshop Speaker

1999 Presented two talks for the Watershed Analysis Workshop sponsored by the University of Maryland Center for Environmental Science Appalachian Laboratory. This workshop was held June 7-11, 1999.

2. SERVICE TO THE PUBLIC

a. Of regional scope

1996 Participant in the workshop entitled "Scouting the Environment" held at the Philmont Scout Ranch and conducted by the Natural Resources Conservation Service. This workshop trained members of conservation committees for the Boy Scouts of America.

b. Of local scope

1993 Science fair judge for St. Francis Central Catholic School, 1 year.

1993-1995 Counselor for the Environmental Science Merit Badge, Boy Scouts of America, 3 summers.

1994-1997 Conservation committee for Camp Mountaineer, Boy Scouts of America. This is a group of professionals in the environmental sciences including members from the USDA Forest Service, Soil Conservation Service, Geological Survey, and WVU. Their mission is to advise on the proper management of the natural areas owned by the Boy Scouts in northern West Virginia.

1997 Organized the Fall Conservation Camporee for the Mountaineer Area Council of the Boy Scouts of America. The theme was water and water conservation.

1996-2000 Merit Badge University participant for the Mountaineer Area Council of the Boy Scouts of America.

1996-2002 Board of Directors, Coopers Rock Foundation - a non-profit corporation that provides aid for the recreational, aesthetic, ecological, educational, historical and research uses of Coopers Rock State Forest (the most frequently visited forest in West Virginia).

- 1999-2002 Chair of Education Subcommittee for Coopers Rock Foundation. As chair I initiated and organized a monthly nature education program entitled Explore the Rock. This program attracts about 30 individuals from the greater Morgantown area every month for a wide range of educational activities based at Coopers Rock State Forest. Under my direction, this committee is also planning for the building and staffing of a nature center to be located at Coopers Rock State Forest.
- 2000 Assisted Dr. Charlie Baer with Wildflower Appreciation Week at the Village at Heritage Point. The Village at Heritage Point is a retirement community in Morgantown.
- 2001 Organized the 12th annual Celebration of the Outdoors at Coopers Rock State Forest. This annual event features 30 workshops on a variety of topics ranging from rock climbing to the role of fire in forest ecology. About 200 individuals of all ages from the greater Morgantown area attend every year.
- 2006-present Member of the West Virginia Interfaith Global Climate Change Campaign - monthly meetings addressing issues and planning activities related to our concern about the consequences of global climate change.

3. SERVICE TO WEST VIRGINIA UNIVERSITY

a. To the University

- 1996 Contributed to efforts to promote summer school at WVU.
- 2002-present Faculty sponsor for Sigma Theta Epsilon – a newly formed Christian service fraternity on campus.

b. To the College

- 1996-1997 Curriculum/Academic Quality Committee
- 1996 Speaker at the Eberly College of Arts & Sciences' Parents' Weekend Program
- 2000-2002 Eberly College Natural and Mathematical Sciences Faculty Evaluation Committee

c. To the Department

- 1993-1994 Promotion and Tenure Committee
Pre-Major Committee

- 1994-1995 Promotion and Tenure Committee
 Pre-major Committee
 Environmental Plant Biologist Search Committee (**Chair**)
 Ad Hoc Vehicle Committee
- 1995-1996 Chair's Advisory Committee
 Honors Committee
 Pre-Major Courses Committee (**Chair**)
 Ad Hoc Vehicle Committee
- 1996-1997 Chair's Advisory Committee
 Graduate Committee
- 1996 Mentor for the "Total Science Experience Lab" in Biology 21.
- 1996 Temporary caretaker for Core Arboretum (one week during summer)
- 1997-1998 Chair's Advisory Committee
 Graduate Committee
 Pre-Major Courses Committee
 Library Liaison
- 1998-1999 Chair's Advisory Committee (**Chair**)
 Pre-Major Course Committee
 Graduate Committee
 Library Liaison
- 1999-2000 Graduate Committee
 Curriculum Committee
 Nominations Committee
 Library Liaison
- 2000-2001 Interim Director of Graduate Studies
 Revised graduate student handbook
 \$1,000 increase for Ph.D. candidates approved
 Graduate Committee (**Chair**)
 Chair's Advisory Committee
 Library Liaison

- 2001-2002 Graduate Committee (**Chair**)
Chair's Advisory Committee (CFAC)
Library Liaison
Co-organizer of graduate recruitment weekend with Dr. Foran
Interim Director of Graduate Studies (Part of this time period)
Associate Chair (began in Summer of 2002 to help facilitate move to new building)
- 2002-2003 Associate Chair
Promotion and Tenure Committee (**Chair**)
Library Liaison
- 2003-2004 Associate Chair
Chemical Hygiene Officer
Promotion and Tenure Committee
Library Liaison
- 2004-2005 Associate Chair
Chemical Hygiene Officer
Safety Committee
Chair's Advisory Committee (CFAC)
Library Liaison
Search Committee (Plant Physiologist)
Graduate Committee
- 2005-2006 Associate Chair (Assoc. Chair of Graduate Studies in 2006)
Chemical Hygiene Officer
Safety Committee
Received Safety Committee Achievement Award
Chair's Advisory Committee (CFAC)
Library Liaison
Promotion and Tenure Committee
- 2006-present Associate Chair (Assoc. Chair of Graduate Studies in 2006)
Chemical Hygiene Officer
Chair's Advisory Committee (CFAC)
Library Liaison
Promotion and Tenure Committee (ended after spring 2006)
Graduate committee