

BART STUDENT RESEARCH PROJECTS

Student, Institution, Cohort	Faculty Mentors	Research Project
Jennifer Hutton, Indiana University, 2000	A: Hans Peter Schmid B: Maxine Watson	Biogenic Emissions and Transport of Trace Gases In and Over a Northern Hardwood Ecosystem
Elisabeth Lehigh, Western Michigan University, 2000	A: Steven Bertman B: Charles Ide	Influence of Changes in Atmospheric Composition on the Growth and Development of Aquatic Organisms
Shelley Pressley, Washington State University, 2000	A: B. Lamb & H. Westberg B: Peter Curtis	Isoprene Flux Measurements Above a Northern Hardwood Forest
Michael Reiskind, University of Michigan 2000	A: Peter Sousounis B: Mark Wilson	The Effects of Global Climate Change and a High CO ₂ Atmosphere on Mosquito Larvae
Erika Williams University of Michigan 2000	A: Gerald Keeler B: Lynn Walter, Jim Teeri	Linking the Biogeochemical Cycles of Carbon and Toxic Trace Metals: A Landscape-Level Investigation of Pb and Hg within Soils & Surface Waters
Julie Adams, Bowling Green State University, 2001	A: Valerie Young B: Paul Moore	Effects of High CO ₂ Detritus on Growth Rates and Food of Benthic Stream Crustaceans
Rick Carter, Bowling Green State University, 2001	A: Steven Bertman B: Rex Lowe	Changes in the Near-shore Littoral of Northeastern Lake Michigan
William Hockaday, Ohio State University, 2001	A: Ellen Mosley-Thompson B: Peter Curtis	Partitioning Respiratory CO ₂ Fluxes Within a Northern Hardwood Forest
Lesley Sefcik, University of Michigan 2001	A: Mary Anne Carroll B: Dave Ellsworth	Effects of Elevated CO ₂ and Shade on Growth and Physiology in Five Northern Tree Species
Julie Heinlein, Michigan State University, 2002	A: Steven Bertman B: R. Jan Stevenson	Ozone-Induced Changes to Algal Communities
Alan J. Hogg, University of Michigan, 2002	A: Mary Anne Carroll B: Dave Ellsworth	NO _x , NO _y , Ozone, and Isoprene Flux Measurements at the UMBS
Amanda Louise Lockwood, Purdue University, 2002	A: Paul Shepson B: David Rhodes	The Role of Biogenic Volatile Organic Compounds' Emission in Forest Nitrogen Cycling
Glenna Malcolm, Penn State University, 2002	A: Kenneth Davis B: Roger Koide	Water Acquisition Strategies & Effects of Climatic Variability on Carbon Sequestration in Northern Michigan Trees.
John Ortega, University of Colorado, 2002	A: Detlev Helmig B: Alex Guenther	Flux Measurements of Biogenic Volatile Organic Compounds by Disjunct Eddy Sampling and Ion Trap Mass Spectrometry Analysis at the UMBS
Tara Strand, Washington State University, 2002	A: Lamb, Westberg B: Steve Seybold	Biosphere/Atmosphere Interactions: Pheromone Fate and Insect Response in Forest Canopies
Mary Wolf, Bowling Green State University, 2002	A: Steven Bertman B: Paul Moore	The Effect of Elevated Ozone on Microbial and Benthic Invertebrate Colonization and Survival
Joseph Bump, Michigan Technological Univ., 2003	A: Richard Honrath B: Rolf Peterson	Animal as Monitors of Changes in Atmospheric Carbon Isotopes
Amy Canavan, University of Minnesota, 2003	A: Dan Vimont B: Francesca Cuthbert	Prediction of the Effects of Climate Change on Great Lakes Avian Populations
Allyson Eller, Cornell University, 2003	A: Mary Anne Carroll B: Jed Sparks	Ramifications of Varying Atmospheric Concentrations of reactive-odd Nitrogen (NO _x) and Direct Foliar Uptake of Atmospheric Nitrogen
Doug Martins, Purdue University, 2003	A: Tilden Myers B: Paul Shepson	The Development of a Light Aircraft Flux Measurement System for Determination of CO ₂ and Other Trace Gas Fluxes.
Krista McGuire, University of Michigan, 2003	A: Mary Anne Carroll B: Don Zak, John Vandermeer	Dynamics of Arbuscular Mycorrhizal Fungi in Response to Wet Nitrogen Deposition and Elevated Atmospheric N in Ace Saccharum Marsh

BART STUDENT RESEARCH PROJECTS, continued

Student, Institution, Cohort	Faculty Mentors	Research Project
Lucas J. Neil, University of Michigan, 2003	A: Mary Anne Carroll B: Dave Ellsworth	Ozone and Isoprene Fluxes—Measurements at the UMBS
Dale Trexel, University of Minnesota, 2003	A. Ed. Swain B. Francesca Cuthbert	Hg Transport from Mother to Egg in Migratory Waterbirds: Does Hg in Eggs Represent Exposure on Breeding or Wintering Grounds?
Anna Williams, University of Michigan, 2003	A: Mary Anne Carroll B: Milford Wolpoff	$\delta^{18}\text{O}$ Use as a Dietary Indicator
Tiffany Duhl, University of Colorado, 2004	A. Detlev Helmig B. David Karowe	Biogenic Uptake of Volatile Organic Compounds by Plants
Jessica Osuna, University of California, Berkeley, 2004	A. Inez Fung B. D. Baldocchi, T. Dawson	Effects of Ambient CO_2 and Climate on Mesophyll Conductance
Lucas Nave, Ohio State University, 2004	A. Paul Shepson B. Peter Curtis	Partitioning of Atmospheric Nitrogen Deposition Within Forest Ecosystems
Amy Young, Western Michigan University, 2004	A. Steven Bertman B. David Karowe	Effects of Elevated Atmospheric Carbon Dioxide and Ozone on Plant Phytoestrogens: Implications for Plant Interactions with Herbivores, Pathogens, and Mutualists.
Steven Edburg, Washington State University, 2005	A. Brian Lamb, Hal Westberg B. Jed Sparks, David Stock	Atmospheric Chemistry Forest Canopy Model: A Large Eddy Simulation Approach
John Hassett, University of Michigan, 2005	A. Jerry Keeler B. Don Zak	Does Chronic Atmospheric NO_3 Deposition Decrease the Abundance of Lignin-Degrading Fungi in Soil?
Deborah Hudleston, University of Michigan, 2005	A. Mary Anne Carroll B. Don Zak, Knute Nadelhoffer	Effects of Elevated Atmospheric Carbon Dioxide and Tropospheric Ozone on Nitrogen Cycling in a Northern Hardwood Forest are Mediated by Mycorrhizae.
Kolby Jardine, State University of New York, Stony Brook, 2005	A. John Mak B. Alex Guenther, Manuel Lerdau	$\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ Isotope rations Measurements of Abundant Oxygenates in the Atmosphere
April Chiriboga, University of Arizona, 2006	A. Xubin Zeng B. Malcolm Hughes, Scott Saleska	From the Ground Up: Integrating Carbon Monitoring Approaches for a Northern Hardwood Forest
Monica Madronich, University of Colorado, 2006	A: Alex Guenther B: Carol Wessman	The Role of Landscape Structure on Biosphere-Atmosphere Interactions: Enhancing the Knowledge of Regional BVOC's Emissions
Kimberly Mueller, University of Michigan, 2006	A: Anna Michalak B: Peter Curtis	Evaluation of Process-Based Carbon Flux Drivers through Geo-Statistical Methods
Patricia Oikawa, State University of New York, Stony Brook, 2006	A: John Mak B: Manuel Lerdau	An Investigation of Mechanisms Regulating Biogenic Methanol Emissions
Alan Talhelm, Michigan Technological University, 2006	A: Richard Honrath B: Kurt Pregitzer	Carbon Assimilation and Gas Exchange under Long-Term Simulated Nitrogen Deposition and Episodic Ozone
Steve Garrity, University of Idaho, 2007	A: Paul Shepson B: Lee A. Vierling	Developing Optically Derived Canopy Physiological and Structural Parameters for the Estimation of Vegetation Productivity
Brady Hardiman, Ohio State University, 2007	A: Steve Bertman B: Peter Curtis	Resource Allocation in Forest Canopies and Consequences for Succession and Atmospheric Interactions
Levi Mielke, Purdue University, 2007	A: Paul Shepson, Alex Guenther B: Peter Curtis	Secondary Organic Aerosol Formation from Biogenic VOCs and Feedback to the Climate System
Brian Seok, University of Colorado, 2007	A: Detlev Helmig B: Mark Williams	Oxidized Carbon and Nitrogen Exchanges through the Seasonal Snowpack at UMBS and their Contribution to the Annual Ecosystem Gas Exchange Budget

Rachel Vannette, University of Michigan, 2007	A: Mary Anne Carroll B: Mark Hunter	AM Fungal Effects on Allocation Trade-offs in <i>Asclepias syriaca</i> Under Elevated CO ₂
Jasmine Crumsey, University of Michigan, 2008	A: Mary Anne Carroll B: Knute Nadelhoffer	Spatiotemporal Variation in Greenhouse Gas Fluxes from Forest Soils: Earthworms as modulators of soil-atmosphere CO ₂ , CH ₄ , and N ₂ exchange
Melissa Galloway, University of Wisconsin, 2008	A: Frank Keutsch B: Tom Sharkey	Model studies of isoprene, ozone, and SOA feedback mechanisms
Stephen Griffith, Indiana University, 2008	A: Phil Stevens B: Rich Philips	Influence of Biogenic Emission factors on HO _x chemistry in a Northern Michigan forest
Elizabeth Wason, University of Michigan, 2008	A: Mary Anne Carroll B: Mark Hunter	Plants Make Scents: Plant Volatile Emissions and the Genetic Variation in <i>Asclepias syriaca</i>
Kellen Calinger, Ohio State University, 2009	A: Gil Bohrer B: Peter Curtis	Climatic and Successional Impacts on Forest Phenology: Consequences for Carbon and Nitrogen Cycling and Local Meteorology
Celia Faiola, Washington State University, 2009	A: Tim VanReken and Brian Lamb B: Peter Harley	Impact of Air Pollution Stressors on Biogenic Terpenoid Emissions and Secondary Organic Aerosol Formation
Rob Hansen, Indiana University, 2009	A: Phil Stevens B: Rich Philips	Measurements of total hydroxyl radical reactivity above a forest canopy and a forest floor
Kyle Maurer, Ohio State University, 2009	A: Gil Bohrer B : Peter Curtis	Incorporating effects of remote-sensed tree-scale structural heterogeneity of forests on flux exchanges and atmospheric surface layer properties
Fernanda Santos, Graduate Center CUNY, 2009	A: Matthew Fraser B: Jeffery Bird	Quantifying black carbon dynamics in a temperate forest ecosystem: Atmospheric deposition, biological degradation and export pathways
Benjamin Sulman, University of Wisconsin, 2009	A: Ankur Desai B: Robert Scheller	Constraining and testing treatment of disturbance, succession, and biogeochemistry in a forest landscape model and understanding their effects on regional climate
Rene Wiesner Brown, University of South Florida, 2009	A: Robert Byrne and Steve Bertman B: Kathleen Scott	Freshwater algal response to elevated dissolved inorganic carbon levels in a northern stream
Allyson Wright, Purdue University, 2009	A: Paul Shepson and Greg Michalski B: Nancy Tuchman	Studies of canopy nitrogen chemistry and atmospheric inputs of nitrogen to the forest
Summer Only Fellows		
Emily Farrer, University of Michigan, 2008	Deborah Goldberg	Plant-soil feedbacks in a dry grassland
Jennifer Goedhart, Ohio State University, 2008	Peter Curtis	Controls on soil respiration during partial canopy senescence in a northern mixed deciduous forest
Rob Hansen, Indiana University, 2008	Phil Stevens	Measurements of total hydroxyl radical reactivity in a forested environment
Dave Marvin, University of Michigan, 2009	Robyn Burnham	Response of temperate and neotropical lianas to atmospheric CO ₂ enrichment and light availability
Nate Slade, Purdue University, 2009	Paul Shepson	Aerosol Production and Composition in a MixedDeciduous/Coniferous Forest