

Curriculum Vitae

Howard S. Neufeld

Personal History

Birthdate: November 28, 1952
Birthplace: Rochester, NY
Marital Status: Married to Claudia Cartaya-Marin;
children Ross and Gabriela

Home Address

201 Laurel Fork Road
Vilas, NC 28692
Tel: 828-297-1090
Cell: 828-773-7689

Business Address

Department of Biology
572 Rivers Street
Appalachian State University
Boone, NC 28608-2027
Tel: 828-262-2683 FAX: 828-262-2127
Email: neufeldhs@appstate.edu

Education

<u>Institution</u>	<u>Years Attended</u>	<u>Degree</u>
Rutgers University New Brunswick, NJ	1970-1975	B.S.
Yale University New Haven, CT	1975-1977	M.F. - Forest Ecology
University of Georgia Athens, GA	1977-1984	Ph.D. - Physiological Plant Ecology

Honors Received

1975 - B.S. with Honors from Rutgers University
1975 - Partial Fellowship to Yale School of Forestry
1978 - Non-teaching research assistantship, Univ. of Georgia
1992 - Wachovia Award for Achievement in Environmental Research, ASU
1992 - Faculty Research Award, Association of Southeastern Biologists
1995 - Invited to lecture at Broward Community College in their
Distinguished Lecturer Series 2002 - Certificate of Appreciation in
recognition of efforts to protect and preserve air quality in the
southern Appalachian mountains, Southern Appalachian
Mountains Initiative (SAMI), August 29, 2002.
2007 - Faculty Research Award - Local ASU Chapter of Sigma Xi, April 24
2008 - 100 Scholars Award - Graduate School, Appalachian State University

Honors Received (cont)

2011 - Nominated for the College of Arts and Sciences Richard N. Henson
Outstanding Advisor Award

Work Experience

<u>Employer</u>	<u>Dates</u>	<u>Duties</u>
The Nature Conservancy	Summer 1976	Summer Intern
U.S. Forest Service	Summer 1977	Gypsy Moth Technician
Univ. of Georgia	1977-1983	Ph.D. student - ecology of cypress trees; teaching assistant for general botany, anatomy and morphology, plant ecophysiology and natural ecosystems of the world
New Mexico State Univ.	March 1984 - June 1985	Postdoctoral Fellow with Dr. Gary Cunningham, Biology Department - studied salinity tolerance in C4 range grasses
National Research Council Postdoctoral Program	June 1985 - April 1987	Postdoctoral Fellow - Visiting Scientist with U.S. EPA, Corvallis, OR; studied effects of ozone on root processes in trees
Univ. of Georgia School of Forestry	April 1987 - August 1987	Research Coordinator for air pollution study with Bob Teskey
Dept. of Biology, Appalachian State Univ. Uplands Research Lab, Great Smoky Mountains National Park, NPS	August 1987 to present	Assistant Professor of Plant Ecophysiology Principal Investigator, Ozone Effects Program
Hawaiian Sugar Planters' Assoc.	April 1988 - August 1994	
Dept. of Biology, ASU	Fall 1989	Visiting Scientist
	May 1992	Promotion to Associate Professor
Dept. of Biology, ASU	May 1993	Award of Tenure
U.S. EPA Laboratory Corvallis, OR	May-June 1993	Visiting Scientist with Drs. Bill Hogsett and Dave Tingey
Dept. of Biology, ASU	May 1998	Promotion to Full Professor

Professional Societies

Association of Environmental Sciences and Studies
Association of Southeastern Biologists
Ecological Society of America
National Center for Science Education
The Nature Conservancy
Sigma Xi
Southern Appalachian Botanical Society
Torrey Botanical Society

University Service

Arts and Speakers Forum Committee, 1988-1990
Faculty Assembly, 1997-2001
Faculty Senate, 1993-1999, **Chairperson 1997-1998, 1998-1999**
Humanities Council, 1995-1998
Morgan Committee, 1988-2003, **Chair for several years**
Director of Biology Graduate Program, 2000-2002
Selection Committee for V.P. of Human Resources, UNC-GA, Summer 2000
Outstanding Scholar Committee from College of Arts & Sciences, 2000-2002, **Chair**
Electronics Technician Search Committee, **Chair 2006**
Strategic Planning Committee, Subcommittee on Undergraduate Education, 2007 University
Forum Committee - Distinguished Speaker Lecture Series serving as **Chair, 2007 - present**
Darwin Bicentennial Celebration Committee, serving as **Chair, 2007-present**
Member of University College Council, 2007-present
Representative on Committee organizing Environmental Sciences Program
2007-present
Search Committee for University Statistical Consultant, 2008
Committee for International Programs in the Sciences, 2008 - present, Co-Chair
Chancellor's Selection Committee - Honors Program - January 2009, January 2010
Life Sciences Proposal Writing Workshop for Novices - Office of Sponsored Research, Panel
Presenter and Discussant, September 14, 2009; Organized by Pollyanne Frantz from a grant
by Edelma Huntley to NC Biotechnology Center.
Institutional Biosafety Council - serving as a scientist on this committee (2011 - 2013)
Inaugural Member - PARE (Peer Assisted Review Enterprise) for Office of Research (2011-2012)

Professional Activities

Organized symposium on Air Pollution and its Ecological Impacts, February 8, 1990 at the Broyhill Center, Appalachian State University

Program Chair, Association of Southeastern Biologists, 1991 Annual Meeting, Broyhill Center, Appalachian State University

Organized symposium with Dr. Jason F. Shogren on Future Directions in Ecology: The Interdependence of Ecology and Economics, August 6, 1991 at the Ecological Society of America meetings, San Antonio, TX

Attended workshop on Monitoring Ozone Damage in Mature Trees, March 1991, sponsored by the National Park Service, Pigeon Forge, TN

Consultant for the Environmental Defense Fund on air quality and effects on plants

Presented a Teaching Workshop, Sponsored by the Botanical Society of America, SE Chapter, at the Assoc. of Southeastern Biologists Meetings, Virginia Beach, VA, April 1993: Methodologies for Plant Ecophysiologicalists

Executive Committee, Assoc. of Southeastern Biologists, April 1993. Also served as Chair of the Place of Meeting Committee

Consultant for the U.S. EPA, Corvallis, OR. Worked on developing a multi-cuvette gas exchange system for use at the EPA Lab, May 18-June 12, 1993

Lecturer, SCI-LINK Program from NCSU, Grandfather Mountain, NC. Lectured secondary school teachers on effects of air pollution on plants. Summers, 1993-1996

Program Chair, Society for the Study of Amphibians and Reptiles, 1995 Annual Meeting, Appalachian State University, Boone, NC

Planning Committee Member for the 29th Annual Air Pollution Workshop, to be held at Arizona State University, Tempe, AZ, April 14-18, 1997

Panel Reviewer for National Park Service Science Scholars Program, Biology Area, sponsored at AAAS Headquarters, Washington, DC, August 11-12, 1997

Host for the 30th Annual Air Pollution Workshop, held at ASU, Boone, NC, April 20-24, 1998

Panel Reviewer for U.S. EPA, Ecosystem Indicator Program, May, Washington, DC, 1998

Associate Editor for American Midland Naturalist (1999-2003)

President, The Association of Southeastern Biologists (2000-2001)

Past-President, The Association of Southeastern Biologists (2001-2002)

Editorial Board Member, TheScientificWorld (2001-2003)

Chair, Local Arrangements Committee, 63rd ASB Meetings, Boone, NC (2001)

Participant in "Institute for Senior Scholars", ASU Division of Continuing Education, Seminar on Air Pollution Effects on Plants

Participant, NPS Air Resources Division, Workshop on compiling list of ozone sensitive plants, held at Ft. McHenry, Baltimore, MD, June 24-25, 2003

Associate Editor for Castanea, (2002-2005, Chair of Editorial Board 2004-2005)

Chair - USDA NE1013 Technical Committee and Host of 2005 meeting in Asheville, NC Chair - USDA NE1013 Technical Committee 2006; now USDA NE1030, 2008-present

President, Southern Appalachian Botanical Society (2006-2008)

Professional Activities (continued)

Past-President, SABS (2008-2010)

Participant, NASA GLOBE program for K-12 teachers, North Carolina Center for the Advancement of Teaching, August 2005.

Consultant, new introductory biology textbook by George Johnson, McGraw-Hill, publisher, 2005-2008.

Co-Chair, with A.H. Chappelka, Symposium on Air Pollution Vegetation Effects Research in National Parks and Natural Areas: Implications for Science, Policy and Management, Air Pollution Workshop, University of Virginia, Charlottesville, VA. Apr. 10, 2006.

Note: Most papers from symposium published in Environmental Pollution in 2007.

President, Local Chapter of Sigma Xi (2006-2007)

Founding Member and Chair, AppalAIR (Air Research Group at ASU, 2008)

Appointed to CASAC in spring 2009 (U.S. EPA Clean Air Scientific Advisory Committee)

Appointed Director of Southern Appalachian Environmental Research and Education Center (SAEREC), February 2010.

Reviewer for the Following Journals or Organizations:

Addison-Wesley Publishers

Air & Waste Management Association

American Journal of Botany

American Midland Naturalist (*served as an Associate Editor, 1999-2003*)

Annales Botanic Fennici

Annals of Forest Science

Association of Southeastern Biologists, Book Reviews

Biological Invasions

Canadian Journal of Botany Canadian (now known as just Botany)

Canadian Journal of Forest Research

Castanea (*former editor and chair of editorial board*)

Climate Change and Energy Competition (private foundation)

Ecology

Environmental and Experimental Botany

Environmental Monitoring

Environmental Pollution

Forest Science

Functional Plant Biology

Global Change Biology

International Journal of Plant Science

Journal of Ecology

Journal of Environmental Quality

Journal of Environmental Monitoring

Reviewer for the Following Journals or Organizations: (continued)

Journal of Estuarine and Marine Sciences
Journal of Experimental Botany
Journal of Forestry
Elsevier - Reviewed Air Pollution Text
Journal of the Torrey Botanical Society
McGraw-Hill (advisor for new introductory biology textbook)
National Science Foundation
Neil Patterson Publ., Textbook Review
New Phytologist
Northeastern Naturalist
Oecologia
Physiologia Plantarum Plant and Soil
Plant Ecology
Plant Functional Biology
Plant Science
Science of the Total Environment
Southeastern Naturalist
Southwest Naturalist
TheScientificWorld
Tree Physiology
Trees - Structure and Function
U.S. Dept. of Agriculture Competitive Grants Program
U.S. Environmental Protection Agency
U.S. Environmental Protection Agency - STAR Proposal Review Panel
U.S. Forest Service
U.S. - Israel Binational Cooperative Grants
U.S. National Park Service
Water, Air and Soil Pollution
Wetlands

Masters Theses Directed

1. Huang, Songqiao. 1992. Response of growth and gas exchange of tulip poplar (*Liriodendron tulipifera* L.) seedlings to ozone exposure. Masters Thesis, ASU. 117 pgs.
Songqiao currently is a biology professor at Los Angeles Valley Community College.
2. Hutcherson, James D. 1993. Effects of ambient pollutants on the physiology and morphology of mature red spruce. Masters Thesis, ASU. 137 pgs.
James is currently an environmental professor at Blue Ridge Community College in NC.

Masters Theses Directed (continued)

3. McCarron, James K. 1995. Ecophysiology of *Galax aphylla*, a clonal, understory evergreen herb in the southern Appalachians. Masters Thesis, ASU. 73 pgs. ***Thesis won 3rd Prize in Cratis D. Williams Thesis Competition.***
Ken received his Ph.D. in plant ecophysiology from Kansas State and is currently an environmental consultant.
4. Horton, Jonathan. 1996. Effects of lightflecks on the gas exchange responses of (*Microstegium vimineum*), a shade tolerant C₄ grass. Masters Thesis, ASU. 65 pgs.
Jonathan received his Ph.D. from the University of Northern Arizona and is currently an associate professor of plant ecophysiology at UNC-Asheville.
5. Williams, L. Denise. 1998. Factors affecting growth and reproduction in the invasive grass *Microstegium vimineum*. Masters Thesis, ASU. 59 pgs.
Denise currently teaches biology at Caldwell Community College in NC.
6. Fredenberg, Stacey. 1999. Effects of soil cadmium levels on the on the growth and physiology of bald cypress seedlings under flooded and non-flooded conditions. Masters Thesis, ASU. 142 pgs.
Stacey is currently an environmental consultant with Parsons in Atlanta, GA.
7. Geissinger, Karen E. 2000. Community changes in a Southern Appalachian wetland after the elimination of grazing. Masters Thesis, ASU. 78 pgs. ***Thesis won Runner-Up Prize in Cratis D. Williams Thesis Competition.***
Karen is currently a botanist with the USGS in Boise, ID.
8. Sobieraj, James. 2002. Effects of ageing on the hydraulic conductivity of *Galax urceolata* (Poir.). Masters Thesis, ASU. 43pp.
James is currently the molecular biology technician in the Department of Biology at ASU.
9. Souza, Lara. 2003. The impacts of ozone on tall milkweed (*Asclepia exaltata*) in Great Smoky Mountains National Park. Masters Thesis, ASU. 75 pp.
Lara received her Ph.D. in invasive species ecology from the University of Tennessee, and is currently a post-doctoral associate at Oak Ridge National Labs.
10. Williams, Amanda Corine. 2003. A natural history of the northern saw-whet owl's (*Aegolius aradicus*) breeding biology and juvenile dispersal in the southern Appalachian mountains. Masters Thesis, ASU. 92 pp.
Corrie was a high school biology teacher, and is now a stay-at-home mom.
11. Hughes, Nicole M. 2004. Functional role of anthocyanins in high light winter leaves of the evergreen herb, *Galax urceolata*. Masters Thesis, ASU. 48 pp.
Niky received her Ph.D. from Wake Forest University in plant ecophysiology and is now an assistant professor at High Point University in High Point, NC.
12. Dumas, Sara Jean. 2004. Community and ecosystem responses following fire in the Linville Gorge Wilderness Area. Masters Thesis, ASU. 42 pp.
Shay is currently working as a botanist in Boise, ID.

Masters Theses Directed (continued)

13. Peoples, Seth J. 2005. Physiological effects of ozone air pollution on *Rudbeckia laciniata* in Great Smoky Mountains National Park. Masters Thesis, ASU. 47 pp.
Seth currently teaches middle school biology in Greensboro, NC.
14. Miller, Bradley W. 2007. Exponential fertilization effects on nursery raised red spruce seedling growth, ectomycorrhizal colonization, and nutrient uptake in forest soil amended potting mixtures. Masters Thesis, ASU.
Brad received his Ph.D. from Virginia Tech, and is currently a post-doctoral researcher for the U.S. EPA in Cincinnati, OH.
15. Roberts, Melinda. 2007. Interactions between water relations and ozone responses in cutleaf coneflower (*Rudbeckia laciniata*) in Great Smoky Mountains National Park. Masters Thesis, ASU. 51 pp.
Melinda is currently an extension agent for the Asheville area and an NCSU employee.
16. Holladay, Cori-Alice. 2007. Responses of loblolly pine (*Pinus taeda* L.) seedlings to heavy metal contamination in wetland soils. Masters Thesis, ASU. 58 pp.
Cori currently works as the stockroom person in the Department of Chemistry at ASU.
17. Taylor, O. Scott. 2008. Conservation and reproductive biology of the Federally endangered shrub *Lindera mellissifolia* in coastal North Carolina. Masters Thesis, ASU. 54 pp.
Scott is currently an environmental consultant in Brevard, NC.
18. Huyler, Ann. 2008. Effects of short-term chronic and acute ozone exposures on foliar and biochemical responses of tulip poplar (*Liriodendron tulipifera* L.) saplings. Masters Thesis, ASU. 54 pp.
Ann is nearing completion of her Ph.D. in Forestry at Auburn University.
19. Perkins, Fern. 2009. Morphological and physiological responses of the lichen *Umbilicaria mammulata* to an existing nitrogen deposition gradient in the northeastern United States and to *in situ* nitrogen fertilization. Masters Thesis, ASU, 75 pp.
Fern is currently living in Costa Rica.
20. Dolan, Chrisha. 2011. The role of leaf anatomy and morphology in determining ozone sensitivity cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*). Masters Thesis, ASU, 76 pp.
Chrisha is currently living in Missouri and looking for plant related employment.

Peer-Reviewed Publications

1. Neufeld, Howard S. 1983. Effects of light on growth, morphology, and photosynthesis in Baldcypress (*Taxodium distichum* (L.) Rich.) and Pondcypress (*T. ascendens* Brongn.) seedlings. *Bull. Torr. Bot. Club* 110:43-54.
2. Montagnini, Florencia, Howard S. Neufeld and Christopher Uhl. 1984. Heavy metal concentrations in some non-vascular plants in an Amazonian rainforest. *Water, Air, and Soil Pollution* 21:317-321.
3. Haines, Bruce L., Judith A. Jernstedt and Howard S. Neufeld. 1985. Direct foliar effects of simulated acid rain. II. Leaf surface characteristics. *New Phytologist* 99:407-416.
4. Neufeld, Howard S., Judith A. Jernstedt and Bruce L. Haines. 1985. Direct foliar effects of simulated acid rain. I. Damage, growth, and gas exchange. *New Phytologist* 99:389-405.
5. Neufeld, Howard S. and Robert O. Teskey. 1986. Variation in the amount of foliage on woody shoots and its effects on water relations parameters derived from pressure-volume curves. *Can. J. For. Res.* 16:239-243.
6. Neufeld, Howard S. 1986. Ecophysiological implications of tree architecture for two cypress taxa, *Taxodium distichum* (L.) Rich. and *T. ascendens* Brongn. *Bull. Torr. Bot. Club* 113:118-124.
7. Neufeld, Howard S., Frederick C. Meinzer, Charles S. Wisdom, M. Rasoul Sharifi, Philip W. Rundel, Mollie S. Neufeld, Yoram Goldring and Gary L. Cunningham. 1988. Canopy architecture of *Larrea tridentata* (DC.) Cov., a desert shrub: Foliage orientation and direct beam radiation interception. *Oecologia* 77:54-60.
8. dePamphilis, Claude W. and Howard S. Neufeld. 1989. Phenology and ecophysiology of *Aesculus sylvatica*, a vernal understory tree. *Can. J. Bot.* 67:2161-2167.
9. Neufeld, Howard S., Daniel M. Durall, Paul M. Rich and David T. Tingey. 1989. A rootbox for quantitative observations on intact entire root systems. *Plant and Soil* 117:295-298.
10. Meinzer, Frederick C., Guillermo Goldstein, Howard S. Neufeld, David A. Grantz, and Gayle M. Crisosto. 1992. Hydraulic architecture of sugarcane in relation to patterns of water use during plant development. *Plant, Cell & Environment* 15:471-477.
11. Neufeld, Howard S., David A. Grantz, Frederick C. Meinzer, Guillermo Goldstein, Gayle M. Crisosto, and Carlos Crisosto. 1992. Genotypic variability of leaf xylem to cavitation in water-stressed and well-irrigated sugarcane. *Plant Physiology* 100:1020-1028.
12. Neufeld, Howard S., James R. Renfro, W. David Hacker and David Silsbee. 1992. Ozone in Great Smoky Mountains National Park: Dynamics and effects on plants. In "Tropospheric Ozone and the Environment II", Ronald L. Berglund. Air & Waste Management Association, Pittsburgh, PA. pgs. 594-617.
13. Hacker, W. David, and Howard S. Neufeld. 1993. The false positive in bioindicators of air pollution. *J. of Arboriculture* 18:249-250.
14. Neufeld, Howard S. and James R. Renfro. 1993. Sensitivity of black cherry seedlings (*Prunus serotina* Ehrh.) to ozone in Great Smoky Mountains National Park: The 1989 Seedling Set. Natural Resources Report NPS/NRTR-93/112, Air Quality Division, U.S. National Park Service. Pgs. 1-26.

Peer-Reviewed Publications (continued)

15. Neufeld, Howard S. and James R. Renfro. 1993. Sensitivity of sycamore seedlings (*Platanus occidentalis*) to ozone in Great Smoky Mountains National Park: Data from 1989. Natural Resources Report NPS/NRTR-93/131, Air Quality Division, U.S. National Park Service. Pgs. 1-39.
16. Thornton, Frank C., J. Dev Joslin, Paul A. Pier, Howard S. Neufeld, John R. Seiler, James D. Hutcherson*. 1994. Cloudwater and ozone effects upon high elevation red spruce: A summary of study results from Whitetop Mountain, Virginia. *Journal of Environmental Quality* 23:1158-1167.
17. Neufeld, Howard S., James R. Renfro, Songqiao Huang*, W. David Hacker, Deborah Mangis, Arthur H. Chappelka, William E. Hogsett, Andrew A. Herstrom, John A. Laurence, E. Henry Lee, James E. Weber, and David T. Tingey. 1995. Assessment of ozone effects on plants native to the southeastern United States. *Proceedings of the XI International Association of Botanical Gardens, Wuxi, China*, Sept. 6-12, 1993.
18. Neufeld, Howard S., E. Henry Lee, James R. Renfro, W. David Hacker, Ben-Hui Yu. 1995. Sensitivity of seedlings of black cherry (*Prunus serotina* Ehrh.) to ozone in Great Smoky Mountains National Park. 1. Exposure-response curves for biomass. *New Phytologist* 130:447-459.
19. Neufeld, Howard S., C. Scott Clark, and James A. Weber. 1996. An automated 25 cuvette gas exchange system for the study of plant responses to ozone. In "Air Pollution and Multiple Stresses", *Proceedings of the 16th International Meeting for Specialists in Air Pollution Effects on Forest Ecosystems, IUFRO*, R. Cox, K. Percy, K. Jensen, and C. Simpson, eds. Sept. 7-9, 1994, Fredericton, NB, Canada.
20. Horton, Jonathan L.* and Howard S. Neufeld. 1998. Photosynthetic responses of *Microstegium vimineum* (Trin.) A. Camus, a shade-tolerant, C₄ grass, to variable light environments. *Oecologia* 114:11-19.
21. Neufeld, Howard S., E. Henry Lee, James R. Renfro and W. David Hacker. 2000. Seedling insensitivity to ozone for three conifer species native to Great Smoky Mountains National Park. *Environmental Pollution* 108:141-151.
22. Chappelka, Arthur H., Howard S. Neufeld, Alan W. Davison and Greg L. Somers. 2003. Evaluation of ozone injury on foliage of cutleaf coneflower (*Rudbeckia laciniata*) and crownbeard (*Verbesina occidentalis*) in Great Smoky Mountains National Park. *Environmental Pollution* 125:53-59.
23. Davison, Alan W., Howard S. Neufeld, Arthur H. Chappelka, Kirsten Wolff and Peter L. Finkelstein. 2003. Interpreting spatial variation in ozone symptoms shown by cutleaf coneflower, *Rudbeckia laciniata* L. *Environmental Pollution* 125:61-70.
24. Neufeld, Howard S. and Donald R. Young. 2003. Ecophysiology of the herbaceous layer in temperate deciduous forests. In: Gilliam, F. and M. Roberts, eds. *The Herbaceous Layer in Forests of Eastern North America*, Oxford University Press, Oxford, UK. pp. 38-90.

Peer-Reviewed Publications (continued)

25. Finkelstein, Peter L., Alan W. Davison, Howard S. Neufeld, Tilden P. Meyers and Arthur H. Chappelka. 2004. Sub-canopy Deposition of Ozone in a Stand of Cutleaf Coneflower. *Environmental Pollution* 131:295-303.
26. Hughes, Nicole M.*, Howard S. Neufeld and Kent O. Burkey. 2005. Functional role of anthocyanins in high light, winter leaves of the evergreen herb *Galax urceolata*. *New Phytologist* 168:575-587.
26. Burkey, Kent O., Howard S. Neufeld, Lara Souza*, Arthur H. Chappelka and Alan W. Davison. 2006. Seasonal profiles of leaf ascorbic acid metabolism in ozone-sensitive wildflowers. *Environmental Pollution* 143:427-434.
27. Neufeld, Howard S., Arthur H. Chappelka, Greg L. Somers, Kent O. Burkey, Alan W. Davison and Peter L. Finkelstein. 2006. Visible foliar injury caused by ozone alters the relationship between SPAD meter readings and chlorophyll concentrations in cutleaf coneflower. *Photosynthesis Research* 87:281-286.
28. Souza, Lara*, Howard S. Neufeld, Arthur H. Chappelka, Kent O. Burkey and Alan W. Davison. Seasonal development of ozone-induced foliar injury on tall milkweed (*Asclepias exaltata*) in Great Smoky Mountains National Park. *Environmental Pollution* 141:175-183.
30. Dumas, Shay*, Howard S. Neufeld and Melany C. Fisk. 2007. Importance of the shrub layer to short-term responses to fire in the Linville Gorge Wilderness Area, North Carolina. *Castanea* 72:92-104.
31. Euliss, Amy*, Melany C. Fisk, S. Coleman McCleneghan and Howard S. Neufeld. 2007. Growth of *Houstonia montana*, a rare southern Appalachian endemic plant, in contrasting habitat types. *Journal of the Torrey Botanical Society* 134:177-187.
32. Grulke, Nancy E., Howard S. Neufeld, A.W. Davison, M. Roberts* and A.H. Chappelka. 2007. Stomatal behavior of O₃-symptomatic and O₃-asymptomatic cutleaf cone flowers (*Rudbeckia laciniata* var. *digitata*) in Great Smoky Mountains National Park. *New Phytologist* 173:100-109.
33. Euliss, Amy C.*, Melany C. Fisk, S. Coleman McCleneghan and Howard S. Neufeld. 2007. Allocation and morphological responses to resource manipulations are unlikely to mitigate shade intolerance in *Houstonia montana*, a rare southern Appalachian herb. *Canadian Journal of Botany* 85:976-985.
34. Gould, Kevin S., Dana A. Dudley and Howard S. Neufeld. 2010. Why some stems are red: cauline anthocyanins shield photosystem II against high light stress. *Journal of Experimental Botany* 61:2707-2717. **Note: figures from article displayed on cover of June 10th issue.**
35. Neufeld, Howard S., Derick B. Poindexter*, Paula F. Murakami and Paul G. Schaberg. 2010. Observations on the relationship between above and below-ground anthocyanin production in *Galax urceolata* (Poir.) Brummitt growing in sunny and shady locations. *Castanea* 76:84-98.

Peer-Reviewed Publications (continued)

36. Neufeld, Howard S., Seth J. Peoples*, Alan W. Davison, Arthur H. Chappelka, Greg L. Somers, Jill R. Thomley and Fitzgerald L. Booker. Ambient ozone effects on gas exchange and total non-structural carbohydrate levels in cutleaf coneflower (*Rudbeckia laciniata* L.) growing in Great Smoky Mountains National Park. (In Press - Environmental Pollution as of 9-5-11).

*indicates graduate student author

Non-Peer Reviewed Publications, and Media Interactions

1. Gargan, K., and Howard S. Neufeld and others. 1976. An ecological survey of Byram River Gorge Preserve. Report to The Nature Conservancy.
2. Gargan, K., and Howard S. Neufeld and others. 1976. An ecological survey of Dennis Farm Preserve. Report to The Nature Conservancy, CT Chap.
3. Neufeld, Howard S. et al. 1976. An ecological survey of Altschul Preserve. Report to The Nature Conservancy, CT Chap.
4. Neufeld, Howard S. 1991. Book Review for ASB Bulletin, Methods in Stomatal Research.
5. Saliendra, Nicanor Z., Frederick C. Meinzer, David A. Grantz, Howard S. Neufeld, and Guillermo Goldstein. 1991. Transpiration of contrasting sugarcane cultivars during soil drying in the field. Amer. Soc. of Agron., Sap Flow Symposium, Poster #136, Oct. 30.
6. Neufeld, Howard S. 1994. Teaching versus research - a letter in reply to the editor. Journal of the American Biology Teacher 56.
7. Neufeld, Howard S. 1994. Efficient and cost-effective computerized reprint requests and records. Bulletin of the Ecological Society of America, 75:284.
8. Neufeld, Howard S. 1995. Book Review for ASB Bulletin, "Air Pollution and Climate Change", 2nd Edition, by Alan Welburn. ASB Bulletin 42:176-177.
9. Neufeld, Howard S. 1996. Forests: Evidence Doesn't Support Claim. Editorial on forest decline in the Southern Appalachians. Winston-Salem Journal, September 18.
10. Neufeld, Howard S. 1997. Tried, True: In Fact, Evolution is Science. Editorial against anti-evolution bill in NC Legislature. Winston-Salem Journal, April 2.
11. Neufeld, Howard S. 1997. Responses of plants to air pollution and elevated CO₂. Ecology 78(6):1940-1941. Book Review of Yunus, M. and M. Iqbal, eds., "*Plant Response to Air Pollution*". John Wiley & Sons, NY.
12. Neufeld, Howard S. 1997. Evolution of Plants. In "North Carolina Scientists Speak Out on Evolution, M.B. Thomas, ed., North Carolina Academy of Science, pgs. 35-37.
13. Neufeld, Howard S. 1997. Science Versus Reason - A Rationalist View of Air Pollution Effects on Forests. Editorial Reply on WNCW, NPR Radio, November 4th.
14. Neufeld, Howard S. 1998. Teaching not "virtual". Editorial column on distance learning. Greensboro News & Record, January 25.

Non-Peer Reviewed Publications, and Media Interactions (continued)

15. Neufeld, Howard S. 1998. Review of Eric G. Bolen's book *Ecology of North America*, ASB Bulletin, Vol. 45 (4): 210-212.
16. Neufeld, Howard S. 1999. Air Pollution and Forests - Rebuttal of earlier segment on the program, Environmental News, WETS, NPR Radio, January 31.
17. Neufeld, Howard S. 1999. Review of Lambers' et al.'s book, *Plant Physiological Ecology*. Ecology 80:1785-1787.
18. Neufeld, Howard S. 2000. Interview with Linda Wertheimer, National Public Radio, All Things Considered Program, Tuesday, August 1, 2000. Topic: Ozone in the Smokies.
19. Neufeld, Howard S. 2000. Thoughts on the causes of tree mortality in Appalachia. Letter to the Editor, Science 290:1301.
20. Neufeld, Howard S. 2001. Dead trees aren't necessarily the result of air pollution. Letter to the Editor, Knoxville News-Sentinel, Sept. 30, 2001.
21. Neufeld, Howard S. 2002. The role of anthocyanins in winter: Inquiry responses by Howard S. Neufeld. Newsletter of the Southern Appalachian Botanical Society 10(1):1,2 & 5.
22. Neufeld, Howard S. 2002. The great triumph of Science - The slaying of ugly hypotheses by beautiful facts (with apologies to T.H. Huxley). ASB Banquet Address, Association of Southeastern Biologists, April 12th, Broyhill Inn, Appalachian State University, Boone, NC., Southeastern Biology 49:266-285.
23. Neufeld, Howard S. 2003. Review of *Air Pollution and Plant Life*, 2nd Edition, J.N.B. Bell and M. Treshow, eds. 2002. John Wiley & Sons, Ltd., Sussex, England. 465 pp. Plant Science 164:675-676.
24. Porter, Ellen, editor. 2003. Ozone sensitive plant species on National Park Service and U.S. Fish and Wildlife lands: Results of a June 24-25, 2003 Workshop, Baltimore, MD. US NPS Air Resources Division and US Fish and Wildlife Service Air Quality Branch. NPS D1522, Natural Resources Report NPS/NRARD/NRR-2003/01, online at: www2.nature.nps.gov/pubs/index.htm. I was a contributing member of the workshop.
25. Brooks, J. Renée and many other signees, including myself. 2004. The Cohesion-Tension Theory. New Phytologist 163:451-452.
26. Cited in Raleigh News & Observer article on air pollution. April 22, 2005. Bad air, pests, man imperil Smokies National Park.
27. Cited in Appalachian Voices, Fall 2005 in article on sudden oak death.
28. Chappelka, A., H. Neufeld, S. McLaughlin, S. Sachs and J. Renfro. 2006. Ozone Pollution Impacts on Native Trees and Wildflowers in Great Smoky Mountains National Park. Final Report: Project Number: NPS #: D-609; PMIS #: 66941. 40 pp.
29. Interview with Mountain Times about the science of fall color. Week of October 8th, 2006.
30. Interviewed by WFAE, Charlotte Public Radio, on fall color, October 6, 2006.
31. Chappelka, Art, Howie Neufeld and Sandy McLaughlin. 2006. Ozone Pollution Impacts on Native Trees and Wildflowers in Great Smoky Mountains National Park. Final Report for Project Number NPS#:D-609, PMIS#:66941, Region: SERO, Park: GRSM. June 1, 2006.

Non-Peer Reviewed Publications, and Media Interactions (continued)

32. Interviewed by radio station in Sacramento, CA on air pollution effects on trees, February, 2007.
33. Neufeld, Howard S. and Arthur H. Chappelka. 2007. Commentary for Papers resulting from the recent symposium on Air Pollution and Vegetation Effects in National Parks and Natural Areas: Implications for Science, Policy and Management. This paper prefaces 11 peer-reviewed articles that appear in Environmental Pollution, Environmental Pollution 149:253-255.
34. Neufeld, Howard S. Appointed by the NC Board of Tourism as its "Fall Color Guy"!
35. Neufeld, Howard S. Interviewed by NC Bureau of Tourism and by AP Reporter on Fall Leaf Color (phone interviews). August 5, 2008. Article appeared in San Jose Mercury News August 11, 2008.
36. Neufeld, Howard S. Interviewed by WBFJ Radio, Winston-Salem on fall leaf color. September 30, 2008. Interviewed by WFAE, NPR, Charlotte on fall leaf color.
37. Neufeld, Howard S. Interviewed by Hendersonville Newspaper on fall leaf color. October 14, 2008. Article appeared on October 16.
38. Neufeld, Howard S. Appeared on North Carolina Weekend, UNC-TV, on Thursday and Friday, October 23rd and 24th, 2008 for story on fall leaf color.
39. Neufeld, Howard S. Interviewed by WBAV, Bea Thompson, October 20, 2008 about fall leaf color.
40. Neufeld, Howard S. Appearance on the Weather Channel to discuss fall leaf color. October 15th, 2009.
41. Neufeld, Howard S. Talk to the Boone Unitarian Universalist Church: The Religious Progression of Charles Darwin: "Like Confessing a Murder". May 10, 2009.
42. Neufeld, Howard S. November, 2009. Letter to the Editor - Watauga Democrat, Boone, NC. Letter debunks Young Earth Creationism and "Dr. Robert Gentry's appearance in the High Country.
43. Neufeld, Howard S. 2010. Interviewed by Smart Money Magazine about effects of global change on fall color displays. June and July (two calls). Article published in October 11, 2010 issue, author was Jami Makan URL: <http://www.smartmoney.com/spending/travel/ten-things-the-leaf-peeping-industry-wont-tell-you/>.
44. Neufeld, Howard S. 2010. Interviewed by the Asheville Citizen Times, Mt. Times about fall leaf color.
45. Neufeld, Howard S. 2010. Consulted (for no fee) with Walt Disney Company on locations for them to shoot fall color scenes as part of their movie The Odd Life of Timothy Green.
46. Neufeld, Howard S. 2010. Book Review of Beerling, D. 2007. The Emerald Planet: How Plants Changed Earth's History. In Castanea 75:402-403.
47. Ladd, Irene, John Skelly, Margaret Pippin and Jack Fishman. 2011. Ozone-Induced Foliar Injury: Field Guide. Langley Research Center, 100 NASA Road Hampton, VA 23681 NP-2011-03-355-LaRC. Note: I, along with several others, was a contributing author to this field guide, and am credited in the final pages. 144 pgs.

Non-Peer Reviewed Publications, and Media Interactions (continued)

48. Neufeld, Howard S. 2011. Review of: Blevins, D. and M.P. Schafale. 2011. Wild North Carolina: Discovering the Wonders of Our State's Natural Communities. UNC Press, Chapel Hill, NC. 176 p. Castanea 76:339-341.
49. Neufeld, Howard S. 2011. Will global climate change affect fall foliage colors? Chinquapin 19(3): 19 & 22. Newsletter of the Southern Appalachian Botanical Society. Invited essay.

Grants Submitted

1. Neufeld, Howard S., Burlyn E. Michel and Bruce L. Haines. 1980. Comparative physiological ecology of Bald Cypress (*Taxodium distichum* L. Rich.) and Pond Cypress (*Taxodium ascendens* Brongn.). NSF Predoctoral Diss. Improvement Grant. \$5,000.
2. Neufeld Howard S. 1980. Common garden experiments with baldcypress and pondcypress seedlings. Sigma Xi Research Center. \$75.
3. Haines, Bruce L. and Howard S. Neufeld. 1983. Growth and photosynthesis of plants subjected to artificial acid rain. Univ. Georgia Research Foundation. \$3,000.
4. Neufeld, Howard S. 1984. Effects of mineral nutrition on SO₄ resistance in trees of differing successional status. National Research Council Postdoctoral Award. @ \$75,000.
5. Neufeld, Howard S. 1987. Comparative growth and ecophysiology of native *Magnolia* species: Leaf size and canopy architectural influences. Univ. Research Committee, Appalachian State University. \$1,897.
6. Neufeld, Howard S. 1988. Nitrogen and water use efficiencies for trees in different successional sites in the southern Appalachians as determined by stable isotope ratios. Research Opportunity Award. Ecosystem Process Research: Soils and Canopies, NSF. Awarded to University of Georgia, Institute of Ecology. \$21,953.
7. Neufeld, Howard S. 1988. Development of a laboratory of plant ecophysiology: A model for professional development. North Carolina Board of Science and Technology. \$28,870.
8. Neufeld, Howard S. 1988. The use of branch chambers in the study of red spruce decline in the southern Appalachians. TVA Grant. \$73,213.
9. Neufeld, Howard S. 1988. Comparative ecophysiology of bald and pond cypress trees subjected to soil drying and flooding. Savannah River Ecology Laboratory, University of Georgia. \$10,000.
10. Neufeld Howard S. 1989. Long-term ozone exposure response studies for tree seedlings from the southern Appalachian mountains. U.S. Environmental Protection Agency. \$326,800 for 3 years.
11. Neufeld, Howard S. 1989. Renewal of red spruce grant. \$79,730 for 2 years.
12. Neufeld, Howard S. 1990. Spectral quality and leaf photosynthetic responses. Univ. Research Committee, Appalachian State University. \$360.
13. Neufeld, Howard S. 1991. Future Directions in Ecology: The Interdependence of Ecology and Economics. A symposium at the AIBS Meetings in San Antonio, TX. Aug. 6, 1991. The Beldon Fund. \$2,500.

Grants Submitted (continued)

14. Neufeld, Howard S. and Claudia P. Cartaya-Marin. 1993. Determination of the Source and Chemical Composition of Volatile Odors Associated with *Galax aphylla*, a Common Herb of Southern Appalachian Forests. Univ. Research Committee, Appalachian State University. \$1054.
15. Neufeld, Howard S. 1994. Resource integration among ramets of the clonal herb, *Galax aphylla*. University Research Committee, Appalachian State University, \$2253.
16. Neufeld, Howard S. 1995. Ecophysiological significance of carbon gain by phyllodia in carnivorous pitcher plants. University Research Council, Appalachian State University, \$1980.
17. Neufeld, Howard S. 1997. Financial Support for 30th Air Pollution Workshop. Appalachian State University, College of Arts & Sciences, Graduate School, Academic Affairs, \$2,000. TVA, \$1500. U.S. EPA, \$5000. National Council on Air and Stream Improvement, \$500.
18. Neufeld, Howard S. 1999. Ozone responses of plants at two different elevations in the Smokies. National Geographic Society, \$9000 (funded).
19. Neufeld, Howard S. 2000. Board of Trustees Travel Grant (not funded), \$2190.
20. Neufeld, Howard S. 2000. Does ascorbic acid confer tolerance to ozone pollution in native wildflowers? University Research Council Grant, \$3556 (funded).
21. Neufeld, Howard S. 2000. Ambient ozone effects on native wildflowers along an elevational gradient in Great Smoky Mountains National Park: Patterns, mechanisms and consequences. Campbell Fellowship, Smoky Mountains Conservation Association. \$2640 (funded)
22. Ehrenfeld, Joan G. and Howard S. Neufeld. 2000. Soil-plant feedbacks: Effects on physiology, growth and demography of invasive species. USDA-NRI Competitive Grants Program, 51.9 Biology of Weedy and Invasive Plants. (not funded). \$334,362.
23. Neufeld, Howard S. 2001. Is the response of native wildflowers to ozone pollution dependent on elevation? University Research Council Summer Grant, \$2500 (funded)
24. Chappelka, A., Neufeld, H., and J. Renfro. 2001. Ozone pollution damage to growth and physiology of native trees and wildflowers in GRSM. U.S. NPS. Funded for \$84,000 over two years (of which \$20,000 went to ASU directly as a subcontract from Auburn).
25. Neufeld, Howard S. 2001. The influence of elevation on the response of native wildflowers to ozone. University Research Council Fall Grant, \$3984 (funded)
26. Neufeld, Howard S. 2001. Ozone Influx, Extracellular Ascorbate and Leaf Anatomy: A Synthetic Theory to Explain Ozone Sensitivity in Plant Leaves. Board of Trustees Travel Grant, \$3000 (funded).
27. Neufeld, Howard S. 2001. Environmental and physiological variation in plant response to ozone: Using transgenic plants to study the role of apoplastic ascorbate. USDA Research Career Enhancement Award Proposal. (Not funded).
28. Reynolds, James F., et al., Howard S. Neufeld, et al. 2002. REU Site: Controlled environmental research on mechanistic responses of plants and ecosystems to global environmental change. NSF-REU. \$403,951. (Not funded)

Grants Submitted (continued)

29. Neufeld, Howard S. 2002. Ozone effects on reproduction in perennial native wildflowers: Are the effects manifested primarily belowground, and therefore out-of-sight, out-of-mind? University Research Council Summer Grant, \$2992 (funded)
30. Neufeld, Howard S. 2002. Hydraulic conductivity and whole plant water use in herbaceous wildflowers: Why plants wilt when the sun strikes them and the potential influence on ozone uptake. University Research Council Fall Grant, \$4675 (funded).
31. Neufeld, Howard S. 2003. Measure growth rate of *Rudbeckia laciniata* in the Great Smoky Mountains National Park. U.S. EPA, RTP, NC. \$3,962 (funded).
32. Neufeld, Howard S. 2004. The influences of light and water stress on the responses of plants to ozone: Do drought or shade protect the ozone-sensitive cutleaf coneflower against ozone injury? URC Summer Grant, \$4,770 (funded, March 26, 2004).
33. Neufeld, Howard S. 2004. A Natural History of Europe: The Ecosystems and Biogeography of Western Europe. International Programs, ASU, February, 2004, \$3,750 (Funded for \$2800, April 2, 2004).
34. Williams, R.S., Howard S. Neufeld and Melany C. Fisk. 2004. Enhancing undergraduate learning through inquiry-based courses in plant-insect interactions, ecosystems and environmental change and plant physiology. CCLI-NSF. December, 2004. \$150,451. I was a Co-PI and helped with the writing and conceptualization. (not funded).
35. Neufeld, Howard S. 2005. Annual meeting of the NE1013 Working Group on effects of ozone on crops and natural ecosystems. U.S. EPA Small Grant X3-83239301-0, May 26, 2005. (Funded for \$4500).
36. Collaborator, From Molecules to Organisms: The Merck/AAAS Cross-Disciplinary Scholars (MACS) Program at Appalachian State University, submitted to Merck/AAAS, 11/5/04. Dr. Nicole Bennett was the PI and leader of this grant. I wrote a sub-proposal to do chemical work on the plant *Galax urceolata*. \$20,000. (not funded). Resubmitted in 2006 and funded for \$60,000 over three years.
37. Collins, Beverley, Howard S. Neufeld, John Walker, co-PIs and others. 2005. Temperature and precipitation climate change effects on sustainability of herbaceous old-field communities. EPA-Star Grant. \$879,126 over 3 years. (not funded).
38. Pippin, Margaret R., Howard S. Neufeld, Krishna Prasad Vadrevu, Stephanie A. Vay and James H. Crawford. 2005. Contribution of photochemical production to the CO₂ budget over North America. North American Carbon Program, ROSES-2005 NRA, Science Mission Directorate, NASA. \$684,000. (not funded).
39. Neufeld, Howard S., Ray S. Williams, John Walker, and Jonathan Horton. 2006. NSF-MRI: Acquisition and set up of a controlled environment growth facility to enhance biological research at Appalachian State University. \$688, 598. (not funded).

Grants Submitted (continued)

40. Chappelka, Arthur H., Howard S. Neufeld and Russell B. Muntifering. 2006. Structure and functioning of a southeastern grassland community under future climate scenarios of elevated tropospheric ozone and altered rainfall amounts. DOE-NICCR. \$372,336. (not funded).
41. Collins, Beverly, Laura DeWald, Kathy Matthews, Howard S. Neufeld, Jonathan Horton, Peter White and Susan Wiser. 2006. Predicting range shifts and extinctions of high elevation rock outcrop communities in response to climate change. DOE-NICCR. \$699,917. (not funded).
42. Neufeld, Howard S. 2006. The sensitivity of the rock tripe lichen (*Umbilicaria mammulata*) to excess nitrogen deposition. URC Grant Competition, ASU. \$4,859. (not funded).
43. Neufeld, Howard S. 2006. A Proposal for Funding a Meeting of the NE-1013 Working Group on the Effects of Ozone on Crops and Natural Ecosystems. US-EPA. \$5,000. (funded, but then EPA lost the grant. Funds applied to next year's grant - see #45 below).
44. Neufeld, Howard S., Ray Williams, John Walker, Guichuan Hou and Annkatrin Rose. 2007. NSF-MRI: Acquisition and set up of a controlled environment growth facility to enhance biological research at Appalachian State University. \$413,150 (not funded)
45. Hou, Guichuan, Howard S. Neufeld and Annkatrin Rose. 2007. A comparative study of maize and fern shoot-borne root development. USDA-NRI. \$270,200 (not funded).
46. Neufeld, Howard S. 2007. A Proposal for funding a meeting of the NE-1013 Working Group on the effects of ozone on crops and natural ecosystems. US-EPA. \$10,000. (funded).
47. Neufeld, Howard S. 2007. Proposal to study the influence of elevated CO₂ and O₃ on lichen community structure, diversity and physiology. Submitted to AspenFACE, Rhinelander, WI and accepted. Funding comes out of funds from proposal #45 above. \$3,500.
48. Neufeld, Howard S. 2008. The ecophysiological significance of red stems: Do anthocyanins act as light attenuators, antioxidants or both? URC Spring Grant, \$4,999.
49. Hou, Guichuan, Howard S. Neufeld, Chishimba Mowa and Susan Edwards. 2008. MRI: Acquisition of a Transmission Electron Microscope for the Core, Multi-User Microscopy Facility at Appalachian State University. NSF-MRI. \$577,883. (Not funded, but received good reviews).
50. Emanuel, Ryan, Howard Neufeld, Lester B. Perry, James P. Sherman and Brett F. Taubman. 2008. RUI: Acquisition of a Mobile Tower System for Interdisciplinary Atmospheric Research, NSF: EAR - Instrumentation and Facilities Grant. \$176,107. Not funded, but received good reviews).
51. Hou, Guichuan, Howard S. Neufeld, Chishimba Mowa, Phil Russell and Susan Edwards. 2009. MRI: Acquisition of a Transmission Electron Microscope for the Core, Multi-User Microscopy Facility at Appalachian State University. NSF-MRI. \$877,938. Resubmission of 2008 grant. Funded at \$500,000.

Grants Submitted (continued)

52. Emanuel, Ryan, Howard Neufeld, Lester B. Perry, James P. Sherman and Brett F. Taubman. 2009. RUI: Acquisition of a Mobile Tower System for Interdisciplinary Atmospheric Research, NSF: EAR - Instrumentation and Facilities Grant. (Funded at \$191,397). Note: funding made available in June, 2011 to NCSU with subcontract to ASU for \$77,880.
53. Neufeld, Howard S., Guichuan Hou, Michael D. Madritch, Annkatrin Rose and John F. Walker. 2009. ARI-R²: Renovation of the Biology Research Greenhouse Complex at Appalachian State University. \$838,995. (not funded).
54. Sherman, James P., Ryan E. Emanuel, Howard S. Neufeld, Lester B. Perry and Brett F. Taubman. MRI-R²: Acquisition of integrated research instrumentation for the Atmospheric Interdisciplinary Research Program at Appalachian State University. \$1,081,649. (not funded).
55. Neufeld, Howard S., Eva Gonzales, Guichuan Hou, Michael Madritch, and Annkatrin Rose. 2010. MRI: Acquisition and Set Up of a Controlled Environment Growth Facility to Enhance Biological Research at Appalachian State University. NSF-MRI 1039634. \$418,243. (not funded).
56. Collins, Beverly S., Horton, Jonathan L., and Howard S. Neufeld. 2010. Collaborative REU Site: High Elevation Rock Outcrop Plant Communities as Sentinels of Climate Change. This is a collaborative proposal from WCU, UNC-A and ASU, and therefore has consecutive project numbers, respectively of NSF-REU 1062734, 1062676 and 1062789. Funding for each school, respectively, is \$144,933, \$162,684 and \$140,799, for a total of \$448,416 (not funded).

Presentations

- Neufeld, Howard S. 1981. Effects of shade on growth, morphology, and gas exchange in baldcypress and pondcypress seedlings. ASB Meetings, Univ. TN, Knoxville, TN.
- Neufeld, Howard S. 1983. Diurnal and seasonal patterns of leaf conductance and water potential in baldcypress and pondcypress saplings. AIBS Meetings, Penn. State Univ., Univ. Pk., PA.
- Neufeld, Howard S. and Claude W. dePamphilis. 1983. Phenology and seasonal water relations of *Aesculus sylvatica* Bartram, a small vernal understory tree. ASB Meetings, Univ. SW LA, Lafayette, LA.
- Neufeld, Howard S., Judith A. Jernstedt and Bruce L. Haines. 1984. Direct foliar effects of simulated acid rain on four hardwood tree species. AIBS Meetings, Colorado State Univ., Ft. Collins, CO.
- Neufeld, Howard S. 1984. Comparative ecophysiology of baldcypress and pondcypress trees, two types of swamp trees native to the southeast United States. Colloquium Presentation, Biology Dept., NMSU, Las Cruces, NM.
- Neufeld, Howard S., Yoram Goldring and Gary L. Cunningham. 1985. Creosote bushes as solar collectors -- Canopy architecture of a desert shrub. ESA Meetings, Univ. Minn., St. Paul, MN.
- Neufeld, Howard S. 1986. Comparative ecophysiology of baldcypress and pondcypress trees native to swamps of the southeastern United States. Dept. of Biol., Univ. MO, St. Louis, MO: Dept. of Biology, Univ. of New Mexico, Albuquerque, NM.: Pacific Northwest Forest and Range Experiment Station, USFS, Corvallis, OR.
- Neufeld, Howard S. 1988. From swamps to deserts: The interplay between ecophysiology and plant form. Dept. of Biology, Clemson Univ., Clemson, SC.
- Neufeld, Howard S. 1989. Comparative ecology of bald and pond cypress trees: The link between ecophysiological measurements and plant architecture. Dept. of Biology, VPI, Blacksburg, VA.
- Neufeld, Howard S., Jim Renfro and David Silsbee. 1989. Ozone effects program in the Great Smoky Mountain National Park. Uplands Research Lab Science Meetings, Gatlinburg, TN.
- Neufeld, Howard S. 1989. Acid Rain: Truths and Misconceptions. Presented to the Blue Ridge Chapter of the Sierra Club, Boone, NC. July 11, 1989.
- Neufeld, Howard S., Jim Renfro and David Silsbee. 1989. The ozone effects program in The Great Smoky Mountains National Park: Preliminary results. ASB Meetings, UNC - Charlotte, Charlotte, NC.
- Hutcherson, James D. and Howard S. Neufeld. 1990. Using branch chambers to study air pollution effects on red spruce. ASB Meetings, Towson State Univ., Towson, MD.
- McCarron, James K. and Howard S. Neufeld. 1990. Ecophysiology of *Galax aphylla*, a clonal evergreen understory herb. ASB Meetings, Towson State Univ., Towson, MD.
- Neufeld, Howard S., Guillermo Goldstein, Frederick C. Meinzer, David A. Grantz and Gayle M. Crisosto. 1990. The hydraulic architecture of sugarcane. ASB Meetings, Towson State Univ., Towson, MD.
- Neufeld, Howard S. 1990. Ozone effects program in the Great Smoky Mountains National Park. Uplands Research Lab Science Meetings, Gatlinburg, TN.
- Neufeld, Howard S. and Claude W. dePamphilis. 1990. Phenological patterns and physiological changes in leaves of *Aesculus sylvatica* in relationship to canopy phenology. INTECOL Meetings, Yokohama, Japan.
- Neufeld, Howard S., David A. Grantz, Frederick C. Meinzer, Guillermo Goldstein and Gayle M. Crisosto. 1990. Vulnerability of the xylem in sugarcane to cavitation. ESA Meetings, Snowbird Resort, Snowbird, UT.
- McCarron, James K. and Howard S. Neufeld. 1991. Ecophysiology of *Galax aphylla*, a clonal evergreen understory herb. ASB Meetings, ASU, Boone, NC.
- Hacker, W. David, Jim Renfro, Songqiao Huang and Howard S. Neufeld. 1991. Response of *Pinus virginiana* seedlings to a gradient of ozone. ASB Meetings, ASU, Boone, NC.
- Huang, Songqiao, W. David Hacker and Howard S. Neufeld. 1991. Effects of different ozone levels on growth of tulip poplar (*Liriodendron tulipifera* L.) seedlings. ASB Meetings, ASU, Boone, NC.
- Neufeld, Howard S. and Jim Renfro. 1991. Do ambient levels of ozone affect plants in the Great Smoky Mountains National Park? Results of three years of observation and experimentation. ASB Meetings, ASU, Boone, NC.
- Hutcherson, James D. and Howard S. Neufeld. 1991. Air pollution effects on mature red spruce. ASB Meetings, ASU, Boone, NC.
- Neufeld, Howard S., Jim Renfro and W. David Hacker. 1991. Ozone effects program in the Great Smoky Mountains National Park. Uplands Research Lab Science Meetings, Gatlinburg, TN.

Presentations (continued)

- Neufeld, Howard S. and Jim Renfro. 1991. Do ambient levels of ozone affect plants in the Great Smoky Mountains National Park? Results of three years of observation and experimentation. AIBS Meetings, San Antonio, TX.
- Neufeld, Howard S. Neufeld, James R. Renfro, W. David Hacker and David Silsbee. 1991. Ozone in GreatSmoky Mountains National Park: Dynamics and effects on plants. AWMA Meetings, Atlanta, GA.
- Neufeld, Howard S. 1991-1992. Air pollution threats to national parks. *Invited presentations to the following groups: Sigma Xi Chapter, ASU; Dept. of Biology, ASU; Sierra Club, Boone, NC.*
- Neufeld, Howard S. 1992. Biological effects of tropospheric ozone. *Invited Participant at SAMAB Forum on Air Quality Management for Class I Areas in the Southern Appalachians.* March 3-5, 1992. Park Vista Hotel, Gatlinburg, TN.
- Neufeld, Howard S., David A. Grantz, Frederick C. Meinzer, Guillermo Goldstein, Gayle M. Crisosto, and Carlos Crisosto. 1992. Vulnerability of the xylem in leaves of sugarcane to water-stressed-induced cavitation. ASB Meetings, Univ. of Alabama, Tuscaloosa, AL.
- Neufeld, Howard S., James R. Renfro and W. David Hacker. 1992. Ozone dynamics in Great Smoky Mountains National Park as affected by elevation and topography. Uplands Research Lab Science Meetings, Gatlinburg, TN.
- Neufeld Howard S., W. David Hacker, and Songqiao Huang. 1992. Effects of ozone on gas exchange responses in Yellow-poplar and Virginia pine seedlings. Uplands Research Lab Science Meetings, Gatlinburg, TN.
- Neufeld, Howard S., Songqiao Huang, W. David Hacker and James R. Renfro. 1992. Responses of growth and gas exchange for two tree species exposed to ozone for two seasons. Third International Symposium on Gaseous Pollutants & Plant Metabolism, VPI, June 13-16, 1992.
- Neufeld, Howard S., Songqiao Huang, W. David Hacker, and James R. Renfro. 1992. Responses of growth and gas exchange for seedlings of two tree species exposed to two seasons of ozone. AIBS Meetings, Honolulu, HI.
- Neufeld, Howard S., and James R. Renfro. 1992. Spatial and temporal dynamics of ozone in Great Smoky Mountains National Park and implications for plant responses. George Wright Society Seventh Conference on Research and Management in Parks and Public Lands, Nov. 16-20, 1992, Jacksonville, FL.
- Neufeld, Howard S., James R. Renfro, and W. David Hacker. 1992. Ozone dose-response relationships for plants in Great Smoky Mountains National Park. George Wright Society Seventh Conference on Research and Management in Parks and Public Lands, Nov. 16-20, 1992, Jacksonville, FL.
- Renfro, James R., and Howard S. Neufeld. 1992. Effects of ambient ozone on foliage of plants in Great Smoky Mountains National Park. George Wright Society Seventh Conference on Research and Management in Parks and Public Lands, Nov. 16-20, 1992, Jacksonville, FL.
- Neufeld, Howard S. 1993. The influence of air pollution on our National Parks. *Invited Seminar. Department of Biology, Furman University,* March 18, 1993, Greenville, SC.
- Neufeld, Howard S. 1993. Air pollution threats to our National Parks. Department of Biology, Coastal Carolina College, and Audubon Society, April 2, 1993, Conway, SC.
- Neufeld, Howard S. *et al.* 1993. *Invited Speaker. Assessment of ozone effects on plants native to the southeastern United States, XI International Association of Botanical Gardens, Wuxi, China,* Sept. 7, 1993.
- Neufeld, Howard S. 1993. Comparative ecophysiology of pond and bald cypress trees. Nanjing Botanical Garden, Sept. 17, 1993, Nanjing, China.
- Neufeld, Howard S. Air pollution threats to our National Parks. Department of Biology, Lenoir-Rhyne College, October 7, 1993. Hickory, NC.
- Hacker, W. David and Howard S. Neufeld. 1993. The effects of elevated levels of ozone on native plant species. Conformity Guidelines Workshop, Texas Dept. of Transportation, Austin, TX. Dec. 7, 1993.
- McLeod, Kenneth W., James K. McCarron, and Howard S. Neufeld. 1994. Comparative growth patterns of bald and pond cypress saplings under varying soil water conditions. ASB Meetings, Orlando, FL, April 13-16.
- Neufeld, Howard S. and Kenneth W. McLeod. 1994. Aspects of the internal water relations of bald and pond cypress trees. ASB Meetings, Orlando, FL, April 13-16.
- James K. McCarron, Howard S. Neufeld, and Kenneth W. McLeod. 1994. Seasonal water relations and gas exchange patterns of bald and pond cypress saplings under varying soil water conditions. ASB Meetings, Orlando, FL, April 13-16.

Presentations (continued)

- Neufeld, Howard S., Edgar B. Lickey, Gary L. Walker, James K. McCarron, and Kenneth W. McLeod. 1994. Future research on the genetics and ecophysiology of bald and pond cypress trees. ASB Meetings, Orlando, FL, April 13-16.
- Neufeld, Howard S. 1994. Ozone effects on plants: A problem of scaling. Southern Appalachian Mountain Initiative (SAMI) Meeting, May 13-14, 1994. Holiday Inn-World's Fair, Knoxville, TN.
- Neufeld, Howard S., C. Scott Clark, James A. Weber. 1994. A 25 cuvette automated gas exchange system for the study of plant responses to ozone. AIBS Meetings, Knoxville, TN.
- Neufeld, Howard S., C. Scott Clark, James A. Weber. 1994. A 25 cuvette automated gas exchange system for the study of plant responses to ozone. 16th International Meeting for Specialists in Air Pollution Effects on Forest Ecosystems, IUFRO, Sept. 7-9, 1994, Fredericton, NB, Canada.
- Neufeld, Howard S. 1994. High altitude forests in Sechuan Province, China: Are there problems with forest decline? Dept. of Biology, ASU, Sept. 28, 1994.
- Neufeld, Howard S., C. Scott Clark, James A. Weber. 1994. A 25 cuvette automated gas exchange system for the study of temporal and spatial variation in canopy leaf gas exchange. First International Canopy Conference, Forest Canopies: Ecology, Biodiversity and Conservation, Marie Selby Botanical Gardens, Sarasota, FL, November 9-13, 1994.
- Neufeld, Howard S. 1995. Air pollution effects on plants in Great Smoky Mountain National Park. Dept. of Horticulture, VPI, Blacksburg, VA, February 23, 1995.
- Neufeld, Howard S., E. Henry Lee, James R. Renfro, W. David Hacker, and Songqiao Huang. 1995. Using Weibull response functions to rank plant species' sensitivity to ozone in Great Smoky Mountains National Park. 27th Annual Air Pollution Workshop, Cuernavaca, Mexico, March 6-9, 1995.
- Neufeld, Howard S. 1995. Air pollution effects on plants in Great Smoky Mountain National Park. Dept. of Biology, UNCC, Charlotte, NC, April 7, 1995.
- Horton, Jonathan L. and Howard S. Neufeld. 1995. Photosynthetic responses of *Microstegium vimineum*, a C₄ shade-tolerant grass, to variable light environments. ASB Meetings, Knoxville, TN, April 19-22. **Winner of the Odum Award from SE Chapter of ESA and ASB Student Research Award.**
- Fredenberg, Stacey C. and Howard S. Neufeld. 1995. The effects of soil cadmium on the growth of bald cypress seedlings under flooded and non-flooded conditions. ASB Meetings, Knoxville, TN, April 19-22.
- Horton, Jonathan L. and Howard S. Neufeld. 1995. Photosynthetic responses of *Microstegium vimineum*, a C₄ shade-tolerant grass, to variable light environments. Ecological Society of America Annual Meetings, Snowbird Resort, UT, July 30-August 3.
- Fredenberg, Stacey C. and Howard S. Neufeld. 1995. The effects of soil cadmium on the growth of bald cypress seedlings under flooded and non-flooded conditions. Ecological Society of America Annual Meetings, Snowbird Resort, UT, July 30-August 3.
- Neufeld, Howard S. 1995. The effects of air pollution on plants in our National Parks. **Invited Talk, Broward Community College's Distinguished Lecturer Series.** October 2, 1995, Fort Lauderdale, FL.
- Neufeld, Howard S. and David B. Joseph. 1996. When do high ozone events occur in Great Smoky Mountains National Park? ASB Meetings, Georgia Southern University, Statesboro, GA.
- Fredenberg, Stacey C. and Howard S. Neufeld. 1996. Responses of bald cypress (*Taxodium distichum*) seedlings grown in sandy soils amended with cadmium under both flooded and non-flooded conditions. ASB Meetings. Georgia Southern University, Statesboro, GA.
- Horton, Jonathan, L. and Howard S. Neufeld. 1996. Photosynthetic responses of *Microstegium vimineum*, a C₄, shade-adapted grass, to variable light environments. ASB Meetings. Georgia Southern University, Statesboro, GA.
- Robertson, Jennifer L. and Howard S. Neufeld. 1996. Ecophysiological significance of carbon gain by phyllodia in carnivorous pitcher plants. ASB Meetings. Georgia Southern University, Statesboro, GA.
- Neufeld, Howard S. and David B. Joseph. 1996. When do high ozone events occur in Great Smoky Mountains National Park? 28th Annual Air Pollution Workshop, April 15-18. North Carolina State University, Raleigh, NC.
- Neufeld, Howard S. 1996. The value of knowledge: The disturbing trend for increasing reliance on pseudoscience and quackery. Humanities Thematic Forum, October 9, 1996, Linville Falls Room, Student Union, ASU.

Presentations (continued)

- Neufeld, Howard S. and David B. Joseph. 1996. When do high ozone events occur in Great Smoky Mountains National Park? Society of Environmental Toxicology and Chemistry, 17th Annual Meeting, November 17-21, Washington, DC.
- Neufeld, Howard S. 1996. Ozone exposure-response relationships for trees in Great Smoky Mountains National Park. **Invited Talk. Dept. of Biology, East Carolina University**, Greenville, NC, December 5.
- Neufeld, Howard S. 1997. Trees and Ozone: The interactive roles of exposure and dynamic in eliciting responses. Dept. of Biology, Appalachian State University, Boone, NC, January 15.
- Williams, Denise and H.S. Neufeld. 1997. Factors affecting the spread of the introduced species, *Microstegium vimineum*, a shade tolerant, C₄ grass. ASB Meetings, Furman University, SC, April 17.
- Robertson, Jennifer and H.S. Neufeld. 1997. Ecological significance of carbon gain by phyllodia and pitchers in carnivorous pitcher plants. ASB Meetings, Furman University, SC, April 17.
- Neufeld, Howard S., E.H. Lee, J.R. Renfro, W. David Hacker. 1997. Responses of herbaceous species to ozone in Great Smoky Mountains National Park. 29th Annual Air Pollution Workshop, Arizona State University, Tempe, AZ, April.
- Neufeld, Howard S. 1998. Ozone in the Southern Appalachians: Is it killing the trees? **Invited Talk. Dept. of Biology, Western Carolina University**, Cullowhee, NC, February 13.
- Culton, Donna A., C.P. Cartaya-Marin, R.W. Soeder, R.W. Henson, and H.S. Neufeld. Isolation and partial characterization of the compound(s) responsible for photoluminescence in the scorpion *Centruroides vittatus*. 1998. 18th Annual Undergraduate Research Symposium on Chemistry, VPI, February 21, 1998.
- Culton, Donna A., C.P. Cartaya-Marin, R.W. Soeder, R.W. Henson, and H.S. Neufeld. Isolation and partial characterization of the compound(s) responsible for photoluminescence in the scorpion *Centruroides vittatus*. 1998. ASB Meetings, Northeast Louisiana State University, Monroe, LA, April 17.
- Williams, L.Denise and H.S. Neufeld. 1998. Factors affecting growth and reproduction in *Microstegium vimineum*, a shade-tolerant, exotic C₄ grass. ASB Meetings, Northeast Louisiana State University, Monroe, LA, April 17.
- Sobieraj, James H. and H.S. Neufeld. 1998. Differential susceptibility to cavitation in petioles of one and two year old leaves of *Galax aphylla*. ASB Meetings, Northeast Louisiana State University, Monroe, LA, April 17.
- Neufeld, Howard S., E. Henry Lee, James R. Renfro, W. David Hacker and Songqiao Huang. 1998. Summary analyses of ozone effects on plants native to Great Smoky Mountains National Park. AIBS Meetings, Baltimore, MD, August 1-5.
- Neufeld, Howard S., E. Henry Lee, James R. Renfro, W. David Hacker and Songqiao Huang. 1998. Summary analyses of ozone effects on plants native to Great Smoky Mountains National Park. IUFRO Meetings, Edinburgh, Scotland, Sept. 20-23.
- Neufeld, Howard S., E.H. Lee, J.R. Renfro, and W.D. Hacker. 1999. Insensitivity of several conifer species to ozone in Great Smoky Mountains National Park. ASB Meetings, UNC-W, April 14-17.
- Sobieraj, James H. II and Howard S. Neufeld. 1999. Hydraulic architecture of *Galax urceolata*, an evergreen, understory shrub of the southern Appalachians. ASB Meetings, UNC-W, April 14-17.
- Brown, C. Michelle, Howard S. Neufeld, and Ray S. Williams. 1999. Herbivory patterns in *Rhododendron maximum*, a broadleaved evergreen shrub of the southern Appalachian mountains. ASB Meetings, UNC-W, April 14-17.
- Geissinger, Karen E., Howard S. Neufeld, and Robert Sutter. 1999. Grazing influences on plants in a southern Appalachian mountain bog. ASB Meetings, UNC-W, April 14-17.
- Neufeld, Howard S. 1999. Air pollution effects on eastern forests: Public perception and scientific reality. **Invited Talk. Dept. of Biology, Wake Forest University**, Winston-Salem, NC, Sept. 22nd.
- Neufeld, Howard S. 2000. Hydraulic conductivity in plants, or, Pop goes the xylem. **Invited Talk. Dept. of Biology, Western Carolina University**, Cullowhee, NC, February 4th.
- Neufeld, Howard S. 2000. Air pollution effects on eastern forests: Public perception and scientific reality. **Invited Talk. Dept. of Ecology and Evolutionary Biology, University of Tennessee**, Knoxville, TN, February 25th.
- Neufeld, Howard S. 2000. Air pollution effects on eastern forests: Public perception and scientific reality. **Invited Talk. Dept. of Biology, UNC-Asheville**, Asheville, NC, March 30th.
- Geissinger, Karen E., Howard S. Neufeld, and Robert Sutter. 2000. Grazing influences on species diversity and net primary production in a southern Appalachian wet meadow. ASB Meetings, UT-Chattanooga, April 5-8. **Winner of the Odum Award from SE Chapter of ESA.**

Presentations (continued)

- Neufeld, Howard S. and Karen E. Geissinger. 2000. Effects of clipping and simulated urination on the growth and photosynthesis of a native sedge (*Carex lurida*) and an introduced grass (*Holcus lanatus*). ASB Meetings, UT-Chattanooga, April 5-8.
- Geissinger, Karen E. and Howard S. Neufeld. 2000. Effects of a rust fungus (*Puccinia coronata*) on the growth and gas exchange of *Holcus lanatus*, an introduced grass species. ASB Meetings, UT-Chattanooga, April 5-8.
- Neufeld, Howard S., Art H. Chappelka, and Alan Davison. 2000. Elevational effects of ozone pollution on tall milkweeds in Great Smoky Mountains National Park. 32nd Air Pollution Workshop, Auburn, AL, Apr. 10-13.
- Neufeld, Howard S. 2000. Air pollution in the eastern United States: Effects on trees and wildflowers. **Invited Talk. Savannah River Ecology Lab**, Aiken, SC. November 2nd.
- Howard S. Neufeld, Lara Souza, Arthur H. Chappelka, and Alan W. Davison. 2001. Field Responses of Some Native Wildflowers to Ozone in Great Smoky Mountains National Park. Trends in Air Quality Conference, Division of Continuing Education, NCSU, Raleigh, NC, Feb. 12-16.
- Alan W. Davison, Lara Souza, Howard S. Neufeld, and Arthur H. Chappelka. 2001. Interpreting variation in ozone symptoms within and between populations of tall milkweed, *Asclepias exaltata*. Trends in Air Quality Conference, Division of Continuing Education, NCSU, Raleigh, NC, Feb. 12-16.
- Geissinger, Karen E. and Howard S. Neufeld. 2000. Grazing influences on species diversity and net primary production in a southern Appalachian wet meadow. Annual Meeting of the Ecological Society of America, Snowbird Resort, UT, Aug. 6-10.
- Sobieraj, James H., II and Howard S. Neufeld. 2000. Hydraulic properties of *Galax urceolata*, an evergreen, understory herb of the southern Appalachians. Annual Meeting of the Ecological Society of America, Snowbird Resort, UT, Aug. 6-10.
- Souza, Lara, Art H. Chappelka, and Howard S. Neufeld. 2001. Seasonal development of ozone-induced foliar injury in tall milkweed (*Asclepias exaltata*). ASB Meetings, New Orleans, LA, April 4-7.
- Howard S. Neufeld, Lara Souza, Arthur H. Chappelka, and Alan W. Davison. 2001. Field responses of some native wildflowers to ozone in Great Smoky Mountains National Park. 33rd Air Pollution Workshop, Riverside, CA, April 10-13.
- Alan W. Davison, Lara Souza, Howard S. Neufeld, and Arthur H. Chappelka. 2001. Interpreting variation in ozone symptoms within and between populations of tall milkweed, *Asclepias exaltata*. 33rd Air Pollution Workshop, Riverside, CA, April 10-13.
- Neufeld, Howard S. 2001. Botany: Leaf structure and function. Class presentation to 7th grade students at Gainesville Middle School, Gainesville, GA, October 18th, 2001. **Invited presentation.**
- Neufeld, Howard S. 2002. Ozone effects on wildflowers in Great Smoky Mountains National Park: Observations on foliar injury, physiology, and stand level phenomena. Presented to the Air Resources Division, National Park Service, Lakewood, CO. February 27th, 2002.
- Davison, A.W., H.S. Neufeld, A.H. Chappelka and P. Finkelstein. 2002. Interpreting spatial variation in ozone symptoms shown by cutleaf cone flower, *Rudbeckia laciniata*. UK CAPER Workshop, Bradford, U.K. April 9th.
- Neufeld, Howard S. 2002. The Great Triumph of Science: The Slaying of Ugly Hypotheses by Beautiful Facts. **Banquet Address to ASB, April 12, 2002.**
- Neufeld, Howard S. 2002. Ozone Effects on Forests in the Southern Appalachians: Separating Myth from Reality. Address to participants in the Institute of Senior Scholars, Office of Conferences and Institutes, Broyhill Inn, ASU, September 24.
- Neufeld, Howard S. 2002. Ozone Effects on Forests in the Southern Appalachians: Does Ozone Hurt Plants? Presentation to two advanced science classes, Gainesville Middle School, Gainesville, GA. Oct. 18, 2002.
- Neufeld, Howard S. 2002. Effects of Ozone on Both Plants and People: But with an Emphasis on the Plants! **Invited Seminar. Department of Biology, Johnson C. Smith University**, Charlotte, NC. Nov. 13.
- Neufeld, Howard S. 2002. Ozone impacts on native wildflowers growing at high elevations in the southern Appalachians. **Invited Seminar. U.S. Fish & Wildlife Service Meeting, Broyhill Inn, ASU, Boone, NC.** Nov. 21.
- Neufeld, Howard S. 2003. Ozone impacts on native wildflowers growing at high elevations in the southern Appalachians. **Invited Seminar. Crossnore Training Center, Crossnore, NC.** February 20.
- Seth Peoples, Howard S. Neufeld and Alan W. Davison. 2003. Effects of ozone on cutleaf coneflower (*Rudbeckia laciniata*) in open top chambers and in Great Smoky Mountains National Park. 34th Annual Air Pollution Workshop, April, University of British Columbia, Vancouver, BC, Canada.
- Neufeld, Howard S. 2003. The Great Triumph of Science: The Slaying of Ugly Hypotheses by Beautiful Facts. **Invited Presentation to Western Carolina's Sigma Xi Annual Banquet Meeting**, Cullowhee, NC. April, 2003.

Presentations (continued)

- Neufeld, Howard S., Arthur H. Chappelka, Alan W. Davison, Kent O. Burkey, Pete Finkelstein, Lara Souza and Seth Peoples. 2003. Ozone impacts on native wildflowers in Great Smoky Mountains National Park. Presentation to the NE-1013 Group, State Cooperative Experiment Stations, Raleigh, NC, May 8-9.
- Chappelka, A.H, G.L. Somers and H.L. Neufeld. 2003. Impact of ground-level ozone on trees in the Great Smoky Mountains National Park.(Poster).Forest Health Monitoring Workshop, USDA Forest Service. Jan. 28-30, Monterey, CA. ** Was not able to attend. Poster presented by J. Brown.
- Chappelka, A.H, G.L. Somers and H.L. Neufeld. 2003. Tropospheric ozone impacts on large, mature trees in the Great Smoky Mountains National Park (Poster). The Ecological Society of America 86th Annual Meeting, August 3-8, 2003, Savannah, GA.
- Hughes NM, Neufeld HS. 2004. Ecophysiological and biochemical function of anthocyanins in high-light winter leaves of *Galax urceolata*. ASB Meetings, University of Memphis, Memphis, TN, April 14-17. **Winner of Odum Award from SE Chapter of ESA.**
- Neufeld, Howard S. Arthur H. Chappelka, Alan W. Davison, Kent O. Burkey, Pete Finkelstein, Lara Souza, Seth Peoples, Fitzgerald Booker, Kirsten Wolff. 2004. Responses of native wildflowers to ozone at scales ranging from the leaf to the stand. **Invited presentation** to Department of Biological Sciences, University of Miami, March 8, 2004.
- Howard S. Neufeld, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey and Peter L. Finkelstein. 2004. Foliar injury caused by exposure to ozone reduces the absorbance of light in leaves of cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*). ASB Meetings, University of Memphis, Memphis, TN, April 14-17.
- Shay Dumas, Howard S. Neufeld, Melany C. Fisk and James H. Sobieraj. 2004. Community and ecosystem responses following fire in the Linville Gorge Wilderness Area. ASB Meetings, University of Memphis, Memphis, TN, April 14-17.
- Seth Peoples, Howard S. Neufeld, Peter L. Finkelstein, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey and Fitzgerald Booker. 2004. Stand structure and development of cutleaf coneflower (*Rudbeckia laciniata*) at two sites in Great Smoky Mountains National Park: Potential influence on ozone uptake. ASB Meetings, University of Memphis, Memphis, TN, April 14-17.
- Howard S. Neufeld, Seth Peoples, Peter L. Finkelstein, Alan W. Davison, Arthur H. Chappelka, and Kent O. Burkey. 2004. Seasonal development of stand structure for cutleaf coneflower (*Rudbeckia laciniata*) at two sites in Great Smoky Mountains National Park: Influences on ozone uptake. Air Pollution Workshop, April 26-29, 2004, Rhinelander, WI.
- Howard S. Neufeld, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey and Peter L. Finkelstein. 2004. Foliar injury caused by exposure to ozone reduces the absorbance of light in leaves of cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*). Air Pollution Workshop, April 26-29, 2004, Rhinelander, WI.
- Hughes, Nicole M., Howard S. Neufeld and Kent O. Burkey. 2005. Functional role of anthocyanins in high light winter leaves of the evergreen herb, *Galax urceolata*. ESA Meetings, Montreal, CA. August 7-12.
- Neufeld, Howard S., Melissa Woods, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey, Peter L. Finkelstein and Susan Sachs. 2005. Reduced reproductive effort in ozone sensitive cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*) clones in Great Smoky Mountains National Park. Association of Southeastern Biologists Meetings, University of North Alabama, Florence, AL, April 13-17.
- Dolan, Chricha, Howard S. Neufeld, Ruth A. Dewel, J. Kenneth Shull, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey. 2005. The role of leaf anatomy in determining the sensitivity of individuals of cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*) to ozone. Association of Southeastern Biologists Meetings, University of North Alabama, Florence, AL, April 13-17.
- Roberts, Melinda D, Howard S. Neufeld, Alan W. Davison and Arthur H. Chappelka. 2005. The influence of water relations on the response of cutleaf coneflower to ozone. Association of Southeastern Biologists Meetings, University of North Alabama, Florence, AL, April 13-17. **Winner of ASB Best Poster Award and Quaterman/Keever Award from SE Chapter of ESA for Best Poster Presentation.**
- Roberts, Melinda D, Howard S. Neufeld, Alan W. Davison and Arthur H. Chappelka. 2005. The influence of water relations on the response of cutleaf coneflower to ozone. Air Pollution Workshop, April. **Winner of APW Best Poster Award.**
- Woods, Melissa, Howard S. Neufeld, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey, Peter L. Finkelstein and Susan Sachs. 2005. Reduced reproductive effort in ozone sensitive cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*) clones in Great Smoky Mountains National Park. Research Day, ASU, April.
- Neufeld, Howard S., Melissa Woods, Alan W. Davison, Arthur H. Chappelka, Kent O. Burkey, Peter L. Finkelstein and Susan Sachs. 2005. Reduced reproductive effort in ozone sensitive cutleaf coneflower (*Rudbeckia laciniata* var. *digitata*) clones in Great Smoky Mountains National Park. Ecological Society of America Meetings, Montreal, CA, August 7-12.

Presentations (continued)

- Howard S. Neufeld and Nancy E. Grulke. 2005. Appreciating the impacts of oxidative stress: From genes to ecosystems: Co-chairs of Organized Oral Session at the Ecological Society of America Meetings, Montreal, CA, August 7-12. Session held on August 8.
- Grulke, Nancy E. and Howard S. Neufeld. 2005. Understanding the implications of oxidative stress: stomatal responses. Ecological Society of America Meetings, Montreal, CA, August 7-12.
- Neufeld, Howard S. 2005. The impacts of ozone on native wildflowers: A case study in the Smoky Mountains using the bioindicator plant, cutleaf coneflower *Rudbeckia laciniata*. **Invited Seminar. Dept. of Plant Biology & Pathology, Cook College, Rutgers University**, New Brunswick, NJ. Oct. 28.
- Neufeld, Howard S. 2005. NC State. Functional role of anthocyanins in high light winter leaves of the evergreen herb, *Galax urceolata*. **Invited Seminar, Dept. of Botany, NCSU**, Raleigh, NC. Nov. 29.
- Poindexter, Derick B., Victoria Ferriss, Garrett Kelly and Howard S. Neufeld. 2006. The relationship between light and anthocyanin production in above and belowground tissues of *Galax urceolata* (Poir.) Brummitt. ASB Meetings, University of Tennessee, Gatlinburg, TN, Mar 29-Apr 1, 2006.
- Huyler, Ann, Howard S. Neufeld, Melany C. Fisk and Kent O. Burkey. 2006. A proposal to study the effects of chronic and acute ozone on the antioxidant content of tulip poplar, *Liriodendron tulipifera*. Air Pollution Workshop, University of Virginia, Charlottesville, VA. Apr. 10-13.
- Perkins, Fern S., Howard S. Neufeld, Melany C. Fisk and John L. Walker. 2006. Increased nitrogen deposition and the green algal lichen *Umbilicaria mammulata*: too much of a good thing? Air Pollution Workshop, University of Virginia, Charlottesville, VA. Apr. 10-13.
- Miller, Bradley W., Howard S. Neufeld and S. Coleman McCleneghan. 2006. The successful nursery production of red spruce seedlings with indigenous ectomycorrhizal fungi of the endangered southern spruce-fir ecosystem. Mycological Society of America, Quebec City, Canada. **Winner of Best Student Oral Presentation.**
- Ladd, Irene, Jack Fishman, Margaret Pippin, Susan Sachs, John Skelly, Art Chappelka, Howard Neufeld and Kent Burkey. 2006. Inquiry based projects using student measurements and the status of using plants as bioindicators. American Geophysical Union Joint Assembly, Baltimore, MD. May 23-26.
- Neufeld, Howard S. 2006. Air Pollution: Its Human Health Effects and Impacts on Natural Ecosystems. **Invited talk to CEP students at Highlands Biological Station, Highlands, NC.** Nov. 7, 2006.
- Neufeld, Howard S. 2007. Why red is a good color for green leaves: A case study with the understory, evergreen herb *Galax urceolata*. **Invited Seminar: UNC-Charlotte**, Charlotte, NC. February 9th.
- Neufeld, Howard S. 2007. Air Pollution in the Southern Appalachians: Impacts on Plants and Ecosystems and Why Red is a Good Color for Green Leaves - A Summary of Research in my Lab Group. **Invited Talk. Presented to ASU College of Arts & Sciences Advancement Council**, March 24th, Broyhill Inn, Boone, NC.
- Huyler, A., Howard S. Neufeld and Kent O. Burkey. 2007. The effects of acute or chronic ozone exposure on the antioxidant content of tulip poplar, *Liriodendron tulipifera*. ASB Meetings, Univ. S. Carolina, Columbia, SC, April 18-21.
- Holladay, Cori-Alice, Howard S. Neufeld and Beverly Collins. 2007. Phytoremediation potential of loblolly pine (*Pinus taeda* L.) in wetland soils with heavy metal contamination. ASB Meetings, Univ. S. Carolina, Columbia, SC, April 18-21.
- Perkins, Fern S., Howard S. Neufeld, Melany C. Fisk and John F. Walker. 2007. Increased nitrogen deposition and the green alga lichen *Umbilicaria mammulata*: too much of a good thing? ASB Meetings, Univ. S. Carolina, Columbia, SC, April 18-21.
- Huyler, A., Howard S. Neufeld and Kent O. Burkey. 2007. The effects of acute or chronic ozone exposure on the antioxidant content of tulip poplar, *Liriodendron tulipifera*. Air Pollution Workshop, Guadalajara, Mexico, April.
- Perkins, Fern S., Howard S. Neufeld, Melany C. Fisk and John F. Walker. 2007. Increased nitrogen deposition and the green alga lichen *Umbilicaria mammulata*: too much of a good thing? Air Pollution Workshop, Guadalajara, Mexico, April.
- Neufeld, Howard S. 2007. Global Warming Impacts. **Invited lecture** to teachers, ASU Math & Science Center, October 25.
- Neufeld, Howard S. 2007. Air Pollution: Its Human Health Effects and Impacts on Natural Ecosystems. **Invited talk to CEP students at Highlands Biological Station, Highlands, NC.** Nov. 7, 2007.
- Neufeld, Howard S. 2007. Better Red than Dead: Speculations on the role of anthocyanins in leaves, stems, petioles and veins. **Invited Talk, Department of Biology, Appalachian State University**, Nov. 12, 2007.
- Johnson, Elizabeth G., Benjamin A. Vaughan, Howard S. Neufeld and Libby G. Puckett. 2007. Better red than dead: the role of anthocyanins in stems. ASC Meetings, Augusta, GA. October.
- Vaughan, Benjamin A., Elizabeth G. Johnson, Libby G. Puckett and Howard S. Neufeld. 2007. An investigation of the odor associated with *Galax urceolata*. ASC Meetings, Augusta, GA. October.

Presentations (continued)

- Neufeld, Howard S., W. David Hacker, E. Henry Lee, James R. Renfro and Songqiao Huang. 2008. On the relative sensitivity to ozone of some tree species in Great Smoky Mountains National Park. Air Pollution Workshop, Raleigh, NC. April 6-10.
- Perkins, Fern, Howard S. Neufeld and Anja W. Wynns. 2008. Impacts of elevated O₃ and CO₂ on corticolous lichen communities in the Aspen FACE free-air exposure system in Rhinelander, WI. Air Pollution Workshop, Raleigh, NC. April 6-10.
- Perkins, Fern, Howard S. Neufeld, Jill E. Thomley and John F. Walker. 2008. Complexities in the analysis of the response of the lichen *Umilicaria mammulata* along a putative nitrogen deposition gradient. Air Pollution Workshop, Raleigh, NC. April 6-10.
- Deviney, David E., Jason Harkey, John Harkey and Howard S. Neufeld. 2008. Influence of trichomes on the spectral characteristics of leaves of the purple velvet plant *Gynura aurantiaca* in the visible and near-IR wavelengths. ASB Meetings, Spartanburg, SC. April 16-19.
- Johnson, Elizabeth G., Benjamin A. Vaughan, Howard S. Neufeld and Libby G. Puckett. 2008. Better red than dead: the role of anthocyanins in stems. ASB Meetings, Spartanburg, SC. April 16-19.
- Neufeld, Howard S. and Guichuan Hou. 2008. Anatomical distribution of anthocyanins in the stems of several herbaceous plants: Speculations on their functional significance. ASB Meetings, Spartanburg, SC. April 16-19.
- Perkins, Fern, Howard S. Neufeld and Anja W. Wynns. 2008. Impacts of elevated O₃ and CO₂ on corticolous lichen communities in the Aspen FACE free-air exposure system in Rhinelander, WI. ASB Meetings, Spartanburg, SC. April 16-19.
- Perkins, Fern, Howard S. Neufeld, Jill E. Thomley and John F. Walker. 2008. Complexities in the analysis of the response of the lichen *Umilicaria mammulata* along a putative nitrogen deposition gradient. ASB Meetings, Spartanburg, SC. April 16-19.
- Vaughan, Benjamin A., Elizabeth G. Johnson, Libby G. Puckett and Howard S. Neufeld. 2008. An investigation of the odor associated with *Galax urceolata*. ASB Meetings, Spartanburg, SC. April 16-19.
- Neufeld, Howard S. 2008. Air Pollution in Great Smoky Mountains National Park: Effects on Plants and Ecosystems. **Invited lecture, School of Forestry, Technical University of Munich, Freising, Germany.** Invited to speak by Drs. Thorsten Grams and Rainer Matyssek. July 15, 2008.
- Neufeld, Howard S. 2008. Darwin and Colleagues: Evolution of an Idea. **Invited Lecture/Discussion** to the Torch Club of Boone, Broyhill Inn, Appalachian State University. September.
- Neufeld, Howard S. 2009. Effects of Ozone on Plants and Ecosystems. **Invited Participant in Ozone Effects Workshop**, SUNY-Stonybrook, Stonybrook, NY. March 6. Invited by Prof. Gil Hanson, Earth Sciences Department.
- Neufeld, Howard S. 2009. The Forgotten Component of Global Climate Change: Air Pollution as a Driver of Plant Evolution. **Invited Speaker at ASB Symposium on Evolution in Honor of E.O. Wilson's 80th Birthday**, ASB Meetings, Birmingham, AL. April 3rd.
- Neufeld, Howard S. 2009. Effects of Ozone on Plants and Ecosystems. **Invited Seminar**, Department of Biology, Georgia Southern University, Statesboro, GA. April 24th.
- Hou, Guichuan and Howard S. Neufeld. 2009. A new look into old histological techniques for studying root biology using modern microscopy. Annual Meeting of the American Society of Plant Biologists and Phycological Society of America joint meeting, July 18-22, Honolulu, HI.
- Neufeld, Howard S. 2009. Better Red than Dead: The Roles of Anthocyanins in Plant Tissues. **Invited Lecture** to the Torch Club of Boone, NC, September, 2009.
- Neufeld, Howard S. 2009. Effects of Ozone on Plants and Ecosystems, **Invited presentation at 14th Annual Pine Barrens Symposium**, Brookhaven National Labs, Long Island. October 29th.
- Neufeld, Howard S. 2009. Panel Discussion: On the Sesquicentennial of the Publication of *On the Origin of Species*: Celebrating 150 Years of Evolutionary Thought. Featuring ASU guest panelists. I was moderator of this panel. Thursday, November 19th, Blue Ridge Ballroom, Plemmons Student Union, ASU.
- Neufeld, Howard S. 2009. Climate Change and Forests: What We Might Expect. Invited lecture at Highlands Biological Station, Highlands, NC. **Guest lecture in ecology course at the station.** Monday, November 16th.
- Neufeld, Howard S. 2010. Better Red Than Dead: The Putative Roles of Anthocyanins in Leaves Stems and Roots. **Invited Seminar** at Department of Biology, Western Carolina University, February 5th.
- Neufeld, Howard S., Derick P. Poindexter, Paula Murakami and Paul Schaberg. 2010. Observations on the relationship between above and below-ground anthocyanin production in *Galax urceolata* growing in sunny and shady habitats. ASB Meetings, Asheville, NC, April 7-10.

Presentations (continued)

- Neufeld, Howard S. Brett Taubman, Jim Sherman, L. Baker Perry, Rahman Tashakkori, David Bowman, C. Long and Pat J. Sheridan. 2010 AppalAIR: The New Atmospheric Interdisciplinary Research Group at Appalachian State University. Air Pollution Workshop, Asheville, NC, April 12-15.
- Dolan, Chrisha and Howard S. Neufeld. 2010. Leaf anatomical characteristics do not explain differences in ozone responses between sensitive and insensitive genotypes of cutleaf coneflower. NE1030 Meeting, Pennsylvania State University, State College, PA. July 15-16.
- Neufeld, Howard S. 2011. Some Common Myths Surrounding the Creation/Evolution Debates: Using historical context to improve our understanding of them. **Invited Talk as the Darwin Day Speaker** at North Georgia College and State University, Dahlonega, GA, February 14.
- Neufeld, Howard S. 2011. Better red than dead: The putative roles of anthocyanins in leaves, stems and roots. **Invited Seminar to Department of Biology** at North Georgia College and State University, Dahlonega, GA, February 15.
- Neufeld, Howard S. 2011. Myths surrounding Darwinian evolution and the creation/evolution debates: Using history to improve our understanding of evolution. ASB Meetings, Huntsville, AL. April 14.
- Neufeld, Howard S., Seth J. Peoples, Alan W. Davison, Arthur H. Chappelka, Greg L. Somers, Jill R. Thomley and Fitzgerald L. Booker. 2011. Ambient ozone effects on gas exchange and total non-structural carbohydrate levels in cutleaf coneflower (*Rudbeckia laciniata* L.) Growing in Great Smoky Mountains National Park. International Air Pollution Workshop, Fort McMurray, Alberta, Canada. May 23-26.
- Dolan, Chrisha, Howard S. Neufeld, Ruth E. Dewel and Guichuan Hou. 2011. Leaf anatomical characteristics do not explain differences in sensitivity to ozone in cutleaf coneflower individuals. International Air Pollution Workshop, Fort McMurray, Alberta, Canada. May 23-26.
- Neufeld, Howard S., Derick P. Poindexter, Paula Murakami and Paul Schaberg. 2011. Observations on the relationship between above and below-ground anthocyanin production in *Galax urceolata* growing in sunny and shady habitats. International Workshop on Anthocyanins, Great Wolf Lodge, Concord, NC, Sep 11-14.
- Neufeld, Howard S. 2011. Climate change: What can we expect? and Air pollution effects and climate change. Seminars to teachers at Highlands Biological Station, Oct. 22 & 23.
- Neufeld, Howard S. 2011. Reactions to evolutionary theory from the late 19th century to the present. Math-Science Center Evening Lectures, ASU, Nov 17.
- Neufeld, Howard S. 2011. Reactions to evolutionary theory from the late 19th century to the present. Biology Department, Johnson C. Smith University, Nov 24.
- Neufeld, Howard S. 2012. Coupled Human and Natural Systems: Is There Really Any Ecology Devoid of Human Influences? Interdisciplinary Studies Brown Bag Seminar, Feb 6, LLC 105.