

# William H. Schlesinger President Cary Institute of Ecosystem Studies, Millbrook, NY

Research and Teaching Interests in Ecosystem Analysis, Global Change, and Biogeochemical Cycling

Certified Senior Ecologist, Ecological Society of America

#### **Address:**

Office: Cary Institute of Ecosystem Studies Home: 11 Linden Lane

PO Box AB

Millbrook, NY 12545 845-677-4392

845-677-5343 (office)

845-677-5976 (fax) Email: Schlesingerw@caryinstitute.org

Cellular: 845-702-5256

Millbrook, NY 12545

#### Homepages:

http://www.caryinstitute.org/people sci Schlesinger.html

http://www.nicholas.duke.edu/people/faculty/Schlesinger.html

http://www.esa.org/education/ecologists\_profile/EcologistsProfileDirectory/index.php?Closer=36

http://en.wikipedia.org/wiki/William H. Schlesinger

#### **Education:**

2008-2012

A.B. Dartmouth College, Hanover, NH, 1972 (cum laude)

Ph.D. Cornell University, Ithaca, NY, 1976

#### **Employment History:**

1972-1976	Teaching Assistant, Section of Ecology and Systematics, Cornell University
1976-1980	Assistant Professor of Biology, University of California, Santa Barbara
1980-2001	Department of Botany/Biology, Duke University Assistant Professor (1980-1983), Associate Professor (1983-1988), Professor (1988-1994), and James B. Duke Professor (1994-2001)
1998	Visiting Professor of Biogeochemistry, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA; fall semester
1999-2002	Director, Graduate Program in Ecology, Duke University
2001-2007	Dean and James B. Duke Professor of Biogeochemistry, Nicholas School of the Environment and Earth Sciences, Duke University
2007-	James B. Duke Professor Emeritus, Duke University
2007-	President, Cary Institute of Ecosystem Studies, Millbrook, NY
2007-	Visiting Professor, Ecology and Evolutionary Biology, Princeton University

Senior Visiting Fellow, School of Forestry & Environmental Studies, Yale University

Hono	rs:	
1971	Milton Sims K	Cramer Award, Dartmouth College
1972	Willard W. Eg	gleston Memorial Botany Prize, Dartmouth College
1995	American Aca	demy of Arts & Sciences, Elected Fellow
1999	Aldo Leopold	Leadership Program, Fellow
2003	National Acad	lemy of Sciences, Elected Member
2006	American Geo	physical Union, Elected Fellow
2006	Soil Science S	ociety of America, Elected Fellow
2008	Intergovernme Peace Prize, 2	ental Panel on Climate Change (IPCC) — Certificate of Recognition for participation in the Nobel 007
2009	American Ass	ociation for the Advancement of Science, Elected Fellow
2010	Renewable Na	tural Resources Foundation, Sustained Achievement Award
2012	Einstein Profe	ssorship, Chinese Academy of Sciences, Xiamen Institute for the Urban Environment
	ssional Activ In Governme  Executive B	nt:
	1993	Before Vice President Al Gore, on the activities of the Environmental Task Force (ETF) panel on land cover and productivity. September 15, 1993, The White House, Washington, DC
	2009	Briefing for Former Vice President Al Gore, "Carbon Sequestration," January 12, 2009, New York, NY
	2009	Briefing for U.S. Secretary for Agriculture, Thomas Vilsack, "Nitrogen and Climate Change," March 23, 2009, Washington, DC
	2010	Briefing for President's Council of Advisors on Science and Technology (PCAST), <i>The Science of Carbon Offsets</i> . August 19, 2010, Washington, DC
	Congression	nal Testimony
	1970	Hearings for the Environmental Quality Education Act of 1970 (HR 14753) before the U.S.

ongressional Testimony	
1970	Hearings for the Environmental Quality Education Act of 1970 (HR 14753) before the U.S. House of Representatives, Select Subcommittee on Education
1989	Hearings for the California Desert Protection Act (HR 780) before the U.S. House of Representatives, Subcommittee on National Parks and Public Lands
1991	Hearings for the California Desert Protection Act (HR 2929) before the U.S. House of Representatives, General Oversight Committee for Interior and Insular Affairs
1992	Hearings on global climate change and the biosphere, before the U.S. Senate, Subcommittee on Science, Technology, and Space (Guest of Senator Al Gore)
1997	Hearings on the EPA's proposed revisions to the Clean Air Act, before the U.S. House of Representatives, Committee on Government Reform and Oversight, Subcommittee on Economic Growth, Natural Resources and Regulatory Affairs
2007	Hearings on The Future of Fossil Fuels: Geological and Terrestrial Sequestration of Carbon Dioxide, before the U.S. House of Representatives, Subcommittee on Energy and Mineral Resources

#### Professional Activities (cont.): In Government (cont.):

#### Judicial Briefing

Schlesinger, W.H. et al. 2009. Motion to file brief *Amici Curiae* in support of petitioners before the U.S. Supreme Court on Mountain-top removal/valley-fill mining practices in the Appalachian region.

### Local and Regional Government Briefings

1997	Before the Riverside County (CA) Board of Supervisors on the impact of the proposed Eagle Mountain Landfill on Joshua Tree National Park
2004	Before the Environmental Review Commission of the General Assembly of North Carolina in hearings on greenhouse gas emissions and global climate change
2005	Before the North Carolina Senate Committee on Agriculture, Environment and Natural Resources on issues of global climate change
2006	Before the Legislative Commission on Global Climate Change, North Carolina General Assembly
2006	Before the North Carolina Utilities Commission, on the proposed Cliffside power plants
2009	Public comment before the Dutchess County Legislature on the impact of budget reductions on the environmental program of Cornell Cooperative Extension

#### Service to Government Agencies

1986-1989	National Science Foundation, Ecosystem Studies Program, Panel member for proposal review
1988-1989	National Research Council, Space Science Board, Committee on Earth Science
1990-1993	National Research Council, Committee on Global Change, Working Group on Terrestrial Ecosystems in Global Change
1991-1994	National Research Council, U.S. National Committee for SCOPE (Scientific Committee on Problems of the Environment)
1993-1996	North Atlantic Treaty Organization (NATO), Science Committee, Special Panel on Global Environmental Change
1994-1999	Universities Space Research Association (USRA), Earth Science Council
1997-1999	National Research Council, Climate Research Committee
1999-2000	Intergovernmental Panel on Climate Change (IPCC), Special Report on Land-Use, Land Use Change, and Forestry. (Lead Author), Chapter 3, "Implications of Different Definitions and Generic Issues"
1999	U.S. Department of Defense, <u>Select Panel on the Environmental Effects of RF</u> ( <u>Radiofrequency</u> ) <u>Chaff</u>
1999	City of Durham (NC), Greenhouse Gas Emissions Reduction Task Force
1999-2000	White House Blue Ribbon Panel for the National Climate Assessment

1999-2002 National Research Council, Committee on Global Change Research

#### **Professional Activities (cont.):**

#### In Government (cont.):

#### Service to Government Agencies (cont.)

2002-2004 National Research Council, Committee to Review the U.S. Climate Change Science Program Strategic Plan

2005-2007 National Research Council, U.S. National Committee for the International Institute for Applied Systems Analysis (IIASA)

2007-2010 U.S. Climate Change Science Program, Carbon Cycle Scientific Steering Group

2008-2010 National Research Council, Committee on Climate, Energy, and National Security

#### In Scientific Organizations:

#### Committees and Elected Offices:

American Geophysical Union

2003-2004 Ad hoc Committee for the AGU Statement on Climate Change

2006-2008 Union Budget Committee

2008-2010 Union Audit and Legal Affairs Committee (Chair)

2008-2010 President, Biogeosciences Section

Ecological Society of America

1988-1997 Publications Committee

1991-1992 Chairman, Publications Committee

1996-2002 Vice President for Finance

2003-2004 President

Geological Society of America

1971-1972 Committee on Environment and Public Policy

International Society of Environmental Biogeochemistry

2006-2011 International Committee

Sigma Xi

2006-2007 Committee on Publications

Soil Science Society of America

2008-2009 Committee on Emerging Issues in Soil Science

2008-2009 Congressional District Core Constituent Science Team [CCST]

#### **Editorial Service:**

Blackwell Scientific Publishers

1994-2001 Board of Editors, Global Change Biology

Ecological Society of America

1982-1985 Board of Editors, *Ecology* 1987-1988 Managing Editor, *Ecology* 

1989-1995 Board of Editors, Ecological Applications

Kluwer Academic Publishers

1983-2000 Board of Editors, Biogeochemistry

Oxford University Press

Board of Editors, The Encyclopedia of Global Change

## Professional Activities (cont.): In Scientific Organizations (cont.):

Editorial Service (cont.):

Springer-Verlag Publishers

1993-1998 Board of Editors, Ecological Studies Series

Annual Reviews Incorporated

2000-2002 Board of Editors, The Annual Review of Ecology and Systematics

#### In Non-government/Not-for-Profit Organizations:

National Geographic Society

2000-2003 Committee on Research and Exploration

Environmental Defense, North Carolina

2004-2007 Board of Trustees

North Carolina State Museum of Natural Sciences

2004-2008 Advisory Commission

Southern Environmental Law Center

2006- Board of Trustees

Doris Duke Charitable Foundation

2007- Board of Trustees

National Parks Conservation Association (NPCA)

2008- Scientific Advisory Committee

Natural Resources Defense Council (NRDC)

2009- Board of Trustees

Duke University, Center for Environmental Implications of NanoTechnology (CEINT)

2010-2012 External Advisory Board

Yale University

2011-2012 University Council Committee on Forestry and Environmental Studies

#### In Corporations:

North Carolina Green Power

2004-2007 Board of Directors

Conoco-Phillips

2005-2007 St. Andrews Prize for the Environment, Selection Committee

TerraPass Inc.

2005- Technical Advisory Board

#### (Recent) Professional Meetings and Workshops:

Annual Meeting of the Geological Society of America, Denver, CO (Halbouty Distinguished Lecture)

2008 American Geophysical Union, San Francisco, CA

2009 American Geophysical Union, Toronto, Canada

2009 Ecological Society of America, Albuquerque, NM (invited keynote paper)

2010 Ecological Society of America, Pittsburgh, PA, Symposium: Science-based Environmental Advocacy

2011 Ecological Society of America, Austin, TX (invited symposium paper)

2012 Gordon Conference, Aquatic & Environmental Sciences, Holderness, NH

#### **Media Coverage of Research and Professional Activities:**

Radio: BBC (January 1994; Leading Edge, January 15, 2004; Science in Action, February 20, 2004)

National Public Radio (Morning Edition, May 1995; All Things Considered, August 9, 2001, September

13, 2006; Living on Earth, July 9, 2010) WUNC (The State of Things, December 22, 2004) John Bradshaw Layfield Show (February 10, 2007)

WAMC (Albany, NY, with Alan Chartock, May 4, 2010); (Weekday broadcasts of Earth Wise program,

beginning January 2, 2012)

Television: CNN, August 1994, October 6, 1997, August 6, 1999

PBS/NOVA, April 18, 2000

WUNC-TV North Carolina People with Bill Friday, January 3, 2003

CSPAN, July 2, 2003

The Weather Channel, Forecast Earth with Heidi Cullen, October 8, 2006

FOX News, Hannity and Colmes Show, October 4, 2007

Book: Highlighted in Al Gore's 2009 book, pp. 204; 216, Our Choice, Rodale Publishers, Inc.

Magazines: Discover, April 1994, February 1995

National Geographic, May 1995, February 2004

Scientific American, February 1998

U.S. News and World Report, February 10, 2003

Time, September 23, 2009 (Online)

Newspapers: Boston Globe (June 26, 2001)

Chronicle of Higher Education (September 20, 2002)

New York Times (March 13, 1990 (Science Watch); August 15, 1995 (Science Times); December 10 1996, May 24, 2001, February 26, 2003, January 11, 2005 (Science Times), June 4, 2006

(Week in Review))

Raleigh News and Observer ("Tar Heel of the Week," October 27, 1996)

Washington Post (June 19, 1997, January 15, 2004, July 15, 2006, February 8, 2008)

Web: World Wrestling Entertainment (http://www.wwe.com/inside/news/archive/jblglobalwarm)

National Climate Conference, *Ecology of a Hot Planet*, January 27, 2010 [ www.bard.edu/CEP ) Natural Resources Defense Council, *OnEarth*, August 3, 2011; September 6, 2011, and February 1,

2012.

Press Briefing: Briefing on the impacts of mountain-top removal mining at the National Press Club, Washington, DC,

January 2010

Other: MetroGreen Business, Expert Q&A: The Cary Institute, February 14, 2010,

[http://www.metrogreenbusiness.com/news/qa.php/2010/02/14/qaamp a dr william schlesinger president]

#### (Major) Research Support:

1977-1979 Soil Nutrient Turnover in a Chaparral Ecosystem, \$72,300 from the National Science Foundation (Grant

DEB-77-14415)

1979-1983 Soil Nutrient Turnover in a Chaparral Ecosystem, \$157,100 from the National Science Foundation

(Grant DEB-79-11753). \$102,000 transferred to Duke University as Grant DEB-80-40484

1982-1983	Arid Zone Soil Carbonates in the Global Carbon Cycle, \$67,000 from the U.S. Department of Energy via subcontract from Oak Ridge National Laboratory
1983-1986	Processes of Soil Carbonate Deposition in Arid Ecosystems, \$450,000 from the National Science Foundation (Grant BSR-82-12466)
1985-1988	The Effects of Geologic Substratum on Origin and Maintenance of Disjunct Forest Ecosystems in a Desert Climate, \$170,883 from the National Science Foundation (Grant BSR-85-04859). (Coinvestigator with W.D. Billings)
1986-1987	Isotopic Composition of Sulfur in Surficial Gypsum Deposits in Deserts of the Southwestern United States, \$40,000 from Public Service Company of New Mexico
1988-1991	Desertification: Responses of Arid Landscapes and Ecosystems to Resource Redistribution. Coinvestigator in cooperative research as part of the Desert Long-term Ecological Research (LTER) Program at New Mexico State University, \$328,600 subcontract to Duke University from National Science Foundation Grants (BSR-86-12106 & 88-11160) to NMSU
1989-1992	Controls on Ecosystem-Level Functions in a Lichen-Oak Woodland, \$68,228 from the National Science Foundation (Grant BSR 89-07689)
1991-1992	Workshop for the Development of a Soil Warming Experiment, \$38,730 from the National Science Foundation (Grant BSR-91-01031)
1991-1994	Response of Western Montane Forest Ecosystems to Global Climate Change, \$381,000 from the U.S. Department of Agriculture (Grant 91-37101-6724)
1991-1994	Desertification: Responses of Arid Landscapes and Ecosystems to Resource Redistribution (Jornada LTER), \$1,199,947 from The National Science Foundation (Grant DEB-92-40261)
1993-1998	Soil Carbon Accumulation under CO <sub>2</sub> Enrichment (FACE), \$500,000 from the National Science Foundation (Grant DEB 93-06295)
1994-1997	Impact of Climate on Plant-Soil Interactions and Carbon Budgets of Ponderosa Pine, \$98,136 from the U.S. Department of Agriculture (Grant 94-37101-0601)
1994-2000	Long-Term Ecological Studies in the Chihuahuan Desert (Jornada LTER), \$3,998,977 from the National Science Foundation (Grant DEB 94-11971). (Co-Principal Investigator with J.F. Reynolds, Botany)
1995-2000	Upgrading of Operations of the National Phytotron, \$1,373,612 from the National Science Foundation. (Grant DEB 94-15541) (Co-investigator with J.F. Reynolds, D.T. Patterson, J.N. Siedow and B.R. Strain)
1995-1998	Forest-Atmospheric Carbon Transfer and Storage (FACTS-I). \$2,455,000 from the U.S. Department of Energy (Grant DE-FG05-95ER62083)
1996-1999	Forest-Atmosphere Carbon Transfer and Storage (FACTS-1), \$422,318 from Brookhaven National Laboratory (Contract 725053)
1996-1998	The effects of global climate change on carbon transport to groundwater under forest vegetation in the Free-Air CO <sub>2</sub> - Enrichment (FACE) experiment in the Duke Forest, \$223,540 from the Electric Power Research Institute (EPRI) (Contract W08020-15)
1997-2000	Forest Succession in a CO <sub>2</sub> -Enriched Environment: Growth Responses of Individuals, Species and Communities in the Forest-Atmosphere Carbon Transfer and Storage-1 (FACTS-1) Forest, \$297,971 from the U.S. Department of Energy (DE-FG02-97ER62463), (Co-Principal Investigator with J.S. Clark, Botany)
1998-2001	Forest-Atmosphere Carbon Transfer and Storage (FACTS-1), \$3,073,063 from U.S. Department of Energy. (Renewal of Grant DE-FG05–95ER62083), (Co Principal Investigator with R. Oren)

1999-2002	Nutrient cycling in response to forest growth at elevated CO <sub>2</sub> (FACE). \$368,401 from The National Science Foundation (DEB-98-15350)
2000-2006	Jornada Basin Long-Term Ecological Research (LTER IV), \$328,760 subcontract from NSF Grant to New Mexico State University
2001-2004	Forest-Atmosphere Carbon Transfer and Storage (FACTS), \$ 3,211,960 from the U.S. Department of Energy (Renewal of Grant DE-FG02-95ER62083), (Co-Principal Investigator with R. Oren)
2001-2004	Assessing Ecological Models of Varying Complexity for Predicting Carbon Sequestration in Managed Pine Plantations, \$142,834 from NIGEC-Southeast, (Co-Principal Investigator with G. Katul and R. Oren)
2004-2005	Workshop on Landscapes, Genomics and Transgenic Conifer Forests, \$25,000 from the National Science Foundation (Co-Principal Investigator with Claire Williams)
2004-2007	Forest-Atmosphere Carbon Transfer and Storage (FACTS), \$3,518,338 from the U.S. Department of Energy (Renewal of Grant DE-FG02-95ER62083), (Co-Principal Investigator with R. Oren)
2007-2008	Frontiers in Sustainability Science: Biofuels as a Critical Test (Workshop), \$49,990 from the National Science Foundation (DEB-0733232), (Co-Principal Investigator with C. Canham, P. Groffman, and M. Pace)
2010-2012	Workshop on Linking Ecology and Ethics for a Changing World: Values, Philosophy, and Action, \$74,000 from the National Science Foundation, (Co-Principal Investigator with S. Pickett et al.)

#### **Publications:**

#### **Books:**

#### As author or coauthor:

- Waring, R.H. and W.H. Schlesinger. 1985. Forest Ecosystems: Concepts and Management. Academic Press, San Diego, 338pp.
- Schlesinger, W.H. 1991. *Biogeochemistry: An analysis of global change.* Academic Press, San Diego. 443 p. (Fifth printing, 1995)
- Schlesinger, W.H. 1997. *Biogeochemistry: An analysis of global change*. 2nd edition. Academic Press, San Diego. 558 p. (Eighth printing, 2005; Spanish edition, 2000)

#### As editor:

- Schlesinger, W.H., ed. 2003. *Biogeochemistry*. Volume 8 of the *Treatise of Geochemistry*. (H.D. Holland and K.K.. Turekian, executive eds.). Elsevier Science Ltd., Amsterdam.
- Havstad, K.M., L.F. Huenneke, and W.H. Schlesinger, eds. 2006. Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin Long-Term Ecological Research Site. Oxford University Press.
- Aneja, V.P., W.H. Schlesinger, R. Knighton, G. Jennings, D. Niyogi, W. Gilliam, and C. Duke, eds. 2006. *Proceedings of the Workshop on Agricultural Air Quality: State of the Science*. North Carolina State University, Raleigh.
- Ostfeld, R.S. and W.H. Schlesinger (eds.). 2008 2012. *The Year in Ecology and Conservation Biology, 2008—2012.* Annals of the New York Academy of Sciences, Volumes 1134, 1162, 1195, 1223, and 1249. Wiley-Blackwell, New York.

#### **Scientific Articles and Book Chapters:**

- Schlesinger, W.H. 1971. The vegetative composition of a beech-maple climax forest in the glaciated plateau of northeastern Ohio. Ohio Journal of Science 71: 174-180.
- Dethier, D.P. and W.H. Schlesinger. 1973. The copper, lead, and zinc content of metamorphic rocks on Mt. Moosilauke, New Hampshire. Ohio Journal of Science 73: 58-61.
- Schlesinger, W.H., W.A. Reiners, and D.S. Knopman. 1974. Heavy metal concentrations and deposition in bulk precipitation in montane ecosystems of New Hampshire, U.S.A. Environmental Pollution 6: 39-47.
- Schlesinger, W.H. and W.A. Reiners. 1974. Deposition of water and cations on artificial foliar collectors in fir krummholz of New England mountains. Ecology 55: 378-386.
- Schlesinger, W.H. and G.L. Potter. 1974. Lead, copper, and cadmium concentrations in small mammals in the Hubbard Brook Experimental Forest. Oikos 25: 148-152.
- Schlesinger, W.H. 1976. Toxic foods and vole cycles: additional data. American Naturalist 110: 315-317.
- Reiners, W.A., W.H. Schlesinger, and R.H. Marks. 1977. Horizontal interception in high-elevation ecosystems of New England. pp. 571-589. In: R.G. Semonin and R.W. Beadle (eds.). *Precipitation Scavenging 1974*. ERDA CONF-741003. National Technical Information Service, Springfield, Virginia.
- Schlesinger, W.H. 1977. Carbon balance in terrestrial detritus. Annual Review of Ecology and Systematics 8: 51-81.
- Schlesinger, W.H. and P.L. Marks. 1977. Mineral cycling and the niche of Spanish Moss, *Tillandsia usneoides* L. American Journal of Botany 64: 1254-1262.
- Schlesinger, W.H. and B.F. Chabot. 1977. The use of water and minerals by evergreen and deciduous shrubs in Okefenokee Swamp. Botanical Gazette 138: 490-497.
- Schlesinger, W.H. 1978. Community structure, dynamics and nutrient cycling in the Okefenokee cypress swamp-forest. Ecological Monographs 48: 43-65.
- Schlesinger, W.H. 1978. On the relative dominance of shrubs in Okefenokee Swamp. American Naturalist 112: 949-954.
- Schlesinger, W.H. and D.S. Gill. 1978. Demographic studies of the chaparral shrub, *Ceanothus megacarpus*, in the Santa Ynez Mountains, California. Ecology 59: 1256-1263.
- Schlesinger, W.H. and M.M. Hasey. 1980. The nutrient content of precipitation, dry fallout, and intercepted aerosols in the chaparral of southern California. American Midland Naturalist 103: 114-122.
- Jones, C.S. and W.H. Schlesinger. 1980. *Emmenanthe penduliflora* (Hydrophyllaceae): Further consideration of germination response. Madrono 27: 122-125.
- Schlesinger, W.H. and D.S. Gill. 1980. Biomass, production, and changes in the availability of light, water, and nutrients during the development of pure stands of the chaparral shrub, *Ceanothus megacarpus* after fire. Ecology 61: 781-789
- St. Omer, L. and W.H. Schlesinger. 1980. Field and greenhouse investigations of the effect of increasing salt stress on the anatomy of *Jaumea carnosa* (Asteraceae), a salt marsh species. American Journal of Botany 67: 1455-1465.
- St. Omer, L. and W.H. Schlesinger. 1980. Regulation of NaCl in *Jaumea carnosa* (Asteraceae), a salt marsh species, and its effect on leaf succulence. American Journal of Botany 67: 1448-1454.
- Gray, J.T. and W.H. Schlesinger. 1981. Biomass, production, and litterfall in the coastal sage scrub of southern California. American Journal of Botany 68: 24-33.
- Schlesinger, W.H. and J.M. Melack. 1981. Transport of organic carbon in the world's rivers. Tellus 33: 172-187, 415.

- Schlesinger, W.H. and M.M. Hasey. 1981. Decomposition of chaparral shrub foliage: Losses of organic and inorganic constituents from deciduous and evergreen leaves. Ecology 62: 762-774.
- Nilsen, E.T. and W.H. Schlesinger. 1981. Phenology, productivity, and nutrient accumulation in the post-fire chaparral shrub, *Lotus scoparius*. Oecologia 50: 217-224.
- Gray, J.T. and W.H. Schlesinger. 1981. Nutrient cycling in Mediterranean type ecosystems. pp. 259-285. In: P.C. Miller (ed.). *Resource Use by Chaparral and Matorral*. Springer-Verlag, New York.
- Schlesinger, W.H., J.T. Gray, D.S. Gill, and B.E. Mahall. 1982. *Ceanothus megacarpus* chaparral: A synthesis of ecosystem processes during development and annual growth. Botanical Review 48: 71-117.
- Schlesinger, W.H., J.T. Gray, and F.S. Gilliam. 1982. Atmospheric deposition processes and their importance as sources of nutrients in a chaparral ecosystem of southern California. Water Resources Research 18: 623-629.
- Schlesinger, W.H. 1982. Carbon storage in the caliche of arid soils: A case study from Arizona. Soil Science 133: 247-255.
- Mahall, B.E. and W.H. Schlesinger. 1982. Effects of irradiance on growth, photosynthesis, and water use efficiency of seedlings of the chaparral shrub, *Ceanothus megacarpus*. Oecologia 54: 291-299.
- Gray, J.T. and W.H. Schlesinger. 1983. Nutrient use by evergreen and deciduous shrubs in southern California. II. Experimental investigations of the relationship between growth, nitrogen uptake, and nitrogen availability. Journal of Ecology 71: 43-56.
- Schlesinger, W.H. 1984. Soil organic matter: A source of atmospheric CO<sub>2</sub>. pp. 111-127. In: G.M. Woodwell (ed.). *The Role of Terrestrial Vegetation in the Global Carbon Cycle: Measurement by Remote Sensing*. John Wiley and Sons, New York.
- Schlesinger, W.H. and C.S. Jones. 1984. The comparative importance of overland runoff and mean annual rainfall to shrub communities of the Mojave Desert. Botanical Gazette 145: 116-124.
- Schlesinger, W.H. 1985. The formation of caliche in soils of the Mojave Desert, California. Geochimica et Cosmochimica Acta 49: 57-66.
- Schlesinger, W.H. 1985. Decomposition of chaparral shrub foliage. Ecology 66: 1353-1359.
- Marion, G.M., W.H. Schlesinger, and P.J. Fonteyn. 1985. CALDEP: A regional model for soil CaCO<sub>3</sub> (caliche) deposition in southwestern deserts. Soil Science 139: 468-481.
- Houghton, R.A., W.H. Schlesinger, S. Brown, and J.F. Richards. 1985. Carbon dioxide exchange between the atmosphere and terrestrial ecosystems. pp. 113-140. In: J.R. Trabalka (ed.). *Atmospheric Carbon Dioxide and the Global Carbon Cycle*. U.S. Department of Energy, DOE, ER-0239, National Technical Information Service, Springfield, VA.
- Lajtha, K. and W.H. Schlesinger. 1986. Plant response to variations in nitrogen availability in a desert shrubland community. Biogeochemistry 2: 29-37.
- Schlesinger, W.H. 1986. Changes in soil carbon storage and associated properties with disturbance and recovery. pp. 194-220. In: J.R. Trabalka and D.E. Reichle (eds.). *The Changing Carbon Cycle: A Global Analysis*. Springer-Verlag, New York.
- Schlesinger, W.H., P.J. Fonteyn, and G.M. Marion. 1987. Soil moisture content and plant transpiration in the Chihuahuan Desert of New Mexico. Journal of Arid Environments 12: 119-126.
- Lajtha, K., J. Weishampel, and W.H. Schlesinger. 1987. Phosphorus and pH tolerances in the germination of the desert shrub *Larrea tridentata* (Zygophyllaceae). Madrono 34: 63-68.
- Fonteyn, P.J., W.H. Schlesinger, and G.M. Marion. 1987. Accuracy of soil thermocouple hygrometer measurements in desert ecosystems. Ecology 68: 1121-1124.

- Lajtha, K. and W.H. Schlesinger. 1988. The biogeochemistry of phosphorus cycling and phosphorus availability along a desert soil chronosequence. Ecology 69: 24-39.
- DeLucia, E.H., W.H. Schlesinger, and W.D. Billings. 1988. Water relations and the maintenance of Sierran conifers on hydrothermally altered rock. Ecology 69: 303-311.
- Schlesinger, W.H. and W.T. Peterjohn. 1988. Ion and sulfate-isotope ratios in arid soils subject to wind erosion in the southwestern U.S.A. Soil Science Society of American Journal 52: 54-58.
- Mowbray, T. and W.H. Schlesinger. 1988. The buffer capacity of organic soils of the Bluff Mountain fen, North Carolina. Soil Science 146: 73-79.
- Lajtha, K. and W. H. Schlesinger. 1988. The effect of CaCO<sub>3</sub> on the uptake of phosphorous by two desert shrub species, *Larrea tridentata* (DC.) Cov. and *Parthenium incanum* H.B.K. Botanical Gazette 149: 328-334.
- Schlesinger, W.H., G.M. Marion, and P.J. Fonteyn. 1989. Stable isotope ratios and the dynamics of caliche in desert soils. pp. 309-317. In: P.W. Rundel, J.R. Ehleringer, and K.A. Nagy (eds.). *Stable Isotopes in Ecological Research*, Springer-Verlag, New York.
- Schlesinger, W.H., E.H. DeLucia, and W.D. Billings. 1989. Nutrient-use efficiency of woody plants on contrasting soils in the western Great Basin, Nevada. Ecology 70: 105-113.
- Schlesinger, W.H. 1989. Discussion: Ecosystem structure and function. pp 268-274. In: J.R. Roughgarden, R.M. May, and S.A. Levin (eds.). *Perspectives in Ecological Theory*. Princeton University Press, Princeton, New Jersey.
- DeLucia, E.H., W.H. Schlesinger, and W.D. Billings. 1989. Edaphic limitations to growth and photosynthesis in Sierran and Great Basin Vegetation. Oecologia 78: 184-190.
- Schlesinger, W.H, P.J. Fonteyn, and W.A. Reiners. 1989. Effects of overland flow on plant water relations, erosion, and soil water percolation on a Mojave Desert landscape. Soil Science Society of America Journal 53: 1567-1572.
- Schlesinger, W.H., J.F. Reynolds, G.L. Cunningham, L.F. Huenneke, W.M. Jarrell, R.A. Virginia, and W.G. Whitford. 1990. Biological feedbacks in global desertification. Science 247: 1043-1048.
- Peterjohn, W.T. and W.H. Schlesinger. 1990. Nitrogen loss from deserts in the southwestern United States. Biogeochemistry 10: 67-79.
- DeLucia, E.H. and W.H. Schlesinger. 1990. Ecophysiology of Great Basin and Sierra Nevada vegetation on contrasting soils. pp. 143-178. In: C.B. Osmond, L.F. Pitelka, and G.M. Hidy (eds.). *Plant Biology of the Basin and Range*. Springer-Verlag, New York.
- Gallardo, A. and W.H. Schlesinger. 1990. Estimating microbial biomass nitrogen using the fumigation-incubation and fumigation-extraction methods in a warm-temperate forest soil. Soil Biology and Biochemistry 22: 927-932.
- Schlesinger, W.H. 1990. Evidence from chronosequence studies for a low carbon-storage potential of soils. Nature 348: 232-234.
- Marion, G.M., W.H. Schlesinger, and P.J. Fonteyn. 1990. Spatial variability of CaCO<sub>3</sub> solubility in a Chihuahuan Desert soil. Arid Soil Research and Rehabilitation 4: 181-191.
- DeLucia, E.H. and W.H. Schlesinger. 1991. Resource-use efficiency and drought tolerance in adjacent Great Basin and Sierran plants. Ecology 72: 51-58.
- Schlesinger, W.H. and W.T. Peterjohn. 1991. Processes controlling ammonia volatilization from Chihuahuan desert soils. Soil Biology and Biochemistry 23: 637-642.
- Schlesinger, W.H. 1991. Climate, environment and ecology. pp. 371-378. In: J. Jager and H.L. Ferguson (eds.). Climate Change: Science, Impacts and Policy. *Proceedings of the Second World Climate Conference*. Cambridge University Press.

- Knops, J.M.H., T.H. Nash, V.L. Boucher, and W.H. Schlesinger. 1991. Mineral cycling and epiphytic lichens: Implications at the ecosystem level. The Lichenologist 23: 309-321.
- Peterjohn, W.T. and W.H. Schlesinger. 1991. Factors controlling denitrification in a Chihuahuan desert ecosystem. Soil Science Society of America Journal 55: 1694-1701.
- Schlesinger, W.H. 1992. Biogeochemistry. Geotimes 37(2): 23-24.
- Marion, G.M., W.H. Schlesinger, and P.J. Fonteyn. 1992. Alkalinity measurements in water extracts of calcareous soils. Soil Science Society of America Journal 56: 598-600.
- Raich, J.W. and W.H. Schlesinger. 1992. The global carbon dioxide flux in soil respiration and its relationship to vegetation and climate. Tellus 44B: 81-99.
- Schlesinger, W.H. and A.E. Hartley. 1992. A global budget for atmospheric NH<sub>3</sub>. Biogeochemistry 15: 191-211.
- Gallardo, A. and W.H. Schlesinger. 1992. Carbon and nitrogen limitations of soil microbial biomass in desert ecosystems. Biogeochemistry 18: 1-17.
- Schlesinger, W.H. 1993. Response of the terrestrial biosphere to global climate change and human perturbation. Vegetatio 104: 295-305.
- Schlesinger, W.H. 1993. Biogeochemistry. Geotimes 38(2): 19-20.
- Schlesinger, W.H., J.M.H. Knops, and T.H. Nash. 1993. Arboreal sprint failure: Lizardfall in a California oak woodland. Ecology 74: 2465-2467.
- Megonigal, J.P. and W.H. Schlesinger. 1994. Biogeochemistry. Geotimes 39(2): 19-20.
- Callaway, R.M., E.H. DeLucia, and W.H. Schlesinger. 1994. Biomass allocation of montane and desert ponderosa pine: An analog for response to climate change. Ecology 75: 1474-1481.
- DeLucia, E.H., R.M. Callaway, and W.H. Schlesinger. 1994. Offsetting changes in biomass allocation and photosynthesis in ponderosa pine (*Pinus ponderosa*) in response to climatic change. Tree Physiology 14: 669-677.
- Callaway, R.M., E.H. DeLucia, E.M. Thomas, and W.H. Schlesinger. 1994. Compensatory responses of CO<sub>2</sub> exchange and biomass allocation and their effects on the relative growth rate of ponderosa pine in different CO<sub>2</sub> and temperature regimes. Oecologia 98: 159-166.
- Gallardo, A. and W.H. Schlesinger. 1994. Factors limiting microbial biomass in the mineral soil and forest floor of a warm-temperate forest. Soil Biology and Biochemistry 26: 1409-1415.
- Marion, G.M. and W.H. Schlesinger. 1994. Quantitative modeling of soil forming processes in deserts: The CALDEP and CALGYP models. pp. 129-145. In: R.B. Bryant and R.W. Arnold (eds). *Quantitative Modeling of Soil Forming Processes*. Special Publication Number 39, Soil Science Society of America, Madison, Wisconsin.
- Schlesinger, W.H. 1994. The vulnerability of biotic diversity. pp. 245-260. In: R.B. Socolow, C. Andrews, F. Berkhout, and V. Thomas (eds.). *Industrial Ecology and Global Change*. Cambridge University Press.
- Ayres, R.U., W.H. Schlesinger, and R.B. Socolow. 1994. Human impacts on the carbon and nitrogen cycles. pp. 121-156. In: R.H. Socolow, C. Andrews, F. Berkhout, and V. Thomas (eds.). *Industrial Ecology and Global Change*. Cambridge University Press.
- Schlesinger, W.H. 1994. Changes in terrestrial carbon storage and interactions between the global carbon and nitrogen cycles. pp. 65-85. In: D.D. Caron et al. (eds.). *Ecological and Social Dimensions of Global Change*. Institute of International Studies, University of California, Berkeley.
- Schlesinger, W.H. 1995. Soil respiration and changes in soil carbon stocks. pp. 159-168. In: G.M. Woodwell and F.T. Mackenzie (eds.). *Biotic Feedbacks in the Global Climate System*. Oxford University Press, Oxford.
- Megonigal, J.P. and W.H. Schlesinger. 1995. Biogeochemistry. Geotimes 40(2): 39-40.

- Cross, A.F. and W.H. Schlesinger. 1995. A literature review and evaluation of the Hedley fractionation: Applications to the biogeochemical cycle of soil phosphorus in natural ecosystems. Geoderma 64: 197-214.
- Gallardo, A. and W.H. Schlesinger. 1995. Factors determining soil microbial biomass and nutrient immobilization in desert soils. Biogeochemistry 28: 55-68.
- DeLucia, E.H. and W.H. Schlesinger. 1995. Photosynthetic rates and nutrient-use efficiency among evergreen and deciduous shrubs in Okefenokee Swamp. International Journal of Plant Sciences 156: 19-28.
- Schlesinger, W.H. 1995. An overview of the global carbon cycle. pp. 9-25. In: R. Lal, J. Kimble, E. Levine, and B.A. Stewart (eds.). *Soils and Global Change*. Lewis Publishers, Boca Raton, Florida.
- Galloway, J.N., W.H. Schlesinger, H. Levy, A. Michaels, and J.L. Schnoor. 1995. Nitrogen fixation: Anthropogenic enhancement environmental response. Global Biogeochemical Cycles 9: 235-252.
- Schlesinger, W.H. and J.P. Megonigal. 1996. Biogeochemistry. Geotimes 41(2): 40.
- Knops, J.M.H., T.H. Nash, and W.H. Schlesinger. 1996. The influence of epiphytic lichens on the nutrient cycling of an oak woodland. Ecological Monographs 66: 159-179.
- Schlesinger, W.H., J.A. Raikes, A.E. Hartley, and A.F. Cross. 1996. On the spatial pattern of soil nutrients in desert ecosystems. Ecology 77: 364-374.
- Schlesinger, W.H. and N. Gramenopoulos. 1996. Archival photographs show no climate-induced changes in woody vegetation in the Sudan, 1943-1994. Global Change Biology 2: 137-141.
- Gallardo, A. and W.H. Schlesinger. 1996. Exclusion of sagebrush *Artemisia tridentata* Nutt. from hydrothermally altered rock by low phosphorus availability. Madrono 43: 292-298.
- Torbert, H.A., S.A. Prior, H.H. Rogers, W.H. Schlesinger, G.L. Mullins, and G.B. Runion. 1996. Elevated atmospheric carbon dioxide in agroecosystems affects groundwater quality. Journal of Environmental Quality 25: 720-726.
- Winkler, J.P, R.S. Cherry, and W.H. Schlesinger. 1996. The  $Q_{10}$  relationship of microbial respiration in a temperate forest soil. Soil Biology and Biochemistry 28: 1067-1072.
- Callaway, R.M., E.H. DeLucia, D. Moore, R. Nowak, and W.H. Schlesinger. 1996. Competition and facilitation: Contrasting effects of *Artemisia tridentata* on desert vs. montane pines. Ecology 77: 2130-2141.
- Havstad, K.M. and W.H. Schlesinger. 1996. Reflections on a century of rangeland research in the Jornada basin of New Mexico. pp. 10-15. In: J.R. Barrow, E.D. McArthur, R.E. Sosebee, and R.J. Tausch (eds.). *Proceedings of the Symposium on Shrubland Ecosystem Dynamics in a Changing Environment*. U.S. Forest Service, Odgen, Utah.
- Schlesinger, W.H. 1996. Biogeochemical processes and dynamics. pp. 25-33. In Final Report, NATO Special Programme on the Science of Global Environmental Change. NATO, Scientific and Environmental Affairs Division, Brussels.
- DeLucia, E.H., R.M. Callaway, E.M. Thomas, and W.H. Schlesinger. 1997. Mechanisms of phosphorus acquisition for ponderosa pine under high CO<sub>2</sub> and temperature. Annals of Botany 79: 111-120.
- Megonigal, J.P. and W.H. Schlesinger. 1997. Enhanced CH<sub>4</sub> emissions from a wetland soil exposed to elevated CO<sub>2</sub>. Biogeochemistry 37: 77-88.
- Schlesinger, W.H. 1997. Biogeochemistry. Geotimes 42(2):44.
- Reynolds, J.F., R.A. Virginia, and W.H. Schlesinger. 1997. Defining functional types for models of desertification. pp. 195-216. In T.M. Smith, H.H. Shugart, and F.I. Woodward (eds.). *Plant Functional Types*. Cambridge University Press, Cambridge.

- Vitousek, P.M., J.D. Aber, R.W. Howarth, G.E. Likens, P.A. Matson, D.W. Schindler, W.H. Schlesinger, and D. Tilman. 1997. Human alteration of the global nitrogen cycle: Sources and Consequences. Ecological Applications 7: 737-750.
- Torbert, H.A., H.H. Rogers, S.A. Prior, W.H. Schlesinger, and G.B. Runion. 1997. Effects of elevated atmospheric CO<sub>2</sub> in agro-ecosystems on soil carbon storage. Global Change Biology 3: 513-521.
- Knops, J.M.H., T.H. Nash, and W.H. Schlesinger. 1997. The influence of epiphytic lichens on the nutrient cycling of a blue oak woodland. pp. 75-82. In: *Proceedings of a Symposium on Oak Woodlands: Ecology, Management, and Urban interface Issues*. U.S. Forest Service, General Technical Report PSW-GTR-160.
- Schlesinger, W.H., L.A. Bruijnzeel, M.B. Bush, E.M. Klein, K.A. Mace, J.A. Raikes, and R.J. Whittaker. 1998. The biogeochemistry of phosphorus after the first century of soil development on Rakata Island, Krakatau, Indonesia. Biogeochemistry 40: 37-55.
- Schlesinger, W.H. and A.M. Pilmanis. 1998. Plant-soil interactions in deserts. Biogeochemistry 42: 169-187.
- Cross, A.F. and W.H. Schlesinger. 1998. Soil phosphorus availability in desert soils. pp. 295-298. In: J.P. Lynch and J. Deikman (eds.). *Phosphorus in Plant Biology: Regulatory Roles in Molecular, Cellular, Organismic, and Ecosystem Processes*. American Society of Plant Physiologists, Washington, D.C.
- Connin, S.L., R.A. Virginia, P. Chamberlain, L. Huenneke, K. Harrison, and W.H. Schlesinger. 1998. Dynamics of carbon storage in degraded arid land environments: A case study from the Jornada Experimental Range, New Mexico (USA). pp. 132-148. In: V.R. Squires, E.P. Glenn, and A.T. Ayoub (eds.). *Combating Global Climate Change by Combating Land Degradation*. Proceedings of a Workshop, Nairobi, Kenya, United Nations Environment Programme.
- Schlesinger, W.H., A.D. Abrahams, A.J. Parsons, and J.C. Wainwright. 1999. Nutrient losses in runoff from grassland and shrubland habitats in southern New Mexico: I. Rainfall simulation experiments. Biogeochemistry 45: 21-34.
- DeLucia, E.H., J.G. Hamilton, S.L. Naidu, R.B. Thomas, J.A. Andrews, A. Finzi, M. Lavine, R. Matamala, J.E. Mohan, G.R. Hendrey, and W.H. Schlesinger. 1999. Net primary production of a forest ecosystem with experimental CO<sub>2</sub> enrichment. Science 284: 1177-1179.
- Pilmanis, A.M. and W.H. Schlesinger. 1999. Spatial assessment of desertification in terms of vegetation pattern and available soil nitrogen. pp. 344-358. In: I.R. Traylor, H. Dregne and K. Mathis (eds.). *Desert Development: The Endless Frontier*. Texas Tech University, Lubbock.
- Schlesinger, W.H. 1999. Carbon sequestration in soils. Science 284: 2095 (Science Compass).
- Levy, E. and W.H. Schlesinger. 1999. A comparison of fractionation methods for forms of phosphorus in soils. Biogeochemistry 47: 25-38.
- Andrews, J.A., K.G. Harrison, R. Matamala, and W.H. Schlesinger. 1999. Separation of root respiration from total soil respiration using carbon-13 labeling during Free-Air Carbon dioxide Enrichment (FACE). Soil Science Society of America Journal 63: 1429-1435.
- Cross, A.F. and W.H. Schlesinger. 1999. Plant regulation of soil nutrient distribution in the northern Chihuahuan desert. Plant Ecology 145: 11-25.
- Schlesinger, W.H. and J.A. Andrews. 2000. Soil respiration and the global carbon cycle. Biogeochemistry 48: 7-20.
- Havstad, K.M., J.E. Herrick, and W.H. Schlesinger. 2000. Desert rangelands, degradation and nutrients. pp. 77-87. In: O. Arnalds and S. Archer (eds.). *Rangeland Desertification*. Advances in Vegetation Science 19, Kluwer Academic Publishers, Dordrecht.
- Schlesinger, W.H., T.J. Ward, and J. Anderson. 2000. Nutrient losses in runoff from grassland and shrubland habitats in southern New Mexico: II: Field plots. Biogeochemistry 49: 69-86.
- Allen, A.S., J.A. Andrews, A.C. Finzi, R. Matamala, D.D Richter, and W.H. Schlesinger. 2000. Effects of Free-Air CO<sub>2</sub> Enrichment (FACE) on below-ground processes in a *Pinus taeda* forest. Ecological Applications 10: 437-448.

- Knops, J.M.H., T.H. Nash, and W.H. Schlesinger. 2000. Seasonal nutrient content and the mineral nutrition of *Ramalina menziesii*. pp. 152-158. In: D. Ming and M.J.A. Werger (eds.). *A Spectrum of Ecological Studies*. Southwest China Normal University Press.
- Andrews, J.A., R. Matamala, K.M. Westover, and W.H. Schlesinger. 2000. Temperature effects on the diversity of soil heterotrophs and the  $\delta^{13}$ C of soil-respired CO<sub>2</sub>. Soil Biology and Biochemistry 32: 699-706.
- Lichter, J., M.L. Lavine, K.A. Mace, D.D. Richter, and W.H. Schlesinger. 2000. Throughfall chemistry in a loblolly pine plantation under elevated atmospheric CO<sub>2</sub> concentrations. Biogeochemistry 50: 73-93.
- Schlesinger, W.H., J. Palmer Winkler, and J.P. Megonigal. 2000. Soils and the global carbon cycle. pp. 93-101. In: T.M.L. Wigley and D.S. Schimel (eds.). *The Global Carbon Cycle*. Cambridge University Press, Cambridge.
- Hartley, A.E. and W.H. Schlesinger. 2000. Environmental controls on nitric oxide emissions from northern Chihuahuan desert soils. Biogeochemistry 50: 279-300.
- Schlesinger, W.H. 2000. Carbon sequestration in soils: Some cautions amidst optimism. Agriculture, Ecosystems and Environment 82: 121-127.
- Matamala, R. and W.H. Schlesinger. 2000. Effects of elevated atmospheric CO<sub>2</sub> on fine root production and activity in a temperate forest ecosystem. Global Change Biology 6: 967-980.
- Cross, A.F. and W.H. Schlesinger. 2001. Biological and geochemical controls on phosphorus fractions in semiarid soils. Biogeochemistry 52: 155-172.
- Michalek, J.L., J.E. Colwell, N.E.G. Roller, N.A. Miller, E.S. Kasischke, and W.H. Schlesinger. 2001. Satellite measurements of albedo and radiant temperature from semi-desert grassland along the Arizona/Sonora border. Climatic Change 48: 417-225.
- Okin, G.S., B. Murray, and W.H. Schlesinger. 2001. Degradation of sandy and shrubland environments: Observations, process modelling, and management implications. Journal of Arid Environments 47: 123-144.
- Finzi, A.C., A.S. Allen, E.H. DeLucia, D.S. Ellsworth, and W.H. Schlesinger. 2001. Forest litter production, chemistry, and decomposition following two years of Free-Air CO<sub>2</sub> enrichment. Ecology 82: 470-484.
- Andrews, J.A. and W.H. Schlesinger. 2001. Soil CO<sub>2</sub> dynamics, acidification, and chemical weathering in a temperate forest with experimental CO<sub>2</sub> enrichment. Global Biogeochemical Cycles 15: 149-162.
- Tilman, D., J. Fargione, B. Wolff, C. D'Antonio, A. Dobson, R. Howarth, D. Schindler, W.H. Schlesinger, D. Simberloff, and D. Swackhamer. 2001. Forecasting agriculturally driven global environmental change. Science 292: 281-284.
- Okin, G.S., B. Murray, and W.H. Schlesinger. 2001. Desertification in an arid shrubland in the southwestern United States. pp. 53-70. In: A.J. Conacher (ed.). *Land Degradation*. Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Phillips, R.L., S.C. Whalen, and W.H. Schlesinger. 2001. Response of soil methanotrophic activity to carbon dioxide enrichment in a coniferous forest. Soil Biology and Biochemistry 33: 793-800.
- Schlesinger, W.H. and J. Lichter. 2001. Limited carbon storage in soil and litter of experimental forest plots under elevated atmospheric CO<sub>2</sub>. Nature 411: 466-469.
- Luo, Y., L. Wu, J.A. Andrews, L. White, R. Matamala, K.V.R. Schaefer, and W.H. Schlesinger. 2001. Elevated CO<sub>2</sub> differentiates ecosystem carbon processes: A deconvolution analysis of Duke Forest FACE data. Ecological Monographs 71: 357-376.
- Schlesinger, W.H., J.S. Clark, J.E. Mohan, and C.D. Reid. 2001. Global environmental change: Effects on biodiversity. pp. 175-223. In: M.E. Soule and G.H. Orians (eds.). *Conservation Biology: Research Priorities for the Next Decade*. Island Press, Washington, D.C.

- Clark, J.S., S.R. Carpenter, M. Barber, S. Collins, A. Dobson, J.A. Foley, D.M Lodge, M. Pascual, R. Pielke, W. Pizer, C. Pringle, W.V. Reid, K.A. Rose, O. Sala, W.H. Schlesinger, D. Wall and D. Wear. 2001. Ecological forecasting: An emerging imperative. Science 293: 657-660 (Viewpoint).
- Phillips, R.L., S.C. Whalen, and W.H. Schlesinger. 2001. Influence of atmospheric CO<sub>2</sub> enrichment on methane consumption in a temperate forest soil. Global Change Biology 7: 557-563.
- Phillips, R.L., S.C. Whalen, and W.H. Schlesinger. 2001. Influence of atmospheric CO<sub>2</sub> enrichment on nitrous oxide flux in a temperate forest ecosystem. Global Biogeochemical Cycles 15: 741-752.
- Karnosky, D.F., B. Gielen, R. Ceulemans, W.H. Schlesinger, R.J. Norby, E. Oksanen, R. Matyssek, and G.R. Hendrey. 2001. FACE systems for studying the impacts of greenhouse gases on forest ecosystems. pp. 297-324. In: D.F. Karnosky, R. Ceulemans, G.E. Scarascia-Mugozza, and J.L. Innes (eds.). *Impact of Carbon Dioxide and Other Greenhouse Gases on Forest Ecosystems*. CABI Publishing, Wallingford, UK.
- Lawrence, D. and W.H. Schlesinger. 2001. Changes in soil phosphorus during 200 years of shifting cultivation in Indonesia. Ecology 82: 2769-2780.
- Pritchard, S.G., H.H. Rogers, M.A. Davis, E. Van Santen, S.A. Prior, and W.H. Schlesinger. 2001. The influence of elevated atmospheric CO<sub>2</sub> on fine root dynamics in an intact temperate forest. Global Change Biology 7: 829-837.
- Geider R.J., E.H. DeLucia, P.G. Falkowski, A.C. Finzi, J.P. Grime, J. Grace, T.M. Kana, J. La Roche, S.P. Long, B.A.
   Osborne, T. Platt, I.C. Prentice, J.A. Raven, W.H. Schlesinger, V. Smetacek, V. Stuart, S. Sathyendranath, R.B.
   Thomas, T.C. Vogelmann, P. Williams, and F.I. Woodward. 2001. Primary productivity of planet earth:
   Biological determinants and physical constraints in terrestrial and aquatic habitats. Global Change Biology 7: 849-882.
- Schlesinger, W.H. 2002. Biogeochemical cycles, pp. 95-96; Biosphere, pp. 117-119; Desertification, pp. 253-256; and Nitrogen Cycle (Volume 2), pp. 137-140. In: A.S. Goudie and D.J. Cuff (eds.). *The Encyclopedia of Global Change*. Oxford University Press, New York.
- Hamilton, J.G., E.H. DeLucia, K. George, S.L. Naidu, A.C. Finzi, and W.H. Schlesinger. 2002. Forest carbon balance under elevated CO<sub>2</sub>. Oecologia 131: 250-260.
- Huenneke, L.F., J.P. Anderson, M. Remmenga, and W.H. Schlesinger. 2002. Desertification alters patterns of aboveground net primary production in Chihuahuan ecosystems. Global Change Biology 8: 247-264.
- Powers, J.S. and W.H. Schlesinger. 2002. Geographic and vertical patterns of stable carbon isotopes in tropical rain forest soils of Costa Rica. Geoderma 109: 141-160.
- Schlesinger, W.H. 2002. Inorganic carbon and the global carbon cycle. pp. 706-708. In: R. Lal (ed.). *Encyclopedia of Soil Science*. Marcel Dekker Inc., New York.
- Powers, J.S. and W.H. Schlesinger. 2002. Relationships among soil carbon distributions and biophysical factors at nested spatial scales in rain forests of northeastern Costa Rica. Geoderma 109: 165-190.
- Finzi, A.C., E.H. DeLucia, J.G. Hamilton, D.D. Richter, and W.H. Schlesinger. 2002. The nitrogen budget of a pine forest under free air CO<sub>2</sub> enrichment. Oecologia 132: 567-578.
- Wainwright, J., A.J. Parsons, W.H. Schlesinger, and A.D. Abrahams. 2002. Hydrology-vegetation interactions in areas of discontinuous flow on a semi-arid bajada, southern New Mexico. Journal of Arid Environments 51: 319-338.
- Hartley, A.E. and W.H. Schlesinger. 2002. Potential environmental controls on nitrogenase activity in biological crusts of the northern Chihuahuan Desert. Journal of Arid Environments 52: 293-304.
- Megonigal, J.P. and W.H. Schlesinger. 2002. Methane-limited methanotrophy in tidal freshwater swamps. Global Biogeochemical Cycles 16: DOI.10.1029/2001GB001594.
- Park, H. and W.H. Schlesinger. 2002. The global biogeochemical cycle of boron. Global Biogeochemical Cycles 16: DOI.10.1029/2001GB001766.

- Finzi, A.C. and W.H. Schlesinger. 2002. Species control variation in litter decomposition in a pine forest exposed to elevated CO<sub>2</sub>. Global Change Biology 8: 1217-1229.
- Parsons, A.J., J. Wainwright, W.H. Schlesinger, and A.D. Abrahams. 2003. The role of overland flow in sediment and nitrogen budgets of mesquite dunefields, southern New Mexico. Journal of Arid Environments 53: 61-71.
- Luo, Y., L. White, J.G. Canadell, E.H. DeLucia, D.S. Ellsworth, A. Finzi, J. Lichter, and W.H. Schlesinger. 2003. Sustainability of terrestrial carbon sequestration: A case study in Duke Forest with inversion approach. Global Biogeochemical Cycles 17: DOI 10.1029/2002GB001923.
- Schlesinger, W.H. 2003. The Carbon Cycle: Human perturbations and potential management options. pp. 25-44. In: J.M. Griffin (ed.). *Global Climate Change: The Science, Economics and Politics*. Edward Elgar, Cheltenham, UK.
- Goslee, S.C., K.M. Havstad, D.C.P. Peters, A.C. Rango, and W.H. Schlesinger. 2003. High resolution images reveal rate and pattern of shrub encroachment over six decades in New Mexico, USA. Journal of Arid Environments 54(4): 755-767.
- Finzi, A.C. and W.H. Schlesinger. 2003. Soil-nitrogen cycling in a pine forest exposed to 5 years of elevated carbon dioxide. Ecosystems 6: 444-456.
- Matamala, R., M.A. Gonzalez-Meler, J.D. Jastrow, R.J. Norby, and W.H. Schlesinger. 2003. Impacts of fine root turnover on forest NPP and soil C sequestration potential. Science 302: 1385-1387.
- BassiriRad, H., J.V.H. Constable, J. Lussenhop, B.A. Kimball, R.J. Norby, W.C. Oechel, P.B. Reich, W.H. Schlesinger, S. Zitzer, and S. Silim. 2003. Foliar <sup>15</sup>N depletion under elevated CO<sub>2</sub>: Linkage to plant nitrogen status and internal cycling. Global Change Biology 9: 1582-1590.
- Zak, D.R., W.E. Holmes, A.C. Finzi, R.J. Norby, and W.H. Schlesinger. 2003. Soil nitrogen cycling under elevated CO<sub>2</sub>: A synthesis of forest FACE experiments. Ecological Applications 13: 1508-1514.
- Schlesinger, W.H., J.S. Pippen, M.D. Wallenstein, K.S. Hofmockel, D.M. Klepies, and B.E. Mahall. 2003. Community composition and photosynthesis by photoautotrophs under quartz pebbles, southern Mojave Desert. Ecology 84: 3222-3231.
- Mohan, J.E., J.S. Clark, and W.H. Schlesinger. 2004. Genetic variation in germination, growth, and survivorship of red maple in response to subambient through elevated atmospheric CO<sub>2</sub>. Global Change Biology 10: 233-247.
- Allen, A.S. and W.H. Schlesinger. 2004. Nutrient limitations to microbial biomass and activity in loblolly pine forests. Soil Biology and Biochemistry 36: 581-589.
- Husk, G.J., J.F. Weishampel, and W.H. Schlesinger. 2004. Mineral dynamics in Spanish moss, *Tillandsia usneoides* L. (Bromeliaceae), from central Florida, USA. Science of the Total Environment 321: 165-172.
- Suwa, M., G.G. Katul, R. Oren, J.A. Andrews, J. Pippen, A. Mace, and W.H. Schlesinger. 2004. Impacts of Elevated atmospheric CO<sub>2</sub> on forest floor respiration in a temperate pine forest. Global Biogeochemical Cycles 18: DOI.10.1029/2003GB002182. http://www.env.duke.edu/people/faculty/katul/pub2004.html
- Finzi, A.C., E.H. DeLucia, and W.H. Schlesinger. 2004. Canopy N and P dynamics of a southeastern US pine forest under elevated CO<sub>2</sub>. Biogeochemistry 69: 363-378.
- Schlesinger, W.H. 2004. Better living through biogeochemistry. Ecology 85: 2402-2407. (Special feature). http://www.esajournals.org/archive/0012-9658/85/9/pdf/i0012-9658-85-9-2402.pdf
- Jackson, R.B. and W. H. Schlesinger. 2004. Curbing the U.S. carbon deficit. Proceedings of the National Academy of Sciences 101: 15827-15829 (Perspective).
- Lichter, J., S.H. Barron, C.E. Bevacqua, A.C. Finzi, K.F. Irving, E.A. Stemmler, and W.H. Schlesinger. 2005. Soil carbon sequestration and turnover in a pine forest after six years of atmospheric CO<sub>2</sub> enrichment. Ecology 86: 1835-1847.

- Norby, R.J., E.H. DeLucia, B. Gielen, C. Calfapietra, C.P. Giardina, J.S. King, J. Ledford, H.R. McCarthy, D.J.P. Moore, R. Ceulemans, P. De Angelis, A.C. Finzi, D.F. Karnosky, M.E. Kubiske, M. Lukac, K.S. Pregitzer, G.E. Scarascia-Mugnozza, W.H. Schlesinger, and R. Oren. 2005. Forest response to elevated CO<sub>2</sub> is conserved across a broad range of productivity. Proceedings of the National Academy of Sciences 102: 18052-18056.
- Schlesinger, W.H. 2006. The global carbon cycle and climate change. pp. 33-54. In: W. Sinnott-Armstrong and R. Howarth (eds.). *Advances in the Economics of Environmental Research*, Vol. 5. Elsevier, Amsterdam
- Schlesinger, W.H., K.H. Reckhow, and E.S. Bernhardt. 2006. Global change: The nitrogen cycle and rivers. Water Resources Research 42:DOI.10.1029/2005WR004300.
- Bernhardt, E.S., J.J. Barber, J.S. Pippen, L. Taneva, J.A. Andrews, and W.H. Schlesinger. 2006. Long-term effects of free air CO<sub>2</sub> enrichment (FACE) on soil respiration. Biogeochemistry 77: 91-116.
- Peters, D.P.C., J. Yao, L. F. Huenneke, R. P. Gibbens, K. M. Havstad, J. E. Herrick, A.Rango, and W.H. Schlesinger. 2006. Simplifying complex landscapes to reduce uncertainty in predictions. pp. 131-146. In: J. Wu, H. Li Jones, and O. Loucks (eds.). *Scaling and Uncertainty Analysis in Ecology: Methods and Applications*. Springer-Verlag, New York.
- Finzi, A.C., D.J.P. Moore, E.H. DeLucia, J. Lichter, K. S. Hofmockel, R.B. Jackson, H-S. Kim, R. Matamala, H. R. McCarthy, R. Oren, J.S. Pippen, and W. H. Schlesinger. 2006. Progressive nitrogen limitation of ecosystem processes under elevated CO<sub>2</sub> in a warm-temperate forest. Ecology 87: 15-25.
- Wallenstein, M.D., S. McNulty, I.J. Fernandez, J. Boggs, and W.H. Schlesinger. 2006. Nitrogen fertilization decreases forest soil fungal and bacterial biomass in three long-term experiments. Forest Ecology and Management 222: 459-468.
- Havstad, K.M. and W.H. Schlesinger. 2006. Introduction. pp. 3-14. In K.M. Havstad, L.E. Huenneke, and W.H. Schlesinger (eds). *Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin LTER*. Oxford University Press, Oxford.
- Schlesinger, W.H., S.L. Tartowski, and S.M. Schmidt. 2006. Nutrient cycling within an arid ecosystem. pp. 133-149. In: K.M. Havstad, L.E. Huenneke, and W.H. Schlesinger (eds.). *Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin LTER*. Oxford University Press, Oxford.
- Abrahams, A.D., M. Neave, W.H. Schlesinger, J. Wainwright, D.A. Howes, and A.J. Parsons. 2006. Biogeochemical fluxes across piedmont slops of the Jornada Basin. pp. 150-175. In: K.M. Havstad, L.F. Huenneke, and W.H. Schlesinger (eds.). *Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin LTER*. Oxford University Press, Oxford.
- Huenneke, L.F. and W.H. Schlesinger. 2006. Net primary production. pp. 232-246. In: K.M. Havstad, L.E. Huenneke, and W.H. Schlesinger (eds.). *Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin LTER*. Oxford University Press, Oxford.
- Peters, D.P.C., W.H. Schlesinger, J.E. Herrick, L.F. Huenneke, and K.M. Havstad. 2006. Future directions in Jornada research: Developing and applying an interactive landscape model to solve old and new problems. pp. 369-386. In: K.M. Havstad, L.E. Huenneke, and W.H. Schlesinger (eds.). *Structure and Function of a Chihuahuan Desert Ecosystem: The Jornada Basin LTER*. Oxford University Press, Oxford.
- Schlesinger, W.H., E.S. Bernhardt, E.H. DeLucia, D.S. Ellsworth, A.C. Finzi, G.R. Hendrey, K.S. Hofmockel, J. Lichter, R. Matamala, D. Moore, R. Oren, J.S. Pippen, and R.B. Thomas. 2006. The Duke Forest FACE experiment: CO<sub>2</sub> enrichment of a loblolly pine forest. pp. 197-212. In: J.S. Nosberger, S.P. Long, R.J. Norby, M. Stitt, G.R. Hendrey, and H. Blum (eds.). *Managed Ecosystems and CO<sub>2</sub>*. Springer-Verlag, Berlin.
- Mohan, J.E., L.H. Zizka, W.H. Schlesinger, R.B. Thomas, R.C. Sicher, K. George, and J.S. Clark. 2006. Biomass and toxicity responses of poison ivy (*Toxicodendron radicans*) to elevated atmospheric CO<sub>2</sub>. Proceedings of the National Academy of Sciences US 103: 9086-9089.
- Thomas, R.B. S.K. Van Bloem, and W.H. Schlesinger. 2006. Climate change and symbiotic nitrogen fixation in agroecosystems. pp. 87-112. In: P.C.D. Newton, R.A. Carran, G.R. Edwards, and P.A. Niklaus (eds.). *Agroecosystems in a Changing Environment*. CRC Press, Boca Raton, Florida.

- Taneva, L., J.S. Pippen, W.H. Schlesinger, and M.A. Gonzalez-Meler. 2006. The turnover rate of carbon pools contributing to soil CO<sub>2</sub> and soil respiration in a temperate forest exposed to elevated CO<sub>2</sub> concentration. Global Change Biology 12: 983-994.
- Schlesinger, W.H. 2006. Global change science. Trends in Ecology and Evolution (TREE) 21: 348-351.
- Wallenstein, M.D., W.T. Peterjohn, and W.H. Schlesinger. 2006. N fertilization effects on denitrification and N cycling in an aggrading forest. Ecological Applications 16: 2168-2176.
- Chapin, F.S., G.M. Woodwell, J.T. Randerson, E.B. Rastetter, G.M. Lovett, D.D. Baldocchi, D.A. Clark, M.E. Harmon, D.S. Schimel, R. Valentini, C. Wirth, J.D. Aber, J.J. Cole, M.L. Goulden, J.W. Harden, M. Heimann, R.W. Howarth, P.A. Matson, A.D. McGuire, J.M. Melillo, H.A. Mooney, J.C. Neff, R.A. Houghton, M.L. Pace, M.G. Ryan, S.W. Running, O.E. Sala, W.H. Schlesinger, and E.D. Schulze. 2006. Reconciling carbon-cycle concepts, terminology, and methods. Ecosystems 9: 1041-1050.
- Palmroth, S., R. Oren, H.R. McCarthy, K.H. Johnson, A.C. Finzi, J. Butnor, M.G. Ryan, and W.H. Schlesinger. 2006. Aboveground sink strength in forests controls the allocation of carbon below ground at [CO<sub>2</sub>]-induced enhancement. Proceedings of the National Academy of Sciences U.S. 103: 19362-19367.
- Safriel, U., E. Ezcurra, I. Tegen, W.H. Schlesinger, C. Nelleman, N.H. Baatjes, D. Dent, E. Groner, S. Morrison,
  D. Rosenfeld, U. Avner, N. Brosch, A. G-Goldhirsh, P. Alpert, B.A. Bortnov, R. Cates, R.P. White, A. Tsonis,
  M. Schwartz, Y. Ayal, B. Pinshow, D. Cohen, T. Demere, H. Shafir, A. Warren, and E. Mazor. 2006. Deserts and the planet—linkages between deserts and non-deserts. Pp. 49-72. In: United Nations Environment Program (UNEP). Global Deserts Outlook. United Nations Environment Progra, Nairobi, Kenya.
- Hofmockel K.S. and W.H. Schlesinger. 2007. Carbon dioxide effects of heterotrophic dinitrogen fixation in a temperate pine forest. Soil Science Society of America Journal 71: 140-144.
- Brazier, R.E., A.J. Parsons, J. Wainwright, D.M. Powell, and W.H. Schlesinger. 2007. Upscaling understanding of nitrogen dynamics associated with overland flow in a semi-arid environment. Biogeochemistry 82: 265-278.
- Mohan, J.E., J.S. Clark, and W.H. Schlesinger. 2007. Long-term CO<sub>2</sub> enrichment of a forest ecosystem: Implications for forest regeneration and succession. Ecological Applications 17: 1198-1212.
- Hofmockel, K.S., W.H. Schlesinger, and R. B. Jackson. 2007. Effects of elevated atmospheric carbon dioxide on amino acids and NH<sub>4</sub><sup>+</sup>- cycling in a temperate pine ecosystem. Global Change Biology 13(9):1950-1959.
- Finzi, A.C., R.J. Norby, C. Calfapietra, A. Gallet-Budynek, B. Gielen, W.E. Holmes, M.R. Hoosbeek, C.M. Iversen, R.B. Jackson, M.E. Kubiske, J. Ledford, M. Liberloo, R. Oren, A. Polle, S. Pritchard, D.R. Zak, W.H. Schlesinger, and R. Ceulemans. 2007. Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of temperate forest productivity under elevated CO<sub>2</sub>. Proc. Nat. Acad. Sci. 104: 14014-14019.
- Mohan, J.E., L.H. Ziska, R.B. Thomas, R.C. Sicher, K. George, J.S. Clark, and W.H. Schlesinger. 2008. Biomass and toxicity response of poison ivy (*Toxicodendron radicans*) to elevated atmospheric CO<sub>2</sub>: Reply. Ecology 89:585-587.
- Aneja, V.P., J. Blunden, K. James, W.H. Schlesinger, R. Knighton, W. Gilliam, G. Jennings, D. Niyogi, and S. Cole. 2008. Ammonia assessment from agriculture: U.S. status and needs. Journal of Environmental Quality 37:515-520.
- Aneja, V.P., J. Blunden, P.A. Roelle, W.H. Schlesinger, R. Knighton, D. Niyogi, W. Gilliam, G. Jennings, and C.S. Duke. 2008. Workshop on agricultural air quality: State of the science. Atmospheric Environment 42:3195-3208.
- Schlesinger, W.H. 2008. Commentator on "Preparing for a Changed Environment." Pp. 273-276. In: C. Pumphrey (ed.). *Global Climate Change: National Security Implications*. Strategic Studies Institute. U.S. Army War College, Carlisle, PA.

- Ryan, M.G., S.R. Archer, R.A. Birdsey, C.N. Dahm, L.S. Health, J.A. Hicke, D.Y. Hollinger, T.E. Huxman, G.S. Okin, R. Oren, J.T. Randerson, and W.H. Schlesinger. 2008. Land Resources: Forests and Arid Lands. The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. Pp. 75-120. In: P. Backlund, A. Janetos, D.S. Schimel (eds.). Synthesis and Assessment Product 4.3, U.S. Climate Changes Program, Washington, DC.
- Aneja, V.P., W.H. Schlesinger, and J.W. Erisman. 2008. Farming Pollution. Nature Geoscience 1(7):409-411.
- Aneja, V.P. and W.H. Schlesinger. 2008. Introduction Agricultural Air Quality: State of the Science. Journal of Air and Waste Management Association 58:1113-1115.
- Lichter, J., S.A. Billings, S.E. Ziegler, D. Gaindh, R. Ryals, A.C. Finzi, R.B. Jackson, E.A. Stemmler, and W.H. Schlesinger, 2008. Soil carbon sequestration in a pine forest after 9 years of atmospheric CO<sub>2</sub> enrichment. Global Change Biology 14:2910-2922.
- Schlesinger, W.H. 2009. On the fate of anthropogenic nitrogen. Proceedings of the National Academy of Sciences. 106:203-208. [doi:10.1073/pnas.0810193105]
- Schlesinger, W.H. 2009. An ecologist's thoughts on forests and farms in a cap-and-trade system. Emory Law Journal 58:423-425.
- Schlesinger, W.H., J. Belnap, and G.M. Marion. 2009. On carbon sequestration in desert ecosystems. Global Change Biology 15(6):1488-1490.
- Ziska, L.H., P.R. Epstein, and W.H. Schlesinger. 2009. Rising CO<sub>2</sub>, climate change, and public health: Exploring the links to plant biology. Environmental Health Perspectives 117:155-158.
- Aneja, V.P., W.H. Schlesinger, and J.W. Erisman. 2009. Effects of agriculture upon the air quality and climate: Research, Policy, and Regulations. Environmental Science and Technology 43:4234-4240. [doi:10.1021/2s8024403]
- Schlesinger, W.H. 2009. The human species and environment: More than a beast, but less than an angel. Renewable Resources Journal 25(3):14-18.
- Schlesinger, W.H. 2009. Thresholds risk prolonged degradation. Nature 461:OnLine [http://www.nature.com/climate/2009/0910/pdf/climate.2009.93.pdf]
- Searchinger, T.D., S.P. Hamburg, J. Melillo, W. Chameides, P. Havlik, D.M. Kammen, G.E. Likens, R.B. Lubowski, M. Obersteiner, M. Oppenheimer, G.P. Robertson, W.H. Schlesinger, and G.D. Tilman. 2009. Fixing a critical climate accounting error. Science 326:527-528 (Policy Forum).
- Phillips, R.P., E.S. Bernhardt, and W.H. Schlesinger. 2009. Elevated CO<sub>2</sub> increases root exudation from loblolly pine (*Pinus taeda*) seedlings as an N-mediated response. Tree Physiology 29:1513-1523.
- Feng, X.J., A.J. Simpson, W.H. Schlesinger, and M.J. Simpson. 2010. Altered microbial community structure and organic matter composition under elevated CO<sub>2</sub> and N fertilization in the Duke Forest. Global Change Biology 16(7):2104-2116. http://dx.doi.org/10.1111/j.1365-2486.2009.02080.x
- Palmer, M.A., E.S. Bernhardt, W.H. Schlesinger, K.N. Eshleman, E. Foufoula-Georgiou, M.S. Hendryx, A.D. Lemly, G.E. Likens, O.L. Loucks, M.E. Power, P.S. White, and P.R. Wilcock. 2010. Mountaintop mining consequences. Science 327:148-149.
- Schlesinger, W.H. 2010. On fertilizer-induced soil carbon sequestration in China's croplands. Global Change Biology 16:849-850.
- Feng, X.J., Y.P. Xu, R. Jaffé, W.H. Schlesinger, and M.J. Simpson. 2010. Turnover rates of hyrolysable aliphatic lipids in Duke Forest soils determined by compound specific 13C isotopic analysis. Organic Geochemistry 41:573-579.

- Aneja, V.P., W.H. Schlesinger, J.W. Erisman, M. Sharma, S. Behera, and W. Battye. 2010. Reactive nitrogen emissions from crop and livestock farming in India. Pp. 1-18. In: H. Pathak (ed.). *ING Bulletins on Regional Assessment of Reactive Nitrogen*, No. 3. New Delhi, India.
- Drake, J.E., A. Gallet-Budynek, K.S. Hofmockel, E.S. Bernhardt, S.A. Billings, R.B. Jackson, K.S. Johnsen, J. Lichter, H.R. McCarthy, M.L. McCormack, D.J. P. Moore, R. Oren, S. Palmroth, R.P. Phillips, J.S. Pippen, S.G. Pritchard, K.K. Treseder, W.H. Schlesinger, E.H. DeLucia, and A.C. Finzi. 2011. Increases in flux of carbon belowground stimulate nitrogen uptake and sustain the long-term enhancement of forest productivity under elevated CO2. Ecology Letters 14:349–357.
- Vitale, J. and W.H. Schlesinger. 2011. Historical analysis of the spring arrival of migratory birds to Dutchess County, New York: A 123-year record. Northeastern Naturalist 18:335-346.
- Schlesinger, W.H. 2011. Climate Change. Intrepretation 65(4):378-390.
- Schlesinger, W.H., J.J. Cole, A.C. Finzi, and E.A. Holland. 2011. Introduction to coupled biogeochemical cycles. Frontiers in Ecology and Environment 9(1):5–8.
- Aneja, V.P., W.H. Schlesinger, J W. Erisman, S.N. Behera, M. Sharma and W. Battye. 2012. Reactive nitrogen emissions from crop and livestock farming in India. Atmospheric Environment 47:92-103.
- McLeod, E., G.L. Chmura, S. Bouillon, R. Salm, M. Bjork, C.M. Duarte, C.E. Lovelock, W.H. Schlesinger, and B.R. Silliman. 2011. A blueprint for blue carbon: Toward an improved understanding of the role of vegetated coastal habitats in sequestering CO<sub>2</sub>. Frontiers in Ecology and Environment 9:552-560.
- Seeley, R.H. and W.H. Schlesinger. 2012. Sustainable seaweed cutting? The rockweed (*Ascophyllum nodosum*) industry of Maine and the Maritime provinces. Annals of the New York Academy of Sciences 1249:84-103.

#### General Interest Articles, Environmental Education and Public Outreach:

- Schlesinger, W.H. 1971. Teachers and students write a curriculum on water pollution. American Biology Teacher 33:211-214.
- Schlesinger, W.H. 1972. Toxic metals in the New Hampshire environment. Dartmouth Alumni Magazine 64(9): 55-56.
- Sullivan, F.E., Jr. and W.H. Schlesinger. 1972. The Environmental Quality Education Act: Where do we stand now? *BioScience* 22: 361-363.
- Schlesinger, W.H. 1976. Spanish moss research. Explorers Journal 54: 90-91.
- Schlesinger, W.H. and H.R. Pulliam. 1992. An ecumenical moment. *Bulletin of the Ecological Society of America* 73(3):184.
- Schlesinger, W.H. 1993, September 24. Keep the Mojave landscape intact. Los Angeles Times, Op-ed: B7.
- Vitousek, P.M., J. Aber, R.W. Howarth, G.E. Likens, P.A. Matson, D.W. Schindler, W.H. Schlesinger, and G. D. Tilman. 1997. Human alteration of the global nitrogen cycle: Causes and consequences. Ecological Society of America, Issues in Ecology #1, 15 pp.
- Schlesinger, W.H. 1998. Replicando un bosque del futuro. Ecosistemas (in Spanish; trans. A. Gallardo), 24/25: 30-32.
- Schlesinger, W.H. 1999. Nitrogen in the Environment. Earth in the Classroom #6, Junior High-School Curriculum produced and distributed by Byrd and Block Communications, Austin, Texas.
- Huenneke, L.F. and W.H. Schlesinger. 1999, March 7. State to benefit. Las Cruces (N.M.) Sun News, Editorial.
- Schlesinger, W.H. 2000. Discovering the desert. Southern New Mexico Magazine. IV(4): 26-29.
- Schlesinger, W.H. 2000, June 9. Chaff poses no danger in Nevada. Reno (Nevada) Gazette Journal, Op-ed.
- Schlesinger, W.H. 2000. About FACE. Meridian (Midway Airlines Inflight Magazine), June, p. 43.
- Schlesinger, W.H. 2000, July 18. A price signal we'd better heed. Raleigh News and Observer, Op-ed: 9A.
- Schlesinger, W.H. 2000, August 25. The nature of sprawl's costs. Raleigh News and Observer, Op-ed: 19A.
- Schlesinger, W.H. 2000, October 17. Warming: Earth out of balance. Raleigh News and Observer, Op-ed: 13A.
- King, G.M., D. Kirchman, A.A. Salyers, W.H. Schlesinger, and J.M. Tiedje. 2001. Global Environmental Change: Microbial Contributions-Microbial Solutions. American Society of Microbiology, Washington, D.C. 12pp.
- Schlesinger, W.H. 2001, November-December. Environmental Ed. 101. Duke Magazine 88(1): 26, 47.
- Schlesinger, W.H. 2002, April 23. Species we can live without? Raleigh News and Observer, Op-ed: 11A.
- Schlesinger, W.H. 2002, April 28. One day, the oil hunt will be fruitless. Raleigh News and Observer, 25Aff.
- Schlesinger, W.H. 2002, June 16. Believe it or not, Earth's getting hotter. Durham Herald-Sun, Op-ed: A11.
- Schlesinger, W.H. 2002, July 10. An unwelcome newcomer: West Nile Virus. *Raleigh News and Observer*, Op-ed:15A.
- Schlesinger, W.H. 2002, August 4. Pressure is growing for greener crops. Raleigh News and Observer, Op-ed:31A.
- Schlesinger, W.H. 2002, August 4; August 11. Earth Daze. (2-part series). Winston-Salem Journal, A25; A21.
- Schlesinger, W.H. 2002, August 15. Drought warns us to prepare for global warming. *The Charlotte Observer*, Op-ed:13A.

- Schlesinger, W.H. 2002, September 22. Warming up to disaster. The Chicago Tribune, Op-ed, 2:11.
- Schlesinger, W.H. 2002, November 30. Relaxed standards threaten N.C. air quality. *The Charlotte Observer*, Op-ed:13A.
- Schlesinger, W.H. 2003, Spring. Blocking natural desert flows. *Desert Report* (Sierra Club California/Nevada Desert Committee), 12-13.
- Schlesinger, W.H. 2003, May 3. Species worth defending: Habitat, military have common ground. *Raleigh News and Observer*. <a href="http://newsobserver.com/editorials/story/2509522p-2331995c.html">http://newsobserver.com/editorials/story/2509522p-2331995c.html</a>, Op-ed:23A, Reprinted (with minor modifications) in *The Ft. Lauderdale Sun-Sentinel*, the *Seattle Post-Intelligencer*, and *The Day* (New Haven, CT).
- Schlesinger, W.H. 2003, May 7. Scientists must boldly address important environmental issues. Guest Column. *Durham Herald Sun*, A13.
- Schlesinger, W.H. 2003, July 8. Mercury in our air—and in our fish. *Raleigh News and Observer*, http://newsobserver.com/editorials/story/2677225p-2482238c.html, Op-ed:9A.
- Schlesinger, W.H. 2003, Summer. Reading desert soils. *Desert Report* (Sierra Club California/Nevada Desert Committee), 5; 14.
- Schlesinger, W.H. 2003, August 29. Exemptions that dilute our sun screen. *Raleigh News and Observer*, http://newsobserver.com/editorials/story/2819319p-2605783c.html, Op-ed:17A.
- Schlesinger, W.H. and A. J. Friedland. 2003, August 30. Preserving the environment is a driving concern. Guest Column. *The Winston-Salem Journal*, 13; Reprinted (with minor modifications) in *New Hampshire Valley News*, October 4

  <a href="http://www.journalnow.com/servlet/Satellite?c=MGArticle&cid=1031770763021&pagename=WSJ/MGArticle/WSJ-ColumnistArticle&path=!opinion!columnists&s=1037645509165">http://www.journalnow.com/servlet/Satellite?c=MGArticle&cid=1031770763021&pagename=WSJ/MGArticle/WSJ-ColumnistArticle&path=!opinion!columnists&s=1037645509165</a>
- Schlesinger, W.H. 2004, January 11. The price of change at the pump. *Raleigh News and Observer*, <a href="http://www.newsandobserver.com/editorials/columnists/story/3211844p-2881120c.html">http://www.newsandobserver.com/editorials/columnists/story/3211844p-2881120c.html</a>, Op-ed:25A.
- Schlesinger, W.H. 2004. Environmental social justice and global change. Heartstone 5:7-10.
- Schlesinger, W.H. 2004, April 7. Kyoto treaty is dead and gone. Durham Herald-Sun, Op-ed:A11.
- Schlesinger, W.H. 2004, April 14. A blow to wildlife protection. *Raleigh News and Observer*, <a href="http://www.newsandobserver.com/editorials/columnists/story/3510292p-3114201c.html">http://www.newsandobserver.com/editorials/columnists/story/3510292p-3114201c.html</a>, Op-ed:15A.
- Schlesinger, W.H. 2004. Environmental Education for a Sustainable Future. *Applied Environmental Education and Communication* 3:75-77.
- Paustian, K., B.A. Babcock, J. Hatfield, C.L. Kling, R. Lal, B.A. McCarl, S. McLaughlin, A.R. Mosier, W.M. Post, C.W. Rice, G.P. Robertson, N.J. Rosenberg, C. Rosenzweig, W.H. Schlesinger, and D. Zilberman. 2004. Climate Change and Greenhouse Gas Mitigation: Challenges and Opportunities for Agriculture. Council for Agricultural Science and Technology, Ames, Iowa. 120pp.
- Schlesinger, W.H. 2004, July 7. Put the sun to work for N.C., Raleigh News and Observer, Op-ed:15A.
- Schlesinger, W.H. 2004, December 23. Warming: It's on its way, N.C., *The* (Raleigh) *News and Observer*, <a href="http://www.newsobserver.com/print/thursday/opinion/story/1956525p-8322442c.html">http://www.newsobserver.com/print/thursday/opinion/story/1956525p-8322442c.html</a>, Op-ed:15A.
- Schlesinger, W.H. 2005, February 7. We've experimented with the atmosphere. Raleigh News and Observer, Op-ed:9A.
- Schlesinger, W.H. 2005, April 27. Will the oil run out? Will we be ready? *The* (Raleigh) *News and Observer* <a href="http://newsobserver.com/news/q/archive/story/2256668p-8636302c.html">http://newsobserver.com/news/q/archive/story/2256668p-8636302c.html</a>, 15-16A.

- Schlesinger, W.H. 2005, April 15. Better mileage for the atmosphere. *Raleigh News and Observer*, <a href="http://www.newsobserver.com/print/friday/opinion/story/2314300p-8692479c.html">http://www.newsobserver.com/print/friday/opinion/story/2314300p-8692479c.html</a>, 15A. Reprinted (with minor modifications) in *The Star Ledger* (Newark, NJ), *Memphis Commercial Appeal* and *Contra Costa Times* (Walnut Creek, CA).
- Schlesinger, W.H. 2005, August 3. You can't filibuster the climate. Raleigh News and Observer, 15A.
- Schlesinger, W.H. 2005, September 2. Putting North Carolina's future in tune with nature. *Raleigh News and Observer*, http://www.newsobserver.com/print/friday/opinion/story/2777606p-9216170c.html, 19A.
- Schlesinger, W.H. 2005, September 8. Can we part the future floodwaters? Durham Herald Sun, A7.
- Profeta, T. and W.H. Schlesinger. 2005, October 4. Americans want sensible solutions on environment. *The Charlotte Observer*.
- Schlesinger, W.H. 2005, October 30. Way to fewer fossil fuels? Tax 'em. Raleigh News and Observer, 27A.
- Schlesinger, W.H. 2005, November-December. Science Reality Show. *Duke Magazine*, 91(6): 78. Reprinted (with minor modifications) in *Frontiers in Ecology and Environment* 3(10): 519, 2005.
- Aneja, V.P., W.H. Schlesinger, D. Niyogi et al. 2006. Emerging National Research Needs for Agricultural Air Quality. *EOS* 87: 25, 29.
- Schlesinger, W.H. 2006, February 3. A cooperative climate. *Raleigh News and Observer*, <a href="http://www.newsobserver.com/559/story/395678.html">http://www.newsobserver.com/559/story/395678.html</a>, 15A.
- Schlesinger, W.H. 2006, February 26. Warming is here. Now what do we do? *Durham Herald-Sun*, A13.
- Schlesinger, W.H. 2006, February 26. The New Dust Bowls. *The Philadelphia Inquirer*, http://www.philly.com/mld/inquirer/news/editorial/13961515.htm, D1, 3.
- Schlesinger, W.H. 2006, March 29. Land sale is wrong solution for schools, forests. *The Salisbury* (NC) *Post*, 10A. Also appeared in *The Fayetteville Observer*, *Durham Herald-Sun*, *The Lexington Dispatch*, and *The Charlotte Observer*.
- Schlesinger, W.H. and V.P. Aneja. 2006, July 3. N.C.'s country air isn't what it should be. *Raleigh News and Observer*, 11A.
- Schlesinger, W.H. 2006, August 5. Make electric power clean, efficient. The Winston-Salem Journal, 15.
- Schlesinger, W.H. 2006, August 24. Facing the prospect of rapid warming. *Raleigh News and Observer*, <a href="http://www.newsobserver.com/559/story/478227.html">http://www.newsobserver.com/559/story/478227.html</a>, Op-Ed 17A.
- Schlesinger, W.H. 2006, September 29. An accord on global warming. Durham Morning Herald, A7.
- Eick, Ryan and Schlesinger, W.H. 2006. Climate Change and the Global Carbon Cycle. Web-based Secondary School Curriculum. Network of Conservation Educators and Practitioners (NCEP), American Museum of Natural History, New York.
- Schlesinger, W.H. 2006, November 24. Carbon trading. *Science* 314:1217. (Editorial) <a href="http://www.sciencemag.org/cgi/content/summary/314/5803/1217">http://www.sciencemag.org/cgi/content/summary/314/5803/1217</a>.
- Schlesinger, W.H. 2006, December 10. Protect the quality of life for every citizen and species. *Raleigh News and Observer*, 21A.
- Schlesinger, W.H. 2007, February 8. Buffers safeguard birds and economy. Bangor (Maine) Daily News, A8.
- Schlesinger, W.H. 2007, February 12. Energy efficiency better than plants that pollute. *The Charlotte Observer*, 13A.
- Schlesinger, W.H. 2007, March 5. An unacceptable loss for eastern N.C. Raleigh News and Observer, 11A.

- Schlesinger, W.H. 2007, March 25. Ecofocus: There's no time to waste to stem warming trend. *Poughkeepsie Journal*, 6B.
- Schlesinger, W.H. 2007, June 10. Ecofocus: Even older forests help control CO<sub>2</sub>. Poughkeepsie Journal, 6,7B.
- Schlesinger, W.H. 2007, August 5. Ecofocus: CO<sub>2</sub>: A good thing—to a degree. *Poughkeepsie Journal*, 10B.
- Schlesinger, W.H. 2007, September 17. Energy inefficiency: Congress ignored several simple solutions. *Raleigh News and Observer*, Op-Ed, 9A.
- Schlesinger, W.H. 2007, October 14. Ecofocus: Lessons from the Ozone hole. Poughkeepsie Journal, 6B.
- Schlesinger, W.H. 2007, November 25. Ecofocus: To benefit the environment most, try a living tree. *Poughkeepsie Journal*, 7B, 10B.
- Schlesinger, W.H. 2008, January 6. Ecofocus: Warmer winters not only effect of climate change. *Poughkeepsie Journal*, 6B.
- Schlesinger, W.H. and G.M. Lovett. 2008, February 17. Ecofocus: Acid rain problem lingers. *Poughkeepsie Journal*, 6B.
- Schlesinger, W.H. 2008, March 1. N.C. should revoke the Cliffside permit. Raleigh News and Observer, Op-Ed.
- Schlesinger, W.H. 2008, June 22. Ecofocus: Let the lawn go—and reap the benefits. Poughkeepsie Journal, 6B.
- Schlesinger, W.H. 2008, Summer. Scientists at Cary Institute in Millbrook working on cause of global warming. *Country Courier Magazine* (LaGrangeville). Summer:12-13.
- Groffman, P.M., W.H. Schlesinger, and C. O'Reilly. 2008, October 12. Ecofocus: Consensus links warming, human actions. *Poughkeepsie Journal*, 9B.
- Schlesinger, W.H. 2009, January 4. Ecofocus: Endangered Species Act changes must be reversed. *Poughkeepsie Journal*, 7B.
- Schlesinger, W.H. 2009, February 15. Ecofocus: Research energy, protect forests, and tax carbon to fight warming. *Poughkeepsie Journal*, 7B.
- Schlesinger, W.H. 2009, April 12. Ecofocus: Temporary pools do lasting good. *Poughkeepsie Journal*, 7B.
- Schlesinger, W.H. 2009, May 22. The Pamlico River's last chance. Raleigh News and Observer, Op-ed. 17A.
- Schlesinger, W.H. 2009, May 24. Ecofocus: Carbon Tax. Poughkeepsie Journal, 7B.
- Schlesinger, W.H. 2009, August 16. Ecofocus: Mountaintop coal digging has dire consequences, *Poughkeepsie Journal*, 7B.
- Schlesinger, W.H. 2009, September 13. Ecofocus: Curbing mercury emissions is crucial. Poughkeepsie Journal, 7B
- Schlesinger, W.H. 2009, October 11. Ecofocus: Study the source to sift sound science from bias. *Poughkeepsie Journal*, 7B
- Schlesinger, W.H. 2009, October 11. Durham County should stand firm on lake boundary. Herald Sun.
- Schlesinger, W.H. and S.E.G. Findlay. 2009, November 8. EcoFocus: Salt makes roads safe but can pollute water. *Poughkeepsie Journal*, 5B.
- Schlesinger, W.H. 2009. South of all borders. pp. 203-205. In: J. Howard (ed.). Tale Featherws: A Celebration of Birds, Birders, and Birdwatching. I-Universe Publishers, New York.
- Schlesinger, W.H. 2009, December 20. EcoFocus: Climate science is solid despite e-mail brouhaha. *Poughkeepsie Journal*, 5B.

- Schlesinger, W.H. 2010, January 7. Protecting rockweed to sustain local fisheries, Jobs. Bangor Daily News, A6.
- Schlesinger, W.H. 2010. Eyes Wide Shut. pp. 13-20. In: K.S. Van Houtan and M.S. Northcott (eds.). Diversity and Dominion. Wipf and Stock Publishers, Eugene, Oregon.
- Schlesinger, W.H. 2010. Biogeochemistry on the farm. pp. 87-88. In: K.S. Van Houtan and M.S. Northcott (eds.). Diversity and Dominion. Wipf and Stock Publishers, Eugene, Oregon.
- Schlesinger, W.H. 2010. Translational Ecology (Editorial). Science 329:609.
- Whitmer, A., L. Ogden, J. Lawton, P. Sturner, P.M. Groffman, L. Schneider, D. Hart, B. Halpern, W. H. Schlesinger, S. Raciti, N. Bettez, S. Ortegjja, L. Rustad, S.T.A. Pickett, and M. Killilea. 2010. The engaged university: Providing a platform for research that transforms society. Frontiers in Ecology and Environment 8(6):314-321.
- Schlesinger, W.H. 2010, 15 August. Problems point to oil's impact. Op-ed. Poughkeepsie Journal, 3F.
- Schlesinger, W.H. 2010, 26 September. Land-use plans will benefit region. Poughkeepsie Journal.
- Kelly, V.R., S.E.G. Findlay, W.H. Schlesinger, K. Menking, and A.M. Chatrchyan. 2010. Road Salt, Moving Toward the Solution. A Publication of the Cary Institute of Ecosystem Studies. 16pp.
- Schlesinger, W.H. 2010, 26 November. Neglect for science carries too high a price. Op-ed. Albany Times Union.
- Schlesinger, W.H. 2011, 2 January. State weights gas-drilling rules. Ecofocus. Poughkeepsie Journal, 1H.
- Schlesinger, W.H. 2011, 13 February. Data show ozone turnaround. Ecofocus. *Poughkeepsie Journal*, 1H.
- Janzen, H.H., P. Fixen, A.J. Franzluebbers, J. Hattey, R.C. Izaurralde, Q.M. Ketterings, D.A. Lobb, and W.H. Schlesinger. 2011. Global prospects rooted in soil science. Soil Science Society of America Journal 75(1):1-8.
- Schlesinger, W.H. 2011, 3 July. Deficit no fault of EPA. Ecofocus. *Poughkeepsie Journal*, 6B.
- Schlesinger, W.H. 2011, 31 July. Going green boosts economy. Ecofocus. Poughkeepsie Journal, 6B.
- Schlesinger, W.H. 2011, 27 August. Ice loss a growing concern. Ecofocus, *Poughkeepsie Journal*, 6B.
- Schlesinger, W.H. 2012, 1 January. More research, regulation needed before fracking advances in N.Y. Ecofocus. *Poughkeepsie Journal*, 6B.

## Book Reviews by W.H. Schlesinger Review of:

- Barbour, M.G. and J. Major (eds.). 1977. Terrestrial Vegetation of California. Wiley, NY. *In: Ecology* 62: 1408-1409, 1981
- Hutzinger, O. 1980. The Handbook of Environmental Chemistry. Vol. 1, Part A. The Natural Environment and the Biogeochemical Cycles. Springer-Verlag, NY. *In: Ecology* 62: 281-282, 1981
- Swift, M.J., O.W. Heal and J.M. Anderson. 1980. Decomposition in Terrestrial Ecosystems. University of California Press, Berkeley. *In: Ecology* 62: 1692-1693, 1981
- Reichle, D.E. (ed). 1981. Dynamic Properties of Forest Ecosystems. Cambridge University Press, NY. *In: Ecology* 63: 257-258. 1982
- Likens, G.E. (ed.). 1981. Some Perspectives of the Major Biogeochemical Cycles. Wiley, NY. *In: Ecology* 63: 595, 1982
- Speidel, D.H. and A.F. Agnew. 1982. The Natural Geochemistry of the Environment. Westview Press, Boulder, Colorado. *In: Ecology* 64: 415, 1983
- Cooley, J.H. and F.B. Golley (eds.). 1984. Trends in Ecological Research for the 1980s. Plenum Press, NY. *In: Ecology* 67: 281-282, 1986
- Myers, R.L. and J.J. Ewel. (eds.). 1990. Ecosystems of Florida. University of Central Florida Press, Orlando, *In: Science* 252, 1009-1010, 1991
- Livingston, R.J. (ed.). 1990. The Rivers of Florida. Springer-Verlag, NY. In: Science 252: 1009-1010, 1991
- Likens, G.E. 1992. The Ecosystem Approach: Its Use and Abuse. Oldendorf/Luhe. *In: Quarterly Review of Biology* 68: 297, 1993
- Zepp, R.G. and C. Sonntag. (eds.). 1995. The Role of Nonliving Organic Matter in the Earth's Carbon Cycle. Wiley, NY. *In: Journal of Biogeography* 23: 732, 1996
- Brown, J.H. 1995. Macroecology. University of Chicago Press. In: Quarterly Review of Biology 71: 145, 1996
- Walker, B.H. and W. Steffen (eds.). 1996. Global Change and Terrestrial Ecosystems. Cambridge University Press, Cambridge. *In: American Scientist* 86: 87, 1998
- Samson, F.B. and F.L. Knopf. 1996. Ecosystem Management. Springer-Verlag, NY. *In: Quarterly Review of Biology* 72: 99-100, 1997
- Kingsland, S.E. 2005. The Evolution of American Ecology, 1890-2000. Johns Hopkins University Press, Baltimore, MD. *In: Bioscience* 56: 269-270, 2006
- Lomborg, B. 2007. Cool It. Alfred Knopf, New York. In: Journal of Forestry 106:293-294

#### **Public Lectures and Seminars Presented:**

Alberta:

University of Calgary, Biology, 1992

Arizona:

Arizona State University, Biology, 2000, 2005 University of Arizona, 1993

#### California:

California Institute of Technology, Geological and Planetary Sciences, 1998, 2010

Electric Power Research Institute (EPRI)

Occidental College, 2002

San Diego State University, Biology

Stanford University, Geology and Environmental Science, 1998, 2002, 2004

UC, Berkeley, (Hans Jenny Memorial Lecture), 1998

UC, Davis, Botany, 1978; Land, Air and Soil Resources, 2001

UC, Irvine, Biology, 1978; Earth System Science, 1998

UC, Riverside, Plant Biology, 1979, 2009

UC, Santa Barbara, Ecology Evolution and Marine Biology, 1998 Bren School of Environment, 2001

#### China:

China Agricultural University, Beijing, 2011 Xiamen Institute for the Urban Environment, 2012

#### Colorado:

Colorado State University, (Eminent Ecologist Series), 1995 University of Colorado, 2006

#### Connecticut:

Hotchkiss School, Salisbury Forum, 2008
University of Connecticut, Ecology and Evolution

University of Connecticut, Ecology and Evolutionary Biology, 2007

Yale University, Biology, 1992; Geology and Geophysics, 2001; Institute for Biospheric Studies, 2008

#### Delaware:

University of Delaware, 2009

#### District of Columbia:

Environmental Protection Agency/Department of Defense, 2009 National Geographic Society, 2000 Smithsonian Institution, 1998

France:

Agro-Paris Tech, Paris, France, GAIE Symposium, 2009

#### Florida:

Northwest Florida State University, 2012

School of Forest Resources and Conservation, (The 10<sup>th</sup> John Gray Lecture), 2005

#### Georgia:

Emory University School of Law, 2008 Georgia Tech, Earth Sciences, 1982, 2001 University of Georgia, Institute of Ecology, 1991; Odum Lecture, 2010 Valdosta State College, Biology, 1975

#### Illinois:

Northwestern University, Geology, 1998 University of Illinois, Chicago, Biology, 1997, 2002; Lussenhop Memorial Lecture, 2010 University of Illinois, Urbana, Plant Science, 1997 Idaho:

Inland Northwest Research Alliance, 2006

India:

Indian Institute of Technology (ITT), Kanpur, 2010

Indiana:

Notre Dame, Biology 2005

Purdue University, Agronomy, 2006

Kansas:

The Land Institute, 2005 University of Kansas, 2004

Louisiana:

Louisiana State University, (The 4<sup>th</sup> Annual Patrick Lecture), 2002

Maine:

Bowdoin College, 2001 University of Maine, 2006

Maryland:

Frostburg State University, Appalachian Environmental Laboratory, 1996 Smithsonian Environmental Research Center, 2009 University of Maryland, Baltimore County, 2004

Massachusetts:

Harvard University, School of Public Health, 2004, 2005, 2006 Marine Biological Laboratory, The Ecosystems Center, 2001 University of Massachusetts, Amherst, Biology, 2000

Michigan:

Michigan State University, W. K. Kellogg Biological Lab, Visiting Eminent Ecologist, 1992. 2004 University of Michigan School of Natural Resources, 2012

Minnesota:

University of Minnesota, Ecology and Evolutionary Biology (The Lindeman Lecture), 1998

Nevada:

University of Nevada, Las Vegas, Biology (The Juanita Greer White Distinguished Lecture), 2005 University of Nevada, Reno, Biology, 1986

New Jersey:

Princeton University, Ecology and Evolutionary Biology, 1995, 2010

New Hampshire:

Dartmouth College, Biology, 1976, 2001; Environmental Studies, 1992, 2003

New Mexico:

New Mexico State University, Biology, 1996 University of New Mexico, Biology, 1996

New York:

American Museum of Natural History, 2000

Bard College, 2009

Brookhaven National Laboratory, 1996

City University of New York (CUNY), Queens College Earth and Environmental Sciences, 2007

City University of New York (CUNY), The Graduate Center, 2007

Columbia University, Lamont Earth Observatory, 1999, 2007

Cornell University, Ecology and Systematics, 1985, 2001, 2007, 2010

**Dutchess Community College**, 2008

Fordham University, 2009

Garden Club of America, 2012

Marist College, 2010

New York Academy of Sciences, 2008

Pace University, 2009, 2010

Rockefeller University, 2008

Secret Science Club (The), Brooklyn, 2008

Skidmore College, 2009

State University of New York (SUNY), Syracuse, College of Environmental Science & Forestry, 2008

State University of New York (SUNY), Stony Brook, 2011

Union College, 2012

#### North Carolina:

Appalachian State University, Biology, 1998

Brevard College, 2007

Catawba College, 2004

Daniel Stowe Botanical Garden, 2000

Davidson College, 2002

Duke University, 2008 (H.J. Oosting Memorial Lecture); Integrated Toxicology Program, 2012

East Carolina, 2007

Elon University, 2009

Lenoir-Rhyne College, 2009

North Carolina A& T University, 2007

North Carolina State University, Botany 2002 (B.W. Wells Memorial Lecture); Agronomy, 2004, 2007 (Willie Woltz Lecture)

University of North Carolina, Chapel Hill; Botany, 1979; Geology, 1998; Marine Science, 2004;

Geography, 2007

Wake Forest University, Biology, 2000

Warren Wilson College, 2009

Western Carolina University, Biology, 1997, 2005

#### North Dakota:

University of North Dakota, 2002

#### Ohio:

Case Western Reserve University, Biology, 1976, 2005

Cleveland Museum of Natural History, 2005

Ohio State University, Botany, 1976

University of Toledo, 2005 University School, 2006

Ontario:

University of Toronto, 2007

#### Pennsylvania:

Lehigh University, Earth and Environmental Sciences, 2000

Pennsylvania State University, Biology, 1976; Earth System Science, 1998

#### Quebec:

McGill University, Biology, 1976

#### Rhode Island:

University of Rhode Island, Graduate School of Oceanography, 2009

#### South Carolina:

Furman College, Earth and Environmental Sciences, 2009

Savannah River Ecology Laboratory, 1982

#### Switzerland:

ETH-Zurich, Latsis Symposium, 2007

#### Tennessee:

Oak Ridge National Laboratory, Environmental Sciences Division

#### Texas:

Rice University, Ecology and Evolutionary Biology

Southwest Texas State University, Biology, 1985

Southwest University (The 16<sup>th</sup> Annual Brown Symposium), 1994

Texas A & M University, Oceanography, 1999; Range Science, (The Dyksterhuis Lecture) 2001; Bush School of Government and Public Service, 2001; Atmospheric Sciences, 2010

Texas Tech University, Lubbock, 2009

University of Texas, Austin, Geology, 1997

University of Texas, San Antonio, Biology, 1998

#### United Kingdom:

British Soil Science Society, London, 2002

University of Sheffield, Geography, (The Hart Lecture), 2008

#### Utah:

University of Utah, Biology, 1994

Utah State University, Institute of Ecology, 1992

#### Vermont:

Bennington College, (The Woodworth Lecture), 2008

#### Virginia:

George Mason University, Biology

Sweetbriar College, Lynchburg, (The Waxman Lecture), 2008

University of Virginia. Earth and Environmental Sciences, 2000, 2011 (Envirodays)

Virginia Tech University, Biology, 1984, 2004

#### Washington:

Environmental Protection Agency, Washington, DC, 2009

University of Washington, Quaternary Sciences 1981; Forestry, 1991

Washington State University, Botany, 1997; Biology, 2005

#### West Virginia:

West Virginia University, Biology, 1996

#### Wyoming:

University of Wyoming, Botany, 1986, 1991, 2007 (Campus Lecture)

#### Graduate Students of William H. Schlesinger

(With thesis/dissertation titles)

#### University of California, Santa Barbara, 1976-1980

Simms, Ellen L., M.A. 1977. (Degree fulfilled by course work)

Now Employed: Director of the Botanical Garden, University of California, Berkeley

Ball, J.T., M.A. 1977.

"Effects of fire on soil mineral nutrients in a southern California soft chaparral community."

Now Employed: Biological Sciences Center, Desert Research Institute, Reno

Wood, Janet Heyl (Janet Vail), M.A. 1980.

"Effects of thalli reticulations on water relations of *Ramalina menziesii* Tayl. along an altitudinal gradient."

Now Employed: Grand Valley State University, Michigan

St. Omer, Lucy, Ph.D. 1980.

"Field and greenhouse investigations of the effects of increasing salt stress on the anatomy and physiology of *Jaumea carnosa* (Asteraceae), a salt marsh species." (Joint Advisor with M.F. Moseley).

Now Employed: Associate Professor, San Jose State University

Gray, John T., Ph.D. 1981.

"Production, nutrient cycling, and nutrient resource-use in Ceanothus chaparral and coastal sage scrub of southern California."

Now Employed: Deceased

Previous Positions: Dames and Moore Inc., Woodward and Clyde Environmental Consultants, and the URS

Corporation, Santa Barbara, CA

#### Duke University, 1980- present

Lajtha, Kathryn, Ph.D. 1986. Botany

"The biogeochemistry of phosphorus cycling and phosphorus availability in a desert ecosystem."

Now Employed: Professor (tenured), Botany and Plant Pathology, Oregon State University

Previous Positions: Postdoctoral (Ohio State); faculty (Boston University)

Peterjohn, William T., Ph.D. 1990. Botany

"Nitrogen loss from desert ecosystems in the southwestern United States."

Now Employed: Associate Professor (tenured), Department of Biology, West Virginia University

Previous Positions: Postdoctoral (Marine Biological Laboratory, Woods Hole)

Cross, Anne F.S., Ph.D. 1994. Botany

"Biogeochemistry at the grassland-shrubland boundary: A case study of desertification in the northern Chihuahuan desert of New Mexico."

Now Employed: The Nature Conservancy, Oklahoma

Previous Positions: Teacher (NC School of Science and Math), Assistant Professor (Oklahoma State University)

Megonigal, J. Patrick, Ph.D. 1996. Botany

"Methane production and oxidation in a future climate."

Now Employed: Research Biogeochemist, Smithsonian Institution, Environmental Laboratory, Edgewater,

Maryland

Previous Positions: Assistant Professor (George Mason University)

Hartley, Anne E., Ph.D. 1997. Botany

"Environmental controls on nitrogen cycling in northern Chihuahuan desert soils."

Now Employed: Assistant Professor (tenure track), Environmental Studies, Florida Gulf Coast University

Previous Positions: Postdoctorals (Marine Biological Laboratory, Ohio State University and Indiana University), Assistant Professor, Florida International University Lawrence, Deborah, Ph.D. 1998. Botany

"Landscape structure, soil fertility, and tree diversity during 200 years of shifting cultivation in West Kalimantan,

Indonesia."

Now Employed: Associate Professor (tenured), Department of Environmental Sciences University of Virginia

Previous Position: Postdoctoral (Harvard Forest)

Tice, Michael M., M.S. 1999. Geology

"The Precambrian Oxygen Cycle"

Now Employed: Assistant Professor, Texas A&M University Previous Position: Doctoral Student, Stanford University

Allen, Andrew S., Ph.D. 1999. Botany

"Effects of elevated atmospheric CO<sub>2</sub> on soil nitrogen availability"

Now Employed: Montecito Public Library, Santa Barbara

Previous Positions: Postdoctoral (University of California, Santa Barbara)

Andrews, Jeffrey A., Ph.D. 1999. Botany

"Changes to belowground carbon dioxide dynamics under experimental CO<sub>2</sub> enrichment of a forest ecosystem"

Now Employed; Locke, Liddell & Sapp, LLP

Previous Positions: Postdoctoral (Rice University), Technical Staff (Enron Corp), Law Student (U. Houston)

Powers, Jennifer S., Ph.D. 2001. Biology

"Geographic variation in soil organic carbon dynamics following land-use change in Costa Rica"

Now Employed: Assistant Professor, University of Minnesota

Previous Positions: Postdoctorals (The State University of New York, Stony Brook and University of Minnesota)

Wallenstein, Matthew D., Ph.D. 2004, Ecology

"Effects of increased nitrogen deposition on forest soil nitrogen cycling and microbial community structure"

Now Employed: Research Scientist, Colorado State University

Previous Positions: Postdoctoral Associate (University of California, Santa Barbara).

Hofmockel, Kirsten, Ph.D. 2005, Ecology

"Effects of elevated atmospheric carbon dioxide on soil nitrogen cycling" (Joint Advisor with R.B. Jackson)

Now Employed: Assistant Professor, Iowa State University

Previous Position: Postdoctoral Associate, University of Michigan

#### Postdoctoral Associates of William H. Schlesinger

Evan H. DeLucia 1985-1986

Now Employed: Professor (tenured) and Department Chair (Plant Biology), University of Illinois

Antonio Gallardo 1989, 1991-1993

Now Employed: Professor (tenured) and Department Chair (Biology), University of Vigo, Spain

Kevin Harrison 1995-1997

Now Employed: Assistant Professor (untenured) McDaniel College, Westminster, MD

Adrien Finzi 1996-1999

Now Employed: Associate Professor (tenured), Boston University

Roser Matamala 1997-2000

Now Employed: Research Scientist, Argonne National Laboratory, Argonne, IL

John Lichter 1998-2000

Now Employed: Associate Professor (tenured), Bowdoin College, Brunswick, ME

Emily Bernhardt 2001-2002

Now Employed: Assistant Professor of Biology, Duke University