

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

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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:

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 (1980-1988), 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

2008-2010 Senior Visiting Fellow, School of Forestry & Environmental Studies, Yale University

Honors:

- 1971 Milton Sims Kramer Award, Dartmouth College
- 1972 Willard W. Eggleston Memorial Botany Prize, Dartmouth College
- 1995 American Academy of Arts & Sciences, Elected Fellow
- 1999 Aldo Leopold Leadership Program, Fellow
- 2003 National Academy of Sciences, Elected Member
- 2006 American Geophysical Union, Elected Fellow
- 2006 Soil Science Society of America, Elected Fellow
- 2008 Intergovernmental Panel on Climate Change (IPCC) — Certificate of Recognition for participation in the Nobel Peace Prize, 2007

Professional Activities:

In Government:

Executive Briefing

- 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

Congressional 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

Judicial Briefing

- 2009 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.

Professional Activities (cont.):

In Government (cont.):

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

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)
- 1992-2002 Inter-agency Environmental Task Force (MEDEA)
- 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, [Select Panel on the Environmental Effects of RF \(Radiofrequency\) Chaff](#)
- 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
- 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

Professional Activities (cont.):

In Government (cont.):

Service to Government Agencies (cont.)

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*

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*

Professional Activities (cont.):

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

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:

2007 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)

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)
WUNC (The State of Things, December 22, 2004)
[John Bradshaw Layfield Show](#) (February 10, 2007)
- 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
- 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>)

(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). (Co-investigator 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 CO₂ 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 CO₂- 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 CO₂ -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 CO₂ (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)

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. *The Year in Ecology and Conservation Biology*. Annals of the New York Academy of Sciences, Vol. 1134.
- Ostfeld, R.S. and W.H. Schlesinger (eds.). 2009. *The Year in Ecology and Conservation Biology*. Annals of the New York Academy of Sciences, Vol. 1162.

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 CO₂. 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 CaCO₃ (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). *Madrone* 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 CaCO₃ 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 CaCO₃ 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.
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- 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
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

Colorado:

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

Connecticut:

Hotchkiss School, Salisbury Forum, 2008
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:

Smithsonian Institution, 1998
National Geographic Society, 2000

France:

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

Florida:

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

Georgia:

Emory University School of Law, 2008

Georgia Tech, Earth Sciences, 1982, 2001
University of Georgia, Institute of Ecology, 1991
Valdosta State College, Biology, 1975

Illinois:

Northwestern University, Geology, 1998
University of Illinois, Urbana, Plant Science, 1997
University of Illinois, Chicago, Biology, 1997, 2002

Idaho:

Inland Northwest Research Alliance, 2006

Indiana:

Notre Dame, Biology 2005
Purdue University, Agronomy, 2006

Kansas:

University of Kansas, 2004
The Land Institute, 2005

Louisiana:

Louisiana State University, (The 4th Annual Patrick Lecture), 2002

Maine:

Bowdoin College, 2001
University of Maine, 2006

Maryland:

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

Massachusetts:

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

Michigan:

Michigan State University, W. K. Kellogg Biological Lab, Visiting Eminent Ecologist, 1992. 2004

Minnesota:

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

Nevada:

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

New Jersey:

Princeton University, Ecology and Evolutionary Biology, 1995

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
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
Dutchess Community College, 2008
Fordham University, 2009
New York Academy of Sciences, 2008
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

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)
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 University (The 16th Annual Brown Symposium), 1994
Southwest Texas State University, Biology, 1985
Texas A & M University, Oceanography, 1999; Range Science, (The Dyksterhuis Lecture) 2001; Bush School of
Government and Public Service, 2001
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
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 CO₂ 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 CO₂ 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 (untentured) 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