CURRICULUM VITAE

THOMAS A. "TAD" DAY

ADDRESS:
Faculty of Ecology, Evolution & Environmental Science
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EDUCATION:

1988	PhD	Colorado State University, Fort Collins, CO
1985	MS	University of Idaho, Moscow, ID
1981	BS with distinction	Colorado State University, Fort Collins, CO

PROFESSIONAL EXPERIENCE:

2004-present	Professor, School of Life Sciences, Arizona State University
1998-2004	Associate Professor, School of Life Sciences, Arizona State University
1995-1998	Assistant Professor, Department of Plant Biology, Arizona State University
1991-1995	Assistant Professor, Department of Biology, West Virginia University
1990-1991	Staff Scientist - Plant Ecologist, USDA-ARS, Beckley, WV
1988-1990	Visiting Research Fellow, Department of Botany, University of Wyoming
1988-1990	Postdoctoral Fellow, Department of Plant Biology, University of Illinois

AFFILIATION:

2010-present	Senior Scientist, Global Institute of Sustainability, Arizona State University
1995-present	Executive Member, Photosynthesis Center, Arizona State University

PROFESSIONAL INTERESTS:
Physiological plant ecology. Litter decomposition and carbon cycling. Influence of environmental factors on photosynthesis, leaf optics, water relations, carbon balance, growth and reproduction. Linking physiological processes with those at other scales, from molecular to ecosystem. Plant productivity and carbon cycling in the context of global change.

MEMBERSHIP: American Association for the Advancement of Science, American Society for Photobiology, Ecological Society of America

SCHOLARSHIP, HONORS, AWARDS: Phi Beta Kappa, Sigma Xi, Regents' Scholarship (State University of New York), Fay Scholarship (Colorado State University), DOE Training Fellowship (Associated Western Universities), AO Wilson Scholarship (Colorado State University), Colorado Graduate Fellowships (State of Colorado), Antarctic Service Medal (NSF)

REFEREED PUBLICATIONS:

1.) Day, TA, EH DeLucia & WK Smith. 1989. Influence of cold soil and snowcover on photosynthesis and conductance in two Rocky Mountain conifers. *Oecologia* 80:546-552.

2.) Day, TA & RG Wright. 1989. Positive plant spatial association with *Eriogonum ovalifolium* in primary succession on cinder cones: seed-trapping nurse plants. *Vegetatio* 80:37-45.

3.) Day, TA & JK Detling. 1990. Grassland patch dynamics and herbivore grazing preference following urine deposition. *Ecology* 71:180-188.

4.) Day, TA, EH DeLucia & WK Smith. 1990. Effect of soil temperature on stem sap flow, shoot gas exchange and water potential in *Picea engelmannii* (Parry) during snowmelt. *Oecologia* 84:474-481.

5.) Day, TA, EH DeLucia & WK Smith. 1990. Dorsiventrality of the photosynthetic-light response in naturally occurring C_3 dicots. *Current Research in Photosynthesis* 4:883-886.

6.) Day, TA & JK Detling. 1990. Changes in grass leaf water relations following bison urine deposition. *American Midland Naturalist* 123:171-178.

7.) DeLucia, EH, TA Day & G Öquist. 1991. The potential for photoinhibition of *Pinus sylvestris* L. seedlings exposed to high light and low soil temperature. *Journal of Experimental Botany* 42:611-617.

8.) DeLucia, EH, HD Shenoi, SL Naidu & TA Day. 1991. Photosynthetic symmetry of sun and shade leaves of different orientations. *Oecologia* 87:51-57.

9.) Day, TA, SA Heckathorn & EH DeLucia. 1991. Limitations of photosynthesis in *Pinus taeda* L. (loblolly pine) at low soil temperatures. *Plant Physiology* 96:1246-1254.

10.) DeLucia, EH, TA Day & TC Vogelmann. 1991. Ultraviolet-B radiation and the Rocky Mountain environment: measurement of incident light and penetration into foliage. *Current Topics in Plant Biochemistry and Physiology* 10:32-48.

11.) DeLucia, EH, SA Heckathorn & TA Day. 1992. Soil temperature effects on growth, biomass allocation, and resource acquisition of *Andropogon gerardii* (Vitman). *New Phytologist* 20:543-549.

12.) DeLucia, EH, TA Day & TC Vogelmann. 1992. Ultraviolet-B screening properties of the epidermis during development in two subalpine conifers. *Plant, Cell and Environment* 15:921-929.

13.) Day, TA, TC Vogelmann & EH DeLucia. 1992. Are some plant life forms more effective than others in screening out ultraviolet-B radiation? *Oecologia* 92:513-519.

14.) Day, TA, G Martin & TC Vogelmann. 1993. Penetration of UV-B radiation in foliage: evidence that the epidermis behaves as a non-uniform filter. *Plant, Cell and Environment* 16:735-741.

15.) Day, TA. 1993. Relating ultraviolet-B screening effectiveness of foliage to absorbing-compound concentration and anatomical characteristics in a diverse group of plants. *Oecologia* 95:542-550.

16.) Day, TA, WJ Rice & BW Howells. 1994. Ultraviolet epidermal-transmittance and absorption spectra in foliage. *Physiologia Plantarum* 92:207-218.

17.) Day, TA & JK Detling. 1994. Water relations of *Agropyron smithii* and *Bouteloua gracilis* and community evapotranspiration following long-term grazing by prairie dogs. *American Midland Naturalist* 132:381-392.

18.) Day, TA & TC Vogelmann. 1995. Alterations in photosynthesis and pigment distributions in pea leaves following UV-B exposure. *Physiologia Plantarum* 94:433-440.

19.) Day, TA & JB McGraw. 1995. Ozone depletion, UV-B radiation and performance of Antarctic vascular plants. *Antarctic Journal of the United States* 30:313-314.

20.) Day, TA, CT Ruhland & BW Howells. 1996. Changes in growth and pigment concentrations with leaf age in pea under modulated UV-B field treatments. *Plant, Cell and Environment* 19:101-108.

21.) Demchik, SM & TA Day. 1996. Effect of enhanced UV-B radiation on pollen quantity, quality and seed yield in *Brassica rapa*. *American Journal of Botany* 83:573-579.

22.) Ruhland, CT & TA Day. 1996. Changes in UV-B radiation screening effectiveness with leaf age in *Rhododendron maximum*. *Plant, Cell and Environment* 19:740-746.

23.) Day, TA & SM Demchik. 1996. Ultraviolet-B radiation screening effectiveness of reproductive organs in *Hesperis matronalis*. *Environmental and Experimental Botany* 36:447-454.

24.) Day, TA & SM Demchik. 1996. Influence of enhanced UV-B radiation on biomass allocation and pigment concentrations in leaves and reproductive structures of greenhouse-grown *Brassica rapa*. *Vegetatio* 127:109-116.

25.) Day, TA, CT Grobe & CT Ruhland. 1996. Impacts of climate change on Antarctic vascular plants: warming and ultraviolet-B radiation. *Antarctic Journal of the United States* 31:226-227.

26.) Sullivan, JH, BW Howells, CT Ruhland & TA Day. 1996. Changes in leaf expansion and epidermal screening effectiveness in *Liquidambar styraciflua* and *Pinus taeda* in response to UV-B radiation. *Physiologia Plantarum* 98:349-357.

27.) Day, TA, CT Ruhland & F Xiong. 1997. Impacts of UV-B radiation and regional warming on Antarctic vascular plants. *Antarctic Journal of the United States* 32:155-157.

28.) McGraw, JB & TA Day. 1997. Size and characterization of a natural seed bank in Antarctica. *Arctic and Alpine Research* 29:213-216.

29.) Grobe, CW, CT Ruhland & TA Day. 1997. A new population of the vascular plant *Colobanthus quitensis* (Kunth) Bartl. at Arthur Harbor, Antarctic Peninsula: correlating recruitment with warmer summer air temperatures. *Arctic and Alpine Research* 29:217-221.

30.) Day, TA, CT Ruhland & FS Xiong. 1998. Response of Antarctic vascular plants to UV-B radiation and warming. *Antarctic Journal of the United States* 33: 136-139.

31) Day, TA, CT Ruhland, CW Grobe & FS Xiong. 1999. Growth and reproduction of Antarctic vascular plants in response to warming and UV-B radiation reductions in the field. *Oecologia* 119:24-35.

32.) Xiong, FS, CT Ruhland & TA Day. 1999. Photosynthetic temperature response of the Antarctic vascular plants *Colobanthus quitensis* and *Deschampsia antarctica*. *Physiologia Plantarum* 106:276-286.

33.) Johnson, GA, SV Mantha & TA Day. 2000. A spectofluorometric survey of UV-induced blue-green fluorescence in foliage of 35 species. *Journal of Plant Physiology* 156:242-252.

34.) Xiong, FS, EC Mueller & TA Day. 2000. Photosynthetic and respiratory acclimation and growth response of Antarctic vascular plants to contrasting temperature regimes. *American Journal of Botany* 87:700-710.

35.) Ruhland, CT & TA Day. 2000. Effects of ultraviolet-B radiation on leaf elongation, production and phenylpropanoid concentrations of *Deschampsia antarctica* and *Colobanthus quitensis* in Antarctica. *Physiologia Plantarum* 109:244-251.

36.) Xiong, FS & TA Day. 2001. Effect of solar ultraviolet-B radiation during springtime ozone depletion on photosynthesis and biomass production of Antarctic vascular plants. *Plant Physiology* 125:738-751.

37.) Ruhland, CT & TA Day. 2001. Size and longevity of seedbanks in Antarctica and the influence of ultraviolet-B radiation on survivorship, growth and pigment concentrations of *Colobanthus quitensis* seedlings. *Environmental and Experimental Botany* 45:143-154.

38.) Mantha, SV, GA Johnson & TA Day. 2001. Evidence from action and fluorescence spectra that UV-induced violet-blue-green fluorescence enhances leaf photosynthesis. *Photochemistry and Photobiology* 73:249-256.

39.) Day, TA, CT Ruhland, & FS Xiong. 2001. Influence of solar ultraviolet-B radiation on Antarctic terrestrial plants: results from a 4-year field study. *Journal of Photochemistry and Photobiology B: Biology* 62:78-87.

40.) Day, TA. 2001. Multiple trophic levels in UV-B assessments - completing the ecosystem. *New Phytologist* 152:183-186.

41.) Day, TA, P Gober, FS Xiong & EA Wentz. 2002. Temporal patterns in near-surface CO_2 concentrations over contrasting vegetation types in the Phoenix metropolitan area. *Agricultural and Forest Meteorology* 110:229-245.

42.) Wentz, EA, P Gober, RC Balling & TA Day. 2002. Spatial patterns and determinants of winter atmospheric carbon dioxide concentrations in an urban environment. *Annals of the Association of American Geographers* 92:15-28.

43.) Xiong, FS, Ruhland, CT & TA Day. 2002. Effect of springtime ultraviolet-B radiation on growth of *Colobanthus quitensis* at Palmer Station, Antarctica. *Global Change Biology* 8:1146-1155.

44.) Day, TA & PJ Neale. 2002. Effects of UV-B radiation on terrestrial and aquatic primary producers. *Annual Review of Ecology and Systematics* 33:371-396.

45.) Morse, LJ, SH Faeth & TA Day. 2002. Effect of *Neotyphodium* endophyte infection on growth and leaf gas exchange of Arizona fescue under contrasting water availability regimes. *Environmental and Experimental Botany* 48:257-268.

46.) Johnson, GA & TA Day. 2002. Enhancement of photosynthesis in *Sorghum bicolor* by ultraviolet radiation. *Physiologia Plantarum* 116:554-562.

47.) Convey, P, PJA Pugh, C Jackson, AW Murray, CT Ruhland, FS Xiong & TA Day. 2002. Response of Antarctic terrestrial microarthropods to long-term climate manipulations. *Ecology* 83:3130-3140.

48.) Coleman, RS & TA Day. 2004. Response of cotton and sorghum to several levels of subambient solar UV-B radiation: a test of the saturation hypothesis. *Physiologia Plantarum* 122:362-372.

49.) Mueller, EC & TA Day. 2005. The effect of urban ground cover on microclimate, growth and leaf gas exchange of oleander in Phoenix, Arizona. *International Journal of Biometeorology* 49: 244-255.

50.) Ruhland, CT, FS Xiong, WD Clark & TA Day. 2005. The influence of ultraviolet-B radiation on growth, hydroxycinnamic acids and flavonoids of *Deschampsia antarctica* during springtime ozone depletion in Antarctica. *Photochemistry and Photobiology* 81:1086-1093.

51.) Park, JH, TA Day, S Strauss & CT Ruhland. 2007. Biogeochemical pools and fluxes of carbon and nitrogen in a maritime tundra near penguin colonies along the Antarctic Peninsula. *Polar Biology* 30:199-207.

52.) Morse, LJ, SH Faeth & TA Day. 2007. *Neotyphodium* interactions with a wild grass are driven mainly by endophyte haplotype. *Functional Ecology* 21:813-822.

53.) Neale, PJ, WE Helbing & TA Day. 2007. Symposium-in-print: UV effects in aquatic and terrestrial environments. *Photochemistry and Photobiology* 83:775-776.

54.) Park, JH & TA Day. 2007. Temperature response of CO_2 exchange and dissolved organic carbon release in a maritime Antarctic tundra ecosystem. *Polar Biology* 30:1535-1544.

55.) Day, TA, ET Zhang & CT Ruhland. 2007. Exposure to solar UV-B radiation accelerates mass and lignin loss of *Larrea tridentata* litter in the Sonoran Desert. *Plant Ecology* 193:185-194.

56.) Day, TA, CT Ruhland & FS Xiong. 2008. Warming increases aboveground biomass and C stocks in vascular-plant dominated Antarctic tundra. *Global Change Biology* 14:1827-1843.

57.) Day, TA, CT Ruhland, SL Strauss, J-H Park, ML Kreig, MA Krna & DM Bryant. 2009. Response of plants and the dominant microarthropod, *Cryptopygus antarcticus*, to warming and contrasting precipitation regimes in Antarctic tundra. *Global Change Biology* 15: 1640-1651.

58.) Krna, MA, TA Day & CT Ruhland. 2009. Effects of neighboring plants on the growth and reproduction of *Deschampsia antarctica* in Antarctic tundra. *Polar Biology* 32:1487-1494.

59.) Strauss, SL, CT Ruhland & TA Day. 2009. Trends in soil characteristics along a recently deglaciated foreland on Anvers Island, Antarctic Peninsula. *Polar Biology* 32: 1779-1788.

60.) Elmendorf, SC, Henry, GH, Hollister, RD, Björk, RG, Bjorkman, AD, Callaghan, TV, Collier, LS, Cooper EJ, Cornelissen, JHC, Day,TA, et. al. 2012. Global assessment of experimental climate warming on tundra vegetation: heterogeneity over space and time. *Ecology Letters* 15: 164-175.

61.) Strauss, SL, TA Day & F Garcia-Pichel. 2012. Nitrogen cycling in desert biological soil crusts across biogeographic regions in the Southwestern United States. *Biogeochemistry* 108:171-182.

62.) Elmendorf, SC, Henry, GH, Hollister, RD, Björk, RG, Boulanger-Lapointe N, Cooper EJ, Cornelissen, JHC, Day, TA, et. al. 2012. Plot-scale evidence of tundra vegetation change and links to recent summer warming. *Nature Climate Change* 2:453-457.

63.) Strauss, SL, F Garcia-Pichel. & TA Day. 2012. Soil microbial carbon and nitrogen transformations at a glacial foreland on Anvers Island, Antarctic Peninsula. *Polar Biology* 35:1459-1471.

MANUSCRIPTS IN PREPARATION:

Day, TA, & CT Ruhland. Effectiveness of different wavebands of solar radiation on the decomposition of contrasting litter in the Sonoran Desert.

OTHER PUBLICATIONS:

Day, TA, & RG Wright. 1985. The vegetation types of Craters of the Moon National Monument. Forestry, Wildlife & Range Experiment Station Bulletin Number 38, University of Idaho.

Day, TA, EC Mueller, FS Xiong & RC Balling. 2000. Temporal patterns in near-surface CO_2 concentrations in the Phoenix urban CO_2 dome over contrasting vegetation types. pp. 205-206 *In: The Urban Environment*. American Meteorological Society, Boston, MA.

Day, TA. 2001. Ultraviolet radiation and plant ecosystems. pp 80-117 *In: Ecosystems, evolution and ultraviolet radiation*. CS Cockell and AR Blaustein (editors). Springer-Verlag, NY.

RESEARCH SUPPORT:

1989-1992. USDA/National Research Initiative Competitive Grant. "Effects of UV-B radiation on foliage optical properties and photosynthesis of conifers." Panel: Ozone depletion and UV. 180,000 (PI: EH DeLucia, CoPI: TA Day)

1991-1993. USDA/National Research Initiative Competitive Grant. "Photosynthetic sensitivity to UV-B: leaf optical and structural considerations." Panel: Plant responses to the environment. $110,000 (PI: TA Day, CoPI: TC Vogelmann)

1992-1993. WVU Senate Faculty Grant. "Ultraviolet-B screening capacity during leaf development." $8,300 (PI: TA Day)

1993-1997. USDA/National Research Initiative Competitive Grant. "UV-B constraints on photosynthetic capacity: linking leaf structure with function." Panel: Plant responses to the environment. $155,100 (PI: TA Day)

1994-1997. National Science Foundation. "Ozone depletion, UV-B radiation and vascular plant performance in Antarctica." Panel: Polar biology and medicine. $320,021 (PI: TA Day)

1996-1997. ASU Faculty Grant in Aid. “Influence of environmental factors on leaf optics.” $6,000 (PI: TA Day)

1997-2000. National Science Foundation. "Impacts of climate change on Antarctic vascular plants: warming and UV-B radiation." Panel: Polar biology and medicine. $336,000 (PI: TA Day)

1997-2000. USDA/National Research Initiative Competitive Grant. "Significance of UV-induced autofluorescence in leaves." Panel: Plant responses to the environment. $160,000 (PI: TA Day, CoPI: WD Clark)

1997-2003. National Science Foundation. “Central Arizona/Phoenix Long-Term Ecological Research Site.” Panel: LTER. $4,200,000 (PIs: CL Redman & NB Grimm, CoPI: TA Day (one of many CoPIs))

1998-2001. National Science Foundation. “The role of endophytes in semi-arid forest-grassland communities” Panel: Ecological studies. $340,000 (PI: S Faeth, CoPI: TA Day)

1999-2001. National Science Foundation. “ Dynamics of an Urban CO_2 Dome” $498,000 (PI: RC Balling, CoPI: TA Day, (one of 5 CoPIs)).

2000. International Travel Grant, ASU. To attend SPARC meeting in Argentina. $1000.

2000-2001. National Science Foundation. REU Supplement on “Impacts of climate change on Antarctic vascular plants: warming and UV-B radiation” Polar biology and medicine. $5000 (PI: TA Day)

2002-2006. National Science Foundation. “Shifting costs and benefits of systemic endophyte interactions with native grass hosts” Panel: Ecological studies. $400,000 (PI: S Faeth, CoPI: TA Day)

2003. National Science Foundation. Multi-user Program: Supplement grant for high-resolution digital camera/software system. $18,100. (PI: R Trelease, CoPI: TA Day (one of 4 CoPIs)).

2003-2007. National Science Foundation. "Response of terrestrial ecosystems along the Antarctic Peninsula to a changing climate." Panel: Polar biology and medicine. $595,000 (PI: TA Day, CoPsI: JM Klopatek, CT Ruhland)

2013-2017. National Science Foundation. "Collaborative Research: Photodegradation in deserts: litter optical and structural considerations". Panel: Division of Environmental Biology (Ecosystem Science). $1,025,628 (PI: TA Day, CoPI: F Garcia-Pichel). CoPI, CT Ruhland, Minnesota State University, also received $294,433 through this collaborative proposal.

TEACHING:

COURSES TAUGHT:

WVU Principles of Biology (first semester for majors - biosphere through species interactions)
“ ” Principles of Biology (second semester for majors - structure and function)
“ ” Plant Ecology (with Lab)
“ ” Environmental Plant Physiology/Physiological Plant Ecology (with Lab)
“ ” Scientific Writing in Biology (biology graduate students)
“ ” Graduate Seminars (6 total)

ASU Principles of Biology (BIO 181; 4 cr; team taught - half semester) SP 96, 98, 00
“ ” Ecology and Environmental Conservation (BIO 330; 3 cr) F 96, 97
“ ” Methods in Environmental Plant Physiology (PLB 524; 3 cr; with lab) SP 97, 99, 01, 03, 06
“ ” Seminar - Graduate Research Traineeship, Photosynthesis (MCB 598; 1 cr) F 96, 97
“ ” Environmental Science (BIO 319/PLB 320; 3 cr) F 98, 99, 00, 01, 02, 03, 04, 05, 06, 07, 08; SU 02, 03, 04, 05, 06, 07
“ ” Seminar - Global change - plant physiology (PLB 598; 1 cr) SP 02
“ ” Physiological plant ecology (BIO/PLB 419/519; 3 cr) SP 02, 04. F 09, SP 12, 13.
“ ” Ecology (BIO 320; 3 cr) SP 05, 07, 09, 10, 11, F 10, 11, 12, 13
“ “ Freshmen success seminar (BIO189; 5 wk) F 09.

GRADUATE STUDENTS ADVISED (COMMITTEE CHAIR):

WVU	Sophie M. Demchik	(1992-95 MS)
"	Paul W. Trammell	(1992-95 MS)
"	Christopher T. Ruhland	(1992-95 MS)
ASU	Christopher T. Ruhland	(1995-2001 PhD)
"	Erin C. Mueller	(1996-2001 MS)
"	Gregory A. Johnson	(1997-2003 PhD)
"	Robert S. Coleman	(2000-2003 MS)
"	Laura J. Morse	(1999-2005 PhD)
"	Sarah Strauss	(2003-2010 PhD)
"	Jorge Lezcano	(2012-present PhD)
"	Alex Tomes	(2013-present PhD)

GRADUATE STUDENT ADVISORY COMMITTEE MEMBER:

WVU 5 graduate student committees
ASU 17 graduate student committees
University of Oulu (Finland) 1 PhD public opponent

POSTDOCTORAL RESEARCH ASSOCIATES SPONSORED:

ASU	Carl W. Grobe (1995-96)
"	Fusheng S. Xiong (1996-01)
"	Nyangenya Maniga (1997-98)
"	Sailaja Mantha (1998-00)
"	Ji-Hyung Park (2003-04)
"	David Bryant (2004-06)

RESEARCH TECHNICIANS:

WVU	Wayne Rice (1992-93)
"	Brad Howells (1993-95)
ASU	Jenny Lin (1998-99)
"	Maria Wiehe (1999-01)
"	Michell Thomey (2004-05)
"	Caroline DeVan (2005-06)
"	Michael Bliss (2013-present)

UNDERGRADUATE RESEARCHERS:

WVU Brant Haas, Brad Howells, Donna Joyce, Paul Kurtz, Danielle Lemlein, Pat McDonnell, Victor Sayed

ASU Tuyetlan Nguyen, Katie Awerkamp, Hana Dostalova, Christine Fisher (REU- Antarctica), Jeff Habig (Univ of Minnesota, REU-Photosynthesis), Anna Jo Isabel (Univ of Oklahoma, REU-Photosynthesis), William Karl, Beverly Roof, Truc Nguyen, Louie Yang (Cornell Univ, REU-Ecology), Erin Foley (Santa Clara Univ, REU-Photosynthesis), Jason Vannett, Michael Beaumont, Justin Gallagher, Nasser Hamdan, Marie Wiehe, Selena Wightman (Univ of Virginia, REU-LTER), Lauren Griffen (Tufts Univ, REU-Photosynthesis), Sunni Jackson, Caleb Slemmons (Wright State Univ, REU-Photosynthesis), Elisa Zhang

(Chaparral High School, sponsored by Barrow Neurological Institute), Craig Howden, Lindsey van Sambeek, Michelle Krieg (NASA Space Grant Intern), Brandon Pizzoferrato, Jason Zatkovich, Rachael Confair, Virginia Fargo, Daniel Rios, Maisah Khan (SoLUR Intern), Misty Gross, Christal Johnson, Loren Stallcop, Anum Chowdry, Jon Halley, Michael Bliss, Alex Jones (SoLUR Intern), Emily Pezelj, Justin Kidd, Lauren Majewski, Nicole Jimenez, Michael Ranta.

SERVICE:

PROFESSIONAL SERVICE:

NSF Station Science Leader, Palmer Station, Antarctica (1995-96, 2003-04, 2004-05 field seasons)

Scientific Advisory Committees or Workshop Participant:

NSF/USDA/EPA - IBGP-GCTE Stress Effects on Future Terrestrial Carbon Fluxes Workshop (1995)

NSF - PAUC: Palmer Area Users' Committee (elected member 1996-97, 2002)

NSF - PAUC: Palmer Area Users' Committee (elected chair 1998-2001)

USDA - UV Monitoring Data Workshop (1998)

SPARC 2000 - Impacts of UV Radiation on Terrestrial and Aquatic Ecosystems Workshop, Argentina (2000)

NAS - Frontiers in Polar Biology Workshop, Polar Research Board, National Research Council, National Academy of Sciences (2002)

USDA - UV Research Conference and Future Research Strategies Planning Committee, Colorado State University (2003)

Fourth Conference on Alpine & Polar Plants, Innsbruck, Austria, International Organizing Committee (2003)

International Conference on the Consequences of stratospheric ozone depletion: An integration of cell to ecosystem responses to enhanced solar UV-B radiation. International Organizing Committee (2004)

Life Sciences Standing Scientific Group "Evolution and Biodiversity in the Antarctic: the Response of Life to Change" (EBA). An International, multidisciplinary program under SCAR (Scientific Committee on Antarctic Research). Nominated and elected co-leader of the Environmental Change Impact Group (2005-08)

Member of "TARANTELLA: Terrestrial ecosystems in ARctic and ANTarctic: Effects of UV Light, Liquefying ice, and Ascending temperatures". An international proposal submitted to UNEP for the International Polar Year (2007-08).

Annual Meeting of American Society for Photobiology, Puerto Rico, Co-organizer of Symposium: "UV effects on terrestrial and aquatic environments" (2006)

UNEP (United Nations Environmental Program) Environmental Effects Assessment Panel Reviewer: "Environmental Effects of Ozone Depletion and Interactions with Climate Change" (2006)

Research Proposal Review Panelist:

USDA NRI Competitive Grants Program (1993, 1994, 2003, 2007)

NSF (1995, 1998, 2013)

AAAS (American Association for the Advancement of Science) Panel – proposals from KACST (National Science Agency of Saudi Arabia) (2011, 2012(2 panels))

EPA-STAR (2012)

Reviewed Research Proposals for:

US National Science Foundation (NSF)
US National Science Foundation - The Implementation Group (TIG) on behalf of EPSCoR
US Civilian Research & Development Foundation (CRDF) Climate Change & Energy Competition
US Department of Agricultural - National Research Initiative Competitive Grants
US Department of Agricultural - Land Grant/State Experiment Stations (CT, MD, NH)
US Department of Energy (DOE)
US Department of State - Office for non-proliferation of former Soviet Republics
US Environmental Protection Agency (EPA)
US National Aeronautics and Space Administration (NASA)
National Geographic Society, USA
National Environmental Research Council United Kingdom (NERC)
Dutch Technology Foundation, Netherlands (STW)
Chilean National Commission for Science and Technology Research (CONICYT)
Chilean National Fund Program for Scientific and Technological Research in Antarctica (INACH),
Israel Science Foundation (ISF)
Netherlands Organisation for Scientific Research (NWO)

Editorial Review Boards:

Environmental & Experimental Botany (1999-present)
Tree Physiology (1997-2006)
Photochemistry & Photobiology (2006-2007, Guest editor)

Reviewed Manuscripts for journals:

Agricultural & Forest Meteorology
Agronomy Journal
Agriculture, Ecosystems & Environment
American Geophysical Union
American Journal of Botany
American Midland Naturalist
Annals of Botany
Antarctic Science
Applied Geography
Arctic & Alpine Research
Arctic, Antarctic & Alpine Research
Australian Journal of Plant Physiology
Biogeochemistry
Biological Conservation
Canadian Journal of Botany
Canadian Journal of Forest Research
Current Biology
Ecological Applications
Ecology
Economic Botany
Ecosystems
Environmental Pollution
Environmental & Experimental Botany
Forest Science
Geophysical Research Letters
Global Biogeochemical Cycles
Global Change Biology
International Journal of Plant Sciences
International Journal of Astrobiology
Journal of Ecology
Journal of Experimental Botany
Journal of Geophysical Research - Biogeosciences
Journal of Photochemistry & Photobiology
Journal of Wildlife Management
Limnology & Oceanography
Nature
New Phytologist
New Zealand Journal of Crop & Hort. Science
Oecologia
Photochemistry & Photobiology
Photosynthesis Research
Photosynthetica
Physiologia Plantarum
Plant and Soil
Plant, Cell & Environment
Plant Ecology
Plant Physiology
Planta
Polar Biology
Polar Research
Proceedings of the Nat'l Academy of Sciences - USA
Quarterly Review of Biology
Scandinavian Journal of Forest Research
Tree Physiology
Vegetatio
Wetlands

Meeting Sessions Chaired:

Ecological Society of America, 1995 Annual Meeting, Snowbird, UT (Plant responses to UV-B)
Twenty-ninth Annual Air Pollution Workshop, 1997, Tempe, AZ (UV-B and plant responses)
Ninth Western Regional Photosynthesis Conference, 2000, Asilomar, CA (Ecophysiology)
Ecological Society of America, 2002 Annual Meeting, Tucson, AZ (Plant ecology: light & carbon)
Fourth Conference on Alpine and Polar Plants, Innsbruck, Austria, 2003 (Ecophysiology)
Annual Meeting of American Society for Photobiology, 2006, Puerto Rico (UVB responses)

COLLEGE, UNIVERSITY AND STATE SERVICE:

WVU Undergraduate Program in Environmental Science, College Committee (1993-1995)
" " Lectures at High schools for WVU Days Student Recruiting (1993-95)
" " College of Arts and Sciences Curriculum Committee (1993-95)

ASU Executive Committee, Photosynthesis Center (1995-present)
" " PBS Live Interactive TV Broadcast from field site in Antarctica ("Live from Antarctica2" in conjunction with NSF and NASA - 6 February 1997)
" " Designed interactive laboratory experiments for high school students published in "Live from Antarctica2 Teachers' Guide" which accompanied above broadcast
" " CAP LTER Management Leadership Council (1997-1999)
" " CAP LTER Leader of Primary Production Team (1997-1999)

DEPARTMENTAL COMMITTEES AND SERVICE:

WVU Graduate Committee (1991-95)
" " Biology Core Course Committee (1992-93)
" " Ecosystem Ecologist Faculty Search Committee (1991-92)
" " Promotion, Evaluation & Tenure Committee (1992-94)
" " New Greenhouse Committee (Chair; 1993-95)
" " Chair's Advisory Committee (1994-95)
" " Academic Advisory Committee (1994-95)
" " Environmental Plant Biologist Faculty Search Committee (1994-95)
" " Pre-major Courses Committee (1994-95)

ASU Coordinator of Plant Growth Facilities (1996-98)
" " Affirmative Action & Human Relations Committee (1997-99)
" " Landscape Ecologist Faculty Search Committee (1998-99)
" " Personnel and Promotion Committee (1998-2001)
" " Undergraduate Academic Advisor (1999-2001)
" " Awards Committee (2000-02)
" " Parliamentarian (2001-02)
" " SOLS Undergraduate Program Committee (2004-07)
" " SOLS Plant Biology Graduate Program Committee (2007-10)
" " SOLS Organismal Ecologist Faculty Search Committee (2008-10)
" " SOLS Graduate Program (2009)
" " SOLS EEES Promotion & Tenure Committee (F 2010, 11, 12)
" " SOLS Facilities Committee (2011-12)
" " SOLS Undergraduate Committee (2012-present)