

MARGARET DALZELL LOWMAN

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CURRICULUM VITAE

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EDUCATION

2006 Aldo Leopold Leadership Program Fellow
2004 Disney Leadership Institute for Biodiversity
2002 Tuck School of Business, Dartmouth College, Executive Management
1983 University of Sydney, Australia. Ph.D. Botany
1978 University of Aberdeen, Scotland. M.Sc. Ecology
1976 Williams College, MA. B.A. in Biology cum laude
Minor in Geology and coordinate major in Environmental Studies.

EMPLOYMENT

2011 – on **Science columnist**, News & Observer, North Carolina newspaper
2010 – on **Director**, Nature Research Center, NC Museum of Natural Sciences, and
Professor, Physical and Mathematical Sciences, NC State University
2004 –on **Executive Director**, TREE Foundation Inc.
2003– 2010 **Director of Environmental Initiatives, and Professor of Biology and Environmental
Studies**, New College of Florida and Sarasota County Regional Government Science
Outreach Partnership
2003 – on **Science columnist**, Sarasota Herald Tribune newspaper, FL
1999 - 2003 **Chief Executive Officer**, Selby Botanical Gardens, FL
1992– 2000 **Adjunct Professorships** at Williams College, University of Florida, University of South
Florida (Tampa), New College of Florida, Ringling School of Art & Design, FL
1992 -1999 **Director of Research & Conservation and Jessie Cox Chair in Tropical Botany**,
Selby Botanical Gardens, FL
1989 - 1992 **Visiting Professor Biology & Environmental Studies**, Williams College, MA
1988 – 1989 **Assistant Professor Botany**, University of New England, Australia
1983 – 1989 **Co-manager**, Ruby Hills Pastoral Company, Walcha NSW Australia
1983- 1887 **Postdoctoral fellow**, Zoology Department, University of New England
1978 – 1981 **Lecturer**, Sydney University, Department of Adult Education

ACADEMIC HONORS

Graduate and Undergraduate

1979 – 1983 Sydney University Fellowship
1983 Sydney University, Australian Museum Award for postgraduate research
1976 – 1977 Duke University Fellowship
1976 Williams College, Dwight Botanical Prize
1972-1976 Williams College, Dean's List

1974 Williams College, Geology Summer Field camp Scholarship

PROFESSIONAL HONORS

2011 Fulbright Senior Specialist Scholar to India
2010 Research Fellow, Environmental Change Institute, Oxford University, UK
2010 Dictor-Martin civic award, Year of Biodiversity Leadership, Sarasota
2009 ACE (Achievements in Canopy Ecology) international award, Bangalore India
2009 Selected as Florida Trend Business Magazine "Icon" February issue, 2009
2009 Tampa, FL Women's history month honoree for "conservation of the planet"
2008- Fulbright Board, appointed Senior Specialist Scholar, term 2008-2013
2008- Elected to Earthwatch International Board of Directors
2008- Re-elected Vice President for Education & Diversity, Ecological Society of America
2008 Elected Fellow of Wings WorldQuest, honoring women in exploration
2007- Appointed Science Advisor for Climate Change to Florida CFO, Alex Sink
2007 Florida Society of Botanical Artists - Gaia Award for Excellence
2007 Appointed to NEON Education Tiger team
2007-2009 Vice President for Research and Education, The Explorers Club
2007 Mendel Medal for achievement in science & spirit, Villanova University
2006 Aldo Leopold Leadership Fellow
Lowell Thomas Medal for Scientific Exploration, The Explorers Club
2006-9 Elected Vice President for Education & Diversity, Ecological Society of America
Nominated for Weizmann Women and Science Award
2006- Advisory Board for Floresta (linking deforestation to poverty and finding solutions)
2005-2008 NEON senior design team (National Ecological Observatory Network)
2005-11 Elected to the Board of Directors, The Explorers Club (and re-elected)
2004 Chief Scientist, The Jason Project in Science Education – Panama: Rain forests at the Crossroads
2003 Disney Leadership Institute for Biodiversity (w/ World Wildlife Fund)
Woman in Power Award, National Council of Jewish Women (NCJW)
Certificate of Honor, Sarasota County Commission on the Status of Women
Asteroid (10739) Lowman named by Carolyn Shoemaker, US Dept. of Interior
2002 Kilby Laureate Medalist honoring work as a rainforest canopy expert
Ecological Society of America, Eugene Odum Award for Excellence in Ecology Education
2001-4 Elected by Williams College alumni as Board of Trustees Tyng Administrator
Florida Gubernatorial appointment to Board of Directors, New College of Florida
2001 AABGA Award for Program Excellence for creating two elevated canopy walkways, one at Selby Gardens and one at Myakka State Park
2000 Girls, Inc. Visionary Award for Public Science & Education Outreach
Williams College Bicentennial Medal for achievements in tropical botany
Phi Delta Gamma Educators' Award for book, Life in the Treetops
1999 Margaret Douglas Medal from National Garden Club of America for Conservation Education
Chief Scientist, The Jason Project in Education in the Amazon, Peru
1999-00 Board of Scientific Advisors, Amazon Center for Education & Environmental Research
1992-00 Selby Gardens, appointed to The Jessie B. Cox Endowed Chair in Tropical Botany
1998 - Selection to Leadership Florida, Class XVI
1997 - Elected Fellow of The Explorers Club

- 1995 - Board of Scientific Advisors, Intl. Center for Tropical Biology, Univ. of Missouri
- 1994 Chief Scientist, The Jason Project in Science Education in Belize
- 1994 Girl's Incorporated "She Knows Where She's Going" Award for mentoring girls in science
- 1993 Pew Scholar nominee in Conservation Biology
- 1991-98 Education Board, Massachusetts Tropical Conservatory
- 1990-95 Board of Science Advisors, Earthwatch

ADMINISTRATIVE and EDITORIAL ACTIVITIES

- 2011 National Science Foundation, macrobiology review panel
- 2010 Chair, Informal Science Education panel (NSF); review panel, NSF Synthesis Centers
- 2009 Chair, Science Committee, The Explorers Club
- 2009 Co-chair (with Kamal Bawa), 5th International Canopy Conference, India
- 2007- 2009 Vice President for research and education (including chair of grants), The Explorers Club
- 2006 – 2012 Vice President for Education & Diversity, Ecological Society of America
- 2005 – 2009 Director of New College/Sarasota County government science partnership
- 2002- on Executive Director of TREE Foundation, Sarasota FL
- 2003–2010 Director of Environmental Initiatives, New College of Florida
- 2001- Founder and member of Science and Environment Council, Sarasota County (Chair 2001-2003)
- 1998 Co-Chair (with Francis Hallé, France), 2nd International Canopy Conference: Global Perspectives (with participants from 35 countries)
- 1998–2000 Finance Committee, Leadership Florida
- 1995-98 European Science Foundation (ESF) - tropical studies initiative committee
- 1994 Co-Chair (with Francis Hallé, France), 1st International Canopy Conference, (with participants from 28 countries)
- 1993 – 09 Association for Tropical Biology & Conservation, Secretary-Treasurer
- 1992 – 99 Editor for *Selbyana* [botanical journal]
- 1989 – 92 Williams College, Center for Environmental Studies Faculty Committee.
- 1987 - 89 Association for Tropical Biology, elected Councilor
- 1979 - 80 Sydney University, student representative to Board of Biological Sciences
- 1977 -78 Duke University, Advisory Committee to Dean
- 1977 -78 Duke University, Faculty Search Committee

Reviewer for *Science*, *Oecologia*, *Biotropica*, *Austra Ecology*, *National Science Foundation*, *Selbyana*, *Phytologia*, *Ecological Monographs*, *Journal of Ecology*, *European Science Foundation*, *Austrian Science Foundation*, *Earthwatch*, *Biological Journal of the Linnean Society*, *Smithsonian Institution*, *Journal of Tropical Ecology*, *National Geographic*, *Conservation Biology*, and many academic book publishers.

BUSINESS EXPERIENCE

- 2010- Oversight to Nature Research Center, NC Museum of Natural Sciences, a \$60 million construction and education private/public partnership (www.naturesearch.org).
- 2008 Sustainability Consultant to Tommy Hilfiger Foundation
- 2008 Chair, Mission/Vision committee, The Explorers Club (1st time to revise mission after 101 years)
- 2002- on Executive Director, TREE Foundation (www.treefoundation.org)

- 1999-2003 CEO of Marie Selby Botanical Gardens, Sarasota, day-to-day operations of botanical garden (budget \$3.4 million) including strategic planning, programs, fund-raising and staffing, with highlights:
- Budget up 25% over 4 years; membership up 46%.
 - Budget deficit (of prior administration) moved to figures in the black
 - Implemented ongoing training and professional development for staff
 - Initiated sister Garden relationships w/ Jardín Botánico Lankester, Cartago, Costa Rica; Fundación Jardín Botánico de Orinoco, Ciudad Bolívar, Venezuela and Cienfuegos Botanical Gardens, Cienfuegos, Cuba.
 - Completed renovations to historic Mansion; a new perimeter delineation; a new pavilion; additional parking spaces (all under-budget); property acquisitions to expand Gardens.
 - Named one of America's Top Ten Botanical Gardens in 2003.
 - Donor levels and annual appeals up over four-fold; first half-million dollar gifts in the history of the Gardens; raised \$2.2 million in 3 yrs for Capital Campaign, most by direct solicitation
 - Opened Center for Canopy Ecology; expanded research department to include gesneriads, canopy ecology and conservation; living collections up 102%
- 1994-2010 Treasurer, Association for Tropical Biology, creating annual budgets, initiated computerized accounting and set up the Society's first endowment
- 1992-1999 Director of Stark Research Center, Selby Gardens: oversee administration, budget, grants, data collection, public relations, conferences, and outreach for eight staff and twenty-one volunteers; raised > \$ 2 million
- 1992-Present Co-Founder, Canopy Construction Associates, a company that specializes construction of canopy walkways for research and education institutions worldwide (www.canopyaccess.com)
- 1983-1990 Managed family agricultural operation, "Ruby Hills" merino fine wool sheep and Poll Hereford stud cattle operation in outback Australia: budgeting, oversight to genetics and breeding, agricultural products, record-keeping, maintenance of extensive property, shearing operations, bed-and-breakfast, and other revenue operations of a weather-related, market driven business
- 1981-1989 Administrated Earthwatch field expeditions in Australia, including budgets, purchasing, travel logistics, data analyses, and publications.
- 1977-1978 Environmental Protection Agency, air pollution regulation
- 1972-1976 Assistant, Payroll Office, Williams College

TEACHING EXPERIENCE

- 2003-2010 Professor of Biology and Environmental Studies, New College of Florida: Plant Ecology (Intro. and Advanced), Communities and Ecosystems, Environmental Issues senior tutorial, The Role of Women in Natural History, Science Outreach in Local Schools (SOS), Conservation Biology, The Ecology of Extreme Environments, Climate Change, Canopy Ecology, Science Education, Tropical Ecology; field courses to Antarctica, Belize, Galapagos, and Amazon.
- 2004 Florida Science Teachers Association – leader of Panama rain forest workshop
- 2004-2010 Appointed Director of Environmental Initiatives, New College of Florida
- 2004-07 Leader of New College Foundation natural history trips to Amazon, Galapagos, and Belize

- 1992-on Numerous lectures for schools, civic clubs, and institutions (addressed over 5 million students and citizens in year 2000 alone, in part with distance learning.)
- 1998–2002 Instructor for Williams College Alumni expeditions to Australia and Peru
- 1993-1996 New College, Fl., Biology & Environmental Studies Department Adjunct - Conservation Biology, Environmental Botany, and Plant Ecology
- 1994 University South Florida, Biology Department Adjunct - Conservation Biology
- 1992 University of Minnesota - Conservation Biology (field course, Lake Itasca)
- 1999-2002 Williams College, Visiting Professor of Biology and Environmental Studies - Tropical Rainforests: Politics, Economics, Biology; Communities and Ecosystems; Environmental Studies; International Environmental Policy (tutorial); Conservation Biology; Women as Natural History Writers (tutorial)
- 198 Williams College, Biology Department –Australian Ecosystems, field course in Australia
- 1983-1987 University of New England, Australia, Botany Dept - Agronomy, General Biology
- 1981-1989 Earthwatch, Principal Investigator, 10 field research expeditions
- 1979-1982 Sydney University, Lecturer, Adult Education Department
Plant Taxonomy, Plant Ecology, Beginning and Advanced sections
Sydney University, Teaching Assistantships - Plant Physiology, Plant Ecology, Plant & Animal Biology, Botanical Methods, and Natural Resources Ecology
- 1975–1976 Williams College, Teaching Assistantships - Field Botany, Environmental Biology, Advanced Plant Ecology

TEACHING OUTREACH & INNOVATIVE EDUCATION

- 2010 Co-chair, National Summit in Ecology Education entitled: Environmental Education for a Sustainable World in Washington DC
- 2010 Featured in Popular Science Magazine college issue: Top Ten Cool College Labs
Featured in Oprah Magazine: Women Taking Risks
- 2010 Funded and hosted Rapid Response Training for Invasive Pythons, FL
- 2009 Press (& Florida cabinet) delegate to UNFCCC (climate change meeting, Copenhagen)
- 2009 Florida Trend Magazine – Icon for February issue (audience mainly business leaders)
- 2008-on Meg Lowman treetops camp – science educator to at-risk teenage girls
- 2008 Funded and hosted Invasive Reptile workshop for state of Florida
- 2008 PASI –National Science Foundation graduate workshop, taught canopy ecology in Peru
- 2006–on Website, www.canopymeg.com (> 40,000 hits per month)
- 2008 Pierian Academy teaching adult ecology education
- 2007 Featured in National Geographic Explorer, Natural History, and Smithsonian Magazines for canopy exploration
- 2007 “No Child Left Indoors” proclamation to city and county of Sarasota; charter for Ecological Society of America and other environmental groups
- 2005–on Science columnist for Sarasota Herald Tribune newspaper (*Nature’s Secrets*)
- 2004-on Tutored New College students in environmental outreach: leading hikes in local parks, and creating hands-on science activities in local middle schools; 53 students participated and earned County Environmental Education Award in 2006
- 2004 Jason XV project for youth education in the rain forests of Panama (over 50 broadcasts for schools and museums during January 2004, 3 million students) and co-authored curricula
- 2002 HGTV host for two botanical shows
- 2001 New York Times/National Geographic Profile TV Series
- 1999 Jason X Project in Science Education, Chief Scientist – international K-12

- science education in forest canopies of Amazonian Peru
- 1999 Scientist featured in National Geographic TV special, *Heroes of the High Frontier*
- 1995-2007 Led Educators' Workshops for teachers about tropical ecology in Peruvian Amazon.
- 1994 Jason V Project, Chief Scientist - international K-12 science education program with satellite linkage between classrooms and scientist at field sites; completed 61 live classes from the rain forest canopy of Belize; wrote curriculum with National Science Teachers Association
- 1993 Produced Reading Rainbow feature film about trees, a national series to educate K-9 about science and reading
- 1991 Initiated program for Williams College students to work with elementary classes to produce games that demonstrated environmental principles
- 1980-Present Lectures to numerous education groups including alumni societies, college students, high schools, and elementary classes each year
- 1979-1983 Sydney University, Adult Education, - proposed and designed two new biology courses, and taught all lectures and labs
- 1977 Massachusetts Audubon Society, Merck Forest, Vermont
- 1969-1976 Taught science at one of America's first summer field science programs, (Burgundy Wildlife Camp) and co-wrote curriculum from that program for the Department of Health Education and Welfare

BOOK PRIZES

- 2006 Natural History magazine, End Notes on **It's a Jungle Up There**; numerous NPR Radio interviews and newspaper features, Smithsonian Magazine "Centerfold"
- 2002 Asteroid Lowman near Jupiter named by Carolyn Shoemaker in honor of book
- 2000 NY Public Library "**Books Every Teenager Should Read**" Award
- 2000 **Life in the Treetops** nominated for the Rachel Carson Book Prize, The John Burroughs Medal, The New York Book Award for the Best Debut of 1999, the 1998-2000 Educator's Award, PEN/Martha Albrand Award for the Art of the Memoir, Christopher Award, Phi Beta Kappa Award in Science
- 1999 Cover review on Sunday NY Times Book Review for **Life in the Treetops**

RESEARCH EXPERIENCE & GRANTS

- 2011 Glaxo Smith Kline, Educators of Excellence in the Amazon \$10,000
- 2011 - Global town halls with Rolex Young Laureates, Rolex Corporation (subm. \$100,000)
- 2011 - NCDENR Department of Urban Forestry, canopy walkway interpretation (subm.\$15,000)
- 2011 National Science Foundation, Informal Science Education – Levels of Learning: How we Know What we Know, (subm. \$1,900,000)
- 2011 RBC Foundation, Blue Water Fund, global water conservation (subm. \$153,000)
- 2011 - Canopy Walkway for North Carolina Kids (submitted Z. Smith Reynolds Foundation for \$257,876)
- 2010 - National Science Foundation, ISE grant, Levels of Learning (subm. \$2 million)
- 2010 - National Science Foundation URM grant: Insect Biodiversity in Temperate Forest Canopies – Using canopy research to inspire the physically challenged to engage in careers in science (subm. \$517,000)
- 2010 National Geographic – Conservation of Church Forests in Ethiopia (\$24,000)
- 2010 Ecology Education Summit, (\$50,000 NSF; \$25,000 additional sponsors)
- 2010 Forest conservation and outreach (\$15,000 Spurlino Foundation; \$10,000 TRIAD)
- 2009 Church forests of Ethiopia (> \$15,000 for sustainability workshop for clergy)

2009 Forest canopies - climate change, conservation and ecosystem services (NSF, \$31,000)

2009 Treehouses and canopy walkways - ecology education in SW Florida (Triad, \$10,000)

2009 National Institute of Health (with PI Michael Kozhevnikov) – resubmitted (see below)

2008 Sarasota County – invasive species ecology and ecology education (\$50,000)

2008 National Institute of Health (with PI Michael Kozhevnikov) – Integration of virtual reality-based 3-D simulations with outdoor activities in environmental science curriculum (\$99,999 submitted)

2008 National Institute of Health – Multi-user virtual reality-based 3-D environment for Environmental health science (\$99,997 w/ Michel Kozhevnikov)

2008 National Science Foundation - Ecosystem Services at the forest/village interface in Thailand- ecological processes and economic valuation (\$570,470, not funded)

2007 Economic Development Corporation, web site development for regional government biological field station project (\$5000)

2007 Canopy Ecology – regional and international (Triad, \$25,000)

2004-2007 Sarasota County, Environmental Services to regional government (\$200,000)

2005 Economic Development Corporation – field station green design (\$5000)

2006 Student Outreach in Science (SOS) – environmental education grant (Community Foundation, \$11,000)

2005-2007 Canopy Ecology – regional and international (Triad, \$35,000)

2002 Triad Foundation – Canopy Ecology –research and outreach (\$30,000)

2003 Aaron Foundation – Canopy ecology – public programs (\$10,000)

Herbivory protocols using canopy cranes Global Canopy Program, (\$26,178)

1999-03 Links between the canopy and the forest floor, National Science Foundation (\$419,976) plus student participation: Ecological Circuitry Collaboratory (\$59,932)

2004 Jason X Project for Education, ACEER, Peru (approximately \$25,000)

2002 The Venice Foundation – botanical collections (\$200,000)

2002 Phase I – Capital Campaign private donor acquisitions (\$1.3 million)

2002 Selby Foundation – Memorial for botanical philanthropist, Marie Selby (\$75,000)

2001 Bank of America education grant for children’s garden exhibits (\$25,000)

2000 State of Florida – Division of Historical Resources – Botanical Collections Security (\$1.5 million)

1999 Selby Foundation – matching grant for botanical improvements (\$500,000)

1998-2001 Long-term studies of trees in tropical and subtropical forests, worked with Joseph Connell and Ian Noble, National Science Foundation (\$250,000)

1998-1999 Phytotelm plants of the Choco and their associated insect fauna, National Geographic Society (\$20,000)

1998 Forest Canopies 1998: Global Perspectives - National Science Foundation (\$20,000); United Nations Environmental Program (\$20,000)

1997 Epiphyte diversity in intact versus fragmented rain forests of Cameroon, Africa, National Geographic Society (\$19,800)

1996 Canopy ecology and ecotourism in Western Samoa, Seacology Foundation (\$10,000)

1994 Forest Canopy Conference: Forest Canopies: Ecology, Biodiversity, and Conservation, NSF (\$20,000); World Wildlife Fund (\$5,000)

1993-1994 Jason V Project - Biodiversity in the rain forest canopies of Belize (~\$75,000)

1993-1998 Long-term studies of trees in tropical and subtropical forests, with Joseph Connell and Ian Noble, NSF (\$250,000).

1993 Smithsonian Visiting Scientist Fellowship to STRI, Panama (\$1,100).

- 1991 Herbivory in the rainforest canopies of Cameroon. Operation Canopée Expedition, Elf-Serepco (\$7,500).
- 1990 Canopy walkway construction. Hopkins Forest, Massachusetts, Miller Fund-Williams College (\$2,500) and Bronfman Science Fund (\$3,000).
- 1989 Mycorrhizal associations and survivorship of rain forest seedlings. UNE Faculty Grant for innovative projects (\$6,600).*
- 1982-1988 Insect abundance and distribution in Australian rainforest canopies. Earthwatch (\$312,000 for multiple expeditions).
- 1985 Effects of insect damage to root systems of eucalypts. Earthwatch (\$27,000).
- 1983-1990 Eucalypt regeneration in dieback regions. Forestry Commission, Australian Research Grants Commission, Ruby Hills Pastoral Company (\$20,000).*
- 1983-1986 Postdoctoral research on herbivory and insect epidemics in Australian forests. Australian Research Grants Committee, with Harold Heatwole (\$122,600).*
- 1979-1983 Miscellaneous marine research, including coral cay vegetation surveys, intertidal barnacle settlement, and photosynthesis on One Tree Island, Heron Island research labs, Great Barrier Reef and Cape Banks intertidal region, Sydney, Australia.
- 1976 Bronfman grant to re-organize herbarium for Williams College.
- 1975 U.S. National Science Foundation REU student grant, investigating wood productivity of birch as energy source for New England towns (forest biomass surveys, computer regression models).
- 1974 Co-authored high school curriculum in environmental education for high schools (Department of Health, Education and Welfare).

PUBLICATIONS

Books:

Lowman, M.D., Schowalter T., & Franklin J. 2011. Forest Canopy Methods (University of California Press).

Lowman, M.D., Burgess, Edward & Burgess, James. 2006. It's a Jungle Out There – More Tales from the Treetops. Yale University Press. 291 pp. (2008 paperback; 2009, reprinted in Korean).

Lowman M.D. and Rinker H.B. 2004 (eds.) Forest Canopies. Elsevier Academic Press.

Lowman M. D. 1999. Life in the Treetops. Yale University Press. (Editions in German, Chinese and Korean; paperback version in 2002)

Lowman M.D. and Nadkarni N.M.(eds.) 1995. Forest Canopies. Academic Press 624 pp. (Second Edition in paperback 1996)

Lowman, M.D. (ed.) 1992. Ecology of Hopkins Forest. Williams College Printers. 100 pp

Heatwole H. and **Lowman M.D.** 1986. Dieback: Death of an Australian Landscape, Reed & Co. 150 pp.

National Leadership Reports:

NEON Tiger Team. 2008. Education Plan. <http://www.neoninc.org/documents/tigerteam>.

Sarasota County Environmental Initiatives, FL (2004 – 2009) series of quarterly reports over 5 years to document environmental programs: invasive reptiles, science education outreach, development of Land Institute, conservation action plans, and other activities.

NEON ISEP. 2006. National Ecological Observatory Network, Integrated Science and Education Plan. National NEON Design Committee, M.D. Lowman – co-chair education group, contributed to ISEP plan and writing: <http://www.neoninc.org/documents/ISEP>.

Lowman M.D. 1974. Some Aspects of the Fabric of Life, U.S. Department of Health, Education and Welfare 204 pp.

Theses:

Lowman M.D. 1982. Leaf Growth Dynamics and Herbivory in Australian Rain Forest Canopies. Ph.D. Thesis. Sydney University (Supervisor: Peter Myerscough).

Lowman M.D. 1978. Phenology and Productivity of *Betula pendula* and *B. pubescens* in Scotland. Master's Thesis. Aberdeen University (Supervisor: Peter Ashton).

Lowman M.D. 1976. Phenological Phenomena and Growth Studies for 16 Northern Hardwoods. Honors Thesis. Williams College (Supervisor: Henry Art).

Journal Articles (peer-reviewed except those with *):

Yadvindar, M, R. Owen, M. Lowman and R. Ewer. 2011. Tropical rain forests – conservation and research interfaces as solutions for the future? IN: Key Topics in Tropical Biology, ed. David McDonald.

Nadkarni, N., Parker, G., **Lowman, M.** 2011. Bibliometric assessment of canopy biology throughout its history. Forest Science (in press)

Lowman, M. D., T. Ganesh, and S. Devy. 2011. International conferences as conduits for science education outreach – engaging diverse stakeholders. Subm. Conservation Biology

Lowman, M.D. 2011. Out on a limb – research in Australia's forest canopies. Ecological Society of Australia 50th Anniversary Cameo Series. E-news.

***Lowman, M.D.** 2010. CSI in Ethiopia: Children Survey Insects. North Carolina Naturalist 18 (2): 8-9.

***Lowman, M. D.** 2010. Finding sanctuary – saving the biodiversity of Ethiopia one church forest at a time. The Explorers Journal 88: 26-35.

Lowman, M.D. 2010. Forest canopies – a scientific history. IN: J. Bhaskar, Amazonia – Perspectives of a Jungle. Fine Arts Publications, Savannah GA.

Lowman, M.D. and Mourad T. 2010. Bridging the divide between virtual and real nature. Frontiers in Ecology and Environment. Frontiers in Ecology and the Environment 8 (7): 339.

- Caughlin, T., Ganesh T., **Lowman M.D.** 2011. Does human disturbance impact feeding tree choice by frugivorous birds and bats in South India? Subm. Current Science.
- Voirin, B, Kayes R., Wikelski M., **Lowman M.D.**. 2010. Sloth defecation behavior. International Journal of Ecology.
- Lowman M.D.** 2009. Biodiversity in tropical forest canopies as a “hook” for science education outreach and conservation. Journal of Tropical Ecology 50: 125-36.
- Lowman M.D.**, D’Avanzo, C. Brewer C. 2009. NEON – A national ecological network for research and education. Science 323: 1176-78.
- Lowman, M.D.**, Randle DC. 2009. Ecological mentoring: inspiring future scientists. Frontiers in Ecology and the Environment 7: 119.
- Lowman M.D.** 2009. A blueprint for Florida’s clean-energy future-Forum on Public Policy. Oxford University. Sustainability 1: 102-112
- Lowman, M.D.** 2009. Canopy walkways for conservation – a tropical biologist’s panacea or fuzzy metrics to justify ecotourism? Biotropica 41-5.
- Lowman M.D.** 2009. Forests in the Upper Heights. Chapter for “Forests,” published by America Natural, Mexico.
- Heatwole. Unsicker H.S. Andriamiarisoa L.P. **Lowman M.D.** 2009. The vicissitudes of leaves in a tropical rainforest in Madagascar. J. Tropical Ecology.
- Lowman M.D.** 2008. The “WoW” Factor – Science behind a safe home. Scene Magazine June/July 61.
- Lowman M.D.** 2007. Out on a limb – Exploration of forest canopies. IN: They Lived to Tell the Tale: True Stories of Modern Adventure from the Legendary Explorers Club. 2007. The Lyons Press: 331-339.
- Lowman M.D.** 2007*. Exploring climate change - charting a new course for planet Earth. The Explorers Journal Fall 2007: 20-22.
- Ernest K.A. **Lowman M.D.** Rinker H. B. Shaw D.C. 2006. Stand-level Herbivory in an Old-Growth Conifer Forest Canopy. Western North American Naturalist 66(4): 473-481.
- Lowman, M.D.** 2006. Fostering partnerships between regional government and ecology. Frontiers in Ecology and the Environment: 547-548.
- Lowman, M.D.** 2006. No child left indoors. Frontiers in Ecology and the Environment 4(10): 455
- Lowman, M.D.** 2006. Out on a limb. The Explorers Club Journal winter 2005-06: 24-30.

Ernest K.A. **Lowman M.D.** Rinker H. B. Shaw D.C. 2006. Development of a novel method for assessing stand-level herbivory in forests. Newsletter of the International Canopy Network 12 (2): 4-6.

M.D. Lowman. 2005. Ecotourism and its impact on forest conservation.
<http://www.actionbioscience.org/environment/lowman.html>

M.D. Lowman. 2004. Canopy conservation initiatives. Plant Talk 35: 45.

Benshoff P.J. Deyrup M.A. Edwards G.B. Frank J.H. Halbert S.E. Jamon A.B. **Lowman M.D.** Mockford E.L. Scheffrahn R.H. Sreenivasan S. Steck G.J. Thomas M.C. Walker T.J. Welbourn W.C. 2004. Invertebrate animals extracted from native Tillandsia (Bromeliales: Bromeliaceae) in Sarasota County, Florida. Florida Entomologist 87(2): 176 – 87.

Lowman M.D. 2004. Ecotourism and the treetops. Forest Canopies. Elsevier Press, San Diego CA.: 475-86.

Lowman M.D. 2004. Tarzan or Jane? A short history of canopy biology. Forest Canopies. Elsevier Press, San Diego CA.: 453-465.

Lowman M.D. and Rinker H.B. 2004. Insect herbivory in tropical forests. Forest Canopies, Elsevier Press. San Diego CA.:359-387.

Burgess E. Burgess J. **Lowman M.D.** and thousands of Jason X school students. 2003. Observations of a Coleopteran herbivore on a bromeliad in the Peruvian Amazon. Journal of the Bromeliad Society 53: 221-24.

Lowman, M.D. 2002. Access into forest canopies – new ways to study orchids and other canopy organisms. Proceedings of the 17th World Orchid Conference, Shah Alam, Malaysia, 24 April-1 May 2002.

Nkongmeneck B.-A., **Lowman M.D.** and Atwood J.T.. 2002. Epiphyte diversity in primary and fragmented forests of Cameroon, Central Africa: a preliminary survey. Selbyana 23(1): 121-130.

Lowman, M.D., Hunter M., Rinker H.B., Schowalter T., and Conte S. 2002. Canopy walkways – highways in the sky. The Global Canopy Handbook (eds. Andrew W. Mitchell, Katherine Secoy, Tobias Jackson) Techniques of Access and Study in the Forest Roof: 35 –40.

Burgess, E.A. Burgess J.B. **Lowman M.D.** and Randle D.C. 2002. Water pollution in bromeliad tanks – an experimental approach. Journal of the Bromeliad Society. 52(2): 58-62.

Lowman M.D. 2001. Plants in the forest canopy: some reflections on current research and future direction. Tropical Forest Canopies: Ecology and Management. K.E. Linsenmair, A.J. Davis, B. Fiala, M.R. Speight (Eds.): 39-50.

Lowman M.D. 2001. Curator of a botanical garden. Plant Sciences 2: 35-36.

Hunter M.D. **Lowman M.D.** Rinker H.B. Schowalter T.D. Fonte S.J. 2001. Canopy herbivory and soil ecology – the top-down impact of forest processes. Selbyana 22(2): 225-231.

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Energy Tips published weekly in the E-column of state cabinet Chief Financial Officer, Alex Sink (2008-onward)

(Note: Twenty peer-reviewed publications were co-authored with undergraduate students, as a result of my undergraduate teaching.)

INVITED, KEYNOTE AND CONFERENCE LECTURES (NOT INCLUSIVE)

2010 – 2012

2011 - Princeton Alumni Association – STEM Education in America, from K through Gray

2011 - Southeast Climate Science Center Workshop – presentation, Climate Change Education - the NRC as a tool for researchers' broader impacts.

2011 - ScienceOnline Conference – Life in the Treetops – challenges of scientists communicating to the public. Keynote lecture, Marriott Hotel, Durham, NC.

2011 - Martin Luther King day presentation – Saving the forests of Ethiopia, one church at a time. Bethlehem Church, Durham NC

2011 - Science Café, Tir Na Nog restaurant, Raleigh – Rain Forests – going, going gone?

2011 - Ashoka Trust for Research on Ecology and the Environment (ATREE), Bangalore India – UN International Year of the Forest – Inspiring new stakeholders for forest conservation

2011 - Earthwatch HSBC Bank field expedition, Bannerghatta National Park – A blueprint for a clean-energy future – climate change, economics, and conservation

2011 - Fulbright senior specialist scholar lecture series, India – Thiruvanthapuram, Kerala state, Department of Forestry headquarters, UN Year of the Forest – inspiring new stakeholders for forest conservation

2011 - Fulbright Foundation Day, CPR Environmental Center, Forestry Department Chennai, India - Life in the Treetops – Forest Canopies Promote Conservation, Economics, and Education

2011 - Fulbright forest lecture series, Guwahati, state of Assam, India, Cotton College – United Nations International Year of the Forest: Inspiring New Stakeholders to Reverse Deforestation.

2011 - Lecture at Nimal Prava Bordoloi Girls Hostel, Handique Girls College, Lataasil, Guwahati, Assam, INDIA - It's a Jungle Up There – Challenges of Women in Field Biology

2011 - NCSU Department of Biology, Plant-insect Interactions in Tropical Rain Forest Canopies

2011 - NCSU Entomology Department, Plant-Insect Relationships in Forest Canopies – the herbivory perspective

2011 - Nature Research Center – STEM Education in the 21st Century, presentation for Deans of Extension, Engagement, and Economic Development, NCSU.

10 – Wiley Elementary School Science Night, How Many Species Exist on Planet Earth? K-5 science night.

2011 - NCSU Veterinary School, annual lunch- Life in the Treetops – Challenges of Women in Field Biology

2010 - Earthwatch Institute, Costa Rica - Rainforests 101 and Copenhagen Update

2010 - Ferrum College - keynote speaker for Women in Science Forum

2010- What will ecology education look like in 2020? Chair and keynote at Ecological Society of America session, annual meeting

2010 – Virtual versus real ecology education – presentation at Ecological Society of America

2010 – Education and Diversity – Vice President's Report, Ecological Society of America

2010 – The View from Down-Under – Advances in ecology and education outreach through the legacy of Joe Connell, invited paper at Ecological Society of America

2010- Diversity Lunch, Chair and Moderator – Ecological Society of America

2010 - SOS, Student Outreach in Science – engaging undergraduates to mentor high school students – invited paper at Ecological Society of America

2010- Conservation of the church forests of Ethiopia – updates on field research for expedition team, Bahir Dar Forestry department, Ethiopia

2010- Bugfest lecture series: 1. Stalking bugs by hot air balloon

2. Bugs R Us – research on insects in forest canopies

2010 - Museum Advisory Board, Life in the Treetops – Flying high with the NRC
 2010 - Public phase committee, Life in the Treetops – meet the new NRC director
 2010 - Friends of Museum Board meeting – It’s a Jungle UP there – challenges in science education
 2010 - Millions of beetles – biodiversity and climate change at a crossroads? Church talk in Chapel Hill

2010 - Opening welcome talk, Sustainable Education Summit; invited talk on Virtual versus Real environmental education (with Rob Stevenson, U. Mass)
 2010 - Summary and next steps for STEM education, Sustainable Education Summit
 2010 - TREE Foundation annual meeting, Executive Director’s Report
 2010 - It’s a Jungle Up There – challenges of women in science, Career Series, NCSU postdocs and graduate student career forum.
 2010 - It’s a Jungle Up There – mentoring session for students from emerging countries. Rolex organized session, Geneva Switzerland.
 2010 - Brimley Ball, keynote talk for fund-raiser, Museum
 2010 - Lecture on The World, Tropical Rain Forests 101 – exploration and research of global forests
 2010 - Lecture on The World, It’s a Jungle Up there – challenges of tropical forest conservation

2010 Out on a Limb – canopy research as a tool for advancing conservation, lecture to NESCENT at Duke University, and mentoring lunch with graduate students
 2010 - Plant-Insect Interactions in Forest Canopies, seminar for Natural Resources Department NCSU

2005-2009

Connery Conservation Lecture, Tulane University, New Orleans LA – Invited Keynote
 John Moran Distinguished Lecturer Series, Senior Academy, Sarasota FL – invited
 Convocation lecture for Earth Day, Carleton College, MN – invited keynote
 Environmental Panel for Earth Week, Princeton University, NJ – invited
 Keynote speaker, Keep Sarasota Beautiful, FL - invited
 Fourth International Canopy Conference, Germany - invited
 Seeing the Big Picture Symposium, Economic Development Corporation - invited
 Science Festival, Flagstaff Arizona 2005 - invited Keynote
 Rutgers University, Ecology and Evolution seminar series - invited
 Explorers Club, Naples chapter – invited
 University of Nebraska, Earth Day 2006 - invited
 Jewish Women’s Association donors' conference - invited
 Northern Trust Bank Golden Anchor clients –invited keynote
 Florida House Earth Day - invited
 Ecological Society of America, Memphis TN
 Southern Utah University –invited keynote
 Presidential Dinner, The Explorers Club – invited keynote
 Lowell Thomas annual dinner, The Explorers Club 2006 – invited honoree
 SACNAS (Society of Chicanos and Native American Scientists), Tampa FL invited
 Westover Academy, CT – invited keynote
 International Sustainable Construction Conference 2006 – invited keynote

Frequent natural history lectures for community walks and local civic groups
Harvard-Yale-Princeton Club luncheon - invited
SEEDS (Sustainable Ecology Education for Diverse Students) at Jasper Ridge
Biological Field Station, CA - invited
Rachel Carson's Birthday anniversary 2007, Chatham College, PA - invited
ATBC Asian Chapter Inaugural Meeting, India- invited keynote
Woods Hole Oceanographic Institution Gender & Equity Invited Speaker, 2007 invited
Kutztown State University, PA "Take your daughter to work day" – invited keynote
Villanova University, PA, Mendel Medal recipient invited lecture, 2007
Burgundy Country Day School, VA, Sevaeride Forum on Environmental Education - invited
keynote
Florida Cabinet, "Climate Change Summit", 2007 – invited keynote panel
Association for Tropical Biology and Conservation, Morelia MX, 2007
Ecological Society of America, San Jose CA, 2007
Elizabethtown College, PA – invited keynote
Concord College WV – invited keynote
The Explorers Club, South Florida Chapter – invited Keynote
Utah Environmental Education Society, Moab UT – invited Keynote
MIT/Cornell Alumni - keynote
Republican Club of Sarasota County – invited keynote
American Association of University Women - invited
Thiel College, Earth Week consortium 2008 – invited keynote
PASI – NSF-sponsored Tropical Ecology Collaboratory, Lima PE
Pine View High School – Earth Day assembly for grades 2-12, 2008
Florida Secretary's Association annual meeting, Univ. Florida 2008
University of Washington – Urban Horticulture, School of Forestry
Ecological Society of America 2008 – Session co-chair "No Child Left Indoors"
Ecological Society of America 2008 – Book-Publishing 102: Writing for
Technical and Public Audiences
University of Wyoming, convocation address – invited keynote
Anniversary of Women's Right to Vote, FL – invited keynote
Millersville University, PA – invited keynote
Australian Ecological Society – plenary address, 2008, Sydney Australia
Senior Friendship Center lecture series
Baker University, KS 2009 invited lecture
Gustavus Adolphus College – keynote speaker, Linneaus Symposium
University of California – Santa Barbara 2009 Biology Department
Ecological Society of America – Session chair: What will ecology education look like in 2020?
Tiger Bay policy forum, Sarasota FL – clean energy panel
NSF Division of Undergraduate Education - invited speaker
University of Miami - seminar speaker
Various church, civic, and citizen groups in Sarasota and throughout Florida

2000-2004

Convocation, SUNY Binghamton, New York – invited keynote
Singapore Botanical Gardens, Singapore - invited
World Orchid Conference, invited speaker, Malaysia
World Bromeliad Conference, invited speaker, Florida

Women and Science Symposium, University of Wisconsin – invited keynote
Delta Kappa Gamma, International Conference, Canada – invited keynote
Missouri Botanical Gardens, John Dwyer Lecture, Missouri – invited keynote
North Carolina State University, NC – invited keynote
Ecological Society of America, diversity luncheon panel, annual meeting 2002, Arizona – invited

Association for Tropical Biology and Conservation, Panama
Woodrow Wilson School of Public Policy, Princeton University - invited
Bowling Green State College, OH – invited keynote
University of Michigan, MI – invited keynote
Eckerd College, FL - invited
Harvard University Club, FL - invited
Florida Science Teachers Association, Jacksonville FL – invited keynote
Cincinnati Zoo Conservation Lecture series, OH – invited keynote
Bowling Green State College, OH - invited keynote
Sarasota Institute of Lifetime Learning, FL - invited
Eckerd College community lecture series, FL - invited
Ecological Society of America, Portland OR
The Global Canopy Debate, Eden Project UK – invited keynote
SE Regional Garden Club of America, Sarasota FL – invited keynote
North Carolina State University Conservation Series, Raleigh NC - invited
Numerous talks at Rotary, Sertoma, church and school and civic groups, FL

1996-2000

Alumni Speaker, Williams College MA - invited
Brazilian Congress of Botany, Invited Keynote Speaker, Brazil
Botanical Gardens of Rio de Janeiro, Brazil - invited
ATB invited speaker session: Thinking globally and working globally:
ecological insights from inter-regional comparative studies, Providence RI
National Botanical Gardens, Bogor Indonesia – invited
Instituto de Ecologia Invited Visiting Scientist Program, Xalapa, Mexico
Vision Dinner, Marie Selby Botanical Gardens - invited keynote
Keynote Speaker, Global Studies 1998 Conference, University of Minnesota
Chair, 2nd International Forest Canopies 1998: Global Perspectives, Sarasota FL
Keynote Speaker, Tropical Rain Forest Canopies Conference, Oxford University - invited
Jason X speaker, BOCES, Long Island – invited keynote
Gifford Arboretum Distinguished Lecture 1999, Miami Florida - invited
Garden Club of America 1999 Awardee Dinner, New Jersey – invited keynote
International Rotary Governors Convention, Sarasota, FL. - invited

1990-1995

The Madeira School, VA – invited keynote
Botany Department, University of Hawaii, Manoa HI
Museum of Comparative Zoology, Harvard University MA - invited
Biology Department, Carleton College MN - invited
Earthwatch, Center for Field Studies - Annual Conference, Boston
International Epiphyte Conference, Selby Gardens FL - invited
Pacific Science Congress, HI - invited

Audubon Naturalists/ Smithsonian Institution, Washington DC – invited keynote
Faculty Club, Williams College MA - invited
National Geographic 1994 Young Explorer, Washington DC – invited keynote
Chair, Canopy Symposium, AIBS, Honolulu HI
World Wildlife Fund, Washington DC - invited
Selby Gardens, Board of Trustees FL
Chair, 1st International Forest Canopy Conference, Sarasota, FL
Geneva Sayre 1995 Invited Lecture - Russell Sage Colleges NY – invited keynote
Tropical Rain Forest Destruction Conference, Cambridge Univ. UK - invited
British Entomological Society, London UK - invited
Professor Lampton Invited Annual Lecture, West Georgia College GA

1980-89

Royal Botanic Gardens, Sydney NSW Australia - invited
CSIRO Division of Plant Industry, Canberra Australia - invited
Herbivory Conference, Kosciusko National Park VIC Australia - invited
Australian Entomological Society Annual Conference, Australia
CSIRO, Entomology Division, Canberra, Australia - invited
Biology Department, University of California, Santa Barbara CA
Lamington National Park, QLD Australia
Center for Field Studies (Earthwatch), MA - invited
CSIRO Rain Forest Research Unit, Atherton, QLD Australia
Entomology Department, Pennsylvania State University PA - invited
Organization for Tropical Studies (OTS) 25th Silver Jubilee Symposium (Miami, FL) and
workshop at La Selva, Costa Rica - invited
Soil Conservation Annual “Trees on Farms” Conference, University of New England NSW
Australia - invited