

MARGARET DALZELL LOWMAN

Arbournaut, conservation biologist, educator

CURRICULUM VITAE

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EDUCATION

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

EMPLOYMENT

2020-21 **Visiting Professor**, National University of Singapore, Geography/Biol Sci/Env Sciences; Adjunct Professor, Arizona State University School of Sustainability
2000-on **Director, TREE Foundation** (www.treefoundation.org) that focuses on local and global tree research, education and exploration, with emphasis on women in environment
2019 – 20 Farrar, Straus & Giroux, Publishers NYC, book author
2014 - 19 **California Academy of Sciences, Lindsay Chair in Botany/Senior Scientist in Plant Conservation** with oversight to strategies for global research/collections and sustainability leadership; inaugural **Chief of Science and Sustainability**, with oversight to ~100 research staff, stewardship of 45+ million collections, budget ~ \$ 7 mil, creating sustainable initiatives throughout all research programs, hiring diversity in STEM, and **Director of Global Initiatives**, serving as an external science voice for global partnerships including Amazon citizen science and Malaysian rain forest bioblitz
2010 -14 **Director**, Nature Research Center, NC Museum of Natural Sciences (including oversight to global initiatives and academic partnerships); and **Research Professor**, College of Sciences, NC State University; oversaw construction, staffing and programs for NRC.
2003 - 14 **Science columnist**, News & Observer, Charlotte Tribune, NC; Herald Tribune, FL
2003 - 10 **Director of Environmental Initiatives**, and **Professor of Biology and Environmental Studies**, New College of Florida and Sarasota County Regional Government Science Outreach Partnership, started environmental studies program at NCF
1999 - 2003 **Chief Executive Officer**, Selby Botanical Gardens, FL and grew budget from \$2 mil to \$3.5 mil during my tenure
1992 - on **Adjunct Professorship service to** Williams College, Univ of Florida, Univ of South Florida (Tampa), New College of Florida, Ringling School of Art & Design, FL, Jimma University (Ethiopia), Bahir Dar University (Ethiopia), San Francisco State University
1992 - 99 **Director of Research & Conservation** and **Jessie Cox Chair in Tropical Botany**, Selby Botanical Gardens, FL
1989 - 92 **Visiting Professor of Biology & Environmental Studies**, Williams College, MA
1983 - 89 **Co-manager**, Ruby Hills Pastoral Company, Walcha NSW Australia
1978 - 89 **Lecturer in Adult Education, Botany and Zoology**, University of New England, Sydney University Australia

ACADEMIC FELLOWSHIPS

- 2019 -20 Visiting Professor, National University of Singapore
- 2018-on Research Professor, Universiti Sains Malaysia, Penang
- 2018 Fellow, Rachel Carson Center, Ludwig Maximilian University, Munich Germany
- 1983 - 87 Australian Research Council Postdoctoral Fellowship
- 1983 Sydney University, Australian Museum Award for postgraduate research
- 1979 - 83 Sydney University Fellowship
- 1976 - 77 Duke University Fellowship
- 1976 Williams College, Dwight Botanical Prize
- 1974 Williams College, Geology Summer Field Camp Scholarship
- 1972 - 76 Williams College, Dean's List

PROFESSIONAL HONORS

- 2019-on Science Advisor, Earthwatch Institute; and Travel Expert, National Geographic
- 2019 External Assessor for biology major programs, Universiti Sains Malaysia
- 2019 Faculty mentor at Oxford University summer conservation student workshops
- 2019 Appointed to Board of Advisors for Scientific American
- 2018 San Francisco Business Times "Woman of Influence" (3rd time); member of National Science Foundation Advisory Comm for Environmental Research & Education.
- 2018 Fellow at Rachel Carson Center, University of Munich, Germany
- 2017-on Appointed Research Professor at Universiti Sains Malaysia, Penang
- 2016-20 Member of National Science Foundation Advisory Committee for International Science and Engineering; visiting professor at Bahir Dar University, Ethiopia
- 2015 Elected Fellow of California Academy of Sciences
- 2015 Honorary Doctorate in Science & commencement speaker, Elmira College
- 2014 Honorary Doctorate in Science & commencement speaker, Wilson College
- 2014 **Roy Chapman Andrews Distinguished Explorer Award**
- 2014 Selected as one of San Francisco's "50 Distinguished Women Business Leaders"
- 2014 Invited keynote speaker, EO Wilson Biodiversity Symposium, Alabama; bestowed title of "Her Highness" by EO Wilson (as Sylvia Earle is "Her Deepness")
- 2013 Rolex Foundation juror to select youth award finalists
- 2013 **Fulbright Senior Specialist Scholar to Ethiopia**
- 2012 Rolex invited Forum speaker at Rolex Awards Ceremony, New Delhi India
- 2012 Appalachian State University, commencement speaker
- 2012 Invited to serve on White House Women and the Environment Summit
- 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" for February 2009
- 2009 Tampa FL Women's history month honoree for "conservation of the planet"
- 2008 - 13 **Fulbright Board Senior Specialist Scholar status**
- 2008 - on Elected to Earthwatch Board of Directors
- 2008 Elected Fellow of Wings WorldQuest, honoring women in exploration
- 2007 - 09 Science Advisor for Climate Change to Florida CFO, Alex Sink
- 2007 - 09 Elected Vice President for Research and Education, The Explorers Club
- 2007 Florida Society of Botanical Artists - Gaia Award for Excellence
- 2007 Appointed to NEON Education Tiger Team (National Ecological Observatory Network)
- 2007 **Mendel Medal for achievement in science & spirit, Villanova University**

- 2006 - on Advisory Board, Plants with Purpose (links deforestation to poverty & finds solutions)
- 2006 - 12 Elected Vice President for Education & Human Resources, Ecological Society of America (and re-elected)
- 2006 Aldo Leopold Leadership Fellow
- 2006 **Lowell Thomas Medal for Biodiversity Exploration, The Explorers Club**
- 2006 Nominated for Weizmann Women and Science Award
- 2005 - 11 Elected to the Board of Directors, The Explorers Club (and re-elected)
- 2005 - 08 **NEON senior design team** (wrote \$350 mil grant for ecological observatories)
- 2004 **Chief Scientist, The Jason Project** in Science Education w/Bob Ballard - Panama: Rain Forests at the Crossroads
- 2003 Disney Leadership Institute for Biodiversity (with World Wildlife Fund)
- 2003 Woman in Power Award, National Council of Jewish Women (NCJW)
- 2003 Certificate of Honor, Sarasota County Commission on the Status of Women
- 2003 **Asteroid (10739) Lowman** named by Carolyn Shoemaker, US Dept. of Interior
- 2002 Kilby Laureate medalist, honored for pioneering rainforest canopy science
- 2002 **Ecological Society of America, Eugene P Odum Award for Excellence in Ecology Education**
- 2001 - 04 Elected by Williams College alumni as Board of Trustees Tyng Administrator
- 2001 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
- 2000 **Williams College Bicentennial Medal for achievements in tropical botany**
- 2000 Phi Delta Gamma Educators' Award for book, Life in the Treetops
- 1999 Margaret Douglas Medal from National Garden Club of America for Conservation Education
- 1999 **Chief Scientist, The Jason Project** in Science Education w/Bob Ballard - Amazon, Peru
- 1999 Board of Scientific Advisors, Amazon Center for Education & Environmental Research
- 1998 Selection to Leadership Florida, Class XVI
- 1997 Elected Fellow of The Explorers Club
- 1995 - on Board of Scientific Advisors, Intl. Center for Tropical Biology, University of Missouri
- 1994 **Chief Scientist, The Jason Project in Science Education w/Bob Ballard - Belize**
- 1994 Girl's Incorporated "She Knows Where She's Going" Award for mentoring girls in science
- 1993 Pew Scholar nominee in Conservation Biology
- 1992 - 99 Selby Gardens, appointed to The Jessie B. Cox Endowed Chair in Tropical Botany
- 1991 - 98 Education Board, Massachusetts Tropical Conservatory
- 1990 - 95 Board of Science Advisors, Earthwatch

ADMINISTRATIVE and EDITORIAL ACTIVITIES

- 2019 Co-Editor, volume on Malaysian Biodiversity Survey, Penang Hill – USM Press.
- 2017 Leader of Malaysia Bio-Blitz, funding and organizing 117 scientists to survey a UNESCO world heritage rain forest site in Penang (65% women participants, first whole-forest survey including canopy and forest floor, first local-n-global collaborations for each taxon and over 1400 findings)
- 2014 - 16 Chair of 3 summits, California Academy of Sciences: Forest Summit, Eye on the Environment: Drones for Conservation, and Women in Science – fund-raising, program development, and student engagement

- 2014 - 16 Inaugural Chief of Science and Sustainability, California Academy of Sciences (duties included: increase staff diversity, create salary equity, update financial reporting, inspire teamwork, integrate research with other divisions, add sustainability to all research portfolios, and serve as editor California Academy of Sciences Proceedings)
- 2016 Committee for 7th International Canopy Conference, London UK
- 2013 Co-editor, Treetops at Risk, edited volume from the 2009 Canopy Conference, India
- 2012 Co-chair (with Demetria Mondragon), 6th Intl. Canopy Conference, Oaxaca Mexico
- 2012 National Science Foundation, PIRE (Programs for International Research and Education) review panel
- 2011 National Science Foundation, Macrobiology review panel
- 2011 Chair, Teen Advisory Board for NC Museum of Natural Sciences
- 2010 - 14 Founding Director, Nature Research Center, wing of NC Museum of Natural Sciences (fund-raise, oversee construction, and set up innovative programs for NC Museum, including Academic partnerships from NC system for each museum laboratory)
- 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 - 09 Vice President for Research and Education, The Explorers Club
- 2006 - 12 Vice President Education & Diversity, Ecological Society of America (2 elected terms)
- 2005 - 09 Director of New College/Sarasota County government science partnership
- 2003 - 10 Inaugural Director of Environmental Initiatives, New College of Florida
- 2001 - 10 Founder of Science and Environment Council, Sarasota County (& Chair 2001-2003)
- 1998 - 2000 Finance Committee, Leadership Florida
- 1998 Co-chair (with Francis Hallé, France), 2nd International Canopy Conference: Global Perspectives (with participants from 35 countries)
- 1995 - 98 Tropical studies initiative committee, European Science Foundation (ESF)
- 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 including *Science*, *Oecologia*, *Biotropica*, *Austral 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*, *African Journal of Agriculture, Ecology, Frontiers in Ecology and the Environment*, *Universiti Sains Malaysia*, and many academic book publishers.

BUSINESS EXPERIENCE

- 2000-on Co-founder and CEO, TREE Foundation, including fund-raising, mission of tree research education and exploration, active local, national and global.
- 2014 - 16 Chief of Science & Sustainability, California Academy of Sciences, with ~\$7 mil annual budget and ~ \$14 mil grants for research, exploration, collections, and staff, including:
- Re-structured Institute for Biodiversity Science and Sustainability,

- Created leadership team including new Director of Collections and CFO
 - Revised annual reviews to include peer-reviews,
 - Established revised and more efficient financial reporting,
 - Sought operational practices that led to increased effectiveness of research
 - Increased gender equity in both payroll and hiring practices
 - Infused “sustainability” into the culture of research activities
 - Created first Director of Collections position to oversee 46 mil collections
- 2010 - 13 Director, Nature Research Center, NC Museum of Natural Sciences, a \$65 million science research and education technology wing of the state museum. Oversaw construction, assisted with fund-raising, created programs, and hired a new team of scientists who combined cutting-edge research with innovative science communication. Science staff received \$11.7 million in grants during our first year and was the most visited public destination in North Carolina!
- 2008 Sustainability consultant to Tommy Hilfiger Foundation
- 2008 Chair, Mission/Vision committee, The Explorers Club (1st mission revision after 101 years)
- 2000 - on Founder & Executive Director, TREE Foundation, a 501(c)(3) organization dedicated to tree research, exploration, and education (<http://treefoundation.org>)
- 1999 - 2003 CEO of Marie Selby Botanical Gardens, Sarasota, day-to-day operations of botanical garden including strategic planning, programs, fundraising and staffing, with highlights:
- Budget up 25% over 4 years; membership up 46%
 - Budget deficit (of prior administration) moved into the black
 - Implemented ongoing training and professional development for staff
 - Initiated global partnerships including Sister Garden relationships w/ Jardín Botánico Lankester, Cartago Costa Rica; Fundación Jardín Botánico de Orinoco, Ciudad Bolívar Venezuela and Cienfuegos Botanical Gardens, Cuba
 - Completed renovations to historic Mansion; new perimeter delineation; new events 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 for Capital Campaign, most by direct solicitation; over 900 volunteers/yr. whose hours represented > \$1.5 million value-added
 - Opened Center for Canopy Ecology; expanded research department to include gesneriads, canopy ecology and conservation; living collections expanded by 102%
- 1994 - 2010 Treasurer, Association for Tropical Biology: created annual budgets, initiated computerized accounting and set up the Society’s first endowment
- 1992 - on Co-founder, Canopy Construction Associates, a company that constructs canopy walkways for research and education institutions worldwide; continued consultant on selection of canopy walkway sites from a biodiversity perspective (www.canopyconstruction.com)
- 1992 - 99 Director of Stark Research Center, Selby Gardens: oversaw administration, budget, grants, data collection, public relations, conferences, and outreach for eight staff and twenty-one volunteers; raised > \$ 2 million for botanical research
- 1983 - 90 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 aspects of a weather-related, market-driven business
- 1981 - 89 Administered Earthwatch field expeditions in Australia, including budgets, purchasing, travel logistics, data analyses, and publications
- 1977 - 78 Environmental Protection Agency, air pollution regulation division, Research Triangle
- 1972 - 76 Assistant, Payroll Office, Williams College (to fund college education)
- 1967 - 75 Science camp counselor and teacher, Burgundy Center for Wildlife Studies, WV

TEACHING EXPERIENCE

- 2017 Re-instituted Jason Learning program, leading a team of teachers/students in Malaysia
- 2017 Celebrated 23st summer of teaching citizen science field expedition on “tropical canopy ecology” in Amazonian Peru
- 2011 - 14 **Professor of Science, North Carolina State University** including citizen-science courses in tropical ecology; science communication training
- 2010-on Mentor for underserved girls at Meg Lowman Treetops Camp, rural NY
- 2004 - 10 Director of Environmental Initiatives, New College of Florida
- 2004 - 07 Leader of New College Foundation natural history trips to Amazon, Galapagos, and Belize
- 2004 Florida Science Teachers Association - leader of Panama rain forest workshop
- 2003 - 10 **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
- 1998 - 2002 Instructor for Williams College Alumni expeditions to Australia and Peru
- 1994-03 Distance learning with Jason Project (virtual expeditions to Belize, Panama, Amazon) that reached millions of middle school students and their teachers
- 1994 University of South Florida, Biology Department Adjunct - Conservation Biology
- 1993 - 96 New College of Florida, Biology & Environmental Studies Department Adjunct - Conservation Biology, Environmental Botany, and Plant Ecology
- 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)
- 1992 University of Minnesota - Conservation Biology (field course, Lake Itasca)
- 1989 - 92 **Williams College, Visiting Professor of Biology and Environmental Studies** -Tropical Rainforests: Politics, Economics, Biology; Communities and Ecosystems; Environmental Studies 101; International Environmental Policy (senior tutorial); Conservation Biology; Women as Natural History Writers (tutorial)
- 1986 Williams College, Biology Department - Australian Ecosystems, field course in Australia
- 1983 - 87 University of New England, Australia, Botany Dept. - Agronomy, General Biology
- 1981 - 89 Earthwatch, Principal Investigator, 10 field research expeditions in Australia
- 1979 - 82 Sydney University, Lecturer, Adult Education Department - Plant Taxonomy, Plant Ecology, Beginning and Advanced sections
- 1979 - 82 Sydney University, Teaching Assistantships - Plant Physiology, Plant Ecology, Plant & Animal Biology, Botanical Methods, and Natural Resources Ecology
- 1975 - 76 Williams College, Teaching Assistantships - Field Botany, Environmental Biology, Advanced Plant Ecology

TEACHING OUTREACH & INNOVATIVE EDUCATION

- 2020-on Virtual “meet-a-scientist” programs during COVID-19 pandemic (>100/year)
- 2019 Invited participant National Geographic Explorers festival, rain forest think tank, and plant conference
- 2019 Documentary film, A Woman who Climbs Trees, to launch in 2020
- 2019 Led Williams College alumni trips to Nepal/Bhutan, Amazon and Costa Rica
Numerous skypes with K-12 classrooms and school assemblies about rain forests, well over 5,000 youth annually by hosting ~ 25+ broadcasts
- 2018 National Geographic explorer, Assessing church forests, Ethiopia as critical reservoirs of herpetofaunal diversity (\$26,000)
- 2017 **Jason Learning** expedition to Malaysia to study rain forest biodiversity, Penang
- 2016 Keynote for Jason Learning, a revival of original Jason Expeditions Washington DC
- 2014 **TEDx** Livermore, CA invited speaker: “How to Raise a Girl Scientist”
- 2014 Various innovative outreach activities: featured in Google Hangout, blog for Huffington Post, Scientific American Forum, numerous distance learning “meet-a-scientist” to middle schools in ~ 10 states (who study my canopy research as statewide Science Next Generation Standards), CBS news interview on canopy access for mobility-limited; ~202,000,000 social media hits during 2014
- 2014 Featured in **National Geographic TV** show, How to Climb a Tree (host: David Rees)
- 2012 - 13 Created virtual “meet-the-scientist” programs in NC Museum of Natural Sciences’ Daily Planet technology theater; hosted EO Wilson & others in “global town halls”; gave > 100 public talks to communicate and inspire fundraising for Museum’s Nature Research Center; trained new staff to develop visual lab programs/grants/communication
- 2012 Featured by National Geographic as their “real-life Lorax”; called “Einstein of the treetops” by Wall Street Journal
- 2012 Invited delegate to the **White House Summit on Women and the Environment**
- 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
- 2010 Featured in Oprah Magazine: Women Taking Risks
- 2010 Funded and hosted Rapid Response Training for Invasive Pythons in SW Florida
- 2009 Press (& Florida cabinet) delegate to UNFCCC (climate change meetings, Copenhagen)
- 2009 Florida Trend Magazine - Icon for February issue (audience mainly business leaders)
- 2008 - on **Meg Lowman Treetops Camp** - science mentor to at-risk teenage girls, annual camp
- 2008 Funded and hosted Invasive Reptile workshop for state of Florida
- 2008 PASI - National Science Foundation graduate workshop, taught canopy ecology in Peru
- 2008 Pierian Academy, faculty for 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
- 2006 - on Website: www.canopymeg.com (~2 million hits per year)
- 2006 Feature article, Smithsonian Magazine
- 2005 - 15 **Science columnist *Nature’s Secrets***: North Carolina’s News & Observer and Charlotte Tribune, Sarasota Herald Tribune newspaper
- 2004 - 10 Tutored New College of Florida 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 w/ Lavar Burton (of Star Trek), a national series to educate K-9 about science and reading
- 1991 Initiated first K-6 program for Williams College students to work with elementary classes to produce games that demonstrated environmental principles
- 1980 - on Lectures to numerous education groups including alumni societies, college students, high schools, and elementary classes each year
- 1979 - 83 Sydney University, Adult Education - proposed and designed two new biology courses, and taught all lectures and labs
- 1977 Massachusetts Audubon Society, Merck Forest, Vermont
- 1968 - 76 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 ACCOLADES

- 2000-2019 Books translated into Korean, German, Chinese, Amharic, and Taiwanese
- 2006 Natural History magazine, Endnotes featured **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 my 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

- 2019 Farer, Strauss & Giroux, Publishers NYC – Advance on canopy book plus advance contracts with German, Australian, UK, and Korean publishers
- 2017 Flagstaff Holdings and Habitat Foundation, \$100,000 to fund IBSS biodiversity expedition in Penang; and second grant for Jason Learning virtual education from Spurlino Foundation, \$50,000 to accompany scientific expedition, Penang.
- 2017 NSF-REU travel supplement for grant #1359367 (\$14,568).
- 2017 IMLS (with U. CA – Santa Cruz) Developing and disseminating a genomic toolkit for the museum community (\$490,799)

2017-20 NSF advisory committees – OISE (international science & engineering); ERE (environmental research and education)

2016 Lakeside scholarships to host: Dr. Sinu Pallaty (India) and Dr. Alemayehu Wassie Eshete (Ethiopia) and Tizezew Sisay (Ethiopia) to study and collaborate at Academy

2015 Southwest Forest Service annual collaborative (\$50,000/yr)

2015 - 19 REU NSF grant – Undergraduate research in the cultural, economic, and ecological significance of church forests in South Gondar, Ethiopia (w/Colby College, \$406,038).

2015 - 19 NSF REU - Wheelchairs and Waterbears: 3D Access to survey forest canopy biodiversity, with special emphasis on inspiring mobility-limited students to seek careers in field biology (w/Baker University \$189,251).

2013 Picker Foundation grant to survey church forests of Ethiopia (w/Colgate U., \$148,000)

2013 Forest Service, biodiversity research and outreach in North Carolina (\$105,000)

2013 - 17 NSF MSP grant - Students Discover: Improving middle school STEM outcomes through scaling citizen science projects. (Co-PI for \$4,286,777.00 with NCSU and NC public schools)

2013 North Carolina university partnerships for Museum (~ \$430,000 per year)

2012 - 14 National Science Foundation RUI grant: Insect Biodiversity in Temperate Forest Canopies - Using canopy research to inspire the physically challenged to engage in careers in science (\$149,000, pilot)

2012 Forest Service partnership for biodiversity lab (\$130,000); Dunn lab partnership for Biodiversity Lab (\$90,000) and for Genomics Lab (~ \$150,000)

2011 Global town halls at NRC with Rolex Young Laureates, Rolex Corporation (\$25,000)

2010 National Geographic CI73-09 – Can Church Forests Conserve Insect Biodiversity 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 5th International Canopy Conference, Forest Canopies: conservation, climate change and sustainable use. (Indo-US Science & Technology Forum #99-2008 \$12,000 w/T Ganesh and Soubadra Devy)

2009 Church forests of Ethiopia, Spurlino Fdn (\$15,000 for religion & science workshop)

2009 Forest canopies – US-India Workshop: articulate and disseminate research priorities on forest canopies, Bangalore October 2009 w/K. Bawa (NSF \$31,000)

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

2008 Sarasota County - Invasive species ecology and ecology education (\$50,000)

2007 Economic Development Corporation, website development for regional government biological field station project (\$5,000)

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

2006 National Science Foundation, informal science education, rain forest exhibit (\$75,000)

2006 Student Outreach in Science (SOS) - Environmental education grant (Community Foundation, \$11,000 grant co-written with NCF students)

2005 - 07 Canopy Ecology - Regional and international (Triad \$35,000)

2005 Economic Development Corporation - Field station green design (\$5,000)

2004 - 07 Sarasota County, environmental services to regional government (\$200,000)

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

2003 Aaron Foundation - Canopy ecology - Public programs (\$10,000)

2003 Herbivory protocols using canopy cranes - Global Canopy Program (\$26,178)

2002 Triad Foundation - Canopy ecology - Research and outreach (\$30,000)

2002 The Venice Foundation - Botanical collections (\$200,000)

2002 Phase I - Capital Campaign private donor acquisitions (\$1.3 mil)

- 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 mil)
- 1999 - 2003 National Science Foundation, links between the canopy and the forest floor (\$419,976) plus student participation: Ecological Circuitry Collaboratory (\$59,932)
- 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 - 99 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 - 98 Long-term studies of trees in tropical and subtropical forests, with Joseph Connell and Ian Noble (NSF \$250,000)
- 1993 - 94 Jason V Project - Biodiversity in the rain forest canopies of Belize (~\$75,000)
- 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)
- 1985 Effects of insect damage to root systems of eucalypts, Earthwatch (\$27,000)
- 1983 - 90 Eucalypt regeneration in dieback regions - Forestry Commission, Australian Research Grants Commission, Ruby Hills Pastoral Company (\$20,000)
- 1983 - 86 Postdoctoral research on herbivory and insect epidemics in Australian forests - Australian Research Grants Committee (\$122,600)
- 1982 - 88 Insect abundance and distribution in Australian rainforest canopies - Earthwatch (\$312,000 for multiple expeditions)
- 1979 - 83 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 reorganize 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 MD. In prep. The Arbonaut: a girl who loves pistils. Farrer, Strauss & Giroux.

Lowman MD, S Azizah Mohd Nor, N Ruppert (editors). In press. Biodiversity Survey on Penang Hill, Malaysia. USM Publishers.

Lowman MD. 2017. Muddy Boots – essays of a field biologist. Peppertree Press, 148 pp.

Lowman MD. 2016. Through the Year with Gertrude Grosbeak. Peppertree Press, children's book.

Lowman MD and W Mulat. 2014. Beza - Who Saved the Forests of Ethiopia, One Church at a Time. Peppertree Press (children's book), both English and Amharic versions.

Lowman MD, S Devy, and T Ganesh (eds.). 2013. Treetops at Risk. Springer, 444 pp.

Lowman MD, T Schowalter, and J Franklin. 2012. Methods in Forest Canopy Research. University of California Press.

Lowman MD, E Burgess, and J Burgess. 2006. It's A Jungle Up There - More Tales from the Treetops. Yale University Press, 291 pp. (Paperback, 2008; reprinted in Korean, 2009.)

Lowman MD and HB Rinker (eds.). 2004. Forest Canopies. Elsevier/Academic Press.

Lowman MD. 1999. Life in the Treetops: Adventures of a Woman in Field Biology. Yale University Press. (Editions in German, Chinese and Korean; paperback in 2002.)

Lowman MD and NM Nadkarni (eds.). 1995. Forest Canopies. Academic Press, 624 pp. (Second edition in paperback, 1996.)

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

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

National Leadership Reports:

Aldo Leopold Leadership Program. 2019. Environmental leadership case studies. Chapter on Ethiopian church forests and bottom-up conservation (subm).

Lowman MD. 2012. Health and environment - kids and treehouses. Women and the Environment White House Summit.

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

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

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.

Lowman MD. 1974. Some Aspects of the Fabric of Life. US Department of Health, Education, and Welfare, 204 pp.

Theses:

Lowman MD. 1982. Leaf Growth Dynamics and Herbivory in Australian Rain Forest Canopies. Ph.D. Thesis. Sydney University (Supervisors: Peter Myerscough and Joseph Connell).

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

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

Scientific Publications

Caviglia-Harris J, E Bennett, B Helmuth, K Hodges, K Galvin, M Krebs, K Lips, **M Lowman**, E. Schur, and L Moore. 2020 The Six Dimensions of Collective Leadership that Advance Sustainability Objectives. Nature Sustainability (subm).

Lowman MD, L Nkaganovsky, C Haley. 2020. Herbivory in the Malaysian rain forest canopy, Penang Hill. IN: The Biodiversity of a Malaysian Rain Forest, Penang Hill. Malaysian Forestry Service Publications.

Moore A, MD West, L Tibbs, WR Miller, C Johansson, **MD Lowman**. Submitted. Tardigrades of the canopy: a new genus for *Acanthechiniscus goedeni* (Heterotardigrada: Eschiniscoidea: Echiniscidae) from Oregon USA. Zootaxa. (first authors were undergraduate students).

Prashanth Ballullaya U, Manoj Kandoth, Rajesh TP, KS Reshmi, **MD Lowman**. 2019. Stakeholder motivation for the conservation of sacred groves in south India: an analysis of environmental perceptions of rural and urban neighborhood communities. Land Use Policy (in press). DOI: <https://doi.org/10.1016/j.landusepol.2019.104213>

Qing Pei, Guodong Li, BP Winterhalder, **M Lowman**. 2019. Regional patterns of pastoralist migrations under the push of reduced precipitation in imperial China. Global Ecology and Biogeography 00:1-11. DOI: <https://doi.org/10.1111/geb.13040>

Lowman MD. 2019. Methoden der baumkronen-forschung im wald. IN: Jahrbuch der Baumpflege (Yearbook of Arboriculture) 2019. (Ed D. Dujeseifken). Haymarket Media. Pp. 111-121.

WR Miller, H Cotton, SA Kimball, **MD Lowman**. 2019. Tardigrades in the canopy: from outreach to classroom to science. (In press).

Waymire A, M DuBuc, WR Miller, **MD Lowman**. 2019. Tardigrades in the canopy: an analysis of arboreal habitats. (In press).

Goodin D, A Wassie, **MD Lowman**. 2019. The Ethiopian Orthodox Tewahedo Church Forests and Economic Development: The Case for Traditional Ecological Management. *Journal of Religion and Society* 21: 1-23.

Lowman MD, S Azizah Mohd Nor, N Ruppert 2018. Advancing the rain forest conservation toolkit – a new model for biodiversity surveys. *Conservation Biology and Practice* (online).

DOI: <https://doi.org/10.1111/csp2.2>

Lowman MD, L Nkaganovsky, C Haley. 2019. Herbivory in the Malaysian rain forest canopy, Penang Hill. IN: *The Biodiversity of a Malaysian Rain Forest, Penang Hill*. Malaysian Forestry Service Publications.

Lowman MD. 2018. Earth system environmental literacy. IN: *Encyclopedia of Sustainability Science and Technology*. Springer Science Publishers.

DOI: https://doi.org/10.1007/978-1-4939-2493-6_895-3

Schlabach S., J Donaldson, K Hobelman, WR Miller, & **MD Lowman**. 2018. Tardigrades of the Canopy: *Milnesium burgessi* nov. sp. (Eutardigrada: Apochela: Milnesiidae) a new species from Kansas, U.S.A. *Transactions of the Kansas Academy of Science* 121(1-2):39-48.

DOI: <https://doi.org/10.1660/062.121.0204>

Permuter G, GB Blank, TR Wentworth, **MD Lowman**, HS Neufeld. 2018. Highway pollution effects on microhabitat community structure of corticolous lichens. *The Bryologist* 121(1): 1-13. (first author is my graduate student)

DOI: <https://doi.org/10.1639/0007-2745-121.1.001>

Lowman MD and J Kress. 2017. Biodiversity and collections – museums as an alternative career to academics. *Frontiers in Ecology and Environment* 15: 110-112.

Lowman MD and S Pallaty 2017. Sacred Forests – assessing the value of spiritual sites. *Bioscience* 67: 688-90. (second author is graduate student)

Lowman MD 2017 More than a repository for dead bodies – making natural science museums relevant for the next generation. *Austin Publishing open access* 1:1-2.

Lowman MD 2017. Exploration in the treetops. IN: *Exploration – Merit Badge Series for Boy Scouts of America*.

Perlmutter G, G Blank, TR Wentworth **MD Lowman**, HS Neufeld, ER Plata. 2017. Effects of highway pollution on forest lichen community structure in western Wake County, North Carolina, USA. *The Bryologist* 120:1-10.

DOI: <https://doi.org/10.1639/0007-2745-120.1.001>

Lowman MD. 2016. Exploring exploration: a field scientist's perspective. *Lifewide Magazine* (UK) 18: 61-64.

Reynolds T, CD Collins, A Wassie, J Liang, W Briggs, **M Lowman**, TS Sisay, E Adamu. 2016. Sacred natural sites as mensurative fragmentation experiments in long-inhabited multifunctional landscapes. *Ecography* 39: 1-14. (three authors are US undergraduates and 2 Ethiopian students)
DOI: <https://doi.org/10.1111/ecog.02950>

Permuter G, G B Blank, TR Wentworth, **MD Lowman**, HS Neufeld. 2017. Environmental factors influencing lichen communities in highway-exposed forests and building an indicator species index for environmental quality in central North Carolina, USA. *J Total Environment*.

Sorger DL, W Booth, AW Eshete, **M Lowman**, M Moffett. 2016. Outnumbered – a new dominant ant species with genetically diverse supercolonies in Ethiopia. *Insectes Sociaux*.
DOI: <https://doi.org/10.1007/s00040-016-0524-9>

Lowman M and B Voirin. 2016. Eye on the environment: drones for conservation. *Frontiers in Ecology and Environment* 14: 234.
DOI: <https://doi.org/10.1002/fee.1290>

M Lowman. 2016. Life in the Lab. *Science* 352:47.
DOI: <https://doi.org/10.1126/science.aaf2161>

Young A, B Chappell, W Miller & **M Lowman**. 2016. Tardigrades of the tree canopy: *Milnesium swansoni* sp. Nov. (Eutardigrada: Apochela: Milnesiidae) a new species from Kansas USA. *Zootaxa* 4072: 559-568. (1st authors = undergraduate students).
DOI: <https://doi.org/10.11646/zootaxa.4072.5.3>

Chang L, D Powell, WR Miller, and **M. Lowman**. 2015. Tardigrades of the canopy: evidence of stratification. *Transactions of the Kansas Academy of Science* 118: 230-236. (1st authors = students)
DOI: <https://doi.org/10.1660/062.118.0306>

Lowman M. 2015. Taiwan explores and celebrates her treetops. *For. Res. Newsletter Taiwan* 22: 28-30.

Chappell BM, D Parry, WR Miller & **MD Lowman** 2015. Tardigrades of the Canopy: *Doryphoribius gibber* Beasley and Pliato, 1987 (Eutardigrada: Parachela: Hypsibiidae) new records from eastern Kansas, U.S.A. *Transactions of the Kansas Academy of Science* 118:48-52.
DOI: <https://doi.org/10.1660/062.118.0106>

Young A, WR Miller RL Tripp, & **MD Lowman**. 2015. Tardigrades in the canopy: a preliminary report. 13th international symposium on Tardigrada, Modena Italy.

Tallis H, J Lubchenco, ... **M Lowman** et al. 2014. A call for inclusive conservation. *Nature* 515: 27-31.
DOI: <https://doi.org/10.1038/515027a>

Haefke, BJ, A Spiers, WR Miller & **MD Lowman**. 2014. Tardigrades of the canopy: *Doryphoribius elleneddiei* nov. sp. (Eutardigrada, Parachela, Hypsibiidae), a new species from eastern Kansas. *Transactions Kansas Academy of Sciences* 117: 299-304. (first authors = undergraduate students)
DOI: <https://doi.org/10.1660/062.117.0319>

Lowman MD. 2014. Ecoliteracy in informal science education settings. *Frontiers in Ecology and the Environment* 12: 474-5.

DOI: <https://doi.org/10.1890/1540-9295-12.8.474>

Lowman MD. 2014. Put the Muse Back in Museums - Science museums should recruit the public in confronting the planet's toughest challenges. *Scientific American Forum*.

Rocha LA ... **M Lowman et al.** 2014. Specimen collection: an essential tool. *Science* 344: 814-5.
DOI: <https://doi.org/10.1126/science.344.6186.816-a>

Haefke BJ, AI Spiers., WR Miller & **MD Lowman, M.D.** 2013. Tardigrades in the Canopy: Using double rope techniques to conduct sampling along vertical transects. *Transactions of the Kansas Academy of Science*, 116(3-4):119-124.
DOI: <https://doi.org/10.1660/062.116.0303>

Lowman, M. D., T. Ganesh, and S. Devy. 2013. The Role of Scientific Conferences to Foster Conservation Solutions for Global Forests. IN: *Treetops at Risk: Challenges of Global Canopy Ecology and Conservation*, Springer Verlag.
DOI: https://doi.org/10.1007/978-1-4614-7161-5_1

Newspaper column entitled: [Nature's Secrets](#) (Sarasota Herald Tribune, March 2005 – on); over 80 public science newspaper feature articles on subjects ranging from climate change to local ecosystems.

Lowman, M.D. 2013. Hooking the public on science. *Ecology*, 94(4), 2013, pp. 981–982.

Lowman, M. D., T. Ganesh, and S. Devy. 2013. “Canopy-Less” Monitoring of Biodiversity and Climate Change: Signs of a Leaky Roof. IN: *Treetops at Risk: Challenges of Global Canopy Ecology and Conservation*, Springer Verlag.
DOI: https://doi.org/10.1007/978-1-4614-7161-5_17

Lowman, M.D. 2012. North Carolina leverages funding for science education. *Science* 335: 1201.

Cardelús CL, P Scull, J Hair, M Baimas-George, **MD Lowman**, and A Wassie Eshete. 2013. A preliminary assessment of Ethiopian sacred grove status at the landscape and ecosystem scales. *Diversity* 5(2): 320-334.
DOI: <https://doi.org/10.3390/d5020320>

Cardelús C, M Baimas-George, **M Lowman**, and A Wassie Eshete. 2013. Church forest status and carbon sequestration in northern Ethiopia. IN: *Treetops at Risk*. Springer: 119-122.
DOI: https://doi.org/10.1007/978-1-4614-7161-5_11

Devy S, T Ganesh, and **M Lowman.** 2013. “Canopy-less” monitoring of biodiversity and climate change: signs of a leaky roof. IN: *Treetops at Risk*. Springer: 169-177.

Heatwole H, S Unsicker, and **M Lowman.** 2013. Ontogeny of herbivory on leaves in a tropical rain forest in Madagascar. IN: *Treetops at Risk*. Springer: 295-305.
DOI: https://doi.org/10.1007/978-1-4614-7161-5_29

Kaganovskiy L and **M Lowman.** 2013. Modeling insect outbreaks in forest canopies: integration of virtual simulations with hands-on ecology for undergraduates. IN: *Treetops at Risk*. Springer: 341-352.
DOI: https://doi.org/10.1007/978-1-4614-7161-5_34

Lewis OT, RM Ewers, **MD Lowman**, and Y Malhi. 2013. Conservation of tropical forests: maintaining ecological integrity and resilience. IN: Key Topics in Conservation Biology 2. DW Macdonald & KJ Willis (eds.). John Wiley & Sons: 222-235.

DOI: <https://doi.org/10.1002/9781118520178.ch13>

Lowman MD. 2013. Exploring the rain forest canopy by balloon. IN: The Modern Explorers. R Hanbury-Tenison & R Twigger, (eds.). Thames and Hudson.

Lowman MD. 2013. Earth system environmental literacy. IN: Earth System Monitoring. J Orcutt (ed.). Springer: 107-121.

DOI: https://doi.org/10.1007/978-1-4614-5684-1_6

Lowman MD, T Ganesh, and S Devy. 2013. The role of scientific conferences to foster conservation solutions for global forests. IN: Treetops at Risk. Springer: 3-7.

DOI: https://doi.org/10.1007/978-1-4614-7161-5_1

Spiers, AI, BJ Haefke, WR Miller, & **MD Lowman**. 2013. Tardigrades in the canopy: *Doryphoribius dawkinsi* Michalczyk and Kaczmarck 2010 – new records from eastern Kansas, USA. Transactions of the Kansas Academy of Science 116(3/4): 125-128.

Miller W, **M Lowman**, and E McCord. 2013. In the canopy with wheelchairs: a model for teaching field biology. IN: Treetops at Risk: the challenges of global canopy ecology and conservation. Springer, New York: 331-339.

DOI: https://doi.org/10.1007/978-1-4614-7161-5_33

Reynolds J and **M Lowman**. 2013. Promoting ecoliteracy through research service-learning and citizen science. Frontiers in Ecology and the Environment 11(10): 565-566.

DOI: <https://doi.org/10.1890/1540-9295-11.10.565>

Seidler R, KS Bawa, **M Lowman**, and N Nadkarni. 2013. Forest canopies as Earth's support systems: priorities for research and conservation. IN: Treetops at Risk. Springer: 55-70.

DOI: https://doi.org/10.1007/978-1-4614-7161-5_4

Voirin B, R Kays, M Wikelski, and **M Lowman**. 2013. Why do sloths poop on the ground? IN: Treetops at Risk. Springer: 195-199.

DOI: https://doi.org/10.1007/978-1-4614-7161-5_19

Beck C, K Klemow, J Paulson, A Bernstein, M Lam, G Middendorf, J Reynolds, K Belanger, C Cardelús, C Cid, S Doshi, N Gerardo, L Jablonski, H Kimmel, **M Lowman**, A MacRae-Crerar, B Pohlrad, J De Roode, and C Thomas. 2012. Add ecology to the pre-medical curriculum. Science 335: 1301.

DOI: <https://doi.org/10.1126/science.335.6074.1301-a>

Cardelús C, **MD Lowman**, and A Wassie. 2012. Uniting church and science for conservation. Science 335: 915-917.

DOI: <https://doi.org/10.1126/science.335.6071.915>

Caughlin TT, T Ganesh, and **MD Lowman**. 2012. Sacred fig trees promote frugivore visitation and tree seedling abundance in South India. *Current Science* 102: 918-922.

Chandler M, D Bebbler, S Castro, **MD Lowman**, P Muoria, N Ouge, and D Rubenstein. 2012. International citizen science: making the local global. *Frontiers in Ecology and the Environment* 10(6): 328-331.

DOI: <https://doi.org/10.1890/110283>

Yadvindar, M, R. Owen, **M.D. Lowman** and R. Ewer. 2012. Tropical rain forests – conservation and research interfaces as solutions for the future? IN: *Key Topics in Tropical Biology*, (ed. David McDonald).

Ermilov Sergey G, Neville N Winchester, **Margaret D Lowman**, and Alemayehu Wassie. 2012. Two new species of oribatid mites (Acari: Oribatida) from Ethiopia, including a key to species of Pilobatella. *Systematic & Applied Acarology* 17(3): 301-317.

DOI: <https://doi.org/10.11158/saa.17.3.9>

Hulcr J, A Latimer, J Henley, N Rountree, N Fierer, A Lucky, **M Lowman**, and R Dunn. 2012. A jungle in there: bacteria in belly buttons are highly diverse, but predictable. *Plos One* 7(11): e47712, pp. 1-6.

DOI: <https://doi.org/10.1371/journal.pone.0047712>

Kaganovskiy L and **MD Lowman**. 2012. Mathematical modeling of forest canopies for herbivory. IN: *Methods in Forest Canopy Research*. **M Lowman**, T Schowalter & J Franklin (eds.). University of California Press: 97-98.

Lowman MD. 2012. Beetles in a salad bar: accurate assessment of herbivory in whole forests.

IN: *Methods in Forest Canopy Research*. **M Lowman**, T Schowalter & J Franklin (eds.). University of California Press: 93-97.

Lowman MD. 2012. Science Statesmanship. *Science Magazine* 336: 157.

DOI: <https://doi.org/10.1126/science.336.6078.157>

Lowman MD and TD Schowalter. 2012. Plant science in forest canopies - the first 30 years of advances and challenges (1980-2010). *New Phytologist* 194(1): 12-27.

DOI: <https://doi.org/10.1111/j.1469-8137.2012.04076.x>

Miller W and **MD Lowman**. 2012. The collection of tardigrades from the canopy. IN: *Methods in Forest Canopy Research*. **M Lowman**, T Schowalter & J Franklin (eds.). University of California Press: 70-73.

Stevenson, D., **Lowman, MD**. 2011. Organized Oral Session 14 Ecology Education in 2020: Integrating New Technologies with Mother Nature. *Bulletin of the Ecological Society of America* 92:420–425.

DOI: <https://doi.org/10.1890/0012-9623-92.4.420>

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

Lowman MD. 2011. Out on a limb: true confessions of a bug detective. IN: *Chemical Biology of the Tropics*. Elsevier Publishers: 87-96.

DOI: https://doi.org/10.1007/978-3-642-19080-3_6

Lowman MD. 2011. Sustainability education: challenges of integrating virtual versus real nature in science education. Encyclopedia of Sustainability Science and Technology. RA Meyers (ed.). Springer Verlag.

Nadkarni N, G Parker, and **M Lowman.** 2011. Forest canopy studies as an emerging field of science. Annals of Forest Science 68: 217-224.

DOI: <https://doi.org/10.1007/s13595-011-0046-6>

Stevenson R and **MD Lowman.** 2011. Ecology education in 2020: integrating new technologies with Mother Nature. ESA Bulletin e-journal.

DOI: <https://doi.org/10.1890/0012-9623-92.4.420>

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

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

Caughlin, T., Ganesh T., **Lowman MD** Submitted. Does human disturbance impact feeding tree choice by frugivorous birds and bats in South India? J. Urban Landscapes.

Nadkarni, N., Parker, G., **Lowman, M.** and Bawa K. 2010. Bibliometric assessment of canopy biology throughout its history. Bioscience (subm.)

Lowman MD. 2010. Finding sanctuary - saving the biodiversity of Ethiopia one church forest at a time. The Explorers Journal 88: 26-31.

Lowman MD. 2010. Tall Tree Canopies. IN: The Fragile Forest: Inside Brazilian Amazonia. DK Bhaskar. International Fine Art Gallery, Augusta GA.

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

DOI: <https://doi.org/10.1890/1540-9295-8.7.339>

Heatwole H, S Unsicker, LP Andriamiarisoa, and **MD Lowman.** 2009. Vicissitudes of leaves in a tropical rain forest in Madagascar. J. Tropical Ecology 25(6): 615-624.

DOI: <https://doi.org/10.1017/s0266467409990277>

Lowman MD. 2009. A blueprint for Florida's clean-energy future - case study of a regional government's environmental strategy. Oxford University. Sustainability 1(2): 97-103.

DOI: <https://doi.org/10.3390/su1020097>

Lowman MD. 2009. Canopy research in the twenty-first century: a review of arboreal ecology. Tropical Ecology 50(1): 125-136.

Lowman MD. 2009. Canopy walkways for conservation - a tropical biologist's panacea or fuzzy metrics to justify ecotourism? Biotropica 41(5): 545-548.

DOI: <https://doi.org/10.1111/j.1744-7429.2009.00562.x>

- Lowman MD.** 2009*. Forests in the Upper Heights. IN: Forests. America Natural, Mexico.
- Lowman MD** and DC Randle. 2009. Ecological mentoring: inspiring future scientists. *Frontiers in Ecology and the Environment* 7: 119.
DOI: <https://doi.org/10.1890/1540-9295-7.3.119>
- Lowman MD**, C D'Avanzo, and C Brewer. 2009. NEON - a national ecological network for research and education. *Science* 323(5918): 1172-1173.
DOI: <https://doi.org/10.1126/science.1166945>
- Voirin B, R Kayes, **Lowman MD**, and M Wikelski. 2009. Evidence for three-toed sloth (*Bradypus variegatus*) predation by spectacled owl (*Pulsatrix perspicillata*). *Edentata* 8: 15-20.
DOI: <https://doi.org/10.1896/020.010.0113>
- Lowman MD.** 2008. The “Wow” Factor - the science behind a safe home. *Scene Mag* June/July 61.
- Lowman MD.** 2007. Exploring climate change - charting a new course for planet Earth. *The Explorers Journal* Fall 2007: 20-22.
- Lowman MD.** 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*. The Lyons Press: 331-339.
- DC Shaw, KA Ernest, HB Rinker, and **MD Lowman**. 2006. Stand-Level Herbivory in an Old-Growth Conifer Forest Canopy. 2006. *Western North American Naturalist*. 66(4): 473-481.
DOI: [https://doi.org/10.3398/1527-0904\(2006\)66\[473:shiaoc\]2.0.co;2](https://doi.org/10.3398/1527-0904(2006)66[473:shiaoc]2.0.co;2)
- Djieto-Lordon C, B Nkongmeneck, **MD Lowman**, and A Dejean. 2006. *Platyserium stemaria* (Polypodiaceae): an African epiphytic myrmecophyte. *Selbyana* 27: 79-82.
- Ernest KA, **MD Lowman**, HB Rinker, and DC Shaw. 2006. Development of a novel method for assessing stand-level herbivory in forests. *Newsletter of the International Canopy Network* 12 (2): 4-5.
- Lowman MD.** 2006. Fostering partnerships between regional government and ecology. *Frontiers in Ecology and the Environment* 4(10): 547-548.
DOI: [https://doi.org/10.1890/1540-9295\(2006\)4\[547:fpbrga\]2.0.co;2](https://doi.org/10.1890/1540-9295(2006)4[547:fpbrga]2.0.co;2)
- Lowman MD.** 2006. No child left indoors. *Frontiers in Ecology and the Environment* 4(9): 451.
DOI: [https://doi.org/10.1890/1540-9295\(2006\)4\[451:ncli\]2.0.co;2](https://doi.org/10.1890/1540-9295(2006)4[451:ncli]2.0.co;2)
- Lowman MD.** 2006. Out on a limb. *The Explorers Club Journal* Winter 2005-2006: 24-30.
- Lowman MD.** 2006. Turning point - Reading the leaves. *New Scientist* 191(2566): 49.
DOI: [https://doi.org/10.1016/s0262-4079\(06\)60303-5](https://doi.org/10.1016/s0262-4079(06)60303-5)
- Lowman MD**, E Burgess, and J Burgess. 2006. Growing up in the treetops. *Natural History* 115(2): 80.
- Lowman MD.** 2005. Out on a limb: explorations of the world's treetops. *Explorers Journal* 83(4): 24-29.

Frank JH, PJ Benschhoff, MA Deyrup, GB Edwards, SE Halbert, AB Jamon, **MD Lowman**, EL Mockford, RH Scheffrahn, S Sreenivasan, GJ Steck, MC Thomas, TJ Walker, and WC Welbourn. 2004. Invertebrate animals extracted from native Tillandsia (Bromeliales: Bromeliaceae) in Sarasota County, Florida. Florida Entomologist 87(2): 176-185.

DOI: [https://doi.org/10.1653/0015-4040\(2004\)087\[0176:iaefnt\]2.0.co;2](https://doi.org/10.1653/0015-4040(2004)087[0176:iaefnt]2.0.co;2)

Lowman MD. 2004. Canopy conservation initiatives. Plant Talk 36: 45.

Lowman MD. 2004. Ecotourism and its impact on forest conservation.

<http://www.actionbioscience.org/environment/lowman.html>

Lowman MD. 2004. Ecotourism and the treetops. IN: Forest Canopies. Elsevier Press, San Diego CA: 475-485.

DOI: <https://doi.org/10.1016/b978-012457553-0/50032-0>

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

DOI: <https://doi.org/10.1016/b978-012457553-0/50030-7>

Lowman MD and HB Rinker. 2004. Insect herbivory in tropical forests. IN: Forest Canopies. Elsevier Press, San Diego CA: 359-386.

DOI: <https://doi.org/10.1016/b978-012457553-0/50024-1>

Burgess E, J Burgess, **MD Lowman**, and thousands of Jason X school students. 2003. Observations of a beetle herbivore on a bromeliad in Peru. Journal of the Bromeliad Society 53(5): 221-224.

Burgess EA, JB Burgess, **MD Lowman**, and DC Randle. 2002. Water pollution in bromeliad tanks - an experimental approach. Journal of the Bromeliad Society 52(2): 58-62.

Lowman MD. 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.

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

Nkongmeneck BA, **MD Lowman**, and JT Atwood. 2002. Epiphyte diversity in primary and fragmented forests of Cameroon, Central Africa: a preliminary survey. Selbyana 23(1): 121-130.

Hunter MD, **MD Lowman**, HB Rinker, TD Schowalter, SJ Fonte. 2001. Canopy herbivory and soil ecology - the top-down impact of forest processes. Selbyana 22(2): 225-231.

Hunter MD, **MD Lowman**, HB Rinker, TD Schowalter, and SJ Fonte. 2001. Canopy herbivory and soil processes in temperate and tropical forests. IN: Tropical Ecosystems. KN Gaenshaiah, R Uma Shaanker & KS Bawa (eds.): 433.

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

Lowman MD. 2001. Epiphytes. *Plant Sciences* 2: 113-115.

Lowman MD. 2001. Plants in the forest canopy: some reflections on current research and future direction. IN: *Tropical Forest Canopies: Ecology and Management*. KE Linsenmair, AJ Davis, B Fiala & MR Speight (eds.). *Forestry Sciences* (69): 39-50.
DOI: https://doi.org/10.1007/978-94-017-3606-0_4

Lowman MD. 2001. Plants in the forest canopy: some reflections on current research and future direction. *Plant Ecology* 153: 39-50.

Holst BK and **MD Lowman** (eds.). 2000. *Forest Canopies 1998: Global perspectives*. Proceedings of the Second International Canopy Conference, Part IV, Sarasota Florida, USA, 4-8 November 1998. *Selbyana* 21(1/2): 7-117.

Lowman MD. 2000. Heat futures in Australia's rain forests. Earthwatch Institute: 25-37.

Adams J, MM Grushka, G Lin, **MD Lowman**, and BDV Marino. 1999. The Biosphere 2 canopy access system. *Ecological Engineering* 13: 313-320.
DOI: [https://doi.org/10.1016/s0925-8574\(98\)00107-4](https://doi.org/10.1016/s0925-8574(98)00107-4)

Adams J, MM Grushka, G Lin, **MD Lowman**, and BDV Marino. 1999. The Biosphere 2 canopy access system. IN: *Biosphere 2: Research Past and present*. BDV Marino & HT Odum (eds.). Elsevier.

Brown M, A Desrosiers, **MD Lowman**, and DC Randle. 1999. Temporal variation in herbivory of a Peruvian bromeliad. *Journal of the Bromeliad Society* 49: 81-83.

Downey L, A Farres, **MD Lowman**, and E Mermin. 1999. Abundance and mortality of two epiphytic *Tillandsias* (Bromeliaceae) in a Florida hammock. *Journal of the Bromeliad Society* 49: 25-28.

Heatwole H, **MD Lowman**, and KL Abbott. 1999. Grazing on Australian eucalypt leaves by insects. *Selbyana* 20: 299-323.

Lowman MD. 1999. *Forest Canopies 1998: Global Perspectives - a new beginning for the new millennium*. *Selbyana* 20(1): 61-65.

Schowalter TD and **MD Lowman**. 1999. Forest herbivory: insects. *Ecosystems of the World*: 253-270.

Preisser E, D Smith, and **MD Lowman**. 1999. Canopy and ground level insect distribution in a temperate forest. *Selbyana* 19(2):141-146.

Burgess E, J Burgess, and **MD Lowman**. 1998. How quickly do bromeliads decay? *Journal of the Bromeliad Society* 48(4): 177-182.

Foster R, **MD Lowman**, HB Rinker, and P Wittman. 1998. Herbivory and insect loads on epiphytes, vines and host trees in the rain forest canopy of French Guiana. *Biologie D'Une Canopée de Forêt Équatoriale*. F Hallé (ed.). Pro-Natura International, France: 116-128.

- Lowman MD.** 1998. Artificial bromeliad tank experiments. *A Wet and Wild Adventure; Curriculum for Jason X* (collated by National Science Teachers Association): 189-191.
- Lowman MD.** 1998. Canopy research of tropical forests. *Mountain, Plain and Garden: The Magazine of Denver Botanic Gardens* 55(2): 18-23.
- Lowman MD.** 1998. Canopy walkways. *A Wet and Wild Adventure; Curriculum for Jason X* (collated by National Science Teachers Association): 186-189.
- Lowman MD.** 1998. Forest canopies 1998: global perspectives. *Selbyana* 18(2): 1-3.
- Lowman MD.** 1998. Leaf toughness and the use of a penetrometer. *A Wet and Wild Adventure; Curriculum for Jason X* (with National Science Teachers Association): 144-156.
- Lowman MD** and PA Morrow. 1998. Insects and their environment: plants. *The Science of Entomology*. 4th edition. WS Romoser and JG Stoffolano, Jr. (eds.). Wm C. Brown Publishers, Dubuque Iowa: 290-316.
- Lowman MD**, E Preisser, and D Smith. 1998. Canopy and ground level insect distribution in a temperate forest. *Selbyana* 19(2): 141-146.
- Schowalter T and **MD Lowman**. 1998. Forest herbivory: insects. *Ecosystems of Disturbed Ground*. Lawrence Walker (ed.). Elsevier Press.
- Connell JH, **MD Lowman**, and IR Noble. 1997. Subcanopy gaps in temperate and tropical forests. *Australian Journal of Ecology* 22: 163-168.
DOI: <https://doi.org/10.1111/j.1442-9993.1997.tb00655.x>
- Donovan C, H Heatwole, **MD Lowman**, and M McCoy. 1997. Phenology of leaf-flushing and macroarthropod abundances in canopies of Eucalyptus saplings. *Selbyana* 18(2): 200-214.
- Lowman MD.** 1997. Herbivory in forests - from centimetres to megametres. *Forests and Insects*. AD Watt, NE Stork & MD Hunter (eds.). Chapman & Hall: 135-149.
- Lowman MD**, D Murray, and P Wittman. 1997. Bromeliads along the ACEER canopy walkway in Amazonian Peru. *Journal of the Bromeliad Society* 47(2): 54-59.
- Carruthers G, RL Kitching, and **MD Lowman**. 1996. Arthropod sampling in Australian subtropical rain forest: how accurate are some of the more common techniques? *Selbyana* 17: 36-42.
- Lowman MD** and P Taylor. 1996. Vertical stratification of small mammals in a northern hardwood forest. *Selbyana* 17: 15-21.
- Lowman MD** and PK Wittman. 1996. Forest canopies: methods, hypotheses and future directions. *Annual Review of Ecology & Systematics* 27: 55-81.
DOI: <https://doi.org/10.1146/annurev.ecolsys.27.1.55>
- Lowman MD**, D Murray, and P Wittman. 1996. Herbivory in a bromeliad of the Peruvian rain forest canopy. *Journal of the Bromeliad Society* 46: 52-55.

Zapfack L, **MD Lowman**, AB Nkongmeneck, and JF Villiers. 1996. The importance of Pteridophytes in the epiphytic flora of some phorophytes of the Cameroonian semi-deciduous rain forest. *Selbyana* 17: 76-81.

Bouricius B and **MD Lowman**. 1995. The construction of platforms and bridges for forest canopy access. *Selbyana* 16(2): 179-184.

Bouricius B, P Coley, F Hallé, **MD Lowman**, N Nadkarni, G Parker, K Saterson, and J Wright. 1995. What's up? Perspectives from the first international forest canopy conference at Sarasota Florida, 1994. *Selbyana* 16: 1-11.

Ingram SW and **MD Lowman**. 1995. The collection and preservation of plant material from the tropical forest canopy. IN: *Forest Canopies*. **MD Lowman** & N Nadkarni (eds.): 587-603.

Lowman MD. 1995. Herbivory in Australian forests - a comparison of dry sclerophyll and rain forest canopies. *Proc. Linnean Society NSW* 115: 77-87.

Lowman MD. 1995. Herbivory as a canopy process in rain forest trees. IN: *Forest Canopies*. **MD Lowman** & N Nadkarni (eds.): 431-455.

Lowman MD. 1995. Linking systematics and ecology to promote conservation. *Selbyana* 16: 125-126.

Lowman MD and W Linnerooth. 1995. Population dynamics of some native Florida epiphytes. II. Mortality after a storm. *Journal of the Bromeliad Society* 45: 15-17.

Lowman MD and M Moffett. 1995. Canopy access techniques. IN: *Forest Canopies*. **MD Lowman** & N Nadkarni (eds.). Academic Press: 3-25.

Lowman MD and N Nadkarni. 1995. Canopy science: a summary of its role in research and education. IN: *Forest Canopies*. **MD Lowman** & N Nadkarni (eds.): 609-613.

Lowman MD and PK Wittman. 1995. The last biological frontier? Advancements in research on forest canopies. *Endeavor* 19: 161-165.
DOI: [https://doi.org/10.1016/0160-9327\(96\)82879-1](https://doi.org/10.1016/0160-9327(96)82879-1)

Lowman MD, M Moffett, and HB Rinker. 1995. Africa from the treetops. *American Biology Teacher* 57(7): 393-401.
DOI: <https://doi.org/10.2307/4450028>

Ballard RL, RM Levanthal, **MD Lowman**, TE Miller, and GM Wellington (curriculum content eds.). 1994. *Jason Curriculum; The Belize Expedition Curriculum*, Jason Foundation for Education and NSTA (National Science Teachers Association).

Lowman MD. 1994*. Accessing forest canopies. *American Orchid Society Bulletin*: 1252-1255.

Lowman MD. 1994*. Ecology of the rain forest canopy in Belize. *Jason Report*, Jason Foundation, MA.

Lowman MD. 1994. What's up? Forest canopy scientists convene for first time at Selby Gardens. *Diversity* 10(4): 36-37.

Bergelson JM, RL Kitching, **MD Lowman**, and S McIntyre. 1993. The biodiversity of arthropods from Australian rainforest canopies: general introduction, methods, sites, and ordinal results. *Australian Journal of Ecology* 18: 181-191.

DOI: <https://doi.org/10.1111/j.1442-9993.1993.tb00442.x>

Doblecki S and **MD Lowman**. 1993. Population dynamics of some native Florida epiphytes. *Journal of the Bromeliad Society* 43: 175-177.

Heatwole H and **MD Lowman**. 1993. Rural dieback in Australia and subsequent landscape amelioration. *Forest Decline in the Atlantic and Pacific Region*. R Huettl & D Mueller-Dombois (eds.). Springer-Verlag: 307-320.

DOI: https://doi.org/10.1007/978-3-642-76995-5_24

Lowman MD. 1993. Forest canopy research: New World, Old World comparisons. *Selbyana* 14: 1-2.

Lowman MD. 1993. Raft in the treetops. *Newsletter American Association of Botanical Gardens* 220: 1-2.

Lowman MD and HB Rinker. 1993. A degree of excellence in biology teaching. *Bird Watcher's Digest* 14: 110-113.

Lowman MD and M Moffett. 1993. The ecology of tropical rain forests canopies. *Trends in Ecology and Evolution* 8(3): 104-107.

DOI: [https://doi.org/10.1016/0169-5347\(93\)90061-s](https://doi.org/10.1016/0169-5347(93)90061-s)

Lowman MD and PA Morrow. 1993. Insects and their environment: plants. *The Science of Entomology*, 3rd edition. A Romoser (ed.): 269-270.

Lowman MD, M Moffett, and HB Rinker. 1993. A new technique for taxonomic and ecological sampling in rain forest canopies. *Selbyana* 14: 75-79.

Lowman MD, M Moffett, and HB Rinker. 1993. Sled Sweeping: A new technique for measuring insects in rain forest canopies. *Biologie D'une Canopée De Forêt Equatoriale - II*. F Hallé & O Pascal (eds.).

Lowman MD and HB Rinker. 1993. John Trott: A Natural Guide. *Bird Watcher's Digest*. 14: 110-112.

Lowman MD. 1992. Herbivory in Australian rain forests, with particular reference to the canopies of *Doryphora sassafras* (Monimiaceae). *Proceedings of the 25th Silver Jubilee Symposium of the Organization for Tropical Studies*. *Biotropica* 24(2b): 263-272.

DOI: <https://doi.org/10.2307/2388521>

Lowman MD. 1992. Leaf growth dynamics and herbivory in five species of Australian rain-forest canopy trees. *Journal of Ecology* 80: 433-447.

DOI: <https://doi.org/10.2307/2260689>

Lowman MD and H Heatwole. 1992. Spatial and temporal variability in defoliation of Australian eucalypts and its consequence for the dieback syndrome. *Ecology* 73(1): 129-142.
DOI: <https://doi.org/10.2307/1938726>

Lowman MD. 1991. The dieback crisis - tree declines throughout the world. Center for Environmental Studies Journal, Williams College.

Lowman MD. 1991. The impact of herbivorous insects on Australian rainforest tree canopies. World Wildlife Fund, Volume III: Australian National Rainforest Study Report. GL Werren & AP Kershaw (eds.): 177-190.

Burgess AD and **MD Lowman**. 1990. A trial to determine the economic viability of a commercial lick block. *Wool Technology and Sheep Breeding* 38(4): 119-121.

Connell JH and **MD Lowman**. 1989. Low-diversity tropical rain forests: some possible mechanisms for their existence. *The American Naturalist* 134(1): 88-119.
DOI: <https://doi.org/10.1086/284967>

Lowman MD. 1988. Litter fall and leaf decay in three Australian rainforest formations. *Journal of Ecology* 76: 451-465.
DOI: <https://doi.org/10.2307/2260605>

Burgess AD, WD Higgins, and **MD Lowman**. 1987. The biomass of New England peppermint (*Eucalyptus nova-anglica*) in relation to insect damage associated with rural dieback. *Australian Journal of Ecology* 12: 361-371.
DOI: <https://doi.org/10.1111/j.1442-9993.1987.tb00956.x>

Heatwole H and **MD Lowman**. 1987. Dieback: death of an Australian landscape. *If Atoms Could Talk*. R Love (ed.). Greenhouse Publications: 42-49.

Heatwole H and **MD Lowman**. 1987. The impact of defoliating insects on the growth of eucalypt saplings. *Australian Journal of Ecology* 12: 175-181.
DOI: <https://doi.org/10.1111/j.1442-9993.1987.tb00938.x>

Lowman MD. 1987. Relationships between leaf growth and holes caused by herbivores. *Australian Journal of Ecology* 12: 189-191.
DOI: <https://doi.org/10.1111/j.1442-9993.1987.tb00940.x>

Heatwole H and **M Lowman**. 1986. Dieback, death of an Australian landscape. Reed Publishers, Frenchs Forest, NSW: 150 pp.

Lowman MD. 1986. Light interception and its relation to structural differences in three Australian rainforest canopies. *Australian Journal of Ecology* 11: 163-170.
DOI: <https://doi.org/10.1111/j.1442-9993.1986.tb01387.x>

Lowman MD. 1985. Insect herbivory in Australian rain forests - is it higher than in the Neotropics? *ESA Symposium Proceedings: Are Australian Ecosystems Different?* Ecological Society of Australia 14:109-119.

Lowman MD. 1985. Temporal and spatial variability in insect grazing of the canopies of five Australian rain forest tree species. *Australian Journal of Ecology* 10: 7-24.
DOI: <https://doi.org/10.1111/j.1442-9993.1985.tb00859.x>

Lowman MD. 1984. An assessment of techniques for measuring herbivory: is rain forest defoliation more intense than we thought? *Biotropica* 16(4): 264-268.
DOI: <https://doi.org/10.2307/2387934>

Lowman MD. 1984. Grazing of *Utetheisa pulchelloides* larvae on its host plant, *Argusia argentea*, on coral cays of the Great Barrier Reef. *Biotropica* 16(1): 14-18.
DOI: <https://doi.org/10.2307/2387888>

Box JD and **MD Lowman.** 1983. Variation in leaf toughness and phenolic content among five species of Australian rain forest trees. *Australian Journal of Ecology* 8: 17-25.
DOI: <https://doi.org/10.1111/j.1442-9993.1983.tb01515.x>

Lowman MD. 1983. Rain forest insects and their host plants. *Biology in Action*.

Lowman MD and BJ Selman. 1983. The biology and herbivory rates of *Novacastria nothofagi* Selman (Coleoptera: Chrysomelidae), a new genus and species on *Nothofagus moorei* in Australian temperate rain forests. *Australian Journal of Zoology* 31: 179-191.
DOI: <https://doi.org/10.1071/zo9830179>

Lowman MD. 1982. The effects of different rates and methods of leaf area removal on rainforest seedlings of coachwood (*Ceratopetalum apetalum*). *Australian Journal of Botany* 30: 477-483.
DOI: <https://doi.org/10.1071/bt9820477>

Lowman MD. 1982. Seasonal variations in insect abundance among three Australian rain forests, with particular reference to phytophagous types. *Australian Journal of Ecology* 7: 353-361.
DOI: <https://doi.org/10.1111/j.1442-9993.1982.tb01310.x>

Newspaper column **Nature's Secrets**, Sarasota Herald Tribune (March 2005 - 2015); over 200 public science newspaper feature articles on subjects ranging from climate change to local ecosystems.
<http://www.heraldtribune.com/apps/pbcs.dll/article?AID=/20050410/COLUMNIST18/504100972/-1/COLUMNIST>

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

Newspaper fortnightly Science Column, Raleigh News and Observer/Charlotte News (2011- 2014).

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

INVITED, KEYNOTE AND CONFERENCE LECTURES (LIST IS NOT INCLUSIVE)

(Average one talk per week on topics of rain forests, canopies, and girls in science)

2015 – 2020

2019 – The Money Tree – Williams College in Costa Rica

2019 – Three fund-raising talks for Earthwatch Institute about forest research

2019 – Over 100 virtual talks to K-12 classrooms around the country
 2019 – Keynote, International Treehouse Conference, Oregon
 2019 – Keynote opening, Vermont Institute of Nature Studies new canopy walkway
 2019 – National Geographic, 90th birthday tribute to EO Wilson
 2019 – Quarryhill Botanical Garden, fundraiser for education, Glen Ellen CA
 2019 – Conservation Solutions for Tropical Rain Forests – Williams College in the Amazon
 2019 – Fund for Women Keynote speaker, Corning Glass Corporation, NY
 2019 – Neue hohen erklettern – wie das baumklettern forschung in baumkronen inspiriert hat, Tree Care Conference keynote, Augsburg Germany
 2019 – Methoden der baumkronen-forschung im wald, Tree Care Conference Augsburg Germany
 2018 – Google Sci-Foo camp, Lightning talk about Ethiopian church forests, Mountain View CA
 2018 – Aldo Leopold Leadership workshop, University of Minnesota, MN
 2018 – Muskoka Environmental Summit, Canada
 2017 – Campuswide lectures at Butler University, Berea College, Univ. South Florida
 2017 – Conservation Foundation annual lecture; Sequoia Zoo fund-raising lecture
 2016 – Women in Science Summit co-chair, keynote speaker, moderator, California Academy
 2016 – Holden Arboretum OH – Arbor Day distinguished lecture and launch of new walkway
 2016 – Elon College NC – Visiting Scholar series
 2016 – Penang Hill, Malaysia – Canopy walkways – exploring the 8th continent
 2015 – Bhutan National Park Service – Canopy walkways for conservation and education
 2015 – Elmira College invited commencement address
 2015 Google Sci Foo Camp CA – Saving the forests of Ethiopia, one church at a time

2010 - 2015

2014 University of Chicago, 21st Century Scientists lecture series: Out on a Limb – challenges of women in science
 2014 Diversity Lunch, Ecological Society of America: Game changers and innovation in Ecology
 2014 Life in the treetops - Beloit High School, MI (~ 1000 students)
 2014 It's a Jungle Up There - Challenges in global forest conservation, Roy Chapman Andrews Distinguished Explorer Award acceptance speech
 2014 Keynote Opening speech, Science Online National Conference, Wheelchairs and Waterbears: inspiring underserved students in science, Raleigh NC
 2014 Plant-insect interactions in forest canopies, EO Wilson Honorary Symposium
 2014 Out on a Limb - Challenges of a woman in science, Wilson College commencement
 2013 International Congress of Ecology (INTECOL) invited speaker - How religion and science can work together for integrated conservation solutions, London UK
 2013 Biotechnology Center, Research Triangle Park, Summit introduction and moderator
 2013 Students as catalysts for large landscape conservation, Colby College, ME - Keynote
 2013 Shattuck-St. Mary's School, MN - Life in the Treetops - Challenges of jungle exploration
 2013 Women in Science and Engineering (WISE) 10th anniversary, North Carolina State University - Out on a Limb - Challenges of a woman in science
 2013 TEDx at NC School of Science and Mathematics - How I climb trees to save forests
 2013 Salon lecture - Life in the Treetops - Challenges of tropical forest conservation
 2012 Rolex Awards ceremony, New Delhi India - Life as an Arbournaut - Mentoring young Indian leaders
 2012 St. Mary's College in the Woods, Indiana - Life in the Treetops: Challenges of women in science

- 2012 Jimma University, Ethiopia - New Perspectives for the Future of STEM Education
- 2012 NCREN keynote lecture - STEM Education at the New Nature Research Center: Linking Virtual and Real Nature
- 2012 Numerous research talks in the Daily Planet multi-media theater, Nature Research Center
- 2012 Ecological Society of America, Diversity Lunch: Generation Z
- 2012 University of Texas, Pan American - Challenges of women and minorities in science
- 2012 National Science Foundation K-12 keynote speaker, annual meeting, Washington DC - Out on a Limb - Linking Real and Virtual Nature for Generation Z
- 2012 SCOPE, NC State University, Raleigh - Annual keynote speaker
- 2012 Chapel Hill Audubon Society - Life in the Treetops - The birds and the bees of the canopy
- 2012 Science Café, Raleigh NC - I Speak for the Trees...
- 2012 Institute for Emerging Issues, annual meeting - Back to our Roots - Eating Healthy and Getting Children Outdoors
- 2012 Appalachian State University, Boone NC - Commencement speaker
- 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, Durham NC - Life in the Treetops - Challenges of scientists communicating to the public - Keynote lecture
- 2011 Martin Luther King Day presentation, Bethlehem Church, Durham NC - Saving the forests of Ethiopia, one church at a time
- 2011 Science Café, Tir Na Nog restaurant, Raleigh NC - 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 - Thiruvananthapuram, 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
- 2011 NCSU Veterinary School, annual lunch - Life in the Treetops - Challenges of Women in Field Biology
- 2011 Beta-diversity of human skin bacteria studied with the citizen science approach - Ecological Society of America's annual meeting

- 2010 Wiley Elementary School Science Night - How Many Species Exist on Planet Earth? K-5 science night
- 2010 Earthwatch Institute, Costa Rica - Rainforests 101 and Copenhagen Update
- 2010 Women in Science Forum, Ferrum College - Keynote speaker
- 2010 What will ecology education look like in 2020? - Chair and keynote at Ecological Society of America's annual meeting
- 2010 A blueprint for Florida's clean energy future - How canopy ecology and students contributed to shaping state climate change policy - Ecological Society of America's annual meeting
- 2010 Can scientists inspire local actions for environmental justice? Role and challenges of ESA's education outreach and diversity initiatives - Ecological Society of America's annual meeting
- 2010 Tropical conservation and education outreach, as influenced by Connell's legacy - Ecological Society of America's annual meeting
- 2010 An exploration of modeling the spread of the Burmese python, *Python mourois* - Ecological Society of America's annual meeting
- 2010 Virtual versus real ecology education - 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 NC
- 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 It's a Jungle Up There - Challenges of women in science, Career Series, NCSU postdocs and graduate student career forum
- 2010 Rolex organized session, Geneva Switzerland - It's a Jungle Up There - Mentoring session for students from emerging countries
- 2010 Brimley Ball, keynote talk for fundraiser, 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
Keep Sarasota Beautiful, FL - Invited keynote
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 2007 - Invited lecture
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 - 2008 Earth Day assembly for grades 2-12
Florida Secretary's Association annual meeting, University of Florida 2008
University of Washington - Urban Horticulture, School of Forestry
Ecological Society of America (ESA) 2009 - Contributions of canopy research to public

education and understanding of ecosystem services
 ESA 2008 - Session co-chair “No Child Left Indoors”: An Action Plan for Future Involvement
 by ESA Members
 ESA 2008 - It’s a jungle up there: Juggling academic life with book authorship
 ESA 2008 - Science outreach for students: Connecting outreach and ecology
 ESA 2008 - Using undergraduates to create an energy audit for local green business
 ESA 2008 - Applications of treecodes to modeling herbivory in forest canopies
 ESA/SER 2007 - It’s a jungle up there: Writing for technical versus public audiences
 ESA/SER 2007 - It’s a jungle up there: Integrating canopy research with education outreach for
 kids
 ESA/SER 2007 - Modeling herbivory in forest canopies
 ESA/SER 2007 - Out on a limb - Forest canopies
 ESA/SER 2007 - The role of frugivorous birds and giant fruit bats as agents for reforestation in
 south India
 ESA/SER 2007 - Science outreach for students: Initiatives to connect local schools to ecology
 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, Sydney 2008 - Plenary address
 Senior Friendship Center lecture series
 Baker University, KS 2009 - Invited lecture
 Gustavus Adolphus College - Linnaeus Symposium - Keynote speaker
 University of California, Santa Barbara - Biology Department 2009
 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, Malaysia - Invited speaker
 World Bromeliad Conference, Florida - Invited speaker
 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, Arizona 2002 - 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 - 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
 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, school and civic groups, FL

1996 - 2000

Alumni Speaker, Williams College, MA - Invited
Brazilian Congress of Botany, Brazil - Invited keynote
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
Global Studies 1998 Conference, University of Minnesota - Keynote speaker
Chair, 2nd International Forest Canopies 1998: Global Perspectives, Sarasota FL
Tropical Rain Forest Canopies Conference, Oxford University - Invited keynote
Jason X speaker, BOCES, Long Island - Invited keynote
Gifford Arboretum Distinguished Lecture, Miami FL 1999 - Invited
Garden Club of America Awardee Dinner, New Jersey 1999 - Invited keynote
International Rotary Governors Convention, Sarasota FL - Invited

1990 - 1995

The Madeira School, VA - Invited keynote
Botany Department, University of Hawaii, Manoa
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 Young Explorer, Washington, DC 1994 - 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 Invited Lecture, Russell Sage Colleges, NY 1995 - Invited keynote
Tropical Rain Forest Destruction Conference, Cambridge University, UK - Invited
British Entomological Society, London, UK - Invited
Professor Lampton Invited Annual Lecture, West Georgia College, GA

1980 - 1989

Royal Botanic Gardens, Sydney NSW Australia - Invited
CSIRO Division of Plant Industry, Canberra Australia - Invited
Herbivory Conference, Kosciuszko 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