

MARGARET DALZELL LOWMAN
Director of Environmental Initiatives
Professor of Biology and Environmental Studies
New College of Florida
5800 Bay Shore Drive, Sarasota FL 34243

CURRICULUM VITAE

Date of Birth: December 23, 1953
Citizenship: USA
E-Mail: lowman@ncf.edu
Web site: www.canoQYilleg.com

4762 Watermark Lane
Sarasota FL 34238
T: (941) 487-4648

EDUCATION

2006 Aldo Leopold Leadership Program Fellow
2004 Disney Leadership Institute for Biodiversity
2002 TUCK SCHOOL OF BUSINESS, Dartmouth College, Executive Management
1979-1983 UNIVERSITY OF SYDNEY, Australia. Ph.D. Botany
1977-1978 UNIVERSITY OF ABERDEEN, Scotland. M.Sc. Ecology
1976-1977 DUKE UNIVERSITY, NC.
1972 -1976 WILLIAMS COLLEGE, MA. B.A. in Biology cum laude
Minor in Geology and coordinate major in Environmental Studies.

EMPLOYMENT

2003-Present Director of Environmental Initiatives, and Professor of Biology and Environmental Studies, New College of Florida and Sarasota County Regional Government Science Outreach Partnership
2001-2004 Adjunct Professor, Ringling School of Art & Design
1999-2003 CEO, Selby Botanical Gardens
1992-2000 Adjunct Professorships at Williams College, University of Florida, University of South Florida (Tampa), New College of Florida
1992-1999 Director of Research and Consen'ation, Selby Botanical Gardens FL
1989-1992 Visiting Professor, Williams College, Departments of Biology and Environmental Studies
1988 - 1989 Faculty*, University of New England, Department of Botany
1983 - 1989 Co.manager, Ruby Hills Pastoral Company, Walcha NSW Australia
1978 - 1981 Lecturer*, Sydney University, Department of Adult Education
(*similar to Assistant Professor level)

ACADEMIC HONORS

Graduate
1976-1977 Duke University Fellowship
1979 -1983 Sydney University Fellowship
1983 Sydney University, Australian Museum Award for postgraduate research
Undergraduate
1972-1976 Williams College, Dean's List
1974 Williams College, Geology Summer Field camp Scholarship
1976 Williams College, Dwight Botanical Prize

PROFESSIONAL HONORS

- 2007 Appointed Science Advisor for Climate Change to Florida CFO, Alex Sink
2007 Florida Society of Botanical Artists -Gaia A ward for Excellence
Vice President for Research and Education, The Explorers Club
2007 Mendel Medal for science achievement, Villanova University
2006 Aldo Leopold Leadership Fellow
Lowell Thomas Medal for Scientific Exploration, The Explorers Club
Elected Vice President for Science Education, Ecological Society of America
Nominated for Weizmann Women and Science Award
Advisory Board for Floresta (linking deforestation to poverty and finding solutions)
2005-6 NEON senior management team (National Ecological Observatory Network)
2005 Elected to the Board of Directors of The Explorers Club
2004 Chief Scientist, The Jason Project in Science Education Panama: Rain forests at the
Crossroads
Disney Leadership Institute for Biodiversity (*w/* World Wildlife Fund)
2003 Woman in Power Award, National Council of Jewish Women (NCJW)
Certificate of Honor, Sarasota County Commission on the Status of Women
Asteroid (**10739**) **Lowman** named by Carolyn Shoemaker of the US Dept. of the Interior
2002 Kilby Laureate Medalist honoring work as a rainforest canopy expert
Ecological Society of America, Eugene Odum Award for Excellence in Ecology
Education
2001-04 Elected as Williams College, Board of Trustees Tyng Administrator
Governor-appointment to Board of New College of Florida
2001 AABGA A ward for Program Excellence for creating two elevated canopy walkways, one
at Selby Gardens and one at Myakka State Park
2000 Girls, Inc. Visionary Award for Public Science & Education Outreach
Williams College Bicentennial Medal for achievements in tropical botany
Phi Delta Gamma Educators' Award for Life in the TreetoQs
1999 Margaret Douglas Medal from National Garden Club of America for
Conservation Education
Chief Scientist, The Jason Project in Education -Amazon, Peru
1999-2000 Board of Scientific Advisors, Amazon Center for Education & Environmental Research
1992-2000 Selby Gardens, The Jessie B. Cox Endowed Chair in Tropical Botany
1998 Selection to Leadership Florida, Class XVI
1997 Elected Fellow of The Explorers Club
1995 Board of Scientific Advisors, Intl. Center for Tropical Biology, Univ. of Missouri
1994 Chief Scientist, The Jason Project in Science Education Belize
1994 Girl's Incorporated "She Knows Where She's Going" Award for mentoring girls in
science
1993 Pew Scholar nominee in Conservation Biology
1991 Education Board, Massachusetts Tropical Conservatory
1990-1998 Board of Science Advisors, Earthwatch

ADMINISTRATIVE and EDITORIAL ACTIVITIES

- 2007 - 08 Vice President for Research and Education, The Explorers Club (NY)
2006 - 09 Vice President for Education and Human Resources, Ecological Society of America

- 2005 - 08 Split position with New College and Sarasota County government
- 2002 on Executive Director of TREE Foundation, Sarasota FL
- 2003 Director of Environmental Initiatives, New College of Florida
- 2001 Founder and Board member of Science and Environment Council, Sarasota County (Chair 2001-2003)
- 1998 Co-Chair (with Francis Halle, France), 2nd International Canopy Conference: Global Perspectives (with participants from 35 countries)
- 1998-2000 Finance committee, Leadership Florida
- 1995-98 European Science Foundation (ESF) -tropical studies initiative committee
- 1994 Co-Chair (with Francis Halle, France), 1st International Canopy Conference, 1994 (with participants from 28 countries)
- 1993 -10 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, Council
- 1979 - 80 Sydney University, student representative to Board of Biological Sciences
- 1977 -78 Duke University, Advisory Committee to Dean
- 1977 -78 Duke University, Faculty Search Committee

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

BUSINESS EXPERIENCE

- 2002 Present Executive Director, TREE Foundation (www.treefoundation.org)
- 1999-2003 CEO of Marie Selby Botanical Gardens, Sarasota, day-to-day operations of botanical garden (budget \$3.4 million) including strategic planning, programs, fund-raising and staffing
 - Budget up 25% over 4 years; membership up 46%.
 - Budget deficit (of prior administration) moved to figures in the black
 - Implemented ongoing training and professional development for staff
 - Initiated sister Garden relationships with Jardin Botanico Lankester, Cartago, Costa Rica; Fundación Jardin Botanico de Orinoco, Ciudad Bolivar, Venezuela and Cienfuegos Botanical Gardens, Cienfuegos, Cuba.
 - Completed renovations to historic Mansion; a new perimeter delineation; a new pavilion; additional parking spaces (all under-budget); property acquisitions to expand Gardens.
 - Named one of America's Top Ten Botanical Gardens in March 2003.
 - Donor levels and annual appeals up over four-fold; first half-million dollar gifts in the history of the Gardens; raised \$2.2 million in 3 yrs for Capital Campaign, most by direct solicitation
 - Opened Center for Canopy Ecology, and expanded research department to include Gesneriads, canopy ecology and conservation: living collections up 102%
- 1994-Present Treasurer, Association for Tropical Biology, creating annual budgets, initiated computerized accounting and set up its rust endowment

- 1992-1999 Director of Stark Research Center, Selby Gardens: oversee administration, budget, grants, data collection, public relations, conferences, and outreach for eight staff and twenty-one volunteers
- 1992-Present Co-founder, Canopy Construction Associates, a company that specializes in construction of canopy walkways for research and education institutions worldwide (www.canoQYaccess.com)
- 1983-1990 Managed family agricultural operation, "Ruby Hills" merino fine wool sheep and Poll Hereford stud cattle operation in outback Australia: budgeting, oversight to genetics and breeding, agricultural products, record-keeping, maintenance of extensive property, shearing operations, bed-and-breakfast, and other revenue operations of a weather-related, market driven business
- 1981-1989 Administrated Earthwatch field expeditions in Australia, including budgets, purchasing, travel logistics, data analyses, and publications
- 1977-1978 Environmental Protection Agency, air pollution regulation
- 1972-1976 Assistant, Payroll Office, Williams College

TEACHING EXPERIENCE

- 2004 Florida Science Teachers Association -leader of Panama rain forest workshop
- 2004 -Appointed Director of Environmental Initiatives, New College of Florida
- 2004-2007 Leader of New College Foundation natural history trips to Amazon, Galapagos, and Belize
- 2003-Present Professor of Biology and Environmental Studies, New College of Florida: Plant Ecology (Intro. and Advanced), Communities and Ecosystems, Environmental Studies senior tutorial, The Role of Women in Natural History, Science Outreach in Local Schools (SOS), Conservation Biology, The Ecology of Extreme Environments, Climate Change, Environmental Issues -Senior Seminar
- 1992-Present Numerous lectures for schools, civic clubs, and institutions (addressed over 5 million students and citizens in year 2000 alone.)
- 1998-2002 Instructor for Williams College Alumni: expeditions to Australia and Peru
- 1993-1996 New College, Fl., Biology & Environmental Studies Departments -Forest Conservation Biology , Environmental Botany, and Plant Ecology
- 1994 University South Florida, Biology Department -Conservation Biology
- 1992 University of Minnesota -Conservation Biology (field course, Lake Itasca)
- 1999-2002 Williams College, Visiting Professor of Biology and Environmental Studies - Tropical Rainforests: Politics, Economics, Biology; Communities and Ecosystems; Environmental Studies; International Environmental Policy (tutorial); Conservation Biology; Women as Natural History Writers (tutorial)
- 1988 Williams College, Biology Department -Australian Ecosystems, field course in Australia
- 1983-1987 University of New England, Australia, Botany Department -Agronomy, General Biology
- 1981-1989 Earthwatch, Principal Investigator, 10 field research expeditions
- 1979-1982 Sydney University, Lecturer, Adult Education Department
Plant Taxonomy, Plant Ecology, Beginning and Advanced sections
Sydney University, Teaching Assistantships -Plant Physiology, Plant Ecology, Plant & Animal Biology, Botanical Methods, and Natural Resources Ecology
- 1975-1976 Williams College, Teaching Assistantships -field Botany, Environmental Biology , Advanced Plant Ecology

TEACHING OUTREACH & INNOVATIVE EDUCATION

- 2007 Featured in National Geographic Explorer, Natural History and Smithsonian Magazines for canopy exploration
- 2007 "No Child Left Indoors" proclamation to city and county of Sarasota; charter for Ecological Society of America and other environmental groups
- 2005 -on Science columnist for Sarasota Herald Tribune newspaper (*Nature's Secrets*)
- 2004-on Tutored New College students in environmental outreach: leading hikes in local parks, and creating hands-on science activities in local middle schools; 53 students participated and earned County Environmental Education Award in 2006
- 2004 Jason XV project for youth education in the rain forests of Panama (over 50 broadcasts for schools and museums during January 2004, 3 million students) and co-authored curricula.
- 2002 HGTV host for two botanical shows.
- 2001 New York Times/National Geographic Profile TV Series.
- 1999 Jason X Project in Science Education, Chief Scientist -international K-12 science education in forest canopies of Amazonian Peru.
- 1999 Scientist featured in National Geographic TV special, *Heroes of the High Frontier*
- 1995-2007 Led Educators' Workshops for teachers about tropical ecology in Peruvian Amazon.
- 1994 Jason V Project, Chief Scientist -international K-12 science education program with satellite linkage between classrooms and scientist at field sites; completed 61 live classes from the rain forest canopy of Belize; wrote curriculum with National Science Teachers Association.
- 1993 Produced Reading Rainbow feature film about trees, a national series to educate K-9 about science and reading.
- 1991 Initiated program for Williams College students to work with elementary classes to produce games that demonstrated environmental principles.
- 1980-Present Lectures to numerous education groups including alumni societies, college students, high schools, and elementary classes each year.
- 1979-1983 Sydney University, Adult Education, -proposed and designed two new biology courses, and taught all lectures and labs.
- 1977 Massachusetts Audubon Society, Merck forest, Vennont
- 1969-1976 Taught science at one of America's first summer field science programs, (Burgundy Wildlife Camp) and co-wrote curriculum from that program for the Department of Health Education and Welfare.

BOOK PRIZES

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

RESEARCH EXPERIENCE & GRANTS

- 2007 National Science Foundation -Ecosystem Services at the forest/village interface in Thailand -ecological processes and economic valuation (\$570,470, submitted)
- 2007 Economic Development Corporation, web site development for regional government biological field station project (\$5000)
- 2007 Canopy Ecology -regional and international (Triad, \$25,000)
- 2004-2007 Sarasota County, Environmental Services to regional government (\$200,000)
- 2006 Economic Development Corporation -field station green design (\$5000)
- 2005 Student Outreach in Science (SOS) -environmental education grant (Community Foundation, \$11,000)
- 2005 Canopy Ecology -regional and international (Triad, \$35,000)
- 2005 -07 Out on a Limb forest Canopies, Infonnal Science Education, NSf (\$74,950)
- 2002 Triad Foundation -Canopy Ecology -research and outreach (\$30,000)
- 2003 Aaron foundation -Canopy ecology -public programs (\$10,000)
- 2003 Herbivory protocols using canopy cranes Global Canopy Program, (\$26,178)
- 1999-03 Links between the canopy and the forest floor, National Science Foundation (\$419,976) plus student participation: Ecological Circuitry Collaboratory (\$59,932).
- 2004 Jason X Project for Education, ACEER, Peru (approximately \$25,000)
- 2002 The Venice Foundation -botanical collections (\$200,000)
- 2002 Phase I -Capital Campaign personal donor acquisitions (\$1.3 million)
- 2002 Selby Foundation Memorial for botanical philanthropist, Marie Selby (\$75,000)
- 2000 State of florida -Division of Historical Resources -Botanical Collections Security (\$1.5 million)
- 1999 Selby Foundation -matching grant for botanical improvements (\$500,000)
- 1998-2001 Long-term studies of trees in tropical and subtropical forests, worked with Joseph Connell and Ian Noble, National Science Foundation (\$250,000)
- 1998-1999 Phytotelm plants of the Choco and their associated insect fauna, National Geographic Society (\$20,000)
- 1998 forest Canopies 1998: Global Perspectives -National Science Foundation (\$20,000); United Nations Environmental Program (\$20,000)
- 1997 Epiphyte diversity in intact versus fragmented rain forests of Cameroon, Africa, National Geographic Society (\$19,800)
- 1996 Canopy ecology and ecotourism in Western Samoa, Seacology foundation (\$10,000)
- 1994 Forest Canopy Conference: Forest Canopies: Ecology, Biodiversity, and Conservation, NSf (\$20,000); World Wildlife Fund (\$5,000).
- 1993-1994 Jason V Project -Biodiversity in the rain forest canopies of Belize (-\$75,000)
- 1993-1998 Long-tenn studies of trees in tropical and subtropical forests, with Joseph Connell and Ian Noble, NSF (\$250,000).
- 1993 Smithsonian Visiting Scientist Fellowship to STRI, Panama (\$1,100).
- 1991 Herbivory in the rainforest canopies of Cameroon. Operation Canopee Expedition, Elf-Serepco (\$7,500).
- 1990 Canopy walkway construction. Hopkins forest, Massachusetts, Miller Fund-Williams College (\$2,500) and Bronfman Science Fund (\$3,000).
- 1989 Mycorrhizal associations and survivorship of rain forest seedlings. UNE faculty Grant for innovative projects (\$6,600).*

- 1982-1988 Insect abundance and distribution in Australian rainforest canopies. Earthwatch (\$312,000).
- 1985 Effects of insect damage to root systems of eucalypts. Earthwatch (\$27,000).
- 1983-1990 Eucalypt regeneration in dieback regions. Forestry Commission, Australian Research Grants Commission, Ruby Hills Pastoral Company (\$20,000).*
- 1983-1986 Postdoctoral research on herbivory and insect epidemics in Australian forests. Australian Research Grants Committee, with Harold Heatwole (\$122,600).*
- 1979-1983 Miscellaneous marine research, including coral cay vegetation surveys, intertidal barnacle settlement, and photosynthesis on One Tree Island, Heron Island research labs, Great Barrier Reef and Cape Banks intertidal region, Sydney, Australia.
- 1976 Bronfman grant to re-organize herbarium for Williams College.
- 1975 U.S. National Science Foundation REU student grant, investigating wood productivity of birch as energy source for New England towns (forest biomass surveys, computer regression models).
- 1974 Co-authored high school curriculum in environmental education for high schools (Department of Health, Education and Welfare).

* Australian grants do not include funds for overhead, graduate student salaries, or administration, which are covered by universities.

PUBLICATIONS

Books:

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

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

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

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

Lowman, M. D. 1999. Life in the Treetops. Yale University Press. (Editions in Gennan, Chinese and Korean)

Lowman, M.D., Edward and James Burgess. 2006. It's a Jungle Out There -More Tales from the Treetops. Yale University Press. 291 pp.

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

Theses:

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

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

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

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

Lowman, M.D. 1982. Seasonal variations in insect abundance among three Australian rain forests, with particular reference to phytophagous types. *Australian Journal of Ecology* 7: 353-61.

Lowman, M.D. 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 -83.

Lowman, M.D. 1983* .Rain forest insects and their host plants. *Biology in Action*.

Lowman, M.D. & J.D. Box. 1983. Variation in leaf toughness and phenolic content among five species of Australian rain forest trees. *Australian Journal of Ecology* 8: 17-25.

Selman, B.J. & M.D. Lowman. 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: 179-91.

Lowman., M.D. 1984. Grazing of *Utetheisa pulche//oides* larvae on its host plant, *Argusia argentea*, on coral cays of the Great Barrier Reef. *Biotropica* 16(1): 14-18.

Lowman, M.D. 1984. An assessment of techniques for measuring herbivory: Is rain forest defoliation more intense than we thought? *Biotropica* 16(4): 264-68.

Lowman, M.D. 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.

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

Lowman, M.D. 1986. Light interception and its relation to structural differences in three Australian rainforest canopies. *Australian Journal of Ecology* 11: 163-170.

Lowman, M.D. 1987. Relationships between leaf growth and holes caused by herbivores. *Australian Journal of Ecology* 12: 189-91.

Lowman, M.D. and H. Heatwole. 1987. The impact of defoliating insects on the growth of eucalypt saplings. *Australian Journal of Ecology*. 12: 175-81.

Lowman, M.D., A.D. Burgess, and W.D. Higgins. 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.

- Heatwole, H. and M.D. Lowman. 1987. Dieback: Death of an Australian Landscape. In: *If Atoms Could Talk*. (Ed. R. Love) Greenhouse Publications. Pp.42-49.
- Lowman, M.D. 1988. Litter fall and leaf decay in three Australian rainforest formations. *Journal of Ecology*. 76: 451-465.
- Connell, J.H. and M.D. Lowman. 1989. Low diversity tropical and subtropical forests. *American Naturalist* 134: 88-119.
- Burgess, A.D. and M.D. Lowman. 1990. The efficiency of salt blocks to supplement the diets of grazing herbivores. *Sheep and Wool Technology* 43: 87-90.
- Lowman, M.D. 1991 *. The dieback crisis -tree declines throughout the world. *Center for Environmental Studies Journal*, Williams College.
- Lowman, M.D. 1991. The impact of herbivorous insects on Australian rain forest canopies. In: World Wildlife fund, Volume III: Australian National Rainforest Study Report. G.L. Werren and A.P. Kershaw, (eds). Pp. 177-90.
- Lowman, M.D. 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.
- Lowman, M.D. 1992. Leaf growth dynamics and herbivory in five species of Australian rain-forest canopy trees. *Journal of Ecology*. 80: 433-447.
- Lowman, M.D. and H. Heatwole. 1992. Spatial and temporal variability in defoliation of Australian eucalypts and its consequence for the dieback syndrome. *Ecology* 73(1): 129-42.
- Lowman, M.D. and H. Heatwole. 1993. Tree decline syndromes in Australia. In: Forest Decline in the Atlantic And Pacific Regions. R. Huettl and D. Mueller-Dombois, (eds.) Springer-Verlag. Pp. 307-21.
- Lowman, M.D. and M. Moffett. 1993. The ecology of tropical rain forests canopies. *Trends in Ecology and Evolution* 8: 104-8.
- Lowman, M.D., M. Moffett, and H.B. Rinker. 1993*. Sled Sweeping: A new technique for measuring insects in rain forest canopies. In: Biologie D'une Canopee De foret Equatoriale -II. F . Halle and O. Pascal, eds.
- Lowman, M.D. 1993*. Raft in the treetops. *Newsletter American Association of Botanical Gardens*. 220: 1-2.
- Lowman, M.D. 1993. Forest canopy research: New World, Old World comparisons. *Selbyana* 14: 1- 2.

- Lowman, M.D. and H.B. Rinker. 1993. A degree of excellence in biology teaching. *Bird Watcher's Digest*. 14: 110-112.
- Lowman, M.D. and P.A. Morrow. 1993. Insects and their environment: Plants. In: Science of Entomology. 3rd Edition. A. Romoser, ed.
- Lowman, M.D., M. Moffett, and H.B. Rinker. 1993. A new technique for taxonomic and ecological sampling in rain forest canopies. *Selbyana* 14: 75-79.
- Lowman, M.D. and S. Doblecki. 1993. Population dynamics of some native florida epiphytes. *Journal of the Bromeliad Society*. 43: 175-177.
- Kitching, R.L., J.M. Bergelson, M.D. 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.
- Ballard, R.L., R.M. Levanthal, M.D. Lowman, T .E. Miller, G.M. Wellington. 1994. (curriculum content eds.) Jason Curriculum; The Belize Expedition Curriculum, Jason Foundation for Education.
- Lowman, M.D. 1994*. Ecology of the rain forest canopy in Belize. *Jason Report*, Jason Foundation MA.
- Lowman, M.D. 1994*. Accessing forest canopies. *American Orchid Society Bulletin* 1252-55.
- Lowman, M.D.1994. What's Up? *Diversity* 10: 36-37.
- Lowman, M.D. and W. Linnerooth. 1995. Population dynamics of some native Florida epiphytes. II. Mortality after a stonn. *Journal of the Bromeliad Society* 45: 15-18.
- Moffett, Mark and M.D. Lowman 1995. Canopy access techniques. In: forest Canopies (M.D. Lowman & N. Nadkarni, eds.) Academic Press. Pp. 3-25.
- Lowman, M.D. 1995. Herbivory as a canopy process in rain forest trees. In: Forest Canopies (M.D. Lowman & N. Nadkarni, eds.) Pp. 431-452.
- Ingram, Stephen W. and M.D. Lowman. 1995. The collection and preservation of plant material from the tropical forest canopy In: Forest Canopies (M.D. Lowman & N. Nadkarni, eds.) Pp.587-602.
- Nadkami, N. and M.D. Lowman. 1995. Canopy science: a summary of its role in research and education. In: forest Canopies (M.D. Lowman & N. Nadkami, eds.) Pp. 609-615.
- Lowman, M.D. 1995. Herbivory in Australian forests -a comparison of dry sclerophyll and rain forest canopies. *Proc. Linnean Society NSW* 115: 77-88.

- Lowman, M.D. , F. Halle, B. Bouricius, P. Coley, 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.
- Lowman, M.D. and B. Bouricius. 1995. The construction of platforms and bridges for forest canopy access. *Selbyana* 16(2): 179-184.
- Lowman, M.D. 1995. Linking systematics and ecology to promote conservation. *Selbyana* 16: 125-126.
- Lowman, M.D. and P .K. Wittman. 1995*. The last biological frontier? Advancements in research on forest canopies. *Endeavor* 19: 161-165.
- Rinker, H.B., M.D. Lowman and M. Moffett. 1995. Africa from the treetops. *American Biology Teacher* 57(7): 393-401.
- Taylor, P. and M.D. Lowman. 1996. Vertical stratification of small mammals in a northern hardwood forest. *Selbyana* 17: 15-21.
- Lowman, M.D. and P.K. Wittman.1996. Forest canopies: methods, hypotheses and future directions. *Annual Review of Ecology & Systematics* 27: 55-81.
- Lowman, M.D., R.L. Kitching, and G. Carruthers. 1996. Arthropod sampling in Australian subtropical rain forest: How accurate are some of the more common techniques? *Selbyana* 17: 36-42.
- Lowman, M.D., P. Wittman, and D. Murray. 1996. Herbivory in a bromeliad of the Peruvian rain forest canopy. *Journal of the BromeliadSociety*. 46: 52-55.
- Zapfack, L., Nkongmeneck, B-A., J.F. Villiers, and M.D. Lowman. 1996. The importance of Pteridophytes in the epiphytic flora of some phorophytes of the Cameroonian semi-deciduous rain forest. *Selbyana* 17: 76-81.
- Lowman, M.D. 1997. Herbivory in forests-from centimetres to megametres In: Forests and Insects. A.D. Watt, N.E. Stork and M.D. Hunter, eds. Chapman & Hall. pp. 136-149.
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- Heatwole, H., M.D. Lowman, C. Donovan, and M. McCoy. 1997. Phenology of leaf-flushing and macroarthropod abundances in canopies of *Eucalyptus* saplings. *Selbyana* 18(2): 200-214.
- Murray, D., M. D. Lowman, P. Wittman.1997. Bromeliads along the ACEER canopy walkway in Amazonian Peru. *Journal of the BromeliadSociety* 47(2): 54-59.
- Lowman M.D. and P.A. Morrow. 1998. Insects and their environment: plants. Pp. 267-290 In: Textbook Of Entomology. 4th Edition. Romoser W.S. and J.G. Stoffolano, Jr. (Eds.) Wm C. Brown Publishers, Dubuque, Iowa. 532 pp.

- Schowalter, T. and M.D. Lowman. 1998. forest herbivory: insects In: Ecosystems of Disturbed Ground. Lawrence Walker, ed. Elsevier Press.
- Lowman, M.D., R. Foster, P. Wittman, H.B. Rinker. 1998. Herbivory and insect loads on epiphytes, vines and host trees in the rain forest canopy of french Guiana. Pp. 116-128 In: *Biologie D 'Une Canopee de Foret Equatoriale*. f. Halle, ed. Pro-Natura International, france.
- Lowman, M.D. 1998*. Artificial bromeliad tank experiments. Pp. 189-191 In: *A Wet and Wild Adventure*; Curriculum for Jason X (collated by National Science Teachers Association).
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Lowman, M.D., C. Brewer and L. Huenneke. 2008. NEON -A Plan to Transform Science Education at a National Level. *Science* (in process).

Heatwole, H. S. Unsicker, L.P. Andriamiarisoa, and M.D. Lowman. Submitted. *The Vicissitudes of Leaves in a Tropical Rainforest in Madagascar. (Ecological Monographs)*

Caughlin, T., T. Ganesh, and M.D. Lowman. Submitted. Does human disturbance impact feeding tree choice by frugivorous birds and bats in South India? (*Biotropica*)

Voirin, Bryson, R. Kays, M. Wikelski, and M. D. Lowman. Submitted. Sloth defecation behavior. (*Biotropica*).

Newspaper column entitled: Nature's Secrets (*Sarasota Herald Tribune*, March 2005 on); over 70 public science newspaper feature articles on subjects ranging from climate change to local ecosystems.

(Note: Sixteen peer-reviewed publications were co-authored with undergraduate students, as a result of my undergraduate teaching opportunities at Williams College and New College.)

INVITED, KEYNOTE AND CONFERENCE LECTURES (NOT INCLUSIVE)

1980-89 Royal Botanic Gardens, Sydney NSW Australia -Invited
 CSIRO Division of Plant Industry, Canberra Australia -Invited
 Herbivory Conference, Kosciusko National Park VIC Australia -Invited
 Australian Entomological Society Annual Conference, Australia
 CSIRO, Entomology Division, Canberra, Australia -Invited

- Biology Department, University of California, Santa Barbara CA
 Lamington National Park, QLD Australia
 Center for field Studies (Earthwatch), MA -Invited
 CSIRO Rain forest Research Unit, Atherton, QLD Australia
 Entomology Department, Pennsylvania State University P A -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
- 1990–
 1995
- The Madeira School, V A -Invited Keynote
 Botany Department, University of Hawaii, Manoa HI
 Museum of Comparative Zoology, Harvard University MA -Invited
 Biology Department, Carleton College MN -Invited
 Earthwatch, Center for field Studies -Annual Conference, Boston
 International Epiphyte Conference, Selby Gardens fL -Invited
 Pacific Science Congress, HI -Invited
 Audubon Naturalists! Smithsonian Institution, Washington DC -Invited Keynote
 faculty Club, Williams College MA -Invited
 National Geographic 1994 Young Explorer, Washington DC -Invited Keynote
 Chair, Canopy Symposium, AIBS, Honolulu HI
 World Wildlife Fund, Washington DC -Invited
 Selby Gardens, Board of Trustees FL
 Chair, 1 st International forest Canopy Conference, Sarasota, fL
 Geneva Sayre 1995 Invited Lecture -Russell Sage Colleges NY -Invited Keynote
 Tropical Rain Forest Destruction Conference, Cambridge Univ. UK Invited
 British Entomological Society , London UK ~ Invited
 Professor Lampton Invited Annual Lecture, West Georgia College GA
- 1996–
 2000
- Alumni Speaker, Williams College MA -Invited
 Brazilian Congress of Botany, Invited Keynote Speaker, Brazil
 Botanical Gardens of Rio de Janeiro, Brazil Invited
 A TB invited speaker session: Thinking globally and working globally: ecological insights from inter-regional comparative studies, Providence RI
 National Botanical Gardens, Bogor Indonesia -Invited
 Instituto de Ecologia Invited Visiting Scientist Program, Xalapa, Mexico
 Vision Dinner, Marie Selby Botanical Gardens -Invited Keynote
 Keynote Speaker, Global Studies 1998 Conference, University of Minnesota
 Chair, 2nd International Forest Canopies 1998: Global Perspectives, Sarasota fL
 Keynote Speaker, Tropical Rain Forest Canopies Conference, Oxford University
 Invited
 Jason X speaker, BOCES, Long Island -Invited Keynote
 Gifford Arboretum Invited Distinguished Lecture 1999, Miami Florida -Invited
 Garden Club of America 1999 Awardee Dinner, New Jersey -Invited Keynote
 International Rotary Governors Convention, Sarasota, fL. -Invited
- 2000–
 2004
- Convocation, SUNY Binghamton, New York -Invited Keynote
 Singapore Botanical Gardens, Singapore -Invited

World Orchid Conference, invited speaker, Malaysia
World Bromeliad Conference, invited speaker, Florida
Women and Science Symposium, University of Wisconsin -Invited Keynote
Delta Kappa Gamma, International Conference, Canada -Invited Keynote
Missouri Botanical Gardens, John Dwyer Lecture, Missouri -Invited Keynote
North Carolina State University, NC -Invited Keynote
Ecological Society of America, diversity luncheon panel, annual meeting 2002,
Arizona -Invited
Association for Tropical Biology and Conservation, Panama
Woodrow Wilson School of Public Policy, Princeton University -Invited
Bowling Green State College, OH -Invited Keynote
University of Michigan, MI -Invited Keynote
Eckerd College, FL -Invited
Harvard University Club, FL -Invited
Florida Science Teachers Association, Jacksonville FL -Invited Keynote
Cincinnati Zoo Conservation Lecture series, OH -Invited Keynote
Bowling Green State College, OH -Invited Keynote
Sarasota Institute of Lifetime Learning, FL -Invited
Eckerd College community lecture series, FL -Invited
Ecological Society of America, Portland OR
The Global Canopy Debate, Eden Project UK -Invited Keynote
SE Regional Garden Club of America, Sarasota FL -Invited Keynote
North Carolina State University Conservation Series, Raleigh NC -invited
Numerous talks at Rotary, Sertoma, church and school and civic groups, FL

2005-
2009

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

Frequent natural history lectures for community walks and local civic groups
Harvard Yale-Princeton Club luncheon -Invited
SEEDS (Sustainable Ecology Education for Diverse Students) at Jasper Ridge
Biological field Station, CA -Invited
Rachel Carson' s Birthday anniversary 2007, Chatham College, P A -Invited
A TBC Asian Chapter Inaugural Meeting, India Invited Keynote
Woods Hole Oceanographic Institution Gender & Equity Invited Speaker, 2007
Invited
Kutztown State University, P A "Take your daughter to work day" -Invited
Keynote
Villanova University, P A, Mendel Medal recipient invited lecture, 2007
Burgundy Country Day School, V A, 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, P A -Invited Keynote
Concord College WV -invited Keynote
The Explorers Club, South florida Chapter -Invited Keynote
Utah Environmental Education Society , Moab UT -Invited Keynote
MIT ICornell Alumni
Republican Club of Sarasota County
American Association of University Women

Various church, civic, and citizen groups -I have an active speaking schedule that usually involves several public lectures per month, on topics ranging from rain forest conservation to science education to climate change policy to juggling family and career. While CEO at the Botanical Gardens, the public outreach aspect of the job required non-stop speaking engagements to all ages.