

Gregory M. Mueller

Chicago Botanic Garden, 1000 Lake Cook Road, Glencoe, IL 60022
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Education

- 1976: Southern Illinois University, Carbondale, B.A. in Botany.
1979: Southern Illinois University, Carbondale, M.S. in Botany
Advisor: Dr. Walter J. Sundberg.
1982: The University of Tennessee, Knoxville, Ph.D. in Botany
Advisor: Dr. Ronald H. Petersen.

Appointments

- 1982-1983: Visiting Scientist, Institute of Physiological Botany, Uppsala University, Sweden
(with Prof. Nils Fries)
1983: Postdoctoral Fellow, Mountain Lake Biological Station, Pembroke, VA.
1984-1985: Postdoctoral Research Associate, Department of Botany, University of Washington,
Seattle. (with Dr. Joe Ammirati)
1985-2008 Curator, Mycology, Department of Botany, The Field Museum, Chicago (Assistant
1985-1992, Associate 1993-2001, Full 2003-2008);
1996-2005. Chair, Department of Botany, The Field Museum, Chicago
2009-2013: Vice President, Science and Academic Programs, Chicago Botanic Garden
2013-Present Negaunee Foundation Vice President, Science, Chicago Botanic Garden

Honorary Appointments

- 1994-present: Lecturer, Committee on Evolutionary Biology, The University of Chicago
1995-present: Adjunct Professor, Department of Biological Sciences, University of Illinois, Chicago
(Associate Professor 1995-2003, Professor 2003-present)
1999-2005: International Coordinator of Fungal Programs, National Institute of Biodiversity
(INBio), Costa Rica
2009-present: Adjunct Professor, Biological Sciences, Northwestern University, Evanston, IL
2009-present: Research Associate, The Field Museum, Chicago

Select Awards and Scholarships

- 1981: Graduate Research Award: First Prize for paper presented to Mycological Society of
America at AIBS meetings.
1992: Alexopoulos Prize: Awarded by Mycological Society of America in recognition of
outstanding research contributions within 10 years of receipt of Ph.D.
2008: Fulbright Senior Fellow, Fulbright Scholar Program
2011: Fellow, Mycological Society of America

Research Interests

Systematics, diversity, biogeography, ecology, and conservation of macrofungi; mycorrhizas

Administration and Noteworthy Committee Work

Chicago Botanic Garden

Vice President, Science (2009–present). Report directly to the Garden's President / CEO and serve on the Garden's Senior Management team. Duties include leading the Garden's science programs, Library, undergraduate and graduate student training initiatives, and working with other members of the Senior Management Team to achieve the Garden's mission.

Field Museum of Natural History

Facilities and Labs: IT Committee (1986-1990 & 2005-2007), Chair SEM Committee (2003-2008)
Exhibit Development: Content Specialist for "Into the Wild" (1989-1991) and "Sizes" (1989-1991) exhibitions; Co-Developer for the curatorial component of "La Selva Fria" exhibition (1993), **Chief Content Specialist for "Underground Adventure"** exhibition (1995-1999), Academic Affairs-Exhibition Liaison Committee (2005-2008)

Education Initiatives: Coordinator **Biodiversity Explorers High School Internship Program** (1995-1998), Illinois "UrbanWatch" Protocol Development Team (1997-2003), Field Museum-Monsanto Environmental Education Initiative Steering Committee (1999-2008)

Administration: Scientific Advisory Council (equivalent to Faculty Senate) (1990-1991, 1995-1996), Collections and Research Affirmative Action Task Force (1990-1991), Strategic Planning Task Force--Research (1992), Academic Affairs Management Group (1993-1996), **Chair Department of Botany** (1996-2005), Environment Team, Field Museum Strategic Planning Initiative (1998-1999), Search Committee for Vice President, Academic Affairs (1999-2000), **Academic Affairs Management Group (committee serving as Acting V.P. of Academic Affairs)** (1999-2001)

University of Chicago Committee on Evolutionary Biology (CEB)

Graduate Admissions Committee (1995-2004), CEB Associate Chair (2004-2008), GAANN Training Grant Coordinating Group (2006-2009)

International Union for the Conservation of Nature (IUCN)

1999-2008: IUCN Species Survival Commission, Fungi Specialist Group, Member
2009-present: IUCN Species Survival Commission Mushrooms, Brackets and Puffballs Specialist Group, Chair
2012-present: Global Fungal Red List Initiative, Coordinator
2013-present: IUCN Species Survival Commission Steering Committee, Member

Illinois and Chicago Regional Conservation Organizations, Committees, and Consortia

1996-1997: Coordinating Group, Chicago Wilderness
1996-2001: Chicago Wilderness Proposal Committee (Chair)
2000-present: Science Advisory Committee, Illinois Chapter of The Nature Conservancy
2009-present: Executive Council, Chicago Wilderness
2009-present: Chicago Mayor's Nature and Wildlife Committee
2012-present: Executive Advisory Committee, Chicago Wilderness

Mycological Societies

1987-1991: Committee on Liaison between MSA and amateur mycological societies, Mycological Society of America (Chair)
1991-1995: Committee on Inter-Society Liaison, North American Mycological Association
1995: Liaison for Conservation of Cultural Resources, Mycological Society of America (MSA's contact with the National Institute for Conservation of Cultural Property, Washington, D.C.)
1993-1996: Councilor, Systematics/Evolution, Mycological Society of America
1997-present: Voucher Specimen Committee, North American Mycological Association
2000-2004: Distinctions Committee, Mycological Society of America (Chair 2003-2004)
2001-2004: MSA Representative to the International Mycological Association
2001-2002: Advisory Board for 2002 Latin American Mycological Association Congress
2004-2008: MSA Vice President, President Elect, President, and Past President,
2008-present MSA Conservation Committee
2009-2011 MSA Nominations Committee
2010-2012 MSA Honorary Awards Committee

2010-present Program Committee for 2014 Latin American Mycological Association Congress
2010-present International Society for Fungal Conservation (Coordinating Group)

Other Organizations

1985-1986: Subcommittees B and C on Fungal Nomenclature of the IAPT Special Committee for Fungi and Lichens
1997-1999: Program Committee, XVI International Botanical Congress (St. Louis)
1998-2001: Systematics Collection Committee, American Society of Plant Taxonomists (Chair, 2000-2001)
2001-2004: Board Member, Natural Science Collections Alliance (formerly ASC)

Editorial Work

1990-1995: Editorial Committee, North American Mycological Association (Chair, 1991-1995)
1995-1998: Associate Editor, *Mycologia*
1998-2001: Editorial Board, *Mycotaxon* (Chair 2000-2001)
2001-2006: Member of Organization for Flora Neotropica Commission
2012-present. Editorial Board, Biodiversity Data Journal
2012-present: Editorial Board, Mycobiota

Public Service

Contact for mushroom cases, Illinois Poison Center and Chicago area hospitals (1985-present)
Scientific Advisor, Illinois Mycological Association (1985-present)

Teaching Experience

1995: Biodiversity Through Time. BioSci. 157. University of Chicago
1996: Ecology of Mycorrhizae. BioSci 594. University of Illinois at Chicago
1997, 1999, 2001, 2003, 2005, 2007: Mutualisms and Symbiosis. (upper level undergraduate majors course). University of Chicago
1998: Ecology and Evolution. BioSci 128 and 131. University of Chicago
Fungal Mutualisms. BioSci 594 (graduate seminar course). UofI at Chicago
2004 & 2005: Diversity of Fungi. Joint University of Illinois, Chicago and University of Chicago graduate student course. (Co-instructor).
2008: Diversity and Biology of Macrofungi. Federal University of Pernambuco, Recife Brazil (graduate course).
2012: Mycology (graduate level course), Northwestern University.
Fungi and Fungi-Like Organisms, Organization for Tropical Studies, Costa Rica (Co-instructor).

Graduate Student Thesis Committees, Postdoc Supervision, Internship Mentoring

Graduate Students: Milagro Mata Hidalgo, U. Costa Rica, Licenciatura, 1995 [External Member] (Curator of Macrofungi, INBio, Costa Rica); Loengrin Umaña Tenorio, U. Costa Rica, Licenciatura, 1995 [External Member] (Curator of Microfungi, INBio, Costa Rica); Juan Luis Mata, U. Costa Rica, M.S. 1998 [External Member] (Assistant Professor, U. Southern Mississippi); Sara Foster, U. Illinois, Chicago, M.S. 1998 [Member] (employed in industry); John Paul Schmit, U. Chicago, Ph.D. 1999 [Chair] (Quantitative Ecologist, National Park Service); Andrew Miller, Ph.D. 2003, U. of Illinois at Chicago [Co-Chair] (Mycologist, Illinois Natural History Survey); Jutta Buschbom, U. of Chicago, Ph.D. 2003 [Chair], (Bioinformatition in Germany); Laura Gúzman Dávalos, UNAM, Mexico, Ph.D. 2003 [Co-Chair] (Professor, U. Guadalajara, Mexico; Matthew Kierle, U. of Chicago, Ph.D. 2008 [Chair] (Assistant Professor of Biology, State College of Florida); Kelly Gravier, Ph.D. 2009, U. of Chicago [Co-Chair]; Sara Branco, Ph.D. 2010, U. Chicago [Co-Chair] (PostDoc UC Berkeley); Rui Zhang, Ph.D. Candidate, Northwestern U. [Chair]; Ning Chen, Northwestern U., M.S. student [Chair], Lynnaun Jo

PostDocs: John (Jack) F. Murphy, 1995-1997; John Paul Schmit, 1999-2000 (currently Quantitative Ecologist, National Park Service); Patrick Leacock, 1997-2006 (currently, Adjunct Curator, Field Museum); Peter Avis, 2004-2007 (currently Associate Professor, Indiana University Northwest); Kentaro Hosaka, 2005-2008 (currently Curator, Mycology, National Museum for Nature and Science, Tsukuba, Japan); Andrew Wilson, 2009-2012 (currently Postdoc, Purdue University).

High School and Undergraduate Research Interns: 52 high school and undergraduate interns

Memberships in Professional Organizations

Mycological Society of America (MSA); Asociacion Latinoamericana de Micología (ALM); North American Mycological Association (NAMA); European Mycological Association; African Mycological Association; International Mycological Association, International Society for Fungal Conservation; Illinois State Academy of Science; Illinois Mycological Association; Botanical Society of America; American Society of Plant Taxonomists; The Association for Tropical Biology; Society of Systematic Biologists; AAAS

Professional Meetings Attended (last 10 years)

- 2003: Deep Hypha, Chicago, IL (Host/ Local Organizer)
A. H. Smith Lakes States Mycological Foray, Carbondale, IL
Mycological Society of America, Asilomar, CA
Commission on Macrofungi Investigations Field Meeting, Causasus Mts., Russia
Congress of European Mycologists, Yalta, Ukraine
Natural Science Collections Alliance Meeting, Berkeley, CA
Missouri Botanical Garden Fall Symposium, St. Louis, MO
- 2004: North American Mycological Association, Asheville, NC
Mycological Society of America, Asheville, NC
Meeting of Midwestern Mycologists, Madison, WI
A. H. Smith Lakes States Mycological Foray, Dells, WI
- 2005: Deep Hypha, Tuscon, AZ
Natural Science Collections Alliance Meeting, Santa Barbara, CA
Soil Ecology Society Meeting, Chicago, IL
Mycological Society of America / Japanese Mycological Society Joint meeting, Hilo, Hawai'i
- 2006: Deep Hypha, Baton Rouge, LA
New Zealand Fungal Colloquium, Westport, NZ
Mycological Society of America / American Phytopathological Society Joint meeting, Quebec, Canada
VIII International Mycological Congress, Cairns, Australia
Missouri Botanical Garden Fall Symposium, St. Louis, MO
- 2007: Mycological Society of America, Baton Rouge, LA
XVth Congress of European Mycologists/European Mycological Association, St. Petersburg, Russia
Botanical Society of America – American Society of Plant Taxonomist Meeting, Chicago, IL.
First Workshop and Symposium on Pyrenees Fungi, Moulis, France.
- 2008: 10th Annual Meeting of the Puerto Rican Mycological Association, Gurabo, PR
Ecological Society of America Meeting, Milwaukee, WI
Mycological Society of America Meeting, State College, PA
A.H. Smith Lakes States Mycological Foray, Indiana Dunes National Lake Shore
VI Latin American Mycological Congress, Mar del Plata, Argentina

- 2009: Joint Mycological Society of America, Botanical Society of America, and American Society for Plant Taxonomy meeting, Snow Bird Utah
Fungal Evolution and Charles Darwin: From Morphology to Molecules, Thailand
Plant Conservation for the Next Decade, Royal Botanic Gardens Kew, UK
Fungal Conservation: Science, Infrastructure, Politics, Whitby, UK
Biological Interactions and Biodiversity, Tokyo, Japan
- 2010: VI Southern Connection Congress, San Carlos de Bariloche, Argentina
4th Global Botanic Garden Congress, Dublin, Ireland
Mycological Society of America, Lexington, KY
9th International Mycological Congress, Edinburgh, UK
Missouri Botanical Garden Fall Symposium, St. Louis, MO
- 2011: Center for Plant Conservation National Meeting, Denver
Association of Midwest Museums, Chicago
VII Latin American Mycological Congress, San José, Costa Rica
North American Mycological Congress, Fairbanks, AK
Global Partnership for Plant Conservation, St. Louis, MO
XVI Congress of European Mycologists and European Mycological Association Meeting, Halkidiki, Greece
- 2012: IUCN SSC Specialist Group Chairs Meeting, Abu Dhabi
1st Workshop of North American Orchid Conservation Center, SERC, Maryland
Mycological Society of America Meeting, New Haven, CT
Missouri Botanical Garden Fall Symposium, St. Louis, MO
Natural Areas Association Conference, Norfolk, VA
IUCN World Conservation Congress, Jeju, Korea
Workshop on Measuring Successful Forest Landscape Restoration, Bristol, UK
- 2013: Measuring Successful Forest Landscape Restoration Workshop 2, Ghana
American Public Garden Association Conference, Phoenix, AZ
Natural Areas Association Conference, Chicago, IL
Global Botanic Garden Conference, Dunedin, New Zealand
IUCN SSC Steering Committee, Mexico
International Society for Fungal Conservation, Gokova, Turkey

Research Grants and Contracts

- 1982-1983: *National Science Foundation*, U.S.-Sweden Cooperative Research Program. "Sexual Incompatibility Studies in the Mushroom Genus *Laccaria*." \$2,883 INT-8211779.
- 1982-1983: *Swedish Natural Science Research Council*, U.S.-Sweden Cooperative Research Program. "Incompatibility Studies in the *Laccaria laccata* Species Complex." 13,000 Skr (awarded to Prof. Nils Fries to support my visit).
- 1984-1987: *National Science Foundation*. "A Taxonomic and Biological Study of the Ectomycorrhizal Agaric Genus *Laccaria* in North America, North of Mexico." \$135,000 BSR-8315238 (Postdoc on award to Dr. J. Ammirati, U. Washington).
- 1986-1990: *National Science Foundation*. "The Agaric Genus *Laccaria* in South America: A Taxonomic and Biological Study." \$144,955 BSR-8607106.
- 1987-1990: *Bradley Study Center, Leopold Memorial Reserve*, WI. "Mycota of the Leopold Reserve." \$18,000 (Co-PI with H. Burdsall, D. Glawe, A. Parker).
- 1989-1992: *John D. and Catherine T. MacArthur Foundation*. "Mushrooms and Other Fungi of Costa Rican Oak Forests." \$22,000.
- 1993-1997: *National Science Foundation*. "Agaricales of Costa Rican *Quercus* forests." \$401,017 DEB-9300798 (PI with Co-PI, R. Halling, New York Botanical Garden).
- 1995-1997: *National Institutes of Health*. "Screening Costa Rican Macrofungi for Bioactive Compounds: Fungi from the Guanacaste Conservation Area." \$100,000 1-R03-TW00732.

- 1995-2000: *National Science Foundation*. "Studies in the Lasiosphaeriaceae: Monographs of Two Key Genera and Family-Level Phylogeny (Fungi, Ascomycetes, Sordariales)." \$702,364 DEB-9521926 (Senior Associate; awarded to Sabine Huhndorf, The Field Museum).
- 1995: *U.S. Department of the Interior, National Biological Service*. "Measuring and Monitoring Biological Diversity: Standard Methods for Fungi" \$6,000.
- 1995-1996: *USDA Forest Service Pacific Northwest Research Station*. "Measuring and Monitoring Biological Diversity: Standard Methods for Fungi" \$10,000.
- 1995-1996: *USDA Forest Service Forest Products Laboratory*. "Measuring and Monitoring Biological Diversity: Standard Methods for Fungi" \$10,000.
- 1996-1998: *National Science Foundation*, Dissertation Improvement Program. "Population Dynamics and Species Diversity of Decomposers of Patchy Substrates." \$10,000 DEB-9623523 (for support of John Paul Schmit, Ph.D. candidate, Univ. of Chicago).
- 1996-1999: *National Science Foundation*, U.S.-China Cooperative Science Program. "Comparative Studies on the Macrofungi of China and Eastern North America." \$133,439 INT-9513874 (Co-PI with PI, Qiuxin Wu, The Field Museum).
- 1996-1998: *Conservation Foundation/Chicago Wilderness*. "Monitoring Restoration in an Oak-Woodland Community at Swallow Cliff Woods" \$45,000 (participant; awarded to D. K. Moskovits).
- 1997-1999: *Illinois Department of Natural Resources*. "Illinois Rapid Assessment Program (IRAP) and EcoWatch/UrbanWatch" \$369,967 (participant; awarded to D. K. Moskovits and C. Fialkowski).
- 1999-2001 *Restoration Research Fund, Forest Preserve District of Cook County*. "Restoration Effects on Macrofungi in an Oak Woodland Community at Swallow Cliff Woods" \$19,244 (with Patrick Leacock and John Paul Schmit)
- 1999-2003: *National Science Foundation*. "Collaborative: Survey of Costa Rican Macrofungi" \$150,000 DEB-9972027.
- 2000: *Conservation Foundation/Chicago Wilderness*. "Impact of Nitrogen Deposition on Macrofungi in Chicago Wilderness." \$12,096. (with Patrick Leacock and)
- 2001-2003: *National Science Foundation*, Dissertation Improvement Program. "Dissertation Research: Phylogenetic studies in the Lasiosphaeriaceae (Fungi, Ascomycetes, Sordariales)." \$9,985 DEB-0105077 (for support of Andrew Miller, Ph.D. candidate, University of Illinois, Chicago).
- 2001-2003: *National Science Foundation*, Dissertation Improvement Program. "Dissertation Research: Evolutionary history of reproductive systems in closely related taxa of the lichen-forming genus *Porpidia* (Ascomycota)." \$10,000 DEB-0105024 (for support of Jutta Buschbom, Ph.D. candidate, University of Chicago).
- 2001-2006: *National Science Foundation*, PEET Program "Studies in the Lasiosphaeriaceae II: Monograph of *Podospora* and Phylogeny of the Lasiosphaeria/Sordariaceae Group (Fungi, Ascomycetes, Sordariales)." \$744,579 DEB-0118695 (Senior Associate; PI, Sabine Huhndorf).
- 2002-2007: *National Science Foundation*, Ecology and Ecosystems "Mycorrhizal regulation of ecosystem response to chronic nitrogen deposition." Field Museum subcontract \$229,818 DEB-0134748 (with J. Lussenhop and H. BassiriRad, University of Illinois, Chicago, and R. M. Miller, Argonne National Labs).
- 2005-2009: *National Science Foundation*, Systematics "REVSYS: Monographing a Model Clade of Ectomycorrhizal Fungi: *Laccaria* – *Hydnangium* ". \$328,727 (DEB-0445216).
- 2005-2009: *John D. and Catherine T. MacArthur Foundation* "Building Capacity for Biodiversity Research, Conservation, and Education in Eastern Himalaya" \$480,000 Grant 02-73933 (Co-PI with Richard Ree and Jun Wen).

2008-2010: *National Science Foundation*, Dissertation Improvement Program. "Dissertation Research: Local Adaptation of Symbiotic Fungi to Serpentine Soils ." \$12,000 DEB-0808269 (support of Sara Branco, Ph.D. candidate, University of Chicago).

Facility, Digitization, and Teaching Grants

- 1988-1991: *National Science Foundation*. "Acquisition of New Scanning Electron Microscopy Facility at Field Museum of Natural History" \$65,000 (Co-PI with P. R. Crane, J. S. Ashe, and C. Niezgoda.)
- 1992: *National Science Foundation*. "Support for the Involvement of Minority Undergraduates in Management of Systematic Collections at Field Museum" (Co-PI with B. D. Patterson, B. Chernoff, J. Engel, J. Flynn, L. Grande, S. Lanyon, S. Lidgard, and A. Newton).
- 1996-1999: *National Science Foundation*, Informal Science Education. "Life Underground: Foundations of the Biosphere" \$1,583,771 ESI-9627007 (Co-PI with M. F. Muraski-Stotz and D. K. Moskovits).
- 1996-1999: *National Science Foundation*. "Support for the Mycological Collections, The Field Museum" \$199,300 DEB-9631632 (PI with Co-PI, Q.-X. Wu)
- 1997: *National Science Foundation*. "Support for the Mycological Collections, The Field Museum: Research Assistantships for Minority High School Students" \$5,582 Supplement to DEB-9631632 (PI with Co-PI, Q.-X. Wu)
- 1999-2000: *National Science Foundation*. "Support for the Mycological Collections, The Field Museum: Lichen Supplement" \$25,100 Supplement to DEB-9631632 (PI with Co-PI, Q.-X. Wu)
2002. *Institute for Museum and Library Services National Leadership Grant*. "vPlants: The Chicago Regional Virtual Herbarium as a Model Multi-Institutional Plant Data Resource" \$418,428 (Co-PI with C. Dunn, Morton Arboretum; J. Ault, Chicago Botanic Garden; W. Alverson, Field Museum)
- 2004-2006 *Institute for Museum and Library Services National Leadership Grant*. "vPlants Plus: Enhancing the Chicago Region Virtual Herbarium" \$473,072 (PI, with C. Dunn, Morton Arboretum; K. Havens, Chicago Botanic Garden; W. Alverson, Field Museum)
- 2006-2009 *Department of Education GAANN Grant*. "GAANN: Graduate Training in Evolutionary Environmental Biology." \$633,000. (PI, with CoPIs M. LaBarbera, UofC; D. Jablonski, UofC; S. Kidwell, UofC; M Kearney, Field Museum; J. McElwain, Field Museum)

Extended Field Work

NORTH AMERICA: Canada: British Columbia, 1981, 1984; Nova Scotia, 1978; Ontario, 1984, USA: AK, CA, CO, FL, GA, ID, IN, IL, HI, KY, LA, MA, MI, MN, MO, MS, NY, NC, OH, OR, SC, TN, TX, VA, WA, WV, WI, WY, 1978-present; Puerto Rico, 1998; Mexico: Nuevo Leon, Tamaulipas, 1988, Verracruz, 2002.

CENTRAL AMERICA: Costa Rica, 1986, 1989, 1991-2005, 2011, 2012; Guatemala, 2002, 2004, 2007; Honduras, 1991; Panama, 2005.

SOUTH AMERICA: Argentina 1987, 1988, 2010; Brazil, 1987, 2008; Chile, 1987-1988; Ecuador, 1987; Colombia, 1987; Venezuela, 1987.

EUROPE: Germany, 1990; the Netherlands, 1982; Sweden, 1982; Russia, 2003, 2007; Ukraine, 2003; France, 2007; Portugal, 2007.

ASIA: China, 1996-1998, 2002, 2006; Japan, 2008, 2009

AUSTRALASIA: Australia 2005, 2006; New Zealand, 1999, 2006; Papua New Guinea 2006

Thesis and Dissertation

- Mueller, G. M. 1978. The genus *Laccaria* in southern Illinois. M.S. Thesis. Southern Illinois University, Carbondale. 64 pp.
- Mueller, G. M. 1982. The genus *Laccaria* in North America excluding Mexico. Ph.D. dissertation. University of Tennessee, Knoxville. 344 pp.

Publications: Books and Journal Volumes

- Mueller, G. M. 1992. *Systematics of Laccaria (Agaricales) in the Continental United States and Canada, with Discussions on Extralimital Taxa and Descriptions of Extant Types*. *Fieldiana: Botany, n.s.*, 30. Chicago: Field Museum of Natural History. 158 pp.
- Carranza, J. and G. M. Mueller, eds. 1996. *Fungi of Costa Rica: Selected Studies on Biodiversity and Ecology*. *Revista de Biología Tropical*, no. 44 (Supplement) 4. 154 pp.
- Mueller, G. M. and Q.-X. Wu, eds. 1997. *Mycological Contributions of Rolf Singer: Field itinerary, Index to New Taxa, and List of Publications*. *Fieldiana, Botany: n.s.*, 38. Chicago: Field Museum of Natural History. 124 pp.
- Mata, M., R. Halling, and G. M. Mueller. 2003. *Macrohongos de Costa Rica/ Costa Rica Macrofungi. Vol. 2*. Instituto Nacional de Biodiversidad (INBio), Costa Rica. 240 pp.
- Mueller, G. M., G. F. Bills, and M. S. Foster, eds. 2004. *Biodiversity of Fungi: Inventory and Monitoring Methods*. Elsevier Academic Press, San Diego, CA. 777 pp.
- Halling, R. E. and G. M. Mueller. 2005. *Common Mushrooms of the Talamanca Mountains, Costa Rica*. New York Botanical Garden Press, NY. 197 pp.
- McFarland J. and G. M. Mueller. 2009. *Edible Wild Mushrooms of Illinois and Surrounding States*. University of Illinois Press. 232 pp.

Publications: Scientific Articles (peer reviewed)

- Mueller, G. M. and W. J. Sundberg. 1981. A floristic study of *Laccaria* in southern Illinois. *Nova Hedwigia* 34: 577-597.
- Mueller, G. M. 1984. New North American species of *Laccaria* (Agaricales). *Mycotaxon* 20: 101-116.
- Fries, N. and G. M. Mueller. 1984. Incompatibility systems, cultural features and species circumscriptions in the ectomycorrhizal genus *Laccaria* (Agaricales). *Mycologia* 76: 633-642.
- Mueller, G. M. 1985. Numerical taxonomic analyses on *Laccaria* (Agaricales). *Mycologia* 77: 121-129.
- Mueller, G. M. and E. C. Vellinga. 1986. Taxonomic and nomenclatural notes on *Laccaria* B. & Br.: *Laccaria amethystea*, *L. fraterna*, *L. laccata* *L. pumila*, and their synonyms. *Persoonia* 13: 27-43.
- Mueller, G. M. 1987. Designation of type collections for *Laccaria proxima*, *L. tortilis* and *L. trullissata*. *Mycotaxon* 28: 303-311.
- Vellinga, E. C. and G. M. Mueller. 1987. Taxonomic and nomenclatural notes on *Laccaria* B. & Br. II. *Laccaria bicolor*, *L. fraterna*, and *L. laccata* var. *pallidifolia*. *Persoonia* 13: 383-385.
- Mueller, G. M. and R. Singer. 1988. *Laccaria gomezii*, a new agaric species from the querceta of Colombia and Costa Rica. *Mycotaxon* 33: 223-227.
- Mueller, G. M. and E. C. Vellinga. 1990. Taxonomic and nomenclatural notes on *Laccaria* B. & Br.--III. *Laccaria amethystina* and *L. impolita*. *Mycotaxon* 37: 385-388.
- Gardes, M., J. A. Fortin, G. M. Mueller, and B. R. Kropp. 1990. Restriction fragment length polymorphisms in the nuclear ribosomal DNA of four *Laccaria* spp.: *L. bicolor*, *L. laccata*, *L. proxima*, and *L. amethystina*. *Phytopathology* 80: 1312-1317.
- Mueller, G. M. 1990 (1991). The Swedish taxa of *Laccaria* (Agaricales) with notes on their distribution. *Nordic Journal of Botany* 10: 665-680.

- Mueller, G. M. 1991. *Laccaria longipes*, a new North American species of the *Laccaria laccata* complex. *Mycotaxon* 40: 145-150.
- Mueller, G. M. 1991. *Laccaria laccata* complex in North America and Sweden: Intercollection pairing and morphometric analyses. *Mycologia* 83: 578-594.
- Mueller, G. M. and M. Gardes. 1991. Intra- and interspecific relations within *Laccaria bicolor sensu lato*. *Mycological Research* 95: 592-601.
- Mueller, G. M. and M. Rajchenberg. 1991. First report of *Cordyceps* from South American *Nothofagus* forests. *The Mycologist* 5: 46-47.
- Gardes, M., G. M. Mueller, J. A. Fortin, and B. R. Kropp. 1991. Mitochondrial DNA polymorphisms in *Laccaria bicolor*, *L. laccata*, *L. proxima*, *L. amethystina*. *Mycological Research* 95: 206-216.
- Mueller, G. M. and B. A. Strack. 1992. Evidence for a mycorrhizal host shift during migration of *Laccaria trichodermophora* and other agarics into neotropical oak forests. *Mycotaxon* 45: 249-256.
- Petersen, R. H. and G. M. Mueller. 1992. New South American taxa of *Cantharellus*, *C. nothofagorum*, *C. xanthoscyphus*, and *C. lateritius* var. *colombianus*. *Boletín de la Sociedad Argentina de Botánica* 28: 195-200.
- Mueller, G. J., G. M. Mueller, L. Shih, and J. F. Ammirati. 1993. Cytological studies in *Laccaria* (Agaricales). I. Meiosis and postmeiotic mitosis. *American Journal of Botany* 80: 316-321.
- Mueller, G. M. and J. F. Ammirati. 1993. Cytological studies in *Laccaria* (Agaricales). II. Assessing phylogenetic relationships among *Laccaria*, *Hydnangium*, and other Agaricales. *American Journal of Botany* 80: 322-329.
- Mueller, G. M., A. von Hofsten, A. Axén, and B. A. Strack. 1993. Basidiospore wall ultrastructure of the false-truffle *Hydnangium* and its phylogenetic significance. *Mycologia* 85: 890-893.
- Fischbein, C. B., J. W. Lipscomb, G. M. Mueller, J. B. Leikin. 1993. Field test of the new fungal identification system in Poisindex. *Veterinary and Human Toxicology* 35: 204-206.
- Mueller, G. M. and E. M. Pine. 1994. DNA data provide evidence on the evolutionary relationships between mushrooms and false truffles. *McIlvainea* 11(2): 61-74.
- Mueller, G. M. 1995. Macrofungi. Pages 192-194 *In* LaRoe, E.T., G. S. Farris, C. E. Puckett, P.D. Doran, and M. J. Mac., eds., *Our Living Resources: A Report to the Nation on the Distribution, Abundance, and Health of U.S. Plants, Animals, and Ecosystems*. U.S. Department of the Interior, National Biological Service, Washington, DC.
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- Mueller, G. M. and K. Hosaka. 2010. A Gondwanan origin for the *Laccaria* – *Hydnangium* clade (Basidiomycota, Agaricomycotina) Clade. VI Southern Connection Congress, San Carlos de Bariloche, Argentina
- Mueller, G. M. and A. Dahlberg. 2010. IUCN Red-Listing and Fungal Conservation: Using Established Tools for Assessing and Reporting on the Conservation Status of Fungal Species. 9th International Mycological Congress, Edinburgh, UK.
- Wilson, A. W., M. C. Aime, T. W. Henkel, and G. M. Mueller. 2010. Systematics and biogeography of *Dicymbe* associated Cantharellaceae from the Guiana Shield. Mycological Society of America, Lexington, KY.

- Mueller, G. M. 2011. Conserving mushrooms and their relatives. Latin American Mycological Congress, San José, Costa Rica.
- Mueller, G. M. 2011. Climate change and fungal conservation. European Mycological Congress, Greece.
- Wilson, A. W., R. Zang, K. Hosaka, and G. M. Mueller. 2011. *Laccaria* from the eastern Himalayas. Mycological Society of America Annual Meeting, Fairbanks, Alaska.
- Wilson, A.W. N. Wickett, P. Grabowski, J. Fant, J. Borevitz, G.M. Mueller. 2012. Using genotyping-by-sequencing techniques for population genetic studies in mushroom-forming fungi. Mycological Society of America Annual Meeting, New Haven, CT.
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Symposia, Workshops, Short courses (seminars and other invited lectures not included)

- Mueller, G. M., J. Polishook, and S. Miller. 1988. "Basidiospore Germination and Tissue Culture Techniques for Agarics, Especially Those That Form Ectomycorrhizae." AIBS/MSA Workshop, Davis, CA. (organizer).
- Mueller, G. M. 1989. Phenetic and cladistic analyses of the genus *Laccaria*. AIBS/MSA Symposium entitled "Numerical Analysis in Fungal Systematics." Toronto, Ontario. (see Abstracts of Presented Papers). Wolfe, C. B. and G. M. Mueller (co-chairs).
- Mueller, G. M. 1990. Herbaria: Repositories of ecological, morphological and molecular data. MSA Evening Discussion entitled "Use of Molecular Techniques, the Impact on Herbarium Specimens and the Preservation of Related Voucher Materials." Madison, WI. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M. 1990. Ectomycorrhizal agarics of neotropical *Quercus* forests: notes on species composition and distribution. International Mycological Congress (IMC-4) Symposium entitled "Tropical Fungi" Regensburg, Germany. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M. 1993. Evidence for high biodiversity in montane neotropical Agaricales. Symposium entitled "Neotropical Montane Forests: Biodiversity and Conservation." The New York Botanical Garden. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M., R. E. Halling, and C. L. Ovrebo. 1994. "Neotropical Holobasidiomycetes: A Preliminary Assessment of Biodiversity and Distribution Based on Studies in Costa Rica and Colombia." IMC-5 Symposium, Vancouver, British Columbia, Canada. (see Abstracts of Presented Papers) (co-organizer).
- Vilgalys, R. and G. M. Mueller. 1994. "Foraging an Integrated Approach to Phylogeny of Homobasidiomycetes." IMC-5 Symposium, Vancouver, British Columbia, Canada. (co-organizer).
- Wu, Q.-X. and G. M. Mueller. 1994. Biogeography of macrofungi: relationships between temperate eastern Asia and eastern North America. AIBS Symposium entitled "Relationships Between Plants of Eastern North America and Eastern Asia." Knoxville, TN. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M. 1995. The mycological world: Are the issues and solutions the same? Society for the Preservation of Natural History Collections Symposium entitled "Destructive Sampling and Molecular Systematics: Are We Moving Toward a Consensus?" Toronto, Ontario, Canada. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M. 1995. A week-long planning workshop entitled "Taxa Working Inventory Group: Fungi" of the All Taxa Biodiversity Inventory, Guanacaste Conservaton Area, Costa Rica. (invited participant).
- Mueller, G. M., G. Bills, and A. Rossman. 1995. A special 4-day workshop on "Measuring and Monitoring Biological Diversity: Standard Methods for Fungi." Washington, D. C. (co-organizer, moderator, and co-editor of symposium volumes).

- Mueller, G. M. 1996. Diversity and distribution of ectomycorrhizae in northern Illinois and Indiana. The Janet Meakin Poor Research Symposium entitled: "The Role of Mycorrhizal Fungi in Restoration Ecology." Chicago Botanic Garden. (invited presenter).
- Mueller, G. M. 1997. Symposium entitled "Assessing Costa Rican Fungal Diversity". The Association for Tropical Biology/Organization for Tropical Studies Annual Meeting, San José, Costa Rica. (see Abstracts of Presented Papers) (organizer).
- Mueller, G. M. 1997. Report from museum partners. Presentation at the All Taxa Biodiversity Inventory Planning Workshop "Discover Life in America." Great Smoky Mountains National Park, Gatlinburg, TN. (invited participant).
- Huhndorf, S. H., G. M. Mueller, F. Lutzoni, F. Fernandez, and A. Miller. 1998. Studies in the Lasiosphaeriaceae: Monographs to two key genera and family-level phylogeny (Fungi, Ascomycetes, Sordariales). Poster presented at NSF Partnership for Enhancing Expertise in Taxonomy Workshop, Woods Hole, MA. (invited participant).
- Rossmann, A. G. Mueller, S. Stephenson, and J. Lodge. 1998. "Initiatives and Issues in Fungal Biodiversity." MSA Informal Session, San Juan, Puerto Rico. (co-organizer).
- Mueller, G. M. and M. Mata. 1998. A week-long planning workshop entitled "National Fungal Inventory Workshop," National Institute of Biodiversity, Santa Domingo, Heredia, Costa Rica. (co-organizer and senior author of final report, 36 pp.).
- Mueller, G. M. and Q. X. Wu. 1998. How host specific are *Suillus americanus* and *S. spraguei*? Second International Congress on Mycorrhiza Symposium entitled "Phylogeny and Systematics." Uppsala, Sweden. (see Abstracts of Presented Papers) (invited presenter).
- Mueller, G. M. 1998. Morphological and molecular divergence between disjunct species of *Suillus*. Presentation at a special symposium on the biogeographic relationships between North American and Chinese macrofungi and lichens. Institute of Microbiology, Chinese Academy of Sciences, Beijing, China. (co-organizer).
- Mueller, G. M., F. Fernando, and M. Mata. 1999. Three-week-long field course on macro- and microfungi for Costa Rican fungal parataxonomists as part of the Costa Rican National Inventory, National Biodiversity Institute (INBio), Costa Rica. (instructor)
- Mueller, G., J. P. Schmit, and P. Leacock. 1999. Responses of mushroom-tree mutualists of our dune and forest ecosystems to a witch's brew of atmospheric contaminants. Field Museum/ Indiana Dunes/ Chicago Wilderness Symposium entitled "Ecology and the Chicago Region: from Cowles to Chicago Wilderness." Chicago. (invited presenter).
- Mueller, G. M. and J. Cifuentes. 1999. Symposium entitled "Methods for Studying Neotropical and South Temperate Agaricales." Latin American Mycological Congress, Caracas, Venezuela. (co-organizer).
- Mueller, G. M., T. J. Entwistle, and R. Vilgalys. 1999. Symposium entitled "Vicariance Biogeography Revisited - New Perspectives from Ferns, Bryophytes, Algae and Fungi." XVI International Botanical Congress, St. Louis, MO (co-organizer).
- Mueller, G. M., J. Lussenhop, et. al. 1999. Soil Ecology Society International Conference "Out of the Black Box: Ecological Lessons from the Underground." The Field Museum, Chicago (host and local organizing committee member).
- Mueller, G. M. 2000. Macrofungi as indicators of environmental stress. Research roundtable: Vegetation. Calumet Research Summit, Chicago. (invited participant)
- Halling, R. and G. Mueller. 2000. The macrofungi of Costa Rica: A collaborative study. NSF Biotic Surveys and Inventories Workshop, Orcas Island, WA.
- Moskovits, D. K., C. Fialkowski, G. M. Mueller, and T. A. Sullivan. 2000. Chicago Wilderness: a new force in urban conservation. Missouri Botanical Garden Fall Symposium, St. Louis, MO. (invited presenter).
- Mueller, G. M., M. Mata, L. Umaña, F. Fernandez, S. Huhndorf. 2001. Workshop on macrofungi and microfungi. National Biodiversity Institute (INBio), Costa Rica. (co-organizer)
- Halling, R. E., J. Carranza, and G. M. Mueller. 2001. Workshop for Central American students: Training on macrofungi. University of Costa Rica, San Pedro. (co-organizer)

- Mueller, G. M. 2002. Symposium entitled "Diversidad fúngica en Costa Rica" Latin American Congress of Mycology, Xalapa, Mexico. (organizer)
- Mueller, G. M., J. P. Schmit, and R. Courtecuisse. 2002. Symposium entitled "Fungal Biodiversity: What do we know? What can we predict?" International Mycological Congress, Oslo, Norway. (co-organizer).
- Mueller, G. M. 2002. Symposium entitled "A diversity of Fungal Diversity Studies" International Mycological Congress, Oslo, Norway. (organizer)
- Mueller, G. M., M. Mata, R. E. Halling, and J. Carranza. 2003. Workshop II for Central American students: Advance Training on Macrofungi. National Biodiversity Institute (INBio), Costa Rica (co-organizer).
- Carranza, J. and G. M. Mueller. 2005. Workshop and symposium on biodiversity of Central American macrofungi. University of Panama and Smithsonian Tropical Research Institute (co-organizer).
- Mueller, G. M. and H. T. Lumbsch, T. 2006. Symposium entitled "Phylogeography" International Mycological Congress, Cairns, Australia. (co-organizer).
- Mueller, G. M. 2009. Symposium on biogeography, International Conference on fungal evolution and Charles Darwin: from morphology to molecules, Pathumthani, Thailand (key note speaker and co-organizer).
- Hallingberg, N. and G. M. Mueller. 2009. Symposium entitled "Fungal Biogeography" Asian Mycological Congress, Taiwan (co-organizer).
- Franco, A.E. and G. M. Mueller. 2011. Pre-Congress Course "Basidiomycota," Latin American Mycological Congress, Guanacaste, Costa Rica.
- Mueller, G. M. 2011. Symposium on Fungal Conservation, Latin American Mycological Congress, San José, Costa Rica.
- Cannon, P. and G.M. Mueller. 2012. The Science of Fungal Conservation. Mycological Society of America Meeting, New Haven, CT.