

LOUISE M. EGERTON-WARBURTON
Curriculum Vitae

Chicago Botanic Garden
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EDUCATION:

- 1994-97 Fulbright Postdoctoral Fellow, University of California, Riverside
- 1994 Ph.D., Environmental Biology, Curtin University of Technology, Australia
Dissertation: Soil-plant relationships of *Eucalyptus* species in acidic coal mining soils.
Adviser: Byron B. Lamont
- 1989 B.S., Biology (Highest Honors), Curtin University of Technology, Australia
Minor: Statistics
- 1984 B.S., Nursing, Western Australian School of Nursing
Clinical specialty: Operating Theater

APPOINTMENTS:

- 2003- present Adjunct Professor of Biology, Northwestern University
- 2004-10 Director and Coordinator, Research Experiences for Undergraduates (REU) site in Plant Conservation and Biology, Chicago Botanic Garden
- 2001- present Conservation Scientist, Soil & Microbial Ecology, Chicago Botanic Garden
- 1999- 2001 Assistant Researcher, Soil Microbial Ecology, University of California, Riverside
- 1997-1998 Post-doctoral Research Fellow: Cell & Molecular Biology, Nanotechnology, University of Melbourne, Australia
- 1981-1987 Nursing practicum
Royal Perth Hospital and regional (rural) hospitals

AWARDS, FELLOWSHIPS AND PRIZES:

- 1995-1998 *BBSRC Post-doctoral Fellowship*, Cambridge University, England (declined)
- 1994-1997 *Fulbright Post-doctoral Fellowship*, Australian- American Education Foundation (accepted)
- 1994 *The David Goodchild Prize for Biological Microscopy*, Australian Society for Electron Microscopy, for outstanding contributions to biological electron microscopy by a young investigator.
- 1992 *The Australian Mining Industry Council Medal* for Environmental Research, for outstanding contributions to restoration practices by a young investigator.

1990-1994	<i>Commonwealth Forestry Graduate Research Fellowship</i> , Australian government, national competitive grant program
1990-1993	<i>Australian Research Council Graduate Scholarship</i> , Australian government, national competitive grant program (declined)
1989	<i>Australian Minerals Consolidated Prize</i> : academic merit prize, best senior student
1988	<i>Alcoa of Australia Prize</i> : Academic merit, best junior student
1987	<i>Worsely Alumina Prize</i> : Academic merit prize, best sophomore student

GRANTS AWARDED:

2013-2014	Northwestern University Initiative for Sustainability and Energy: Metagenomic discovery of novel lignin-degrading fungi for biofuel production' (\$35,000)
2012-2014	American Petrochemical Companies Research Award: Survey and characterization of fungal bound lipids from an organic geochemical perspective (\$100,000)
2011	Northwestern University Initiative for Sustainability and Energy: Fungal macromolecular products as potential novel biofuel source (\$45,000)
2010	Northwestern University Initiative for Sustainability and Energy: Fungal macromolecules in C-sequestration and facilitating electron transfer (\$50,000)
2007-2010	NSF, Research Experiences for Undergraduates (REU) Site, Plant Biology and Conservation: Genes to ecosystems (\$272,000)
2006-2007	Chicago Wilderness Small Grants Program: The role of mycorrhizal fungi in the invasion of exotic plant species in prairies (\$15,000)
2006-2011	NSF, Integrative Graduate Education and Research Traineeship (IGERT), Ecology at the Urban Interface 2006-2011 with the University of Illinois (Core faculty, ~\$3,000,000)
2005-2006	NASA Commercialization Grant: Polarization sensing of fertilization effects (\$100,000)
2005	National Council on Science for Sustainable Forestry: Biodiversity implications of post-fire recovery strategies in the California chaparral (\$50,000)
2004-2006	NSF, Research Experiences for Undergraduates (REU) Site, Plant Conservation and Biology (\$234,008)
2003-2005	USDA Forest Services, National Urban Council Forestry Advisory Committee: Anthropogenic nitrogen deposition and mycorrhizae in urban and rural forests (\$102,520)
2003-2004	NSF, SBIR Phase I: Polarization sensing of stress levels in vegetation (\$100,000)
2003	NSF, SGER, Immediate post-fire response of soil biological and pedogenic properties at the San Dimas lysimeters biosequence (\$52,000)

2001	University of California Shipley-Skinner Endowment: Co-adaptation between plants and their mycorrhizae (\$26,500)
2000-2003	Australian Research Council: Mycorrhizae and the restoration of terrestrial orchids (\$185,000)
1998-2004	NSF: Common mycorrhizal networks: active or passive channels? Collaborator (\$3,400,000)
1993	Western Collieries Ltd: Utilization of mycorrhizal inoculation in the restoration of coal mine tailings (\$21,500)
1989	AMC Mineral Sands Ltd: Seed source and seed quality in restoration practice (\$10,500)

JOURNAL PUBLICATIONS:

Yost J.L.*, **Egerton-Warburton, L.M.**, Schreiner, K.M., Palmer, C.E., and Hartemink, A.E. (2016). Impact of restoration and management on aggregation and organic carbon accumulation in urban grasslands. *Soil Science Society of America Journal*, in press. * Undergraduate student author

Allen, E.B., **Egerton-Warburton, L.M.**, Hilbig, B.E., and Valliere, J.M. (2016). Interactions of arbuscular mycorrhizal fungi, critical loads of nitrogen deposition, and shifts from native to invasive species in a southern California shrubland. *Botany*, in press.

Sollenberger, D., *Kadlec, C., O'Shaughnessy, J. and **Egerton-Warburton, L.M.** (2016). Environmental filtering mediates grassland community assembly following restoration with soil carbon additions (2016). *Restoration Ecology*, in press. * Undergraduate student co-author

Graham, R.C., **Egerton-Warburton, L.M.**, Hendrix, P.F., Shouse, P.J., Johnson-Maynard, J.L., Quideau, S.A., Sternberg, P.D., Jobes, J.A., and Breiner, J.M. (2016). Post-fire pedogenic response: wildfire effects on the soil environment in a 60-year-old biosequence. *Soil Science Society of America Journal*, in press.

Egerton-Warburton, L.M. (2015). Inoculation of *Eucalyptus* with ectomycorrhizal *Pisolithus* enhances plant growth and mineral nutrition in acidic coal spoil. *Applied and Environmental Soil Science* vol. **2015**, doi:10.1155/2015/803821

DeLong, J.R., Swarts, N., Dixon, K.W., **Egerton-Warburton, L.M.** (2013). Mycorrhizal preference promotes habitat invasion by a native Australian orchid: *Microtis media*. *Annals of Botany* **111**: 409-418.

Querejeta, J.I., **Egerton-Warburton, L.M.**, Prieto, I., Vargas, R., Allen, M.F. (2012). Changes in soil hyphal abundance and viability can alter the patterns of hydraulic redistribution by plant roots. *Plant and Soil* **355**: 63-73.

Querejeta, **Egerton-Warburton, L.M.**, and Allen, M.F. (2009). Differential access to groundwater modulates the mycorrhizal responsiveness of oaks to inter-annual rainfall variability in a California woodland. *Ecology* **90**: 649-662.

Egerton-Warburton, L.M., Querejeta, J.I., and Allen, M.F. (2008). Efflux of hydraulically lifted water by mycorrhizal hyphae during imposed drought. *Plant Signaling and Behavior* **3**: 68-71. Invited paper.

Egerton-Warburton, L.M., Johnson, N.C., and Allen, E.B. (2007). Mycorrhizal community dynamics following nitrogen fertilization: a cross-site test in five grasslands. *Ecological Monographs* **77**: 527-544.

- Egerton-Warburton**, L.M., Querejeta, J.I., and Allen, M.F. (2007). Common mycorrhizal networks provide a potential pathway for the transfer of hydraulically lifted water between plants. *Journal of Experimental Botany* **58**: 1473-1483.
- Plamboek, A.H., Dawson, T.E., **Egerton-Warburton**, L.M., North, M., Bruns, T.D., and Querejeta, J.I. (2007). Water transfer via ectomycorrhizal fungal hyphae to conifer seedlings. *Mycorrhiza* **17**: 439-447.
- Querejeta, J.I., **Egerton-Warburton**, L.M., and Allen, M.F. (2007). Soil hyphal dynamics in a California coast live oak woodland during extreme summer drought. *Soil Biology and Biochemistry* **39**: 409-417.
- Treseder, K.K., **Egerton-Warburton**, L.M., Allen, M.F., Cheng, Y., and Oechel, W.C. (2003). Alteration of soil carbon pools and communities of mycorrhizal fungi in a chaparral community exposed to elevated CO₂. *Ecosystems* **6**: 786-796.
- Allen, E.B., Allen, M.F., **Egerton-Warburton**, L.M., Corkidi, L., & Gomez-Pompa, A. (2003). Impacts of early- and late-seral mycorrhizae during restoration in seasonal tropical forest, Mexico. *Ecological Applications* **13**: 1701-1717.
- Allen, M.F., Swenson, W., Querejeta, J.I., **Egerton-Warburton**, L.M., & Treseder, K.K. (2003). Ecology of mycorrhizae: a conceptual framework for complex interactions among plants and fungi. *Annual Review of Phytopathology* **41**: 271-303. Invited review.
- Johnson, N.C., Rowland, D.L., Corkidi, L., **Egerton-Warburton**, L.M., & Allen, E.B. (2003). Nitrogen enrichment alters mycorrhizal allocation at five mesic to semiarid grasslands. *Ecology* **84**: 1895-1900.
- Egerton-Warburton**, L.M., Graham, R.C., and Hubbert, K.R. (2003). Spatial variability in mycorrhizal hyphae and nutrient and water availability in a soil weathered bedrock profile. *Plant and Soil* **249**: 331-342.
- Querejeta, J.I., **Egerton-Warburton**, L.M., and Allen, M.F. (2003). Direct nocturnal water transfer from oaks to their mycorrhizal symbionts during severe soil drying. *Oecologia* **134**: 55-64. [Featured in *Science*, 24 October, 2002]
- Egerton-Warburton**, L.M., Graham, R.C., Allen, E.B., and Allen, M.F. (2001). Reconstruction of the historical changes in mycorrhizal fungal communities under anthropogenic nitrogen deposition. *Proceedings of the Royal Society of London, Series B* **268**: 2479-2484.
- Egerton-Warburton**, L.M., and Allen, M.F. (2001). Endo- and ectomycorrhizae in *Quercus agrifolia* Nee. (Fagaceae): patterns of root colonization and effects on seedling growth. *Mycorrhiza* **11**: 283-290.
- Egerton-Warburton**, L.M., and Ghisalberti, E.L. (2001). Isolation and structural identification of a germination inhibitor in fire-recruiters from the California chaparral. *Journal of Chemical Ecology* **27**: 371-382.
- Egerton-Warburton**, L.M., and Allen, E.B. (2000). Shifts in the diversity of arbuscular mycorrhizal fungi along an anthropogenic nitrogen deposition gradient. *Ecological Applications* **10**: 484- 496.
- Tieu, A., and **Egerton-Warburton**, L.M. (2000). Contrasting seed morphology dynamics in relation to the alleviation of dormancy with soil storage. *Canadian Journal of Botany* **78**: 1187-1198.
- Allen, M.F., **Egerton-Warburton**, L.M., Allen, E.B. and Karen, Ô. (1999). Mycorrhizae in *Adenostoma fasciculatum* Hook. & Arn.: a combination of unusual ecto- and endo- forms. *Mycorrhiza* **8**: 225- 228.

- Egerton-Warburton, L.M.** (1998). A smoke-induced alteration of the sub-testa cuticle in seeds of the post-fire recruiter, *Emmenanthe penduliflora* Benth. (Hydrophyllaceae). *Journal of Experimental Botany* **49**: 1317-1327.
- Egerton-Warburton, L.M., Balsamo, R.A., and Close, T.J.** (1997). Temporal accumulation and ultrastructural localization of dehydrins in *Zea mays* L. *Physiologia Plantarum* **101**: 545-555.
- Egerton-Warburton, L.M., Ghisalberti, E.L., and Burton, N.C.** (1998). Intergeneric hybridism in *Chamelaucium* and *Verticordia* (Myrtaceae) based on analysis of essential oils and morphology. *Australian Journal of Botany* **46**: 201-208.
- Egerton-Warburton, L.M., Ghisalberti, E.L., and Considine, J.A.** (1998). Intraspecific variability of the volatile leaf oils in *Chamelaucium uncinatum* Schauer (Myrtaceae). *Biochemical Systematics and Ecology* **26**: 873- 888.
- Egerton-Warburton, L.M., West, M.M., and Lott, J.N.A.** (1997). Conservative allocation of globoid-held mineral nutrients in seeds of *Banksia grandis* Willd. (Proteaceae). *Canadian Journal of Botany* **75**: 1951-1956.
- Egerton-Warburton, L.M.** (1995). An absence of ecotype evolution in three *Eucalyptus* species colonizing coal mine soils with low pH and high aluminium content. *Water, Air and Soil Pollution* **83**: 335-349.
- Egerton-Warburton, L.M., and Griffin, B.J.** (1995). Differential tolerance of *Pisolithus tinctorius* isolates to aluminum in vitro. *Canadian Journal of Botany* **73**: 1229-1233.
- Egerton-Warburton, L.M., Griffin, B.J., and Kuo, J.** (1995). Reserves of aluminium and mineral nutrients in seeds of *Eucalyptus calophylla* (Myrtaceae) with reference to the globoid inclusions. *Seed Science Research* **5**: 53-57.
- Egerton-Warburton, L.M., and Griffin, B.J.** (1994). Levels of mineral nutrients in fresh- and frozen bulk hydrated biological specimens: a comparison of EDS data collected in the Environmental SEM and a conventional cryo-SEM. *Micron* **25**: 607-612. Invited Paper
- Egerton-Warburton, L.M., Griffin, B.J., and Kuo, J.** (1993). Microanalytical studies of metal localization in biological tissues by Environmental SEM. *Microscopy Research and Technique* **25**: 406-411. Invited Paper
- Egerton-Warburton, L.M., Kuo, J., Griffin, B.J., and Lamont, B.B.** (1993). The effect of aluminium on the distribution of calcium, magnesium and phosphorus in mycorrhizal and non-mycorrhizal seedlings of *Eucalyptus rudis*: a cryo-microanalytical study. *Plant and Soil* **156**: 481-484.
- Egerton-Warburton, L.M., Griffin, B.J., and Lamont, B.B.** (1992). Localization of aluminum and manganese in reproductive tissues of eucalypts by Environmental SEM indicates a basis for pre-emergent selection. *Journal of Computer-Assisted Microscopy* **4**: 205-211. Invited Paper.

SUBMITTED/ IN REVIEW

Desai, N., Wilson, A.W., Powers, J.M., Mueller, G.M., and **Egerton-Warburton, L.M.** Mycorrhizal community structure in *Quercus oleoides* in a restored seasonally dry tropical forest. Submitted to *Environmental Research Letters*.

Ning, C., Mueller G.M., Egerton-Warburton, L.M., Wilson A.W., Yan W., Xiang, W. Functional responses of the ectomycorrhizal fungal community to nitrogen deposition in a slash pine (*Pinus elliottii*) plantation in

south-central China. Submitted to *Forest Ecology and Management*.

IN PREPARATION

Treseder, K.K., Allen, E.B., **Egerton-Warburton**, L.M., Hart, M.M., Johnson, N.C., Klironomos, J.N., Maherali, H., Powell, J.R., and Tedersoo, L. Arbuscular mycorrhizal fungal traits could mediate ecosystem responses to nitrogen deposition. For submission to *Soil Biology and Biochemistry*.

Morgan, B.S.T. and **Egerton-Warburton**, L.M. Ultra-high-throughput Illumina sequencing reveals unprecedented diversity in communities of arbuscular mycorrhizal fungi in a Mexican dry seasonal tropical forest. For submission to *Mycorrhiza*.

BOOK CHAPTERS:

Schreiner, K.M., Blair, N.E., Levinson, W.*, and Egerton-Warburton, L.M. (2014). Contribution of fungal macromolecules to soil carbon sequestration. In: A.E. Hartemink & K. McSweeney (eds.), *Soil Carbon, Progress in Soil Science*, DOI 10.1007/978-3-319-04084-4_16, Springer International Publishing, Switzerland. pp. 155-161. * Undergraduate student co-author

Yost, J.L.*, Palmer, C.E., and Egerton-Warburton, L.M. (2014). Contribution of soil aggregates to soil carbon sequestration in restored urban grasslands. In: A.E. Hartemink & K. McSweeney (eds.), *Soil Carbon, Progress in Soil Science*, DOI 10.1007/978-3-319-04084-4_16, Springer International Publishing, Switzerland. pp 147-154. * Undergraduate student co-author

Allen, E.B., Querejeta, J.I., Vargas, R., Snyder, S.R., Egerton-Warburton, L.M., Gomez-Pompa, A., and Allen, M.F. (2008). Restoration and mycorrhiza in seasonal tropical forest: fungal species composition, carbon accumulation, and water relations. In: *Tropical Restoration for the New Millennium*. UNAM Press, Mexico City. Invited.

Allen, M.F, Chrisafulli, C., Morris, S.J., Egerton-Warburton, L.M., MacMahon, J., and Trappe, J.M. (2005). Mycorrhizae and Mt. St. Helens- the story of a symbiosis. In: *Ecological responses to the 1980 Eruption of Mt St. Helens*. Eds. V. Dale, F. Swanson, C. Chrisafulli. Springer, New York. Pp. 221-232. Invited.

Jumpponen, A., and Egerton-Warburton, L.M. (2005). Mycorrhizal fungi in successional environments- a community assembly model incorporating host plant, environmental and biotic filters. In: *The Fungal Community: its organization and role in the ecosystem*. Eds. J. Dighton, P. Oudemans, and J. White. Invited.

Egerton-Warburton, L.M., Querejeta, J.I., Finkelman, S.L., and Allen, M.F. (2005). Soil Biology: Mycorrhizal Fungi. In: *Encyclopedia of Soils in the Environment* (Ed. D. Hillel, K. Scow and others). Invited.

Allen, E.B., Sirulnik, A.G., Egerton-Warburton, L.M, Kee, S.N., Bytnerowicz, A., Padgett, P.E., Temple P.J., Fenn, M., Poth, M.A., and Meixner, T. (2005). Air pollution and vegetation change in southern California coastal sage scrub: a comparison with chaparral and coniferous forest. In: *Planning for Biodiversity: Bringing Research and Management Together*. Eds. B. E. Kus and J.L. Byers. USDA Forest Service General Technical Report PSW-GTR-195. December, 2005.pp. 79-96.

Egerton-Warburton, L.M., Allen, E.B., and Allen, M.F. (2002). Diversity and conservation of mycorrhizal fungal communities under elevated atmospheric CO₂ and anthropogenic nitrogen deposition. In: *Microorganisms in Plant Conservation and Diversity*. (Eds K. Sivasithamparam, K.W. Dixon and R. Barrett.). pp. 19-43. Kluwer Academic Press, Dordrecht. Invited.

Egerton-Warburton, L.M., and Griffin, B.J. (1999). Nutrients: a sparse resource. *Toxicities*

(serpentine soils and mine tailings). In: *Plants in Action: Adaptation in Nature, Performance in Cultivation*. (Eds Atwell, B.J., Kriedemann, P.E., & Turnbull, C.G.N.). Macmillan Education Australia, South Yarra, Victoria.

REPRESENTATIVE CONFERENCE PRESENTATIONS:

Morgan, B.S.T, Mueller, G.M., and Egerton-Warburton, L.M. (2015). Host species drives arbuscular mycorrhizal fungal community structure in a Mexican tropical seasonally dry forest. International Conference on Mycorrhizas, Flagstaff, AZ.

Morgan, B., and Egerton-Warburton, L. (2014). Precipitation drives arbuscular mycorrhizal fungal community composition in dry seasonal tropical forests of the Yucatan Peninsula. Annual Meeting of the Association for Tropical Biology and Conservation, Cairns, Queensland, Australia.

Morgan, B., and Egerton-Warburton, L. (2014). High-throughput sequencing reveals diverse fungal communities associated with lignin decomposition in seasonally dry forests of the Yucatan Peninsula. Mycological Society of America Annual Meeting, East Lansing, MI

Yost, J.L.* , Palmer, C.E., and Egerton-Warburton, L.M. 2013. The role of soil aggregates in sequestering carbon in restored temperate grasslands. International Union of Soil Scientists Meeting, Global Soil Carbon Symposium, Madison WI. * Undergraduate intern co-author

Egerton-Warburton, L.M. and Hevey, R.D (2013). Ectomycorrhizal community recovery following exotic species invasion and restoration in an oak savanna. Society for Ecological Restoration, International Meeting, Madison, WI.

Schreiner, K.M, Blair, N.E., Buiser, A.* , and Egerton-Warburton, L.M. (2013). The contribution of fungal necromass to soil organic matter storage. American Geophysical Union, San Francisco, CA.
*Undergraduate intern co-author

Desai, N. Wilson, A., Muller, G., and Egerton-Warburton, L.M., (2012). Mycorrhizal community structure in *Quercus oleoides* in a seasonally dry tropical forest. Ecological Society of America Annual Meeting, Portland, OR.

Martel, E.* , O'Shaughnessy, J., and Egerton-Warburton, L.M. (2011). Plant protection from soil pathogens by arbuscular mycorrhizal fungal communities. Ecological Society of America Annual Meeting, Austin, TX. *Undergraduate student

Pahamov, E.* , Marshall, M.* , Frederick, M.* , and Egerton-Warburton, L.M. (2010). Soil legacies differentially influence native grass establishment in a prairie restoration. Ecological Society of America Annual Meeting, Pittsburgh, PA. *Undergraduate student

DeLong, J., Swarts, N., Dixon, K.W., Zerega, N., and Egerton-Warburton, L.M. (2009). The influence of endophytic partners on patterns of weediness in a native Australian orchid, *Microtis media*. Ecological Society of America Annual Meeting, Albuquerque, NM.

Jilling, A.* , Umek, L., and Egerton-Warburton, L.M. (2009). Divergent soil microbial community recovery in response to contrasting restoration techniques targeted against an invasive species. Ecological Society of America Annual Meeting, Albuquerque, NM.*Undergraduate student

Querejeta, J.I., Egerton-Warburton, L.M., and Allen, M.F. (2008). Hydraulic redistribution of soil water by roots and fungal symbionts. Ecological Society of America, Annual Meeting. Invited Symposium presentation.

Bing, C. *, Sollenberger, D., and Egerton-Warburton, L.M. (2006). Soil feedbacks during prairie ecosystem restoration. Ecological Society of America, Annual Meeting. *Undergraduate student

Kadlec, C. *, Sollenberger, D., and Egerton-Warburton, L.M. (2005). Carbon addition and its effects on soil nitrogen and prairie development. Soil Ecology Society of America Meeting, Chicago, IL, May 2005. *Undergraduate student

Querejeta, J.I., Egerton-Warburton, L.M., and Allen, M.F. (2003). Hydraulic lift: transfer of water and fluorescent tracers between plants connected by common mycorrhizal network. International Conference on Mycorrhizae (ICOM 4), Montreal Canada. Invited paper, and lecture.

Egerton-Warburton, L.M., Querejeta, J.I., and Allen, M.F. (2002). Hydraulic lift and mycorrhizae sustain mineral nutrient acquisition in dry soils. Botany 2002, Annual Meeting of the Botany Society of America, Madison, WI. Invited paper.

Allen, E.B., Egerton-Warburton, Sigüenza, C., Sirulnik, A.G. and Padgett, P.E. (2001). Effects of N deposition on plants and soil microorganisms on an urban to rural gradient in southern California. Nitrogen 2001 Conference, Baltimore MD, October 2001. Invited paper.

SERVICE TO THE SCIENTIFIC COMMUNITY:

Editorial Board Service:

2014 *Applied Soil Ecology*. Appointed to the Editorial Board
 2015 *Geoderma Regional*. Appointed to the Editorial Board

Manuscript reviewer:

Reviewer for 26 different journals.

Frequent reviewer (i.e., more than one manuscript per year in successive years) for:

<i>Annals of Botany</i>	<i>Applied Soil Ecology</i>	<i>Ecology</i>	<i>Ecological Applications</i>
<i>Geoderma</i>	<i>Mycorrhiza</i>	<i>New Phytologist</i>	<i>Oecologia</i>
<i>PLoS One</i>	<i>Plant and Soil</i>	<i>Restoration Ecology</i>	

Committee service:

2013- present Frances and Evelyn Clark Soil Biology Scholarship Committee, Soil Science Society of America
 2008-09 Plant Biology and Conservation Graduate Studies Committee, Northwestern University
 2004- present Chair, Soil Science searches, Chicago Botanic Garden
 1993-94 Committee, Western Australian Society for Electron Microscopy

Ad-hoc grant reviewer:

1998- present National Science Foundation

Panel service:

2007- present National Science Foundation

TEACHING AND MENTORING:

COURSES TAUGHT:

2009- present Instructor, Northwestern University
 Field and Lab Methods in Conservation Biology (PBC499),

2006- present	Instructor, Northwestern University Soils in the Environment (PBC418/ENV SCI 390) (originally offered as Soil Ecology [PBC440])
2008	Guest lecturer, University of Wisconsin, Madison Introductory Mycology
2007	Guest lecturer, Northwestern University Ecosystem Ecology (PBC442)
2004	Instructor, Chicago Botanic Garden- Loyola University certificate program Field Botany and Ecology
2004	Guest Lecturer, University of Illinois, Urbana-Champaign Natural Resources 410
2004	Guest Lecturer, Oakton Community College Biology 290: Research in Biology
1993-1994	Instructor, Curtin University of Technology, Australia Upper division course: Horticultural Botany
1988-1994	Teaching Assistant, Curtin University of Technology, Australia Upper division courses: Plant Physiology, Horticultural Botany Lower division courses: Ecology, Plant Biology, Animal Biology, *Biometry
1992-1993	Teaching Assistant, Edith Cowan University, Australia: Lower division course: Botany

GRADUATE STUDENTS ADVISED, GRADUATION DATE, AND DESTINATIONS:

Current students:

Lauren Umek	Ph.D. program (Plant Biology & Conservation), Northwestern University Progressed to Candidacy, July 2012. Defense expected: August, 2016
Ben Morgan	Ph.D. program (Plant Biology & Conservation), Northwestern University Progressed to candidacy June, 2013. Defense expected: March, 2017
Chen Ning	Ph.D. program (Plant Biology & Conservation), Northwestern University Commenced: Fall Quarter 2013
Lynnaun Johnson	Ph.D. program (Plant Biology & Conservation), Northwestern University Commenced: Fall Quarter 2014
Matt McCreary	Ph.D. program (Ecology & Evolution), UIC Progressed to candidacy June, 2014.
Kaiyue Zhou	M.S., Northwestern University Commenced: Fall Quarter 2015
Jessica Ross	B.S./M.S. program, Northwestern University Defense expected August, 2016

Past Students and Destinations:

NU, Northwestern University; UIC, University of Illinois, Chicago

2014	Anne Neis, M.S. (NU)	Data management specialist
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	Chen Ning, M.S. (NU)	Ph.D. program, Northwestern University
	Robert Hevey, M.S. (NU)	Ph.D. program, Northwestern University
	Corey Palmer, M.S. (NU)	Restoration assistant
2013	Nikhail Desai, M.S. (NU)	Community Forestry Specialist, Portland OR
2009	Jonathon De Long, M.S. (NU)	Ph.D. (2016), Swedish Agricultural University, Uppsala, Sweden. Post-doc Manchester University, UK
	Zaid McKee-Krisberg M.S. (UIC)	Ph.D. (Biology), Temple University, PA. Post-doc UC Berkeley
2008	Rachel Gross M.S. (NU)	M.B.A. program
	Joseph Salerno M.S. (NU)	Ph.D. program, SUNY, Syracuse
2007	Kara Borden M.S. (UIC)	Instructor, Peggy Notabert Nature Museum, IL

UNDERGRADUATE INTERNS ADVISED AND DESTINATIONS:

* Hispanic; [§] African American; †small school/no research experience

2016	Stephanie Neal*	REU: University of Miami (sophomore)
	Aaron Lowenstein*	REU: Washington University (freshman)
	Ramsey Milliken [§]	Summer intern; DePaul University, B.A. December 2016
2014	Benjamin Sedillo*	REU; University of New Mexico, B.S. 2015; in M.S./Ph.D. program UC Santa Cruz
	Ramsey Millison [§]	REU; DePaul University
	Rosalba Herrera*	REU: Loyola University Chicago
2013	Jenifer Yost†	Intern: Lake Forest College, B.A. 2013; in PhD program, University of Wisconsin, Madison
	Kevin Amses†	REU: Humboldt State University, B.S. 2015; in PhD program, Michigan State University
	Allison Buiser [§]	Summer Intern: Knox College
	Mariah Allen [§]	REU: Lake Forest College
	Ben Girgenti	Summer intern: Brown University, B.S. 2015
2012	Brionna Slocum [§]	REU: Ohio State University, B.S. 2013; in Medical school.
2010	Ector Martell-Pina*	REU: University of Texas, El Paso, 2014, B.S./M.S
	Viviana Penuela*	REU: University of Florida, 2012 B.S.; in M.S. program, Florida International University
	Hannah Spungen	Summer intern: B.S. 2012, Rochester University
2009	Merry Marshall [§]	REU: Our Lady of the Lake College, 2010, B.S.; Conservation and Land Management Internship Program

2008	Andrea Jilling	REU: McGill University, B.S. 2011; in Ph.D. program, University of New Hampshire
	Robert Welter†	REU: Truman State University, B.S. 2009; Research Assistant, Smithsonian Tropical Research Institute
2006	Jonathon De Long†	REU: University of Wisconsin, Milwaukee, B.S. 2007; completed M.S., Ph.D. (see under graduate students)
2005	Christopher Bing	REU: University of California, Santa Barbara, B.S. 2007; M.S. Science/Math Education, UC Berkeley
2004	Cynthia Kadlec†	REU: Elmhurst College, B.A. 2006; Field Officer; Forest Preserve District of Cook County
2003-2004	Andrew Piotrowski	Research intern; Ph.D. 2009; Biochemistry, University of Illinois, Chicago

MENTORING:

Undergraduates:

REU Program Director: 2004- 2010

REU and Undergraduate Mentor: 2003 to present (Total: 14 students; 5 Hispanic; 6 African American)

Research projects in contemporary soil ecology the results of which have been presented at national meetings, e.g., Ecological Society of America, Soil Ecology Society.

High school students:

College First 2004- present (Total: 21; students; 7 Hispanic; 12 African American)

The program is designed to recruit inner city high school students with an interest in science, and provide them with 10 weeks of research experience, extra classes, and life skills to help them achieve a college placement.

Wheeling High School 2014- present (Total: 8 students; 5 Hispanic)

Research projects in seed biology, soil ecology and litter decomposition, the results of which have been presented at the Illinois Junior Science Fair and local science meetings. To date, students have received 3 gold, 2 silver and 2 bronze medals at Illinois Junior Science Fairs.

Futures Unlimited Program 2003-04, 2007

Role model for 'Future Unlimited: Careers in Science and Mathematics for Women'. Presented and discussed life as a soil ecologist and scientist during a workshop and forum for young women in high school intending to pursue a career in science (held at Oakton Community College).

Other mentoring

- Sydney Kim, John North High School, Riverside, CA, qualified for the State Finals of the California Science Olympiad (2000)

- Isabella de Muro, Northbrook High School, IL (2015- present): Gold medalist in the IL State Finals of the Junior Science Fair.

- Rebekah Bouvier, Liberty Christian College, IL (2015- present):

2015- Qualified for the state Science Fair finals, received a best in category award in Botany, and was nominated for the 2015 Broadcom MASTERS prize.

2016- Gold medalist in the IL State Finals of the Junior Science Fair.

Judge for:

Ecological Society of America Buell-Braun Award, 2000- present
Chicago Area Undergraduate Research Symposium, 2007- 2014

MEMBERSHIPS TO PROFESSIONAL ASSOCIATIONS:

Ecological Society of America

Society for Ecological Restoration

Soil Science Society of America

Microscopy Society of America

Soil Ecology Society of America

Mycological Society of America