

Curriculum Vitae

Louise Egerton-Warburton

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<https://www.chicagobotanic.org/research/staff/warburton>

EDUCATION

Post-doctoral

The University of Melbourne, Australia	1997 -1998
The University of California, Riverside	1994 -1997

Graduate

Curtin University, Australia	PhD, Environmental Biology	1990 - 1994
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Undergraduate

Curtin University, Australia	BS, Biology/ Chemistry (highest Honors)	1986 - 1989
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PROFESSIONAL APPOINTMENTS

Northwestern University	Professor of Biology (Adjunct)	2005 - present
Chicago Botanic Garden	Conservation Scientist	2001 - present
University of California, Riverside	Research Associate (Mycology)	1999 – 2001
The University of Melbourne, Australia	Post-doctoral (Botany, Chemistry)	1997 -1998
The University of California, Riverside	Post-doctoral (Soil Ecology)	1994 -1997

AWARDS, HONORS AND FELLOWSHIPS

Research

Cambridge University, England, BBSRC Post-doctoral Fellowship, (declined)	1995
Fulbright Foundation (Australia) Post-doctoral Fellowship	1994- 1997
Australian Microscopy Society, David Goodchild Prize (Biological Microscopy)	1994
Australian Mining Industry Council Medal for Environmental Research	1994
Commonwealth Forestry Graduate Research Fellowship, Australian government	1990- 1994
Australian Research Council Graduate Scholarship (declined)	1990
Australian Minerals Consolidated Prize: Best Senior/ Honors student	1989
Alcoa of Australia Prize: Best Junior student	1988
Worsley Alumina Prize: Best Sophomore student	1987

Mentoring/ Teaching

Stevenson High School SPARK Mentor award	2015, 2018, 2019
Chicago Botanic Garden, Outstanding College First Mentor	2010
Oakton Community College, Futures Unlimited: Careers in Science and Mathematics for Women, Role model	2003, 2004, 2007

GRANTS

In progress:

North Central-SARE (Invited full proposal)	Quantifying the ecosystem services provided by Kernza®, a perennial wheatgrass cultivar	Co-PI	\$250,000	2021-2024
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Funded:

Funding source	Title	Role	Amount	Year
The Darwin Initiative Round 25	Maximising community and conservation benefits from plants of Mount Mulanje	Collaborator (PI- Botanic Gardens Conservation International)	\$388,252 CBG portion TBD	2020-2022
Northwestern University Initiative for Large Data	Data collection and analysis in sustainable agriculture	Co-PI	\$35,000	2018-2019
The Darwin Initiative Round 23	Domestication of Mulanje Cedar for Improved Livelihoods	Collaborator (PI- Botanic Gardens Conservation International)	\$252,172; CBG portion \$6,728 + participant costs	2017-2019
NSF	Acquisition of a ploidy analyzer at Chicago Botanic Garden	Co- PI	\$101,048	2017
Northwestern University Institute for Sustainability and Energy	Metagenomic discovery of novel lignin-degrading fungi for biofuel production	PI	\$30,000	2013 - 2014
American Chemical Society	Survey and characterization of fungal bound lipids from an organic geochemical perspective	Co-PI	\$100,000	2012-2014
Northwestern University Institute for Sustainability and Energy	Fungal macromolecular products as potential novel biofuel source	Co-PI	\$45,000	2011
Northwestern University Institute for Sustainability and Energy	Fungal macromolecules in C-sequestration and facilitating electron transfer	Co- PI	\$50,000	2010
NSF	Research Experiences for Undergraduates (REU) Site, Plant biology and conservation: genes to ecosystems	PI	\$272,000	2007-2010
Chicago Wilderness Grants Program	The role of mycorrhizal fungi in the invasion of exotic plant species in prairies	PI	\$15,000	2006

NASA	Polarization sensing of nitrogen fertilization effects	Co- PI	\$100,000	2005-2006
National Council for Science in Sustainable Forestry	Biodiversity implications of post-fire recovery strategies in the California chaparral	PI	\$50,000	2005-2006
NSF	Research Experiences for Undergraduates (REU) Site, Plant Conservation and Biology	Co- PI	\$234,008	2004 - 2006
NSF	SBIR Phase I: Polarization sensing of stress levels in vegetation	Co- PI	\$100,000	2004
USDA Forest Services	Anthropogenic nitrogen deposition and mycorrhizae in urban and rural forests	PI	\$102,520	2003-2005
NSF	Immediate post-fire response of soil biological and pedogenic properties at the San Dimas lysimeter bio-sequence	Co- PI	\$52,000	2003
Prior to appointment at the Chicago Botanic Garden:				
University of California Shipley-Skinner Endowment	For everything a season: soil seed banks and fire in the coastal sage scrub	PI	\$26,500	2001
Australian Research Council	Mycorrhizae and the restoration of terrestrial orchids in urban areas	PI	\$185,000	2000 - 2003
Western Collieries Ltd.	Utilization of mycorrhizal inoculation in the restoration of coal mine tailings	PI	\$21,500	1993-1994
AMC Mineral Sands Ltd.	Seed source and seed quality in restoration practice	PI	\$10,500	1989

PUBLICATIONS

Total citations: 3809 (June 2020)

h-index: 24

i10-index: 38

*Undergraduate student; †graduate student; ‡post-doctoral researcher

50) †Ning, C., Mueller, G.M., **Egerton-Warburton**, L.M., Xiang, W., Yan, W. and Liu, Y. (2020). Differences in ectomycorrhizal community assembly between native and exotic pines are reflected in their enzymatic functional capacities. *Plant and Soil* **446**, 179–193.

<https://doi.org/10.1007/s11104-019-04355-9>

Journal IF: 3.761

Times cited: -

49) †Ning, C., **Egerton-Warburton**, L.M., Mueller, G.M., Xiang, W., and Yan, W. (2019). Host phylogenetic relatedness and soil nutrients shape ectomycorrhizal community composition in native and exotic pine plantations. *Forests* **10**, 263 <https://doi.org/10.3390/f10030263> (Special Issue: The Ecology of Fine Roots and Mycorrhizas in Forests)

Journal IF: 2.543

Times cited: 3

48) †Ning, C., Mueller G.M., **Egerton-Warburton**, L.M., Wilson A.W., Yan W., and Xiang, W. (2018). Diversity and functioning of ectomycorrhizal fungal communities following nitrogen fertilization in an urban-adjacent pine plantation. *Forests* **9**: 99 <https://doi.org/10.3390/f9030099>

Journal IF: 2.543

Times cited: 5

47) 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. (2018). Arbuscular mycorrhizal fungal traits could mediate ecosystem responses to nitrogen deposition. *Journal of Ecology* **106**: 480-489. (Special Issue: Mycorrhizal Fungi as Drivers and Modulators of Ecosystem Processes)

Journal IF: 5.68

Times cited: 37

46) †Morgan, B.S.T. and **Egerton-Warburton**, L.M. (2017). Barcoded NS31/AML2 primers for high-throughput sequencing of arbuscular mycorrhizal communities in environmental samples. *Applications in Plant Sciences* **5**: 1700017.

Journal IF: 1.389

Times cited: 6

45) †Desai, N., Wilson, A.W., Powers, J.M., Mueller, G.M., and **Egerton-Warburton, L.M.** (2016). Mycorrhizal community structure in *Quercus oleoides* in a restored seasonally dry tropical forest. *Environmental Research Letters* **11**: 125007. (Special Issue: Conservation of Dry Seasonal Tropical Forests)

Journal IF: 6.192

Times cited: 7

44) *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* **80**: 992-1002.

Journal IF: 1.997

Times cited: 6

43) 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* **94**: 425-433.

Journal IF: 1.178

Times cited: 8

42) 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. *Restoration Ecology* **24**: 626–636. * Undergraduate

Journal IF: 2.544

Times cited: 10

41) 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* **80**: 376-394.

Journal IF: 1.997

Times cited: 5

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

Journal IF: 1.460

Times cited: 7

39) †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.

Times cited: 15

38) †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.

Journal IF: 4.041

Times cited: 35

37) 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.

Journal IF: 3.761

Times cited: 27

36) Querejeta, **Egerton-Warburton**, L.M., and Allen, M.F. (2009). Topographic position modulates the mycorrhizal response of oaks to inter-annual rainfall variability. *Ecology* **90**: 649-662.

Journal IF: 5.175

Times cited: 100

35) Bidartondo, M., Bruns, T.D., Blackwell, M., Edwards, I., Taylor, A.F.S., Horton, T., Zhang, N., ... **Egerton-Warburton**, L.M. ... Hughes, K. (2008). Preserving accuracy in GenBank. *Science* **319**: 5870.

Journal IF: 41.063

Times cited: 334

34) **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.

Journal IF: 1.644

Times cited: 37

33) 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.

Journal IF: 8.759

Times cited: 238

32) 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.

Journal IF: 6.305

Times cited: 195

31) 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.

Journal IF: 3.114

Times cited: 85

30) Querejeta, J.I., Egerton-Warburton, L.M., and Allen, M.F. (2007). Hydraulic lift may buffer rhizosphere hyphae against the negative effects of severe soil drying in a California oak savanna. *Soil Biology and Biochemistry* **39**: 409-417.

Journal IF: 5.290

Times cited: 173

29) 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.

Times cited: 20

28) 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.

Times cited: 58

27) 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.

Journal IF: 4.735

Times cited: 70

- 26)** 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.
Journal IF: 4.378
Times cited: 163
- 25)** 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.
Journal IF: 10.200
Times cited: 325
- 24)** 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.
Journal IF: 5.175
Times cited: 420
- 23)** **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.
Journal IF: 3.761
Times cited: 59
- 22)** 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.
Journal IF: 3.011
Times cited: 239
- 21)** **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.
Times cited: 7
- 20)** **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.
Journal IF: 4.847
Times cited: 75
- 19)** **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.
Journal IF: 3.114
Times cited: 107

18) 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.

Journal IF: 3.151

Times cited: 12

17) 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.

Journal IF: 4.378

Times cited: 426

Policy document:

<https://www.rivm.nl/publicaties/review-and-revision-of-empirical-critical-loads-and-dose-response-relationships>

16) 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.

Journal IF: 1.178

Times cited: 24

15) Schultz, T.F., Egerton-Warburton, L., Crawford, S.A., and Wetherbee, R. (2000). Identification of a 41 kDa protein embedded in the biosilica of scales and bristles isolated from *Mallomonas splendens* (Synurophyceae, Ochrophyta). *Protist* **152**: 315-327.

Journal IF: 2.701

Times cited: 11

14) 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.

Journal IF: 3.114

Times cited: 30

13) 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.

Journal IF: 5.360

Times cited: 102

12) 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.

Journal IF: 3.656

Times cited: 11

11) 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.

Journal IF: 0.931

Times cited: 22

10) 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.

Journal IF: 3.656

Times cited: 102

9) 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.

Journal IF: 1.178

Times cited: 5

8) Egerton-Warburton, L.M., Ghisalberti E.L. (1995). Essential oil composition of *Chamelaucium uncinatum* (Myrtaceae). *Phytochemistry* **40**: 837-839.

Journal IF: 5.547

Times cited: 8

7) 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.

Journal IF: 1.769

Times cited: 1

6) 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.

Journal IF: 1.178

Times cited: 63

5) 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.

Journal IF: 1.329

Times cited: 1

4) 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.

Journal IF: 1.988

Times cited: 8

3) 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.

Journal IF: 1.327

Times cited: 17

2) 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* **155/156**: 481-484.

Journal IF: 3.761

Times cited: 18

1) 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.

Journal IF: 2.451

Times cited: 1

In review

*Undergraduate student; †graduate student; ‡post-doctoral researcher

†Ning, C., **Egerton-Warburton, L.M.**, Mueller, G.M., Xiang, W., and Yan, W. Host identity is the key determinant of initial ectomycorrhizal fungal community assembly in exotic and native pine seedlings. *Applied Soil Ecology*.

In revision/ preparation

*Buiser, A.M., Herrera, F., **Egerton-Warburton, L.M.**, Mueller G.M., P. Herendeen, and P.R. Raven. Fungi in lignified roots from the Early Cretaceous of Mongolia: revealing an unexplored mycobiota.

Egerton-Warburton, L.M., †Schreiner, K.M., Brunner, V., *Sanchez, B., *Schultz, J., †Morgan, B.S.T., and Blair, N.E. Transformation of fungal necromass: temporal changes in mass loss are reflected in microbial community composition and necromass chemistry. For submission to *Soil Biology and Biochemistry*.

Technical reports and encyclopedias

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.

Times cited: -

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).

Times cited: 3

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. pp. 79-96.

Times cited: 20

Allen, M.F., **Egerton-Warburton**, L.M., Treseder, K.K., Cario, C.H., Lindahl, A.E., Lansing, J.L., Querejeta, J.I., Karen, O., Harney, S., and Zink, T. (2005). Biodiversity of Mycorrhizal Fungi in Southern California. In: Planning for Biodiversity: Bringing Research and Management Together. Eds. B. E. Kus and J.L. Byers. USDA Forest Service Gen. Tech. Rep. PSW-GTR-195. Pp. 43- 56.

Times cited: 1

Egerton-Warburton, L.M., Grown, D.J., Considine, J.A. (1994). Genetic resources for *Chamelaucium uncinatum* (Geraldton wax). New Ornamental Crops and the Market for Floricultural Products. Acta Horticulturae https://www.actahort.org/books/397/397_9.htm

Times cited: 2

Popular press

Egerton-Warburton, L.M. 2018. Leadership as your lodestar. CSA News.

<https://dl.sciencesocieties.org/publications/csa/abstracts/63/10/28?access=0&view=article>

See also: <https://www.soils.org/membership/women-in-science/feature-articles>

CONFERENCE PRESENTATIONS AND ACTIVITIES

Total number of conferences representing the Chicago Botanic Garden: 54 (14 International)

Total number of presentations: 73

Number of presentations with student as primary author or co-author: 46

Year	Meeting	Presentation type (number)	No. Under-grad coauthors	No. Graduate student (co)authors
2019	International Mycorrhiza meeting (ICOM10)	Oral, invited; Poster	1	2
2019	Ecological Society of America	Symposium, oral invited (declined)	-	-
2018	Ecology of Soil Microbes	Oral, contributed; Poster	1	1
2018	Society of Wetland Scientists	Oral, contributed	-	2
2018	Ecological Society of America	Poster	-	2
2017	American Public Gardens Association	Symposium, oral (invited)	-	-
2017	Association for Tropical Biology and Conservation	Oral, contributed; Poster	1	1
2017	International Mycorrhiza meeting (ICOM9)	Oral, contributed; Poster	-	2
2017	International Society for Environmental Biology	Oral, contributed	-	-
2017	Soil Metagenomics DOE-JGI	Poster	-	1
2017	Midcontinental Paleobotany Symposium	Poster	1	-

2017	Mycological Society of America	Oral, contributed	-	1
2017	Soil Ecology Society	Oral, contributed; Poster	1	3
2016	Soil Science Society of America	Oral, contributed	2	-
2015	International Mycorrhiza meeting (ICOM8)	Poster	-	1
2015	International Union of Soil Scientists	Workshop	-	-
2015	Midwest Great Lakes Society for Ecological Restoration	Oral, contributed	-	1
2015	Society for Ecological Restoration	Oral, contributed; Poster	-	2
2015	Soil Ecology Society	Oral, contributed; Poster	-	1
2015	Soil Science Society of America	Poster	-	-
2015	American Geophysical Union	Poster	3	-
2014	Soil Metagenomics DOE-JGI	Poster	-	1
2014	American Geophysical Union	Posters (2)	4	-
2014	Association for Tropical Biology and Conservation	Oral, contributed; Poster	-	1
2014	Earth's Living Skin	Oral, contributed; Poster	-	1
2014	Goldschmidt 2014	Oral, contributed; Poster	1	-
2014	Mycological Society of America	Poster	-	1
2014	Midwest Great Lakes Society for Ecological Restoration	Oral, contributed	-	1
2014	Society for Ecological Restoration	Oral, contributed	-	-
2014	World Congress in Soil Science	Poster	1	1
2013	Ecological Society of America	Posters (2)	1	1
2013	International Union of Soil Scientists, Soil Carbon Colloquium	Oral, contributed (2)	1	1
2013	Society for Ecological Restoration	Oral, contributed; Poster	-	1
2011	Ecological Society of America	Posters (2)	2	-
2010	NSF REU workshop	Poster	-	-
2010	Ecological Society of America	Posters (2)	3	-
2009	Ecological Society of America	Posters (4)	1	2
2009	Chicago Area Undergraduate Research Symposium	Poster	1	-
2008	Ecological Society of America	Symposium, oral invited	-	-
2008	Chicago Area Undergraduate Research Symposium	Poster	1	-

2008	Restoration in Botanic Gardens, Kew	Workshop, Invited	-	-
2007	Botanical Society of America	Oral, invited	-	-
2007	Ecological Society of America	Poster (2)	2	-
2007	NSF REU workshop	Poster	-	-
2007	Woody Plant Symposium	Oral, invited	-	-
2006	Agronomy Society North Central branch meeting	Poster, workshop	-	-
2006	Ecological Society of America	Oral, contributed	1	-
2006	Soil Ecology Chicago	Oral, invited	-	-
2006	Ecological Society of America	Poster	1	-
2006	Soil Science Society of America	Oral, contributed	1	-
2006	World Congress in Soil Science	Poster	-	-
2005	Soil Ecology Society	Poster	1	-
2004	Ecological Society of America	Posters (2)	-	-
2003	Soil Ecology Society	Posters (2)	-	-

TEACHING EXPERIENCE

Graduate

* NU, Northwestern University

Location	Short title	Format	Role	Year
NU*	Field Methods in Plant Biology and Conservation (PBC450)	Laboratory	Instructor	2009, 2010
NU	Soils in the Environment (PBC418/ENV SCI 390)	Lecture	Instructor	2018, 2013-2015, 2008, 2005
NU	Soils in the Environment (PBC418/ENV SCI 390)	Laboratory	Instructor	2018, 2013-2015, 2008, 2005
NU	Independent study- Soil Lab (PBC499)	Laboratory	Instructor	2009-present
NU	Graduate research	Research	Instructor	2009-present
University of Illinois, Chicago	Ecosystems (BIOS535)	Lecture	Guest lecturer	2008, 2009
NU	Ecosystem Ecology (PBC422)	Lecture	Guest lecturer	2007
University of Illinois, Urbana-Champaign	Natural Resources Methods (NRES410)	Lecture	Guest lecturer	2004

Undergraduate Location	Short title	Format	Role	Year
NU	Undergraduate Research	Research	Instructor	2019-present
Oakton Community College	Research in Biology	Lecture	Guest lecturer	2003, 2004
Curtin University	Horticultural Botany	Laboratory	Instructor	1994
Curtin University	Horticultural Botany	Laboratory	TA	1990- 1993
Curtin University	Plant Physiology	Laboratory	TA	1993
Curtin University	Ecology	Laboratory	TA	1988
Curtin University	Plant Biology	Laboratory	TA	1992-1993
Curtin University	Biometry	Laboratory	TA	1993
Edith Cowan University	Botany	Laboratory	TA	1992- 1993

MENTORING AND ADVISING

Summary of post-doctoral researchers and students mentored and advised.

Level	Total number	Women	Hispanic	African-American	Hawaiian - Pacific Islander	Veteran	Small college*
Post-doctoral	3	2					
Graduate, PhD	6 (4) [¶]	2		2			
Graduate, MS	18 (13)	10		1			
Undergraduate	51 (48)	25	10	8	1	3	33
High school	52	35	15	13			

*Small college with no access to research experiences per NSF guidelines

[¶] Value in parentheses indicates number of students graduated

Individual	Role	Year	Destination
Post-doctoral			
Kathryn Schreiner	Post-doctoral Mentor	2012-2014	Assistant Professor, University of Minnesota Duluth
Jianwu Tang	Post-doctoral Mentor	2007-2009	Marine Biological Lab, Woods Hole
Lara Jefferson	Post-doctoral Mentor	2003	Managing Director, EnPeritus Ltd
PhD			
Benjamin Morgan	PhD advisor	2011- present (ABD)	Environmental Scientist, Metropolitan Water District of Chicago, IL
Amelia Litz	PhD committee	2019- present	-

Lauren Umek	PhD advisor	Graduated 2018	Restoration Manager, Chicago Park District
Lynnaun Johnson	PhD committee	Graduated 2019	Post-doc, Rush University
Chen Ning	PhD committee	Graduated 2018	Assistant Professor, Central South University of Forestry and Technology, China
Matt McCreary	PhD committee	Graduated 2016	NSF Post-doc, UW Madison

MS

Lucas Chamberlain	MS advisor	2018- present	-
Lindsey Gohd	MS co-advisor	2018- present	-
Logan Novak	MS co-advisor	2019- present	-
Emma Leavens	MS committee	Graduating 2020	Nachusa Grasslands, Research Assistant
Matt Evans	MS committee	2018- present	-
Kaiyue Zhu	MS advisor	Graduated 2018	Novogene Technologies
Jessica Ross	MS advisor	Graduated 2017	UW Madison Arboretum
Corey Palmer	MS advisor	Graduated 2014	Biology Instructor, Northeastern Illinois University
Robert Hevey	MS advisor	Graduated 2014	PhD student, Northwestern University
Nik Desai	MS advisor	Graduated 2013	Urban Forestry specialist, Portland City Council, OR
Jonathan deLong	MS advisor	Graduated 2009	PhD Swedish Agricultural University, post-doc University of Wageningen, Netherlands
Rachel Gross	MS advisor	Graduated 2008	MBA
Anne Nies	MS committee	Graduated 2014	Senior data strategist, Rally Health
Chen Ning	MS committee	Graduated 2014	PhD, Northwestern University
Zaid McKee-Krisberg	MS committee	Graduated 2009	PhD Temple University, NSF post-doc UC Berkeley
Lauren Umek	MS committee	Graduated 2008	PhD, Northwestern University
Joe Salerno	MS committee	Graduated 2008	Research assistant, NU
Kara Borden	MS committee	Graduated 2007	Education specialist, Peggy Notaebart Nature Museum

SERVICE TO THE PROFESSION

Service	Journal/ Organization	Position	Year(s)
Editorial service	<i>Restoration Ecology</i>	Co-ordinating Editor	2016- present
	<i>Geoderma Regional</i>	Editorial Board	2016- present
	<i>Applied Soil Ecology</i>	Editorial Board	2014-2017
Manuscript reviews			
Journal		Year (No. manuscripts)	
<i>Agronomy</i>		2017 (2)	
<i>Annals of Botany</i>		2015, 2014 (2), 2012, 2011 (2), 2009	
<i>Applied Soil Ecology</i>		2020, 2019 (4), 2018, 2017 (2), 2016 (15), 2015 (8), 2014 (10), 2013 (7), 2012 (3), 2011 (5), 2010, 2009 (2)	
<i>Applications in Plant Sciences</i>		2018	
<i>Applied and Environmental Microbiology</i>		2015	
<i>Archives of Agronomy and Soil Science.</i>		2018	
<i>Canadian Journal of Soil Science</i>		2017	
<i>Ecology</i>		2020, 2012, 2009	
<i>Ecology Letters</i>		2011	
<i>European Journal of Soil Science</i>		2011 (2)	
<i>FEMS Microbiology Ecology</i>		2018	
<i>Forests</i>		2019 (2), 2018, 2017, 2016	
<i>Functional Ecology</i>		2015, 2014, 2013, 2011	
<i>Fungal Biology</i>		2017 (2), 2016, 2014, 2013	
<i>Fungal Ecology</i>		2017 (2), 2014	
<i>Geoderma/ Geoderma Regional</i>		2020, 2019 (2), 2018, 2017, 2016 (4), 2015 (2), 2014	
<i>Global Change Biology</i>		2011	
<i>HortScience</i>		2011 (2)	
<i>International Journal of Plant Sciences</i>		2013	
<i>Journal of Ecology</i>		2018, 2017 (4), 2016 (2), 2011	
<i>Journal of Experimental Botany</i>		2011 (2)	
<i>Journal of Vegetation Science</i>		2016	
<i>Microbial Ecology</i>		2014	
<i>Microbiology Open</i>		2017	
<i>Mycorrhiza</i>		2018, 2016, 2015, 2011, 2006	
<i>New Phytologist</i>		2014, 2011	
<i>Oecologia</i>		2019, 2018, 2016, 2015, 2014, 2009	
<i>Oikos</i>		2018	
<i>Peer Journal</i>		2018, 2017	
<i>Plant and Soil</i>		2019, 2018, 2016 (2), 2012, 2011	
<i>Plant Ecology</i>		2016	
<i>PLOS One</i>		2018, 2016 (16), 2015 (2)	
<i>Restoration Ecology</i>		2020, 2019 (3), 2018 (7), 2017 (5), 2016 (3), 2015	
<i>Nature- Reports</i>		2020	
<i>Sustainability</i>		2020, 2017	
<i>Water</i>		2018	

Service	Organization	Position	Year(s)
Panel service	National Science Foundation	Ecosystems, Population and Community Processes Panels	2019, 2017, 2016, 2015, 2013, 2008, 2007
Ad-hoc grant reviews	National Science Foundation	Ecosystems, REU, Population and Community Processes	1998- present
Society service	Soil Science Society of America (SSSA)	Women in Soil Science Committee (Member)	2017- 2019
	SSSA	Applied Soil Science Committee (Chair)	2018
	SSSA	Student Research Symposium Contest Committee (Member)	2018- 2019
	SSSA	Francis and Evelyn Clark Graduate Student Scholarship Committee (Member)	2013- 2015
	American Public Gardens Association (APGA)	Session organizer/presenter, Soil Health in Botanic Gardens	2017
	Ecological Society of America	Buell- Braun Awards (Judge)	2002- 2014
	Soil Ecology Society of America	Organizing committee, Soil Ecology Meeting at Argonne National Laboratories, IL	2005
	West Australian Society for Electron Microscopy	Committee	1993- 1994
Student symposia and competitions	Chicago Public Schools, Skinner West	Space Race Competition (Judge)	2012
	University of Illinois, Chicago	Student Research Forum (Judge)	2010

Chicago Area Undergraduate Research Consortium	Student Research Symposium (Judge)	2009- 2013
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SERVICE TO THE DEPARTMENT AND INSTITUTION

*PBC- Joint Northwestern University- Chicago Botanic Garden Graduate Program in Plant Biology and Conservation

Committee service	*PBC PhD admissions	2020- present
	PBC MS admissions	2016- 2019, 2008-2010
	PBC Curriculum committee	2020- present

Chicago Botanic Garden	World Environment Day	Demonstrations and workshops on soil and fungi for the public	2010- present
	Workshop on Mycorrhizas	Garden Club of America	2009
	CBG Behind the Scenes	Workshops and tours for members, donors, and visitors	2007- present
	Research Experiences for Undergraduates (REU) Program	Program founder (2004) and co-ordinator and director, web master and administrator	2004- 2010

TRAINING AND PERSONAL DEVELOPMENT (examples)

2020 Planning and organization workshop, NU Faculty Development
 2019 Bash/ Python scripting workshop
 2018 Bioinformatics pipeline (JAMP) workshop and training
 2016 Social media utilization- Snapchat workshop
 2015 QIIME (bioinformatics processing) workshop
 2013 Fungal genomics workshop, DOE Joint Genome Institute
 2010 NSF REU Director workshop
 2007 NSF REU Director workshop

COMMUNITY OUTREACH

Evanston Spring Film Series, Panel member for discussion of 'Dirt- The Movie'	2015
Friends of Lovelace Park (Evanston IL), science advisor (soils)	2019- present

MEDIA COVERAGE- Examples

2017 Crop, Soils, Agronomy (CSA) News Magazine, Soil Science Society of America
<https://dl.sciencesocieties.org/publications/csa/articles/62/1/8> doi:10.2134/csa2017.62.0102

2017: Phys.org

<https://phys.org/news/2017-09-arbuscular-mycorrhizal-fungal-exposed-dna.html>

2017: Botanical Society of America, Twitter

https://twitter.com/Botanical/status/913125030200057856?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E914875975716007937&ref_url=https%3A%2F%2Fplu.mx%2Fplum%2Fa%2F%3Fdoi%3D10.3732%2Fapps.1700017

2016: Wiley Ecology

https://twitter.com/wileyecology/status/727876797489131520?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E727876797489131520&ref_url=https%3A%2F%2Fplu.mx%2Fplum%2Fa%2F%3Fdoi%3D10.1111%2Frec.12362

2013: Discovery Channel

Filmed a segment on ‘Soils’ with Trillium Productions, Evanston, for the Discovery channel.

2015: National Geographic

<https://blog.nationalgeographic.org/2015/07/08/the-foundations-of-our-forests/>

2005: National Science Foundation

https://www.nsf.gov/news/news_summ.jsp?cntn_id=104301&org=

2005: Science News

<https://www.sciencenews.org/blog/food-for-thought/using-light-sense-plants-health-and-diversity>

NON-ACADEMIC EDUCATION, CERTIFICATION AND WORK EXPERIENCES

Les Mills® Certified Group Exercise Instructor	2016- present
Red Cross CPR-AED certification	2007- present
Registered Nurse	1984- 1987
West Australian School of Nursing BS (Nursing)	1984

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Soil Science Society of America	2005- present
Society for Ecological Restoration	2015- present
Soil Ecology Society	1999- present
Ecological Society of America	1994- 2016