

## ROBERT OZ AUGÉ

(last updated 3/18/19)

### Employment History

<u>Ranks/Positions</u>	<u>Institution</u>	<u>Department</u>	<u>Dates</u>
Professor Emeritus	University of Tennessee		2017-
Professor	University of Tennessee	Plant Sciences, OHLD <sup>1</sup>	1998-2017
Department head	University of Tennessee	Plant Sciences	2009-2013
Interim department head	University of Tennessee	Plant Sciences	2008
Associate professor	University of Tennessee	OHLD	1992-1998
Assistant professor	University of Tennessee	OHLD	1987-1992
Postdoctoral associate	USDA-ARS	Weed Physiology Group	1986-1987
Graduate Research Assistant	Washington State University	Horticulture	1983-1986

<sup>1</sup>Ornamental Horticulture & Landscape Design

### Educational History

<u>Institution</u>	<u>Program</u>	<u>Dates</u>	<u>Degree</u>
Washington State University	Horticulture	1983 - 1986	Ph.D.
Southern Illinois University	Biology	1976 - 1978	M.S.
Southern Illinois University	Botany	1972 - 1975	B.A.

### Courses

Meta-analysis & Literature Reviews	Preparing Thesis Proposals
Landscape Plant Physiology	Drought Physiology
Horticultural Internet Communication	Plant Water Relations
Environmental Plant Ecophysiology	Mineral Stress
Plant and Garden Photography	Scientific Writing
Freshman Seminar	

**Thesis/Dissertation Chair/Graduate Assistantship Mentor:** 13 masters students, 1 doctoral student

**Member of Graduate Committees:** 29 other M.S. and PhD students

### Refereed Publications

**Note:** names preceded by an asterisk are authors that are/were graduate students, postdoctoral or technical associates, or visiting scientists in my research program

\*Toler HD, Augé RM, Benelli V, Allen F, Ashworth A. 2019. Global meta-analysis reveals agro-grassland productivity varies based on species diversity over time. *Crop Science* (In press)

Pothula SK, Grewal PS, Augé RM, Saxton AM, Bernard EC. 2018. Agricultural intensification and urbanization negatively impact soil nematode richness but not abundance: a meta-analysis. *Journal of Nematology* (In press).

Tian NN, Poudyal NC, Augé RM, Hodges DG, Young TM. 2017. [Meta-analysis of price responsiveness of timber supply](#). *Forest Products Journal* 67: 152-163

\*Wang S\*, Augé RM, \*Toler HD. 2017. [Arbuscular mycorrhiza formation and its function under elevated atmospheric O<sub>3</sub>: A meta-analysis](#). *Environmental Pollution* 226: 104-117.

Augé RM, \*Toler HD and Saxton AM. 2016. [Mycorrhizal stimulation of leaf gas exchange in relation](#)

- [to root colonization, shoot size, leaf phosphorus and nitrogen: a quantitative analysis of the literature using meta-regression](#). *Frontiers in Plant Science* 7:1084. doi: 10.3389/fpls.2016.01084
- Shrestha U, Butler DM, Augé RM. 2016. [A meta-analysis of impact of anaerobic soil disinfestation on pest suppression and yield of horticultural crops](#). *Frontiers in Plant Science* doi.org/10.3389/fpls.2016.01254
- Ma Y, Augé RM, Cheng ZM. 2016. [Can overexpression of cation/proton antiporter 1 family genes increase salt tolerance? A meta-analysis](#). *Plant Biotechnology Journal* 15: 162–173. doi 10.1111/pbi.12599
- Shrivastava G, Ownley BH, Augé RM, \*Toler H, Dee M, Vu A, Köllner TG, Chen F. 2015. [Colonization by arbuscular mycorrhizal and endophytic fungi enhanced terpene production in tomato plants and their defense against herbivorous insects](#). *Symbiosis* 65: 65-74.
- Augé RM, \*Toler HD and Saxton AM. 2014. [Arbuscular mycorrhizal symbiosis and osmotic adjustment in response to NaCl stress: a meta-analysis](#). *Frontiers in Plant Science* 5: 562. doi: 10.3389/fpls.2014.00562
- Gualandi RJ, Jr, Augé RM, Kopsell DA, Ownley BH, Chen F, \*Toler HD, Dee ME, Gwinn KD. 2014. [Fungal mutualists enhance growth and phytochemical content in \*Echinacea purpurea\*](#). *Symbiosis* 63: 111-121.
- Augé RM, Saxton AM, \*Toler HD. 2014. [Arbuscular mycorrhizal symbiosis alters stomatal conductance of host plants more under drought than under amply watered conditions: a meta-analysis](#). *Mycorrhiza* 25: 13-24.
- Augé RM, \*Toler HD, Sams CE, \*Nasim G. 2008. [Hydraulic conductance and water potential gradients in squash leaves showing mycorrhiza-induced increases in stomatal conductance](#). *Mycorrhiza* 18: 115-121.
- Augé RM, \*Toler HD, \*Moore JL, \*Cho K, Saxton AM. 2007. [Comparing contributions of soil versus root colonization to variations in stomatal behavior and soil drying in mycorrhizal \*Sorghum bicolor\* and \*Cucurbita pepo\*](#). *Journal of Plant Physiology* 164: 1289-1299.
- Hanson PJ, Tschaplinski TJ, Wullschleger SD, Todd DE Jr, Augé RM. 2007. [The resilience of upland-oak forest canopy trees to chronic and acute precipitation manipulations](#). In Buckley DS and Clatterbuck WK, Eds. Proceedings 15th Central Hardwood Forest Conference, Knoxville, TN February 27–March 1, 2006, United States Department of Agriculture, Forest Service Southern Research Station, e-General Technical Report SRS–101, pp. 3-12.
- \*Cho K, \*Toler HD, Lee J, Ownley BH, Stutz JC, \*Moore JL, Augé RM. 2006. [Mycorrhizal symbiosis and response of sorghum plants to combined drought and salinity stresses](#). *Journal of Plant Physiology* 163: 517-528.
- Lefsrud, M.G., D.A. Kopsell, R. Augé. 2006. [Biomass production and pigment accumulation in kale grown under increasing photoperiods](#). *HortScience* 41: 603-606.
- Klingeman WE, van Iersel MW, Kang JG, Augé RM, \*Moore JL, Flanagan PC. 2005. [Whole plant gas exchange measurements of mycorrhizal 'Iceberg' roses exposed to cyclic drought](#). *Crop Protection* 24:

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- Augé RM. 2004. [Arbuscular mycorrhizae and soil/plant water relations](#). *Canadian Journal of Soil Science* 84: 373-381.
- Augé RM, Sylvia DM, Park SJ, BATTERY BR, Saxton AM, \*Moore JL, \*Cho K. 2004. [Partitioning mycorrhizal influence on water relations of \*Phaseolus vulgaris\* into soil and plant components](#). *Canadian Journal of Botany* 82: 503-514.
- Augé RM, \*Moore JL, Sylvia DM, \*Cho K. 2004. [Mycorrhizal promotion of host stomatal conductance in relation to irradiance and temperature](#). *Mycorrhiza* 14: 85-92.
- Augé RM, \*Moore JL, \*Cho K, Stutz JC, Sylvia DM, Al-Agely A, Saxton AM. 2003. [Relating dehydration resistance of mycorrhizal \*Phaseolus vulgaris\* to soil and root colonization by hyphae](#). *Journal of Plant Physiology* 160: 1147-1156.
- Augé RM, \*Stodola AJW, \*Moore JL, Klingeman WE, \*Duan X. 2003. [Comparative dehydration tolerance of foliage of several ornamental crops](#). *Scientia Horticulturae* 98: 511-516.
- Augé RM, \*Moore JL. 2002. [Stomatal response to nonhydraulic root-to-shoot communication of partial soil drying in relation to foliar dehydration tolerance](#). *Environmental and Experimental Botany* 47: 217-229.
- Augé RM, Windham MT, \*Moore JL, Witte WT, \*Kubikova E, Klingeman WE, \*Evans RM, \*Reiss J, Flanagan PC, Saxton AM. 2002. [Leaf curl and water relations of kousa dogwoods showing resistance to summer stress](#). *Journal of Environmental Horticulture* 20: 143-147.
- Klingeman WE, Augé RM, Flanagan PC. 2002. [Arbuscular mycorrhizal assessment of Ornamental trees grown in tennessee field soils](#). *HortScience* 37: 778-782.
- \*Bano A, Harper JE, Augé RM, Neuman DS. 2002. [Changes in phytohormone levels following inoculation of two soybean lines differing in nodulation](#). *Functional Plant Biology* 29: 965-974.
- Augé RM, \*Stodola AJW, \*Tims JE, Saxton AM. 2001. [Moisture retention properties of a mycorrhizal soil](#). *Plant and Soil* 230: 87-97.
- Augé RM. 2001. [Water relations, drought and VA mycorrhizal symbiosis](#). *Mycorrhiza* 11: 3-42.
- Augé RM, \*Kubikova E, \*Moore JL. 2001. [Foliar dehydration tolerance of mycorrhizal cowpea, soybean and bush bean](#). *New Phytologist* 151: 535-541.
- \*Kubikova E, \*Moore JL, Ownley BH, Mullen MD, Augé RM. 2001. [Mycorrhizal impact on osmotic adjustment in \*Ocimum basilicum\* during a lethal drying episode](#). *Journal of Plant Physiology* 158: 1227-1230.
- Augé RM. 2001. [Online directory of international mycorrhizologists](#). *Mycorrhiza* 11: 115-116.
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- [stomatal conductance with hydraulic, chemical and environmental variables in five urban tree species](#). *Scientia Horticulturae* 90: 305-320.
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- Augé RM, \*Duan X, \*Croker JL, Witte WT, \*Green CD. 1998. [Foliar dehydration tolerance of twelve deciduous tree species](#). *Journal of Experimental Botany* 49:753-759.
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- \*Croker JL, Witte WT, Augé RM. 1998. [Stomatal sensitivity to nonhydraulic root-to-shoot signals of partial soil drying in six temperate, deciduous forest trees](#). *Journal of Experimental Botany* 49:761-774.
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- Augé RM, \*Stodola AJW, \*Ebel RC, \*Duan X. 1995. [Leaf elongation and water relations of mycorrhizal sorghum in response to partial soil drying: two \*Glomus\* species at varying phosphorus fertilization](#). *Journal of Experimental Botany* 46: 297-307.
- Erbaugh D, Windham M, \*Stodola AJW, Augé RM. 1995. [Light intensity and drought stress as predisposition factors for dogwood anthracnose disease](#). *Journal of Environmental Horticulture* 13:186-189.

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- Augé RM, \*Stodola AJW, \*Ebel RC, \*Duan X. 1994. [Nonhydraulic signalling of soil drying in mycorrhizal maize.](#) *Planta* 193: 74-82.
- \*Ebel RC, \*Stodola AJW, \*Duan X, Augé RM. 1994. [Nonhydraulic root to shoot signalling in VA mycorrhizal and nonmycorrhizal sorghum exposed to partial soil drying or root severing.](#) *New Phytologist* 127: 495-505.
- \*Chapman DS, Augé RM 1994. [Drought resistance strategies of four native ornamental perennials.](#) *Journal of the American Society for Horticultural Science* 119: 299-306.
- Vogelien DL, Augé RM, Hendrix J, Hickok LG. 1993. [Response of sodium chloride tolerant mutants of the fern \*Ceratopteris\*: growth and ion, carbohydrate and water relations of gametophytes.](#) *Plant, Cell and Environment* 16: 959-966.
- Augé RM, Foster JG, Loescher WH, \*Stodola AJW . 1992. [Symplastic sugar and free amino acid molality of \*Rosa\* roots with regard to mycorrhizal colonization and drought.](#) *Symbiosis* 12: 1-17.
- Augé RM, Brown MS, Bethlenfalvay GJ, \*Stodola AJW. 1992. [Stomatal response of mycorrhizal cowpea and soybean to short-term osmotic stress.](#) *New Phytologist* 120: 117-125.
- \*Duan X, Augé RM. 1992. [Stomatal response to short-term osmotic stress of cowpea leaves given varying phosphorus fertilization.](#) *Journal of Plant Nutrition* 15: 265-274.
- Augé RM, \*Duan X. 1991. [Mycorrhizal symbiosis and nonhydraulic root signals of drying soil.](#) *Plant Physiology* 97: 821-824.
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- Augé RM, Gealy DR, Franceschi VR, Ogg AG. 1990. [Comparative effects of metribuzin and its ethylthio analog on the ultrastructure of developing chloroplasts in seedlings of \*Triticum aestivum\* and \*Bromus tectorum\*.](#) *Pesticide Biochemistry and Physiology* 38: 204-215.
- Augé RM, \*Stodola AJW, Gupta SD, Hovanesian JR, Conger, BV. 1990. [Using pressure-volume analysis to characterize NaCl-induced osmotic and turgor adjustment in \*in vitro\* cultures.](#) *Journal of Plant Physiology* 136: 15-23.
- Augé RM, \*Stodola AJW, Pennell B. 1990. [Osmotic and turgor adjustment in \*Rosa\* foliage drought-stressed under varying irradiance.](#) *Journal of the American Society for Horticultural Science* 115: 661-667.
- Augé RM, \*Stodola AJW. 1990. [An apparent increase in symplastic water contributes to greater turgor in mycorrhizal roots of droughted \*Rosa\* plants.](#) *New Phytologist* 115: 285-295.

- Augé RM, \*Stodola AJW, Gealy DR. 1990. [Turgor maintenance in \*Rosa\* foliage given three levels of nitrogen fertilization and subjected to drought](#). *Journal of Environmental Horticulture* 8: 108-112.
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- Augé RM, Hickok LG, \*Stodola AJW. 1989. [Psychrometric pressure-volume analysis of osmoregulation in roots, shoots and whole sporophytes of salinized \*Ceratopteris\*](#). *Plant Physiology* 91: 322-330.
- Augé RM, Schekel KA, Wample RL. 1987. [Leaf water and carbohydrate status of VA mycorrhizal rose exposed to water deficit stress](#). *Plant and Soil* 99: 291-302.
- Augé RM, Schekel, KA, Wample RL. 1987. [Rose leaf elasticity changes in response to drought acclimation and mycorrhizal colonization](#). *Physiologia Plantarum* 70: 175-182.
- Augé RM, Schekel KA, Wample RL. 1986. [Greater leaf conductance of VA mycorrhizal rose plants is not related to phosphorus nutrition](#). *New Phytologist* 103: 107-116.
- Augé RM, Schekel KA, Wample RL. 1986. [Osmotic adjustment in leaves of VA mycorrhizal and nonmycorrhizal rose plants in response to drought stress](#). *Plant Physiology* 82: 765-770.

### Book Chapters

- Augé RM, \*Moore JL. 2005. Arbuscular mycorrhizal symbiosis and plant drought resistance. In: Mehrotra VS (ed.) *Mycorrhiza: Role and Applications*. Allied Publishers Limited, New Dehli.
- Augé RM. 2003. [Stomatal behavior of forest trees in relation to hydraulic, chemical and environmental factors](#). In: Hanson P, Wullschleger SD (ed) *North American Temperate Deciduous Forest Responses to Changing Precipitation Regimes*. Springer-Verlag, New York, pp. 100-120.
- Ruiz-Marín O, Augé RM, Trigiano RN. 2001. Efecto de sales de metales pesados en la regeneración *in vitro* de Crisantemo (*Dendranthema grandiflora*). In: Dallos MP (ed) *Biotechnologia Agricola: Un Enfoque Hacia el Mejoramiento de Plantes*. Asociación Colombiana de Estudios Vegetales *in vitro* - ACEVIV, Bogotá, Colombia, pp. 89-98.
- Augé RM. 2000. [Stomatal behavior of arbuscular mycorrhizal plants](#). In: Kapulnik Y, Douds DD (eds) *Arbuscular mycorrhizas: physiology and function*. Kluwer Academic Publishers, Dordrecht, the Netherlands, pp. 201-237.

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