

## Tanya E. Cheeke

Assistant Professor, School of Biological Sciences  
Washington State University, Tri-Cities  
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### Education

**Doctor of Philosophy, Biology**, Portland State University. Title: *An evaluation of the nontarget effects of Bacillus thuringiensis maize on arbuscular mycorrhizal fungi in the soil ecosystem*. Advisors: Mitchell Cruzan and Todd Rosenstiel

**Bachelor of Science**, The Evergreen State College. *Emphasis*: Sustainable Agriculture, Environmental Science

### Experience and Professional appointments

2017 – present      **Assistant Professor**, School of Biological Sciences, Washington State University (WSU)

2015 – 2017      **National Science Foundation Postdoctoral Fellow**, Department of Biology, Indiana University (IU), Mentor: James Bever (Department of Biology). Title: *Evaluating the role of plant-soil feedbacks in invaded grasslands*

2013 – 2015      **Carl Tryggers Postdoctoral Fellow**, Department of Forest Mycology and Plant Pathology, Swedish University of Agricultural Sciences (SLU)  
Mentors: Petra Fransson (SLU), Anna Rosling (Uppsala University), Richard Phillips (IU). Title: *Improving process level understanding of the roles of fungal mycelia in carbon sequestration in temperate forests*

2010 – 2013      **Environmental Protection Agency Science to Achieve Results Fellow**, Terrestrial Systems Soils and Plant Ecology Division

2011 – 2012      **Visiting Scholar**, Indiana University. Research training in molecular identification of arbuscular mycorrhizal fungi

2010      **Local Organizer**, *Evolution* Annual Meeting, Portland, OR

2005 – 2009      **Teaching Assistant**, Portland State University (PSU), Portland, OR

### Grants in review

2022      Department of Energy, *Building inclusive capacity and partnerships to tackle soil-water-microbe-root feedbacks in forest regeneration after wildfires*, PI, \$149,995

2022      Department of Energy, *Feedback effects of wildfire in mycorrhizal fungal dynamics and ecosystem processes in boreal forests*, PI, \$999,703

2022      National Science Foundation, *BII: Forest Survival Institute (ForSIte): advancing a phytobiome model of tree performance and forest resilience*, PI of WSU subaward, 12.5M (\$713,180 to WSU)

2021      National Science Foundation, IRES Track I: Student Research Experience in Germany to Resolve Complex Plant Traits, Senior Personnel, \$299,722

## Grants and Fellowships Awarded

2021	WSU College of Arts and Sciences Seed Grant (Co-PI), <i>Temperate forests on fire: the role of coupled hydrological and microbial soil drivers in tree regeneration success or failure after burning</i> , \$15,000
2021	Washington State Wine Commission and the Washington Grape and Wine Research Program (PI), <i>Effect of mycorrhizal inoculants on grapevine growth and nutrient uptake</i> , \$12,848
2020	EMSL User Proposal (Co-PI), <i>Past is Prologue: Ancient glass analogues for the long-term disposal of vitrified nuclear waste</i> . PI: CI Pearce; Co-PIs: AE Plymale, JJ Neeway, VG Danna, TE Cheeke, JL Weaver, JS McCloy, DK Peeler, J. Allen. Collaboration with researchers at PNNL. User proposal for facilities and equipment use; <i>equivalent value</i> \$80,684
2020	WSU CSANR BioAg Grant Program (PI), <i>A field evaluation of mycorrhizal inoculants on grapevine growth and nutrient uptake</i> , \$39,976
2019	Washington State Wine Commission and the Washington Grape and Wine Research Program (PI), <i>Effect of mycorrhizal inoculants on grapevine growth and nutrient uptake</i> , \$25,000
2018	MJ Murdock Charitable Trust Partners in Science Program (PI), <i>Evaluating the role of soil microbes in ecological restorations</i> , \$15,000
2018	WSU ADVANCE Leadership Grant for Faculty Success Program, National Center for Faculty Development and Diversity, \$3450
2018	WSU College of Arts and Sciences International Travel Grant for travel to the International Mycological Congress, San Juan, Puerto Rico, \$1000
2018	International Mycological Congress Travel Grant, \$500
2017	Meyers Point Environmental Field Station, Co-PIs T.E. Cheeke and S. Roley. <i>Intersections of plant communities, soil microbes, and biogeochemical processes in the ecological restoration of agricultural land</i> , \$3000
2017	Alaska Airlines Imagine Tomorrow Travel Grant for the International Mycological Congress, San Juan, Puerto Rico, \$1858
2015	National Science Foundation Postdoctoral Fellowship in Biology, <i>Evaluating the role of plant-soil feedbacks in invaded grasslands</i> , \$138,000
2014	Indiana Academy of Sciences, Senior Research Grants Program \$2,908
2014	NSF REU Supplement Grant (co-written with PI Phillips) \$7,000
2011	Sigma Xi Grant in Aid of Research \$1,100
2010	Environmental Protection Agency STAR Fellowship \$111,000
2010	Sigma Delta Epsilon-Graduate Women in Science Grant \$3,000
2010	<i>Create a modern student commons in Science Building 2</i> . M. Kaiser, T.E. Cheeke, L. Bliss-Ketchum, T. Davidson, M. Eastman. \$300,000
2010	NSF Doctoral Dissertation Improvement Grant \$15,000
2009	Lindbergh Foundation \$10,580

## Honors and awards

2021	Ecology and Conservation Councilor, Mycological Society of America (Elected)
2019	Woman of Distinction award, Washington State University Tri-Cities
2017	Translational Mycology Postdoctoral Research Award, Mycological Society of America \$1200
2016	Early Investigator Award, New Phytologist Trust

2015	Forest Fungal Ecology Postdoctoral Research Award, Mycological Society of America \$2,500
2013	Dean's Award for Outstanding Academic Achievement, College of Liberal Arts and Sciences, Portland State University
2012	EcoService Award, Honored Distinction, Union of Concerned Scientists
2010	Graduate Student Research Award, Botanical Society of America \$500
2009	Best Student Oral Presentation, ESA Annual Meeting, Albuquerque, NM
2009	PSU President's Award for Outstanding University Service

**Publications** \*Undergraduate co-author, \*\* Graduate student co-author

### In revision

18. Kasanke, C., Zhao, Q., Alfaro, T., Walter, C., Hobbie, S., **Cheeke, T.E.**, and K. Hofmockel. AM fungal distribution differs among North American grassland ecosystems with minimal response to decadal fertilization of nitrogen and phosphorus. *In revision for Molecular Ecology*

17. Cifizzari, K.C. \*\*, Moyer, M.M., and **T.E. Cheeke**. *In revision*. Evaluation of a mycorrhizal inoculant and phosphorus fertilizer on *Vitis vinifera* growth and nutrient uptake.

### Published

16. Chaudhary, V.B., Holland, E.P., Charman-Anderson, S., Bell-Dereske, L., **Cheeke, T.E.**, Corrales, A., Duchicela, J., Egan, C., Gupta, M.M., Guzman, A., Hannula, S.E., Hestrin, R., Hoosein, S., Kumar, A., Mhretu, G., Neuenkamp, L., Soti, P., Xie, Y., and T. Helgason. 2022. What *are* mycorrhizal traits? *Trends in Ecology and Evolution*. doi: 10.1016/j.tree.2022.04.003

15. Nelson, L.W., Cifizzari, K.C. \*\*, and **T.E. Cheeke**. 2021. The effect of arbuscular mycorrhizal fungi on seed germination: An inquiry-based lab activity. *The American Biology Teacher*. 83(8), 537-541

14. **Cheeke, T.E.**, Schneider, M.\*, Saify, A., Brauner, M.\*, and R. Bunn. 2021. Role of soil biota in grassland restorations in high nutrient soil. *Restoration Ecology*. e13549

13. Frewert, A. \*\*, Trippe, K., and **T.E. Cheeke**. 2021. Can locally-sourced inoculum and biochar synergistically improve the establishment of mycorrhizal fungi in mine tailings? *Restoration Ecology*. e13518

12. Jack, C., Petipas, R., **Cheeke, T.E.**, Rowland, J., and M. Friesen. 2020. Microbial inoculants: silver bullet or microbial Jurassic Park? *Trends in Microbiology*. 29(4), 299-308

11. **Cheeke, T.E.**, Phillips, R.P., Kuhn, A.\*, Rosling, A., and P. Fransson. 2020. Variation in mycorrhizal hyphal production rather than turnover regulates standing fungal biomass in temperate hardwood forests. *Ecology*. 102(3):e03260

10. Plymale, A.E., Wells, J.R., Pearce, C.I., Brislaw, C.J., Graham, E.B., **Cheeke, T.E.**, Allen, J.L., Fansler, S.J., Arey, B.W., Bowden, M.E., Saunders, D.L., Danna, V.G., Tyrrell, K.J., Weaver, J.L., Sjöblom, R., Paul, R., McCloy, J.S., Hjärthner-Holder, E., Englund, M., Ogenhall, E., Peeler, D.K., and A.A. Kruger. 2020. Niche partitioning of microbial communities at an ancient vitrified hillfort, with implications for vitrified radioactive waste disposal. *Geomicrobiology Journal*, 38(1), 36-56

9. **Cheeke, T.E.**, Zheng, C., Koziol, L., Gurholt, C.R., and J.D. Bever. 2019. Sensitivity to AMF species is greater in late-successional than early-successional native or non-native grassland plants. *Ecology*. 100(12):e02855.
8. **Cheeke, T.E.**, Phillips, R. P., Brzostek, E.R., Rosling, A., Bever, J.D. and P. Fransson. 2017. Dominant mycorrhizal association of trees alters carbon and nutrient cycling by selecting for microbial groups with distinct enzyme function. *New Phytologist*. 214: 432–442.
7. Rosling, A., Midgley, M., **Cheeke, T.E.**, Fransson, P., and R.P. Phillips. 2016. Phosphorus cycling in deciduous forest soil differs between stands dominated by ecto- and arbuscular mycorrhizal trees. *New Phytologist*. 209:887-1323. *This study was highlighted in a Commentary: Kuyper and Koele 2016, New Phytologist, 209 (3): 894–895.*
6. Kolseth, A.K., D’Hertefeldt, T., Emmerich, M., Forabosco, F., Marklund, S., **Cheeke, T.E.**, Hallin, S., and M. Weih. 2015. Influence of genetically modified organisms on agro-ecosystem processes. *Agriculture, Ecosystems and Environment*. 214: 96-106.
5. **Cheeke, T.E.**, Schutte, U.M.E., Hemmerich, C.M., Cruzan, M.B., Rosenstiel, T.N., and J.D. Bever. 2015. Spatial soil heterogeneity has a greater effect on symbiotic arbuscular mycorrhizal fungal communities and plant growth than genetic modification with *Bacillus thuringiensis*. *Molecular Ecology*. 24: 2580-2593.
4. **Cheeke, T.E.**, Darby, H.\* , Bever, J.D., Rosenstiel, T.N., and M.B. Cruzan. 2014. Effect of *Bt* maize cultivation history on arbuscular mycorrhizal fungal colonization, spore abundance and diversity, and plant growth. *Agriculture, Ecosystems and Environment*. 195: 29-35. \
3. **Cheeke, T.E.**, Cruzan, M.B., and T.N. Rosenstiel. 2013. A field evaluation of arbuscular mycorrhizal fungal colonization in multiple lines of *Bt* and non-*Bt* maize. *Applied and Environmental Microbiology*. 79(13): 4078-4086.
2. **Cheeke, T.E.**, Rosenstiel, T.N., and M.B. Cruzan. 2012. Evidence of reduced arbuscular mycorrhizal fungal colonization in multiple lines of *Bt* maize. *American Journal of Botany*. 99(4): 700-707. *This study was featured on the cover of the American Journal of Botany.*
1. **Cheeke, T.E.**, Pace, B.A.\* , Rosenstiel, T.N., and M.B. Cruzan. 2011. The influence of fertilizer level and spore density on arbuscular mycorrhizal colonization of transgenic *Bt* 11 maize (*Zea mays*) in experimental microcosms. *FEMS Microbiology Ecology*. 75: 304-312.

#### **Book chapters (peer-reviewed)**

**Cheeke, T.E.** 2012. Effects of the cultivation of genetically modified *Bt* crops on nontarget soil organisms. In: Microbial Ecology in Sustainable Agroecosystems. Advances in Agroecology Series. Cheeke, T.E., Coleman, D.C., Wall, D.H. (Eds.) Boca Raton: CRC Press. pp. 153-227.

#### **Books – edited volumes**

**Cheeke, T.E.**, Coleman, D.C., and D.H. Wall (Editors) 2012. Microbial Ecology in Sustainable Agroecosystems. Advances in Agroecology Research. Boca Raton: CRC Press.

## Other articles, reports

**Cheeke, T.E.**, Branco, S., Haelewaters, D., Natvig, D.O., Maltz, M., Cantrell Rodriguez, S., Cafaro, M.J., and G. May. 2018. Diversity in the Mycological Society of America. Inoculum (MSA society newsletter, March 2018).

Bever, J.D., Bauer, J.T., House, G.L., **Cheeke, T.E.**, Koziol, L. Tipton, A., Schultz, P.A., Copprick, P.R., Duell, E.B., Zaiger, K.L., Wilson, G.W., and K.R. Hickman. 2017. Soil microbial communities: Critical roles in control of non-native invasive species and restoration of ecosystem functions. Strategic Environmental Research and Development Program (SERDP) Project R3-2330. Indiana University, Bloomington, Indiana, USA.

## Teaching

Spring 2022 Biology of Mutualisms (Biol 446/546) WSU  
Fall 2021 Plants and People (Biol 401, Capstone course), WSU  
Fall 2021 Advanced Topics in Biology, Restoration Ecology (Biol 589), WSU  
Summer 2021 Special Problems (Biol 499, student research), WSU  
Fall 2020 Special Problems (Biol 499, student research), WSU  
Fall 2020 Advanced Topics in Biology, Mycorrhizal Ecology (Biol 589), WSU  
Fall 2020 Plants and People (Biol 401, Capstone course), WSU  
Fall 2019 Mycorrhizal Ecology (Biol 589, Graduate discussion course), WSU  
Fall 2019 Plants and People (Biol 401, Capstone course), WSU  
Summer 2019 Special Problems (Biol 499, student research), WSU  
Spring 2019 General Microbiology (MBios 305), WSU  
Fall 2018 Plants and People (Biol 401, Capstone course), WSU  
Fall 2018 Special problems (Biol 499; student research), WSU  
Summer 2018 Special problems (Biol 499; student research), WSU  
Spring 2018 General Microbiology (MBios 305), WSU  
Spring 2018 Special problems (Biol 499; student research), WSU  
Fall 2009 Research and Society (BI 480), Teaching Assistant, PSU  
2007-2009 Molecular Methods in Microbiology (BI 488/588; lab), Teaching Assistant, PSU  
2007-2009 Introduction to Microbiology (BI 235; lab), Teaching Assistant, PSU  
Spring 2006 Genes and Society (BI 341), Teaching Assistant, PSU  
2005-2006 Principles of Biology (BI 251, BI 252; lab), Teaching Assistant, PSU

## Invited Seminars (†virtual due to COVID)

2022 WAVEx: Soil Inoculants Webinar†  
2021 Washington Native Plant Society†  
2021 Washington State University, Mount Vernon Northwestern Washington Research and Extension Center†  
2019 Portland State University, Keynote Speaker for Alumni Night, Portland, OR  
2019 Tyson Research Center, Washington University, Graduate student invited seminar speaker, St. Louis, MO  
2019 University of California Riverside, Department of Evolution, Ecology, and Organismal Biology, Riverside, CA  
2019 Walla Walla University, Department of Biological Sciences Biology Colloquium, College Place, WA

2018 Washington State University, Dept. of Crop and Soil Science, Pullman, WA  
 2018 Idaho Native Plant Society, Moscow, ID  
 2018 Horticulture seminar, WSU-Irrigated Agriculture Research and Extension Center, Prosser, WA  
 2018 Eastern Washington University, Department of Biology, Cheney, WA  
 2017 Pacific Northwest National Laboratory, Richland, WA  
 2017 Washington State University, School of Biological Sciences, Vancouver, WA  
 2017 Washington State University, School of Biological Sciences, Pullman, WA  
 2017 University of Idaho, Department of Soil and Water Systems, Moscow, ID  
 2017 Missouri State University, Department of Biology, Springfield, MO  
 2017 Washington State University, School of Biological Sciences, Richland, WA  
 2016 Towson University, Department of Biological Sciences, Towson, MD  
 2016 University of Kansas, Department of Ecology and Evolutionary Biology, Lawrence, KS  
 2016 Western Illinois University, Department of Biological Sciences, Macomb, IL  
 2016 University of Missouri, Division of Biological Sciences, Columbia, MO  
 2016 University of Montana, Division of Biological Sciences, Missoula, MT  
 2016 Cleveland State University, Department of Biological, Geological and Environmental Sciences, Cleveland, OH  
 2014 Indiana University, EcoLunch Seminar, Bloomington, IN  
 2014 Lewis and Clark College, Department of Biology, Portland, OR  
 2013 Army Polytechnic School, Sangolquí, Ecuador (via Skype)  
 2013 Swedish University of Agricultural Sciences, Department of Forest Mycology and Plant Pathology, Uppsala, Sweden  
 2013 Shahala Middle School, Vancouver, WA  
 2012 Indiana University, EcoLunch Seminar, Bloomington, IN

#### Invited Presentations at Scientific Meetings (\*presenter, †virtual due to COVID)

2021 Dick, W., Funck, R., Miller, K., **T.E. Cheeke**. Special Session: *Peer Review: Benefits and Opportunities or Why I Should Peer Review*. Invited Panelist. Soil Science Society of America International Meeting, Salt Lake City, UT.  
 2021 **Cheeke, T.E.\*** and J.D. Bever. *Restoration of native plant communities through microbial inoculations*. Invited presentation for the symposium: Microbial communities in the age of the Anthropocene. American Society of Microbiology†  
 2020 **Cheeke, T.E.\***, Nilson, N., Finnestad, A., Saify, A., Brauner, M., and R. Bunn. *Effect of Soil Microbial Inoculations on Plants Native and Non-Native to the Palouse*. Invited presentation for the symposium: Hot, Dry, and Salty: Plant-Microbe Interactions that Lead to Enhanced Productivity in Native and Managed Ecosystems. Soil Science Society of America†  
 2020 Phillips, R.P.\*, Beidler, K., Brzostek, E., **Cheeke, T.E.**, Craig, M., Keller, A., and M. Midgley. *Trait differences between mycorrhizal guilds promotes variation in soil organic matter dynamics*. Invited presentation for the symposium: Mycorrhizal fungi as modulators of soil organic matter dynamics. Soil Science Society of America†  
 2020 **Cheeke, T.E.\*** and J.D. Bever. *Restoration of native plant communities through microbial inoculations*. Invited presentation for the symposium: Microbial communities in the age of the Anthropocene. American Society of Microbiology, Chicago, IL. *Cancelled due to COVID. \*symposium resubmitted for 2021 mtg*  
 2019 Phillips, R.P.\*, Beidler, K.V., **Cheeke, T.E.**, Craig, M.E., Liang, C., Kennedy, P.G., Mushinski, R.M., and J. Raff. *Do mycorrhizal associations promote distinct soil microbial communities and microbially-mediated activities?* Invited presentation for the

- symposium: Mapping Earth's Microbiome: Understanding Macroecological Rules of Microbial Distributions and their Consequences for Ecosystems. Ecological Society of America, Louisville, KY.
- 2018 **Cheeke, T.E.\*** *Testing the efficacy of soil microbial transplants to facilitate the establishment of native prairie plants in invaded grasslands.* Invited talk for the symposium: Prairie Restoration in the Inland Northwest. Society for Ecological Restoration, Spokane, WA.
- 2018 **Cheeke, T.E.\***, Branco, S. Haelewaters, D., Natvig, D.O., Maltz, M., Cantrell Rodriguez, S., Cafaro, M.J., and G. May. *Diversity in the Mycological Society of America.* Invited presentation for the symposium: Boosting Diversity in Mycology. International Mycological Congress, San Juan, Puerto Rico
- 2017 **Cheeke, T.E.\*** and J.D. Bever. *Restoration 2.0: Does reintroducing native soil organisms improve plant restoration efforts?* Invited speaker for the Organized Oral Session: Plant-Soil Interactions in a Changing World: Exploring the interface between global change drivers and plant-soil feedbacks. Ecological Society of America, Portland, OR.
- 2017 Bauer, J.\*, **Cheeke, T.E.**, Koziol, L., Reynolds, H., and J.D. Bever. *Plant-soil feedbacks and secondary succession: How feedbacks shape plant community response to disturbance and restoration efforts.* Invited talk for the Organized Oral Session: Plant-Soil Interactions in a Changing World: Exploring the interface between global change drivers and plant-soil feedbacks. Ecological Society of America, Portland, OR.
- 2016 Bever, J.\*, Koziol, L., House, G., Bauer, J., Gurholt, C., **Cheeke, T.E.**, Zaiger, K., Hickman, K., Wilson, G., and P. Schultz. *Mycorrhizae, succession, and restoration: Principle and practice.* Invited talk for the Organized Oral Session: Soil Microbial Communities as Facilitators of Ecosystem Restoration and Recovery. Ecological Society of America, Fort Lauderdale, FL.
- 2016 **Cheeke, T.E.\***, Gurholt, C.R., and J.D. Bever. *Mycorrhizal responsiveness differs among non-native and native prairie plants.* Invited talk for the symposium: Ecology of Fungal Invasions. Mycological Society of America, Berkeley, CA.

#### Contributed Presentations at Scientific Meetings (\*presenter, †virtual due to COVID)

- 2022 **Cheeke, T.E.\***, Nilson, N., Finnestad, A., Saify, A., Brauner, M., and R. Bunn. *Effect of Soil Microbial Inoculations on Plants Native and Non-Native to the Palouse.* Mycological Society of America, Gainesville, FL, *upcoming July 2022*
- 2022 Cifizzari, K.P., Moyer, M.M., Lueck, M.R., and **Cheeke, T.E.\*** *Evaluation of mycorrhizal inoculant products and effects on young grapevine development,* Soil Ecology Society, Richland, WA, *upcoming May 2022*
- 2021 Nelson, L. Berner, R.\*, and **T.E. Cheeke.** *A course-based undergraduate research experience to investigate the effect of mycorrhizal fungi on shrub-steppe plant growth and development.* Botanical Society of America and Mycological Society of America joint meeting<sup>†</sup>.
- 2020 **Cheeke, T.E.\*** and R. Bunn. *An evaluation of mycorrhizal responsiveness in plants native and non-native to the Palouse.* Ecological Society of America<sup>†</sup>
- 2020 Davies, G.E.\* and **T.E. Cheeke.** *Effect of soil microbial inoculations on plant-pollinator interactions in a tallgrass prairie restoration.* Ecological Society of America<sup>†</sup>
- 2020 Evans, R.\*, Bishop, J., and **T.E. Cheeke.** *Nitrogen deposition and invasive herbivores alter mycorrhizal colonization and soil carbon in the developing ecosystem of Mount St. Helens.* Ecological Society of America<sup>†</sup>

- 2020 Plymale, A.\*, Wells, J., Pearce, C., Brislawn, C., Graham, E., **Cheeke, T.E.**, Allen, J., Fansler, S., Arey, B., Matthews, B., Bowden, M., Saunders, D., Danna, V., Weaver, J., Sjöblom, R., McCloy, J., Hjärthner-Holder, E., Englund, M., Ogenhall, E., Peeler, D., and A. Kruger. *Surface characteristics of ancient glass analogues for long-term disposal of vitrified radioactive waste*. Clay Minerals Society Meeting<sup>†</sup>
- 2020 Winward, A.\* and **T.E. Cheeke**. *Evaluating the role of soil microbes in ecological restorations*. M.J. Murdock Charitable Trust Partners in Science National Conference, San Diego, CA
- 2019 Frewert, A.\*, Trippe, K., and **T.E. Cheeke**. *Formosa Superfund: Is there a synergistic plant response to mycorrhizae and biochar co-amendments*. Mycological Society of America, Minneapolis, MN.
- 2019 Wells, J.R.\*, Plymale, A.E., Pearce, C.I., Brislawn, C., Graham, E.B., Fansler, S.J., Arey, B.W., Soltis, J.A., Bowden, M., **Cheeke, T.E.**, Weaver, J.L., Sjöblom, R., and A.A. Kruger. *Biochemical evaluation of ancient hillfort glass as an analogue for nuclear waste glass*. Northwest Regional Meeting, American Chemical Society, Portland, OR.
- 2016 **Cheeke, T.E.\***, Branco, S., Haelewaters, D., Natvig, D.O., Maltz, M. Cantrell Rodrigues, S., and G. May. Poster title: *Diversity in the Mycological Society of America*. Mycological Society of America, Berkeley, CA.
- 2015 **Cheeke, T.E.\***, Phillips, R.P., Kuhn, A., Rosling, A., Bever, J.D., and P. Fransson. Talk title: *Mycelial production and standing fungal biomass are higher in temperate hardwood forests dominated by ectomycorrhizal trees than in forests dominated by arbuscular mycorrhizal trees*. International Conference on Mycorrhiza, Flagstaff, AZ.
- 2015 Adams, C., **Cheeke, T.E.**, Haelewaters, D., Lee, S., Maltz, M.\*, Scharnagl, K., Smyth, C., and J.K. Uehling. Poster title: *The Mycological Society of America Student Section*. International Conference on Mycorrhiza, Flagstaff, AZ.
- 2015 **Cheeke, T.E.\***, Phillips, R.P., Kuhn, A., Rosling, A., Bever, J.D., and P. Fransson. Talk title: *Mycelial production and standing fungal biomass are higher in temperate hardwood forests dominated by ectomycorrhizal trees than in forests dominated by arbuscular mycorrhizal trees*. Botanical Society of America / Mycological Society of America joint meeting, Edmonton, Alberta.
- 2014 **Cheeke, T.E.\***, Phillips, and P. Fransson. Poster title: *Mycelial production and turnover differ in temperate hardwood forests dominated by arbuscular mycorrhizal trees versus ectomycorrhizal trees*. Mycological Society of America, East Lansing, MI.
- 2012 **Cheeke, T.E.\***, Bever, J.D., Cruzan, M.B., and T.N. Rosenstiel. Talk title: *An evaluation of arbuscular mycorrhizal fungal colonization in split-plots of Bt and non-Bt maize*. Ecological Society of America, Portland, OR.
- 2011 **Cheeke, T.E.\*** Poster title: *Genetically modified corn: Nontarget effects of insect-resistant Bt corn on symbiotic soil fungi*. Environmental Protection Agency Science to Achieve Results Fellowship Conference, Washington D.C.
- 2011 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B. Cruzan. Talk title: *A field evaluation of AMF colonization in multiple Bt maize lines*. Ecological Society of America, Austin, TX.
- 2010 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B.. Cruzan. Talk title: *Transgenic Bt maize: An evaluation of nine different Bt maize isolines on arbuscular mycorrhizal fungi*. Botanical Society of America, Providence, RI.
- 2010 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B. Cruzan. Talk title: *Transgenes in maize: Evidence of reduced AMF colonization in multiple Bt maize lines*. Evolution. Portland, OR.
- 2010 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B. Cruzan. Talk title: *Transgenes in maize: Evidence of reduced AMF colonization in multiple Bt maize lines*. Food in Bloom conference, Bloomington, IN.



- 2010 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B. Cruzan. Poster title: *Transgenes in maize: Evidence of reduced AMF colonization in multiple Bt maize lines*. EvoWIBO, Port Townsend, WA.
- 2009 **Cheeke, T.E.\***, Cruzan, M.B., and T.N. Rosenstiel. Talk title: *Transgenes in maize: Evidence of reduced arbuscular mycorrhizal colonization in multiple Bt maize isolines*. Ecological Society of America, Albuquerque, NM.
- 2008 **Cheeke, T.E.\***, Rosenstiel, T.N., and M.B. Cruzan. Talk title: *Effects of nutrient stress on the colonization of mycorrhizal fungi in transgenic Bt corn*. Ecological Society of America, Milwaukee, WI.

### Outreach and Education

- 2020 Master Gardener’s presentation & microscope activity, Presentation title: Examining the role of soil microbes in ecological restorations, WSU Tri-Cities, Richland, WA
- 2019 Science Extravaganza, “Good” and “Bad” Microbes using a bread dough activity (yeast) and hand washing activity (germs) with preschoolers, Children’s Garden Montessori, Richland, WA
- 2018 Idaho Native Plant Society, Moscow, ID – Invited talk title: *Harnessing the power of soil microbes for ecological restorations*
- 2018 Science Extravaganza, DNA extraction from strawberries with preschoolers, Children’s Garden Montessori, Richland, WA
- 2017 *Role of mycorrhizal fungi in ecological restorations*. Eco Logic LLC, Bloomington, Indiana
- 2017 *Role of mycorrhizal fungi in ecological restorations*. City of Bloomington Parks and Recreation Department, Bloomington, Indiana
- 2016 Donated plants and set up native butterfly garden at Sunflower Daycare for Earth Day, Indiana University, Bloomington, IN
- 2013 *The wonderful world of soil microbes*. Middle school science classes, Shahala Middle School, Vancouver, WA
- 2012 *The science of seeds and seed dispersal*. Science Night, Grandview Elementary School, Bloomington, IN
- 2011 *The science of seed dispersal*. Science Night, The Bloomington Project School. Bloomington, IN
- 2009 – 2011 Darwin Day, co-organizer, Portland State University

### Professional Service

- 2021 Presenter for WSUTC Sciences Information Night
- 2020 Honors thesis student evaluator for Madeline Boe (Cornejo lab, WSU)
- 2020 Regional Palouse Prairie research meeting organizer (Oct. 2020)
- 2020 Academic Session Presenter, WSU Tri-Cities Preview Day
- 2019 Academic Session Presenter, WSU Tri-Cities Preview Day
- 2019 Search committee member for Associate Vice Chancellor for Faculty Affairs, WSU-TC
- 2019 Women in Soil Ecology (WISE) mentor
- 2019 Graduate Women in Science grant proposal reviewer
- 2018-2019 Mycological Society of America Diversity and Inclusion Committee
- 2018 WSU CAHNRS Search Committee for Rhizosphere Ecologist, Fall 2018

2018	EMSL grant review panel, Pacific Northwest National Lab, Richland, WA
2017	USDA grant review panel, Washington DC
2016 - 2017	Chair of the Mycological Society of America Diversity Committee
2016	Panelist for professional development workshop for IU women in science
2016	NSF Proposal Reviewer (Ad hoc), Division of Environmental Biology
2016	Organized a Professional Development workshop for students and postdocs at the Mycological Society of America meeting, Berkeley, CA
2016	Organized “Careers in Mycology, Interactive Luncheon” at the Mycological Society of America meeting, Berkeley, CA
2015-2016	Ecology Committee, Mycological Society of America
2015-2016	Diversity Committee, Mycological Society of America, Founding member
2014-2016	Postdoc Representative, Mycological Society of America
2012-present	Reviewer of manuscripts for Fungal Ecology, Soil Biology and Biochemistry, Environmental Evidence, European Journal of Soil Biology, Journal of Applied Ecology, Research in Microbiology, Mycologia, Plant and Soil, New Phytologist, Functional Ecology, Botany, Mycorrhiza, Molecular Ecology, Restoration Ecology, Applied Soil Ecology
2013	Intel science fair judge, Plant Sciences. Portland, OR
2011– 2012	Promotion and Tenure Committee, Graduate Student Representative, PSU
2011	Session Organizer and Moderator, <i>Recruitment and Retention of Underrepresented Students in the Sciences</i> , Environmental Protection Agency STAR Fellows Conference
2011	Student Advisory Council, EPA STAR Conference
2010 – 2011	Promotion and Tenure Committee, Graduate Student Representative, PSU
2010 – 2011	Faculty Liaison, Biology Graduate Student Association, PSU
2008 – 2010	President, Biology Graduate Student Association, PSU
2009	Faculty Hiring Committee, Graduate Student Representative, PSU
2009	McNair Scholar mentor, PSU
2009	Moderator, Ronald E. McNair Research Conference, PSU
2009	Soil microbiology workshop coordinator, Master Gardener Organic Certification Program, Oregon State University
2009	ESA Symposium organizer: <i>How can soil microbial ecology contribute to the sustainability of agricultural systems?</i> Albuquerque, NM
2007 – 2008	Secretary/Treasurer, Biology Graduate Student Association, PSU
2006 – 2013	Mentor in the Cruzan and Rosenstiel labs, PSU

### Students mentored, trained, and/or supervised (\*independent research project)

2021-present	Rey Huachambe, undergraduate researcher, WSU
2021-present	*Madeline Lueck, MS student, WSU
2021-present	Emily Arredondo, undergraduate researcher, WSU
2021-present	Michael Nunnelee, undergraduate researcher, WSU
2021-present	Stephanie Warner, undergraduate researcher, WSU
2020-present	*Rachel Berner, PhD student, WSU
2020-present	*Alexis Sullivan, MS student, WSU
2019-present	Gunnar Wickenhagen, undergraduate researcher, WSU
2019-2021	*KC Cifizzari, MS, WSU; <b>defended Spring 2021</b>
2018-2021	*Gunner Davies, MS, WSU; <b>defended Spring 2021</b>
2020-2021	*Rylan Hull, undergraduate researcher, WSU
2020-2021	Guislen Eager, undergraduate researcher, WSU

2018-2020 \*Austin Frewert, MS, WSU; **defended Fall 2020**

2018-present \*Rebecca Evans, PhD student, WSU

2020 Mischa Schutz, undergraduate researcher, WSU

2020 Dylan Hartwig, undergraduate researcher, WSU

2019 Jeanette Lilly, undergraduate researcher, WSU

2019 Cassidi Harris, undergraduate researcher, WSU

2019 Nicholas Sconzo, undergraduate researcher, WSU

2019 Noah Nilson, undergraduate researcher, WSU

2019 Alea Taylor, undergraduate researcher, WSU

2019 \*Javier Chavez Lara, undergraduate researcher, WSU

2019 Patrick Zecchino, undergraduate researcher, WSU

2019 Marcy McCall, undergraduate researcher, WSU

2018-2019 \*Megan Brauner, Chancellor Summer Scholar, WSU

2018-2019 \*Tristan Anderson, post-bacc researcher, WSU

2018-2020 Ashley Finnestad, undergraduate researcher, WSU

2018-2019 Sabrina Sandhu, undergraduate researcher, WSU

2018 \*Ella Krinitsyn, Chancellor Summer Scholar, WSU

2018 \*Mary Schneider, Honors Thesis, WSU

2018 Gerard Lomas, undergraduate researcher, WSU

2018 Shadan Abdali, undergraduate researcher, WSU

2018 Lupita Gomez, undergraduate researcher, WSU

2018 Bryndalyn Corey, undergraduate researcher, WSU

2018 Catalina Yopez, undergraduate researcher, WSU

2018 Jasmine Gonzales, undergraduate researcher, WSU

2017-2018 Alifya Saify, Lab manager, WSU

2016-2017 \*K.C. Cifizzari, McNair Scholar, Indiana University

2016-2017 Jake Graham, Lab technician, Indiana University

2016-2017 Alifya Saify, Lab technician, Indiana University

2016 Alex Varney, Lab technician, Indiana University

2016 Wendy Anderson, Lab Manager, Indiana University

2016 T.K. Williams, Lab technician, Indiana University

2016 Jacob Hopkins, Lead Lab Technician, Indiana University

2016 Jaclyn Gill, Lab technician, Indiana University

2016 Vanessa Snyder, Lab technician, Indiana University

2014 \*Alex Kuhn, NSF REU student, Phillips lab, Indiana University

2014 Robin Johnson, undergraduate researcher, Phillips lab, Indiana University

2013 Sarah Arteaga, post-baccalaureate, Cruzan lab, Portland State University

2011 – 2013 Scott Kiel, undergraduate researcher, Cruzan lab, PSU

2009 – 2013 \*Kiernan Garrett, high school intern, Cruzan lab, PSU

2009 – 2013 \*Alessandra Elliott, high school intern, Cruzan lab, PSU

2011 – 2012 \*Ann Rasmussen, post-baccalaureate researcher, Cruzan lab, PSU

2011 – 2012 \*Erik Hasenkopf, undergraduate researcher, Cruzan lab, PSU

2010 – 2012 \*Hayley Darby, post-baccalaureate researcher, Cruzan lab, PSU

2010 – 2012 \*Luke Reyes, undergraduate researcher. Honor's Thesis, Cruzan lab, PSU

2008 – 2012 Matt LaPlante, undergraduate researcher, Cruzan lab, PSU

2010 – 2011 Jennifer Jones, undergraduate researcher, Cruzan lab, PSU

2009 – 2010 Danielle Butler, undergraduate researcher, Cruzan lab, PSU

2009 – 2010 Belma Hergic, undergraduate researcher, Cruzan lab, PSU

2009 \*Denissia Withers, McNair Scholar, PSU

2007 – 2009 \*Corey Guidry, undergraduate researcher, Cruzan lab, PSU

2008 – 2009 Dan Kowalkiewicz, undergraduate researcher, Cruzan lab, PSU

2008 Madeline Steele, post-baccalaureate researcher, Cruzan lab, PSU  
 2007 Melia Chase, high school summer intern, Cruzan lab, PSU  
 2007 Sage Wagner, high school summer intern, Cruzan lab, PSU  
 2007 Emily Fielding, undergraduate researcher, Cruzan lab, PSU  
 2006 – 2008 \*Brian Pace, undergraduate researcher, Honor's Thesis. Cruzan lab, PSU

**Professional Affiliations:** Mycological Society of America, Ecological Society of America, Soil Ecology Society, International Mycorrhiza Society, Society for Ecological Restoration, Washington Native Plant Society

### Media Coverage/Research Publicity

- 2021 **The Good Fruit Grower:** *Good to Know: Harnessing fungi power, How soil fungi could reduce fertilizer needs and improve grapevine growth* <https://www.goodfruit.com/good-to-know-harnessing-fungi-power/>
- 2020 **CAS News:** *Publications update: Why should I peer review?* <https://access.onlinelibrary.wiley.com/doi/10.1002/csan.20271>
- 2020 **The Daily Evergreen:** *WSU Tri-Cities researchers use fungi to replace chemical fertilizers* <https://dailyevergreen.com/95641/news/ws-u-tri-cities-researchers-use-fungi-to-replace-chemical-fertilizers/>
- 2020 **WSU Insider:** *Wine and fungi: The perfect pairing, news article on my wine grape research* <https://news.wsu.edu/2020/11/30/wine-fungi-perfect-pairing/>
- 2020 **NewsWise:** *Article on the symposium I presented my Palouse Prairie research in at the Soil Science Society of America conference* <https://www.newswise.com/articles/hot-dry-and-salty-symposium-to-cover-plant-microbe-interactions-in-a-changing-world>
- 2020 News articles highlighting my partnership with a recently funded NSF grant (1.4 M), led by a team of data scientists from Oregon's three largest universities:
- **WSU CAS:** <https://cas.wsu.edu/news/2020/08/08/oregon-scientists-team-up-to-use-big-data-to-address-societal-challenges/>
  - **OSU Newsroom:** <https://today.oregonstate.edu/news/oregon-scientists-team-use-big-data-address-societal-challenges>
  - **Mirage News:** <https://www.miragenews.com/oregon-scientists-team-up-to-use-big-data-to-address-societal-challenges/>
- 2020 **Pacific Northwest Ag Network, Wave Minute:** *Relationship Between Wine Health And Soil Health, Radio story highlighting my wine grape research* <https://www.washingtonagnetnetwork.com/2020/08/07/wave-minute-relationship-between-wine-health-and-soil-health/>
- 2019 News stories on my WSUTC Woman of Distinction Award
- **StoryHub CAS:** <https://cas.wsu.edu/2019/11/27/biology-professor-honored-as-wsu-tri-cities-woman-of-distinction/>
  - **WSUTC:** <https://tricitie.wsu.edu/three-local-individuals-honored-as-wsu-tri-cities-women-of-distinction/>
- 2019 **WSUTC Facebook page:** Social media coverage of my lab: *Students work with Tanya Cheeke, Assistant Professor of Biology in the WSU Tri-Cities greenhouse this summer...* <https://www.facebook.com/WSUTriCities/posts/students-work-with-tanya-cheeke-assistant-professor-of-biology-in-the-wsu-tri-ci/2608577452496681/>

- 2019 **WSU Insider:** SURCA 2019 winners – highlighted the Gray Award Megan Brauner won for her undergraduate research in my lab. <https://news.wsu.edu/2019/04/01/surca-2019-winners/>
- 2019 **Washington State Magazine:** *A point of reference* – article highlighting my restoration ecology research at Meyer’s Point Environmental Field Station <https://magazine.wsu.edu/2019/04/28/a-point-of-reference/>
- 2018 **ScienceDaily:** *Fungi may help restore native plant populations*  
<https://www.sciencedaily.com/releases/2018/05/180514083932.htm>
- 2018 **WSU Insider:** *WSU Tri-Cities team researching use of fungi to restore native plant populations*  
<https://news.wsu.edu/2018/05/10/use-fungi-to-restore-native-plants/>