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Academic Appointments

- 2022-2023. **Postdoctoral Research Associate**, WSU Puyallup Research and Extension Center, Washington State University.
- 2020-2022. **USDA NIFA Postdoctoral Fellow**, Ornamental Plant Pathology, WSU Puyallup Research and Extension Center, Washington State University.

Education

- 2015-2020. **PhD** Plant Pathology, Forestry and Agricultural Biotechnology Institute, Dept. of Plant & Soil Science, University of Pretoria, South Africa. Dissertation: *Phytophthora* diversity in the Cape Floristic Region. Primary Supervisor: Mike Wingfield. Co-Supervisors: Treena Burgess, Francois Roets.
- 2016-2019. **Affiliate Research Student**, Dept. of Conservation Ecology & Entomology, Stellenbosch University, South Africa.
- 2012-2014. **Dual MSc** Dept. of Botany & Plant Pathology, Dept. of Wood Science & Engineering, Oregon State University. Thesis: Phytosanitation of Douglas-fir (*Pseudotsuga menziesii*) logs to mitigate the risk of artificially disseminating *Phytophthora ramorum* within the global trade of timber. Advisers: Everett Hansen & Jeff Morrell.
- 2006-2010. **BSc** Dept. of Natural Resource Sciences, Washington State University. Undergraduate Thesis: Influence of climatic variables on forest growth in the Sierra Nevada Mountains.

Initiatives

- 2022- PI, *Ravenholt Urban Forest Health Lab* (<https://treehealth.wsu.edu/>), Washington State University, Albert Victor Ravenholt Fund.
- 2020- Program director, *Forest Health Watch* (<https://foresthealth.org/>), Washington State University, United States Department of Agriculture, National Institute of Food and Agriculture.
- 2022- Prime mover, *Open Redcedar Adaptation Network* (<https://jmhulbert.github.io/adaptation>), Washington State University.
- 2022- Prime mover, *USDA APHIS PPA 7721 Invasive Species Outreach for Tribes* (<https://extension.wsu.edu/invasive-species>), Washington State University.
- 2020- Organizer, *WSU Forestry Working Group*, Washington State University.
- 2020- Organizer, *Pacific Northwest Citizen Science Network* <https://pnwcitsci.org/>
- 2016-2020 Project leader, *Cape Citizen Science* (<https://citsci.co.za/>), Forestry and Agricultural Biotechnology Institute, University of Pretoria, Stellenbosch University, DST-NRF Centre of Excellence in Tree Health Biotechnology.
- 2019- Prime mover, *Forest Health Citizen Science Community* (<https://fhcs.page/>).
- 2018-2019 Instructor, *R for biology and ecology workshop series* (<https://jmhulbert.github.io/r/>), two series offered at University of Pretoria and one series offered at Stellenbosch University.
- 2012-2014 Co-founder, *Inspiration Dissemination* (<http://blogs.oregonstate.edu/inspiration/>), KBVR 88.7fm, Oregon State University.

Community Service

- 2021-2024 Volunteer, Nature and Environment Council, MetroParks Tacoma
- 2021 Member, Pierce County Community Engagement Task Force
- 2021 Volunteer Mechanic, Second Cycle, Tacoma, Washington
- 2020-2021 Voting Member, Puyallup Watershed Initiative, Forest Community of Interest
- 2018 Volunteer Mechanic, Palouse Bicycle Collective, Moscow, Idaho
- 2014-2015 Volunteer Shop Manager, Corvallis Bicycle Collective, Corvallis, Oregon

Publications

Book Chapters

- Liebhold A, Moltzen B, Juzwik J, **Hulbert JM**, (submitted) Forest tree pathogen biosecurity. USFS National Forest Health Assessment Chapter 6.

Peer-Reviewed Manuscripts

- Brooks R, Omdall D, **Hulbert JM**, Brown S, Marshall JC, Elliott M, Chastagner GA. 2023. *Cryptostroma corticale*, the causal agent of sooty bark disease of maple, appears widespread in western Washington State, USA. *Forest Pathology* (accepted).

- Andrus et al. 2023. Canary in the Forest? – Tree mortality and canopy dieback of western redcedar linked to drier and warmer summers. *Journal of Biogeography* JBI-23-0212.R1 (in press). (pre-print @ BioRx)
- **Hulbert JM**, Hallett RA, Roy HE, Cleary M 2023. Citizen science can enhance strategies to detect and manage invasive forest pests and pathogens, *Frontiers in Ecology and Evolution* 11. DOI: 10.3389/fevo.2023.1113978.
- Lanning KK, Kline N, Elliott M, Stamm E, Warnick T, LeBoldus JM, Garbelotto M, Chastagner GA, **Hulbert JM** 2023. Citizen science can add value to *Phytophthora* monitoring: five case studies from western North America. *Frontiers in Environmental Science* 11. DOI: 10.3389/fenvs.2023.1130210.
- Fraisl D, Hager G, Bedessem B, Hsing P, Gold M, Haklay M, **Hulbert, JM**, and others 2022. Citizen Science in environmental and ecological sciences, *Nature Review Methods Primers* 2, 64. DOI: 10.1038/s43586-022-00144-4.
- Engelbrecht J, Duong TA, Paap T, **Hulbert JM**, Hanneman JJ, van den Berg N 2022 . Population genetic analyses of *Phytophthora cinnamomi* reveals three lineages and movement between natural vegetation and avocado orchards in South Africa. *Phytopathology*. DOI: 10.1094/PHYTO-10-21-0414-R
- Bose TB, **Hulbert JM**, Burgess TI, Paap T, Wingfield MJ 2021. Two novel *Phytophthora* species from the Cape Floristic Region of South Africa. *Mycological Progress*, 20(6):755-767. DOI: 10.1007/s11557-021-01702-y.
- Elliott M, **Hulbert JM**, Streng D, Chastagner GA 2021. Multiagency collaborations help public gardens contain *Phytophthora* outbreaks while providing insights and opportunities for novel research. *Plant Health Progress*. DOI: 10.1094/PHP-02-21-0045-FI.
- Paap T, Wingfield MJ, Burgess I, **Hulbert JM**, Santini A. 2020. Harmonising the fields of invasion science and forest pathology. *NeoBiota* 62:301-332. DOI: 10.3897/neobiota.62.52991.
- **Hulbert JM**, Paap T, Burgess TI, Roets F, Wingfield MJ. 2019. Botanical gardens provide valuable baseline *Phytophthora* diversity data. *Urban Forestry and Urban Greening* 46:126461. DOI: 10.1016/j.ufug.2019.126461.
- Ryan SF and 41 others, 2018. The role of citizen science in addressing grand challenges in food and agriculture research, *Proceedings of the Royal Society B* 285(1891). DOI: 10.1098/rspb.2018.1977.
- **Hulbert JM**, Agne MC, Burgess TI, Roets F, Wingfield MJ. 2017. Urban environments provide opportunities for early detection of *Phytophthora* invasions, *Biological Invasions* 19:3629–3644. DOI: 10.1007/s10530-017-1585-z.
- Peterson E, Hansen EM, **Hulbert JM**. 2014. Source or Sink? The role of soil and water borne inoculum in the dispersal of *Phytophthora ramorum* in Oregon tanoak forests. *Forest Ecology and Management*, 322:48-57. DOI: 10.1016/j.foreco.2014.02.031.

Not Peer-Reviewed Manuscripts

- Hester SN, Kruger H, Ticehurst JL, **Hulbert JM** and Cacho OJ. 2023. Editorial: The Role of Community and Industry Surveillance in Managing Invasive Species: A Review of Current Knowledge. *Frontiers in Ecology and Evolution* 11. (accepted).
- Elliott M, Rollins L, Bourret T, **Hulbert JM**, Chastagner GA 2021. Three new hosts for *Phytophthora ramorum* confirmed in Washington State: Salal, Oregon grape, and red huckleberry, *Plant Health Progress*. DOI: 10.1094/PHP-01-21-0003-FI.
- Chastagner GA, Elliott M, **Hulbert JM** 2021. Effectiveness of fungicides and biopesticides in controlling Botrytis gray mold on western hemlock nursery stock. *Tree Planter's Notes*, 64(1):21-31.
- **Hulbert JM**, Turner SC, Scott SL. 2019. Challenges and solutions to establishing and sustaining citizen science projects in South Africa, *South African Journal of Science*, 115(7/8). DOI: 10.17159/sajs.2019/5844.
- Auerbach J, Barthelmess E, Cavalier D, Cooper C, Fenik H, Haklay M, **Hulbert JM**, Kyba C, Larson L, Lewandowski E, Shanley L. 2019. The problem with delineating narrow criteria for citizen science. *Proceedings of the National Academy of Sciences*, 116(31). DOI: 10.1073/pnas.1909278116.
- **Hulbert JM** 2019. Citizen science increases the ethics of foreign led research, *Narrative Inquiry in Bioethics*, Johns Hopkins University Press. Volume 9, Number 1, Spring 2019. DOI: 10.1353/nib.2019.0024.

- Van der Colff D, Ebrahim I, Powrie LW, Rebelo AG, Edge D, Mecenero S, Scott SL, Hoffman MT, **Hulbert JM**, Dithale N, Mahood K, Gafen M, Sink KJ, Franken M, Zikishe V, Grieve K, Parbhoo S, Dayaram A and Turner SC. 2019. 'Biodiversity provides opportunities for citizen science' chapter in *National Biodiversity Assessment 2018: Compendium of Benefits of Biodiversity*. South African National Biodiversity Institute, Pretoria. hdl.handle.net/20.500.12143/6491
- **Hulbert JM**, Roets F. 2018. Science engagement in South Africa. *Science*, 361(6406):985. DOI: 10.1126/science.aav1499.
- **Hulbert JM**. 2016. Citizen science tools available for ecological research in South Africa, *South African Journal of Science*, 112:5/6. DOI: 10.17159/sajs.2016/a0152.

Manuscripts in Review or Revision

- **Hulbert JM** (submitted). More mentorship needed for research co-production with marginalized communities.
- **Hulbert JM**, Roets F, Burgess TI, Wingfield MJ. (under revision). Exotic and putatively native *Phytophthora* species are associated with distinct plant communities in southern Afrotemperate Forests.
- Louw NL, Roets F, **Hulbert JM** (under revision). Molecular techniques reveal additional factors in the decline of the endangered silver tree (*Leucadendron argenteum*).
- **Hulbert JM**, Scholtz K, Roets F. (under revision). Youth participation in citizen science reveals differences between outreach and engagement and connects plant pathology research to public health.

Manuscripts in Prep

- **Hulbert JM** and others (in prep). Citizen science reveals important environmental factors in the western redcedar dieback.
- Arte H, White E, Felthoven L, Gaither A, Billo T, McDonald S, **Hulbert JM** (in Prep). Western redcedar dieback is associated with urban heat in King County Washington.

Extension Fact Sheets

- Zobrist KW, Bomberger RA, Glass J, **Hulbert JM**, Darr M, Roberts E, (accepted). managing emerald ash borer in Washington State, WSU Extension Fact Sheet.
- Zobrist KW, Bomberger RA, Glass J, Marquis J, **Hulbert JM**, Darr M, Roberts E, (accepted). What you need to know about the risks of emerald ash borer in Washington, WSU Extension Fact Sheet.
- Brooks R, **Hulbert JM**, Omdall D, Elliott M, Chastagner GA 2022. Sooty Bark Disease Diagnostic Guide, WSU Extension Fact Sheet FS375E.

ArcGIS Story Maps

- Dewitz F, Hulbert JM. 2023. Tacoma schools, urban heat and trees
- Hulbert JM, Elliott JM, Chastagner G. 2023. *Phytophthora* communities in eastern Cascade waterways

Community Science Field Guides

- Dewitz F, **Hulbert JM**. 2023. Maple Health Watch Research - iNaturalist and Sample Collection Field Manual.
- **Hulbert JM** 2022. Soil Sample Collection Guide.
- **Hulbert JM**, Dewitz F. 2022. Tacoma Street Tree Vulnerability Study iNaturalist - Field Manual.
- Evans A, **Hulbert JM**. 2022. Western Redcedar Dieback Project - iNaturalist Field Manual 3.0.

Program Progress Reports

- **Hulbert JM**. 2023. *Ravenholt Urban Forest Health Lab Progress Report*.

Funding and Support

Totals

Total Funding Secured as Postdoc (2020-)

- Funding awarded at WSU: **\$2,918,200**
- Funding pending: **\$88,221**
- Funding applied for at WSU: **\$4,682,978**

Postdoc Fellowship Proposals

Funded

- 2020-2022 **PD**, *Forest Health Defenders: enhancing biosecurity through public engagement in plant disease research*. USDA NIFA EWD Postdoctoral Research Fellowship program (**\$164,967**).

Submitted

- 2022-2023 **PI**, *Visualizing western redcedar vulnerability and demonstrating assisted seed migration as an approach for climate adaptation*. USGS Northwest Climate Adaptation Science Center Research Fellowship Program (**\$65,069**).
- 2020-2021 **PI**, *Developing a toolkit for climate adaptive conservation of the western redcedar in the Pacific Northwest*. USGS Northwest Climate Adaptation Science Center Research Fellowship Program (**\$63,383**). **Application withdrawn to accept above.**
- 2020-2022 **PI**, *Surveying Phytophthora diversity in the Olympic National Forest with citizen science*. NSF Postdoctoral Fellowship in Biology, Broadening Participation of Groups Under-represented in Biology (**\$138,000**). **Application withdrawn to accept above.**
- 2020 **Postdoc**, *Forest Health Defenders: public engagement to conserve the western redcedar*. David H. Smith Conservation Research Fellowship, Society for Conservation Biology (**\$123,000**).
- 2019 **Postdoc**, *Moss, metals and microbes: revealing hotspots of stormwater contamination with citizen science in the Puget Sound*. David H. Smith Conservation Research Fellowship, Society for Conservation Biology (**\$178,710**).

Research Grants

Funded

- 2023 **PI**, *Empowering community college students to equitably enhance urban forests*. USDA Forest Service, Urban and Community Forestry, Inflation Reduction Act (**\$1,786,431**).
- 2023 **PI**, *Enhancing bio-surveillance in the Pacific Northwest by strengthening and leveraging the networks of the Forest Health Watch*. USDA Forest Service, Bipartisan Infrastructure Law (**\$145,000**).
- 2023 **PI**, *Increasing Native Vigilance, Awareness and Surveillance of Invasions via Education and Resources (INVASIVE-R) Project (Year Two)*. USDA APHIS PPQ PPA Section 7721 (**\$89,403**).
- 2023 **Co-PI**, *Washington Nursery and Landscape Biosurveillance Education Program*. Washington State Department of Agriculture, Nursery Research Funding (**\$15,000**).
- 2022 **PI**, *Detecting biological invasions with sentinel plantings at ports and urban points of dispersal in Washington State*. USDA Forest Service, International Programs (**\$205,071**).
- 2022 **PI**, *Tacoma Sooty Bark Disease Vulnerability*. Washington State Department of Natural Resources, Community Forestry Assistance Grant (**\$40,000**).
- 2022 **PI**, *Increasing Native Vigilance, Awareness and Surveillance of Invasions via Education (INVASIVE) Project*. USDA APHIS PPQ PPA Section 7721 (**\$77,763**).
- 2021 **Co-PI**, *Survey and diagnostic activities to identify distribution and host range for maple sooty bark disease in urban areas of the Puget Sound region*. USDA Forest Service Emerging Pests program (**\$31,750**).
- 2020 **Co-PI**, *Stream survey of Phytophthora spp. present in Pacific Northwest larch forests considered to be high risk for P. ramorum establishment*. USDA Forest Service Emerging Pests program (**\$35,910**).

- 2020 **Cooperator/Proposal Author**, *Lateral movement of Phytophthora ramorum in nursery substrates*. USDA APHIS PPQ PPA Section 7721 (**\$48,582**).

Submitted

- 2023 **PI**, *Enriching Tribal management and resilience to invasive species with co-designed educational materials*. USDA APHIS PPQ PPA Section 7721 (**\$88,221**).
- 2023 **PI**, *Engaging community college students in tree inventory and monitoring blitzes in Washington State*. USDA Forest Service, Bipartisan Infrastructure Law (**\$285,000**).
- 2023 **PI**, *Washington Statewide Campus Tree Blitz* (**\$40,000**).
- 2022 **Co-PI**, *Schools as oases in urban heat islands: addressing urban forest equity through school and community partnerships and research*. National Science Foundation, Civic Innovation Challenge (**\$48,653**).
- 2021 **PI**, *Community engagement to explore the microbes associated with the dieback of western redcedar*. USGS Directed Research Funding - Northwest Climate Adaptation Science Center (**\$226,493**).
- 2021 **PI**, *Empowering communities to understand the effects of climate change on forest health, accelerate research about the dieback of western redcedar, and recognize genetic diversity as a tool for increasing climate resiliency*. USDA Forest Service Urban & Community Forestry 2021 Challenge Cost Share Grant Program (**\$299,539**).
- 2020 **Co-PI/Postdoc**, *Seattle Urban Forest Atlas: An interactive citizen-science geo-database and simulation platform to promote healthy, resilient, and equitable urban forests*. University of Washington EarthLab Innovation Grants Program (**\$74,141**).
- 2019 **PI**, *Forest Health Defenders: Public engagement to conserve the western redcedar*. USDA Forest Service Citizen Science Competitive Funding Program Application (**\$30,000**).

Foundation Grants and Gifts

Funded

- 2022 **PI** *Ravenholt Urban Forest Health Lab*, Albert Victor Ravenholt Fund (**\$270,000**).

Submitted

- 2023 **PI** *Bamford Foundation Urban Science Internship Program* (**\$270,000**).
- 2022 **PI** *Minimizing Human Health Risks and Urban Tree Infections from Sooty Bark Disease*, Tree Research and Education Endowment Fund, John Z. Duling Grant (**\$24,942**).
- 2022 **Co-PI** *Co-Developing Tree Planting Guides for Cities: A Case Study in Tacoma Washington*, Frank & Evelyn Schmidt Family Foundation (**\$25,000**).

Funded Outreach Grants

- 2020 Tribal Engagement Activity Proposal, Forest Community of Interest, Puyallup Watershed Initiative (**\$8,500**).
- 2018 Social Impact Grant, Faculty of AgriScience, Stellenbosch University (~**\$4,000, received in ZAR**).
- 2017 Mathre Education Endowment Award, American Phytopathological Society (**\$1,000**).
- 2017 Plant Pathology Promotion Fund, British Society for Plant Pathology (~**\$2,500, received in ZAR**).

Crowdfunded Projects

- 2017 Engage Kayamandi Youth in Cape Citizen Science with Vision Afrika, DOI:10.18258/8690 (**\$626**).
- 2015 Discovering Plant Destroyers in South Africa with Citizen Science, DOI:10.18258/2066 (**\$5,000**).

In Kind Donations

- 2021 Field Sampling Equipment (GPS units, camera traps, communication devices), Transition Fidalgo
- 2021 Field Notebooks, Rite in the Rain
- 2021 Western redcedar trees, Weyerhaeuser
- 2021 Soil temperature and moisture monitoring equipment, Meter
- 2017 Field Guide to Fynbos (20 copies), Rapula Trust

Sponsored Internship Proposals

- 2023 *Keeping trees healthy in urbanizing environments of the Pacific Northwest* College of Agriculture, Human and Natural Resource Sciences, Washington State University **(\$2,000)**.
- 2022 *Supporting ornamental, flower, and bulb crop productions in the Pacific Northwest through applied research*, College of Agriculture, Human and Natural Resource Sciences, Washington State University, Research and Extension Experiences for Undergraduates (REEU): Sustainable High-value Horticulture and Processing **(\$4,500)**.
- 2022 *Keeping trees healthy in changing environments of the Pacific Northwest*, College of Agriculture, Human and Natural Resource Sciences, Washington State University **(\$3,000)**.
- 2021 *Tree health and heat islands in Seattle*, College of the Environment, Environmental Science, University of Washington, Capstone Project Proposal.

Academic Honors & Awards

- 2019 Getting the Message to the Public, Forestry and Agricultural Biotechnology Institute
- 2018 Travel Fund, British Society for Plant Pathology
- 2018 Stephen A. Johnston Student Travel Award, American Phytopathological Society
- 2016 Getting the Message to the Public, Forestry and Agricultural Biotechnology Institute
- 2016 Best Student Personal Website, Forestry and Agricultural Biotechnology Institute
- 2015 Best PhD Oral Presentation, Dept. of Plant Science Postgraduate Research Symposium
- 2014 Graduate Scholarship, Oregon Lottery
- 2014 Travel Award, Oregon State University Graduate School
- 2014 Student Travel Award, Botany and Plant Pathology Graduate Student Association
- 2014 Bartholomew Memorial Scholarship
- 2014 Most Innovative Radio Program, Intercollegiate Broadcasting System
- 2014 Best WSE Oral Presentation, Western Forestry Graduate Research Symposium
- 2013 Schutz Family Fellowship
- 2013 Alfred W. Moltke Fellowship
- 2013 Jack & Lila Saubert Fellowship
- 2013 Larry Moore Award for Graduate Education in Plant Pathology
- 2013 Student Travel Award, Western International Forest Disease Work Conference

Academic Leadership

- 2022- Vision Committee, WSU Puyallup Research and Extension Center
- 2020- Program Director, Forest Health Watch
- 2020- Organizer, Forestry Working Group, Washington State University
- 2021- Member, Forest Adaptation Network
- 2017-2020 Committee Member, American Phytopathological Society, Committee for Diversity and Equality
- 2017-2020 Committee Member, American Phytopathological Society, Forest Pathology Committee
- 2016-2020 Founder and Project Leader, Cape Citizen Science
- 2015 Coordinator, University of Pretoria Invasive Species Journal Club
- 2014 Founder and Director, Botany and Plant Pathology BUDS Program
- 2014 Planning Committee Member, Western Forestry Graduate Research Symposium
- 2013-2014 President, Botany and Plant Pathology Graduate Student Association

- 2013-2014 Co-Founder and Director, Forest Graduate Undergraduate Mentorship Program
- 2013 Planning Committee Member, Western Forestry Graduate Research Symposium
- 2013 Planning Committee Member, College of Forestry Graduate Student Orientation
- 2013 Organizer, Natural Science Graduate Student BBQ
- 2012-2014 Co-host, Inspiration Dissemination
- 2012-2014 Officer, College of Forestry Graduate Student Council
- 2012-2014 Wood Science Steward, Coalition of Graduate Employees
- 2012-2014 Graduate Representative, Dept. of Wood Science and Engineering
- 2012-2014 Committee Member, Wood Science and Engineering Graduate Affairs
- 2012 Organizer, Natural Science Graduate Student BBQ

Teaching Experience

Guest Lectures

- 2023 Washington State University, School of the Environment, Disturbance Ecology (SOE 485) Lecture, *Forest Pathology in the Pacific Northwest*.
- 2023 Highline Community College, Botany and Evolution, *Urban forests, tree health, equity and community science* (two lectures).
- 2023 University of Puget Sound, Research Methods, *Tacoma community science, western redcedar health as indicators of inequities*.
- Green River College, Forest Ecology, On-Campus Lab instruction, *Western redcedar dieback on Green River Campus*.
- 2023 University of Washington Tacoma, Environmental Science, *Urban forest health and community science in Tacoma*.
- 2022 Washington State University, Plant Pathology (PLP 429) *Forest Pathology - Tree health issues in the Pacific Northwest*.
- 2022 Pierce College, Cell Biology, *Stream sampling for Phytophthora* (2 classes, two field lessons and one lab visit).
- 2022 University of Washington, Human Centered Design and Engineering, Directed Research Groups, Spring Quarter, *The UX of climate change: western redcedar dieback*.
- 2022 Green River College, Forest Resource Management, Forest Ecology, On-Campus Lab instruction, *Western redcedar dieback and Sooty Bark Disease issues on Green River Campus*.
- 2022 Washington State University, School of the Environment, Graduate class in Ecology (SOE 593) Lecture, *Western redcedar dieback and the community science approach*.
- 2021 Washington State University, Department of Plant Pathology, General Plant Pathology (PLP 429) Lecture, *Forest Pathology - concepts and issues in the Pacific Northwest*.
- 2021 Pierce College, Cell Biology, On-Campus Lecture, *The need for more forest health scientists to increase climate resilience in urban communities*.
- 2021 Green River College, Forest Resource Management, Forest Health and Protection course, On-Campus Lab instruction, *Sooty bark disease and western redcedar dieback on Green River campus*.
- 2021 Pacific University, Department of Biology and Environmental Science, Plant Pathology, *Western redcedar dieback - plant pathology research with Pacific University*.
- 2021 Evergreen State College, Environmental Studies, Field Ecology Lecture, *Western redcedar dieback - exploring local project opportunities with students at Evergreen State College*.
- 2021 Green River College, Forest Resource Management, Forest Ecology Lecture, *Western redcedar dieback - exploring local project opportunities with students at Green River College*.
- 2021 Washington State University, School of the Environment, Disturbance Ecology (SOE 485) Lecture, *Tree root diseases - effects at multiple scales*.
- 2021 University of Washington, Human Centered Design and Engineering, Directed Research Group, Winter & Spring Quarters, *The UX of climate change: Forest Health Watch - community engagement for healthy forests*
- 2020 Washington State University, Department of Plant Pathology, General Plant Pathology (PLP 429) Lecture, *Forest Pathology*.
- 2020 Washington State University, 4H Ecostewards Program, Chelan/Douglas County Extension, Guest

Lecture, *Super Fungi - adaptations and super powers*.

- 2018 Cape Peninsula University of Technology, Faculty of Applied Sciences, Btech Plants Module, Lecture, *Invasive microscopic organisms: plant pathogens and biosecurity*.
- 2018 Stellenbosch University, Dept. of Conservation Ecology & Entomology, CONSECOL414: Advanced Conservation Management, Lecture, *Microscopic organisms: plant promoters and plant destroyers*.
- 2017 Stellenbosch University, Dept. of Conservation Ecology & Entomology, CONSECOL414: Advanced Conservation Management, Lecture, *A look into the microscopic world: lifelines or invisible threats*.
- 2017 Stellenbosch University, Dept. of Conservation Ecology & Entomology, CONSECOL414: Advanced Conservation Management, Field Course, Drie Kulien Nature Reserve.
- 2016 Stellenbosch University, International Winter School, Biodiversity & Ecology Course, Lecture, *Surveying Phytophthora species with citizen science*.

Co-direction

- 2021 University of Washington, Human Centered Design and Engineering, Directed Research Group, Winter & Spring Quarters, *The UX of climate change: western redcedar dieback*.

Field Assistance

- 2021 Evergreen State College, Environmental Studies Path Affiliation, *Field Ecology*
- 2021 Green River College, BAS in Forest Resource Management program, *Forest Ecology*

Workshop Instruction

- 2019 University of Pretoria, Faculty of Natural and Agricultural Sciences, *R for biology data science workshop series (5 sessions, 76 participants, packages: ggplot2 and dplyr)*.
- 2019 University of Pretoria, Forestry and Agricultural Biotechnology Institute, *RStudio and R package workshop series (5 sessions, 35 participants, packages: ggplot2, dplyr, vegan and Markdown)*.
- 2018 Stellenbosch University, Dept. of Conservation Ecology & Entomology, *RStudio and R package workshop series (4 sessions, 23 participants, packages: ggplot2, dplyr, and vegan)*.

Courses Prepared to Teach

- Invasion / Disturbance Ecology
- Forest Health and Protection
- Forest Pathology
- Methods of Citizen and Community Science
- Data Visualization

Event Organization

Webinars

- 2023 *Ravenholt Urban Forest Health Spring 2023 Webinars*
- 2023 *Invasive species workshop and webinars for Tribal Audiences* (Virtual Workshop).
- 2021 Webinar Co-Organizer, Western Redcedar: Cultural and ecological reflections and dieback concerns, Treeline Webinar Series.
- 2021 Webinar Co-Organizer, Arbutus ARME (<https://www.arbutusarme.org>), Inaugural Member Meeting -Spring.
- 2021. Session Moderator (4 sessions), Washington Forest Owners' Winter School, Washington State University Extension.
- 2020 Webinar Co-Organizer, Arbutus ARME (<https://www.arbutusarme.org>), Inaugural Member Meeting (Webinar).

Workshops

- 2023 *Invasive species workshop and webinars for Tribal Audiences* (Virtual Workshop).
- 2022 E3 Washington Virtual Conference Workshop, *Schools as oases in urban heat islands: identifying the barriers*.
- 2022 City of Tacoma, *Tacoma Tree Pest Identification Workshop*, City of Tacoma Waste Transfer Station and Nursery.
- 2022 Pacific Education Institute, *Urban Forestry Solutions Oriented Storylines*, Almendinger Conference Center, WSU Puyallup Research and Extension Center, Puyallup, Washington.
- 2022 Washington Invasive Species Council & Washington State University, *Invasive Species Preparedness Resources for Tribal Nations Workshop*, Almendinger Conference Center, WSU Puyallup Research and Extension Center, Puyallup, Washington.

Conferences

- 2024 Session Coordinator, *Public engagement to keep urban trees and communities healthy*, IUFRO 26th World Congress 2024, Stockholm, Sweden.
- 2022 Conference Co-Organizer, *Pacific Northwest Citizen Science Summit*, Online Conference, Zoom.
- 2022 Session Chair, Collaboration and Community Science, Human-Nature Systems, Salish Sea Ecosystem Conference. Online Conference, Zoom.
- 2021 Conference Co-Organizer, *Pacific Northwest Citizen Science Summit*, Online Conference, Zoom.
- 2019 Session Coordinator, *Forest health defenders: empowering citizens to protect forests through research contributions*, IUFRO XXV World Congress, Curitiba, Brazil.
- 2018 Event Co-organizer, *South Africa Citizen Science Fair, International Citizen Science Day Event*, Kirstenbosch National Botanical Garden, Cape Town, South Africa.
- 2017 Session Coordinator, *Early detection and monitoring of invasive forest pests and pathogens with citizen science*, IUFRO 125th Anniversary Congress, Freiburg, Germany.
- 2014 Symposium Planning Committee, *Canopies to construction: the ecology, management and use of tomorrow's forests*, Western Forestry Graduate Symposium, Corvallis, Oregon, USA.
- 2013 Symposium Planning Committee, *Branching out: communicating forest research beyond academics*, Western Forestry Graduate Symposium, Corvallis, Oregon, USA.

Invited Panel Participation

- 2023 *Bringing Youth Outside*, Healing Connections: Nature and Wellness Symposium.
- 2023 *Climate Migration Workshop*, Human Centered Design and Engineering, University of Washington.
- 2022 *Professional Q&A*, Northwest Innovative Forestry Summit, Forest Guild, UW Pack Forest, Eatonville, Washington.
- 2021 *Urban Forests: Climate Change Solution or Casualty?* Youtube, Cascadia Climate Action, Climate Science on Tap Event.
- 2015 *Is one tree worth a forest?* World Forestry Congress, World Cafe Forest Health Session, Durban, South Africa.
- 2013 *Maximizing your graduate education*, new student orientation panel, Graduate School, Oregon State University.

Presentations

North American Conferences

- 2023 **Hulbert JM**, Community engagement, Oomycetes and western redcedar dieback, American Phytopathological Society annual conference, Denver, Colorado.
- 2023 **Hulbert JM**, Community engagement for healthy forests, Western International Forest Disease Work Conference, Sonoma, California.
- 2023 Elliott M, **Hulbert JM**, Murray T, Chastagner G, Identification of the sooty bark pathogen (*Cryptostroma corticale*) from hosts in multiple states, Western International Forest Disease Work Conference, Sonoma, California (Poster Presentation).

- 2023 Elliott M, **Hulbert JM**, Murray T, Chastagner G, Detecting biological invasions with sentinel plantings at ports and urban points of dispersal in Washington State, Western International Forest Disease Work Conference, Sonoma, California (Poster Presentation).
- 2023 **Hulbert JM**, Western redcedar dieback - open analyses of open data, Washington GIS Association annual meeting, Tacoma, Washington.
- 2023 **Hulbert JM**, Community engagement can enhance biosurveillance, Western Forest Insect Work Conference, Seattle, Washington.
- 2022 **Hulbert JM**, Sooty Bark Disease - Climate Change Time Bomb in the Pacific Northwest, Partners in Community Forestry, Seattle, Washington.
- 2022 **Hulbert JM**, History of PNW CitSci and the Citizen Science Community, Pacific Northwest Citizen and Community Science Summit (Virtual Presentation).
- 2022 **Hulbert JM**, Sooty Bark Disease: Diagnostics & Research in the Pacific Northwest Pacific Northwest International Society of Arboriculture Meeting, Coure D'Alene, Idaho.
- 2022 **Hulbert JM**, Are Oomycetes associated with the dieback of western redcedar?, 10th Meeting of the International Union of Forest Research Organizations, Working Party S07.02.09 - *Phytophthora* in Forests and Natural Ecosystems Berkeley California.
- 2022 **Hulbert JM**, Forest Health Watch: empowering communities to keep trees healthy, 10th Meeting of the International Union of Forest Research Organizations, Working Party S07.02.09 - *Phytophthora* in Forests and Natural Ecosystems Berkeley California.
- 2022 **Hulbert JM**, Community engagement to accelerate research and learning about the dieback of western redcedar. Salish Sea Ecosystem Conference. (Virtual Presentation).
- 2022 **Hulbert JM**, Community engagement can accelerate research about urban forest health issues. Urban Ecology and Conservation Symposium, Urban Ecosystem Research Consortium, Portland Oregon. (Virtual Presentation).
- 2021 **Hulbert JM**, Western redcedar dieback as an indicator of the effects of climate change on cultural resources and tribal communities, 2021 Rising Voices Workshop, Virtual (Poster-walk) Presentation
- 2021 **Hulbert JM**, So, you want to start a citizen science project?, 2021 Pacific Northwest Citizen and Community Science Summit, Virtual Presentation.
- 2021 **Hulbert JM**, Forest Health Watch: empowering community scientists to accelerate research, Northwest Climate Conference (Online), Virtual Presentation.
- 2021 **Hulbert JM**, Urban Ecology and Conservation Symposium, Urban Ecosystem Research Consortium, Exploring the dieback of western redcedar as a symbol of the inequities in urban environments. Video Poster Presentation.
- 2018 **Hulbert JM**, Burgess TI, Roets F, Wingfield MJ. 2018. Pathogen hunters: nonscientist engagement in plant disease research, International Congress for Plant Pathology, Boston. Poster Presentation.
- 2018 **Hulbert JM**, Burgess TI, Roets F, Wingfield MJ. 2018. The Cape Town Hypothesis Test: *Phytophthora* in urban vs natural environments, International Congress for Plant Pathology, Boston. Poster Presentation.
- 2014 **Hulbert JM**, Morrell JJ, Hansen EM. 2014. Chemical treatment to sanitize *Phytophthora ramorum* colonized timber products and mitigate the risk of accidental dissemination of Sudden Oak Death. International Union of Forest Research Organizations, World Congress. Salt Lake City. Poster Presentation.
- 2014 **Hulbert JM**, Rosenberger R. 2014. Forest G.U.M.P. The value of graduate-undergraduate mentorship programs. International Union of Forest Research Organizations, World Congress. Salt Lake City. Poster Presentation.
- 2014 **Hulbert JM**, Morrell JJ, Hansen EM. 2014. Potential of using boron for mitigation of *Phytophthora ramorum* in Douglas-fir logs. International Research Group on Wood Protection 45th annual meeting. St. George, Utah. Oral Presentation.
- 2014 **Hulbert JM**, Kamvar Z. 2014. *Inspiration Dissemination*: Science Communication for College Students. American Association for the Advancement of Science Annual Meeting. Chicago, Illinois, Poster Presentation.
- 2014 **Hulbert JM** 2014. The value of graduate-undergraduate mentorship programs. Biennial Conference on University Education in Natural Resources Auburn University, Auburn, Alabama.
- 2014 **Hulbert JM**, Kamvar Z. 2014. *Inspiration Dissemination*: Science Communication for College

Students. Biennial Conference on University Education in Natural Resources Auburn University, Auburn, Alabama.

- 2012 **Hulbert JM**, Morrell J, Hansen E. 2012. Chemical treatment to sanitize *Phytophthora ramorum* colonized timber products. Western International Forest Disease Work Conference, Tahoe City, California. Oral Presentation.
- 2011 Hansen E, **Hulbert JM**, Reeser P, Sutton W, Kanaskie A. 2011. Sudden larch death? Larch susceptibility to *Phytophthora ramorum*. Western International Forest Disease Work Conference, Leavenworth Washington. Poster Presentation.

International Conferences

- 2022 **Hulbert JM**. Citizen science approaches: mass participation or structured monitoring of invasive species. International Plant Health Conference, London. Recorded presentation.
- 2019 **Hulbert JM**. Methods of public engagement in forest health research, IUFRO XXV World Congress, Curitiba, Brazil. Oral Presentation.
- 2019 **Hulbert JM**, Burgess T, Roets F, Wingfield MJ. Non-scientist engagement in plant disease research in South Africa, IUFRO XXV World Congress, Curitiba, Brazil. Oral Presentation.
- 2017 **Hulbert JM**, Burgess T, Roets F, Wingfield MJ. Public engagement to survey *Phytophthora* in South Africa, IUFRO Working Party *Phytophthora* in forests and natural ecosystems (7.02.09), Sapa, Vietnam. Oral Presentation.
- 2017 **Hulbert JM**, Roux J, Burgess T, Roets F, Wingfield MJ. Citizen science initiatives: opportunities to manage global forest pest challenges, IUFRO 125th Anniversary Congress, Freiburg, Germany. Oral Presentation.
- 2017 **Hulbert JM**, Roux J, Burgess T, Roets F, Wingfield MJ. Cape Citizen Science: public engagement to detect and discover *Phytophthora* species in South Africa, IUFRO 125th Anniversary Congress, Freiburg, Germany. Poster Presentation.
- 2017 **Hulbert JM**, De Beer ZW, Wingfield MJ. Cape Citizen Science: public engagement for plant disease research in a biodiversity hotspot, International Botanical Congress, Shenzhen, China, Poster Presentation (not presenting author).
- 2014 **Hulbert JM**, Morrell JJ, Hansen EM. Wooden Vectors of *Phytophthora ramorum*: Are Douglas-fir Logs a Risk? Seventh Meeting of the IUFRO Working Party 7.02.09 *Phytophthora* in Forests and Natural Ecosystems, Esquel, Argentina. Poster Presentation (not presenting author).
- 2012 Peterson E, **Hulbert JM**, Hansen EM. Roads and streams are not significant pathways for SOD spread in tanoak forests. 6th IUFRO *Phytophthora* in Forest and Natural Ecosystems. Cordoba, Spain. Oral Presentation (not presenting author).

South African Conferences

- 2018 **Hulbert JM**. Igniting conversations with community engagement: establishing citizen science projects in South Africa, Science Forum South Africa, Pretoria, South Africa. Oral Presentation.
- 2017 **Hulbert JM**, Roets FR. Indigenous plant pathogens and their contributions to plant community diversity, Fynbos Forum, Swellendam, South Africa. Oral Presentation.
- 2017 **Hulbert JM**, Roets FR. Revealing hidden threats to fynbos biodiversity with citizen science, Fynbos Forum, Swellendam, South Africa. Oral Presentation.
- 2017 **Hulbert JM**, Roux J, Burgess TI, Roets F, Wingfield MJ. Methods of surveying plant pathogens with citizen science, South African Society for Plant Pathology, 50th anniversary meeting, Champagne Sports Resort, KwaZulu-Natal Province, South Africa. Oral Presentation.
- 2017 **Hulbert JM**, Roux J, Burgess TI, Roets F, Wingfield MJ. Public engagement in South Africa's ecological research: the 'how' and 'why' of citizen science, South African Association of Botanists, Annual Meeting, Cape Town, South Africa. Oral Presentation.
- 2016 **Hulbert JM**, Agne MC, Roux J, Burges TI, Roets F, Wingfield MJ. Records of *Phytophthora* invasions suggest that early detection programs should focus on urban environments, DST-NRF Centre of Excellence for Invasion Biology Workshop, *Non-native species in urban environments: patterns, processes, impacts and challenges*, Stellenbosch, South Africa. Oral Presentation.

- 2016 **Hulbert JM.** Monitoring invasive species with citizen science: an international review, Joint South African Association of Botanists-Southern Africa Society for Systematic Biology Conference, Bloemfontein, South Africa. Oral Presentation.
- 2015 **Hulbert JM.** Early detection and monitoring of invasive plant pests with citizen science, DST-NRF Centre of Excellence for Invasion Biology Workshop, *Evolutionary Dynamics of tree invasions: drivers, dimensions, and implications for management*, Stellenbosch, South Africa. Oral Presentation.

Symposia

- 2022 University of Washington Urban Forest Symposium. *Western redcedar trees as cultural resources in urban environments*. Pre-recorded presentation.
- 2022 Washington State University Research Week, *Engaging community scientists in research about tree health and urban heat islands*. Virtual Presentation.
- 2021 Washington State University Research Showcase, *Community science to keep forests healthy in the face of climate change*. Poster presentation.
- 2021 Washington State University, 4th Annual plant Science Symposium, *Forest Health Watch: community science to accelerate research about the dieback of western redcedar*. Poster presentation.
- 2020 Portland State University, Cedar Summit, *Understanding western redcedar dieback: the community science approach*, Virtual Presentation.
- 2020 Puyallup Watershed Symposium, Pierce County, *Forest Health Watch - community science for healthy forests*, Webinar Presentation.
- 2019 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Tree Protection Co-operative Program Annual Meeting, *Phytophthora multivora: local driver of plant diversity and global agent of bio-insecurity*.
- 2018 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Tree Protection Co-operative Program Annual Meeting, *Phytophthora diversity in southern Afrotropical forests*.
- 2017 Stellenbosch University, Dept. of Conservation Ecology & Entomology, Research Day, *Introduction to Cape Citizen Science: A project to engage the public in plant disease research*.
- 2016 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Tree Protection Co-operative Program Annual Meeting, *Developing a citizen science program on tree health in South Africa*.
- 2016 University of Pretoria, Forestry and Agricultural Biotechnology Institute, NRF-DST Centre of Excellence in Tree Health Biotechnology Annual Meeting, *The history of Phytophthora cinnamomi in South Africa*.
- 2015 University of Pretoria, Dept. of Plant & Soil Science Postgraduate Research Symposium, *Introduction to Cape Citizen Science: A project to engage the public in plant disease research*.
- 2014 Oregon State University, College of Forestry, Western Forestry Graduate Research Symposium, *Wooden vectors of Phytophthora ramorum: Are Douglas-fir logs really a risk?*
- 2013 Oregon State University, College of Forestry, Western Forestry Graduate Research Symposium, *Chemical treatments to sanitize Phytophthora ramorum colonized timber material and mitigate the risk of artificial Sudden Oak Death dissemination*.

Seminars and Lab Meetings

- 2023 Washington State University, Department of Plant Pathology Fall Seminar Series, *Citizen science and biosecurity- opportunities for plant disease monitoring and research*
- 2022 Washington State University, Department of Plant Pathology Fall Seminar Series, *Research needs for mitigating the emergence of sooty bark disease in the Pacific Northwest* (Virtual Presentation).
- 2021 USDA Forest Service, Forest Health and Protection (Region 6), monthly forest pathology meeting, *Sooty Bark Disease: climate change ‘time bomb’ in many broadleaf trees in the PNW* (Virtual Presentation).
- 2021 Washington State University, Department of Plant Pathology Spring Seminar Series, *Forest Health Watch: community engagement for healthy forests* (Virtual Presentation).
- 2021 Systematic Biology Seminar, Systematic Biology Programme, Uppsala University, Sweden *Citizen science methods to accelerate research about forest health issues* (Virtual Presentation).

- 2020 Washington State University, Forestry Working Group meeting, *Forest Health Watch and the WSU forestry community* (Virtual Presentation).
- 2020 Washington State University, 4-H Eco-Stewards Program meeting, *Forest Health Watch - community science in the Pacific Northwest* (Virtual Presentation).
- 2020 University of Pretoria, Forestry and Agricultural Biotechnology Institute, *A quest for plant destroyers in the Cape Floristic Region: a story of the growth of an indigenous-plant pathologist* (PhD Prestige Seminar).
- 2018 Stellenbosch University, Dept. of Conservation Ecology and Entomology, Roets, Oberlander, and Dryer Join Lab Meeting, *The Cape Town Hypothesis Test*.
- 2017 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Thursday Morning Seminar Series, *The trade of live plants in Africa: a risk to tree health?*
- 2016 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Research Discussion Seminar, *The role of scientists in society: developing a responsible protocol in case we discover an internationally regulated plant pathogen*.
- 2016 University of Pretoria, Dept. of Plant and Soil Science, Fall Seminar Series, *Citizen science tools available for phytogeographical research in South Africa*.
- 2016 Stellenbosch University, Dept. of Plant Pathology, Friday Forum Seminar Series, *Cape Citizen Science: community engagement to survey *Phytophthora* species in the fynbos*.
- 2016 University of Pretoria, Forestry and Agricultural Biotechnology Institute, Thursday Morning Seminar Series, *Methods of sampling *Phytophthora* with citizen science*.
- 2015 Oregon State University, Dept. of Botany and Plant Pathology, Spring Seminar Series, *Crowd-funding and citizen science applications in biology*.
- 2013 Oregon State University, Dept. of Wood Science & Engineering, Spring Seminar Series, *Using wood science to mitigate the impact of Sudden Oak Death*.

Invited Talks

- 2022 Washington Community Forestry Council Meeting, *Urban Forestry Programming at WSU* (Virtual Presentation).
- 2022 Northwest Indian Fisheries Commission, USDA Animal and PLant Health Inspection Service, Emergency Preparedness Response Management Training, *USDA APHIS INVASIVE Project Introduction*.
- 2021 Washington Department of Natural Resources, Presentation to State Forester & Forest Health Division Leads, *Forest Health Watch: community engagement for healthy forests* (Virtual Presentation).
- 2021 Western International Forest Disease Workgroup, Climate Change Committee Update, *Western redcedar dieback update* (Virtual Presentation).
- 2021 Green River Coalition, Guest Seminar for Interns, *Forest Health Watch: community science to accelerate research* (Virtual Presentation).
- 2021 Seattle Climate Change Meetup Group, *Community scientists needed in forest health and climate change research* (Virtual Presentation).
- 2021 PlantAmnesty Member Event, *Community scientists needed to explore and understand the dieback of western redcedar* (Virtual Presentation).
- 2021 Bonneville Environmental Foundation, Treeline Practitioners Meeting, *Tools for community engagement: creating custom projects on iNaturalist* (Virtual Presentation).
- 2021 City of Tacoma, Nature and Environment Advisory Council Meeting, *Forest Health Watch: community engagement for healthy parks* (Virtual Presentation).
- 2021 Arbutus ARME, Spring member meeting, *TreeSnap and iNaturalist observation update*, (Virtual Presentation).
- 2021 Forest Resource Management Faculty Meeting, Green River College, *Forest Health Watch: community engagement for healthy forests* (Virtual Presentation).
- 2020 University of Washington, Urban Ecology Research Lab Meeting, *Exploring the dieback of western redcedar as a metaphor for the inequities in urban communities* (Virtual Presentation).
- 2020 Climate Resiliency Fund, Bonneville Environmental Foundation, Riparian Climate Corridors Project Extension Group Meeting, *Forest Health Watch - community science* (Virtual Presentation).

- 2020 King County, King County Conservation District Forestry Team Meeting, *Western redcedar dieback in King County* (Virtual Presentation).
- 2020 Washington State Department of Agriculture, Plant Protection Group Meeting, *Forest Health Watch - upcoming community science program* (Virtual Presentation).
- 2020 South King County Culture (SoCoCulture), Member Update, *Forest Health Watch - partnering with SoCuCulture to promote the Engaging Trees platform* (Virtual Presentation).
- 2020 Forest Adaptation Network, Bi-Annual Meeting, *Forest Health Watch - engaging communities in forest adaptation science* (Virtual Presentation).
- 2020 Seattle Urban Forestry Interdepartmental Team, Quarterly Meeting, *Forest Health Watch - upcoming community science program* (Virtual Presentation).
- 2020 Seattle Urban Forestry Commission, Monthly Meeting, *Forest Health Watch - community science in the Pacific Northwest* (Virtual Presentation).
- 2020 City of Seattle, Urban Forest Core Team, monthly Meeting, *Forest Health Watch - an upcoming community science program in the Pacific Northwest* (Virtual Presentation).
- 2020 Puyallup Watershed Initiative, Forest Community of Interest, Bimonthly Meeting, *Forest Health Defenders - Pacific Northwest citizen science - brainstorm and discussion* (Virtual Presentation).
- 2020 Forestry and Natural Resources Extension Coffee Hour, Oregon State University, *Forest Health Defenders - Pacific Northwest citizen science - brainstorm and discussion* (Virtual Presentation).
- 2020 EcoPhysiology Working Group, Reed College, Portland State University & WSU Vancouver, *Forest Health Defenders - Pacific Northwest citizen science - brainstorm and discussion* (Virtual Presentation).
- 2020 Urban Ecology Research Laboratory, University of Washington, *Seattle Urban Forest Atlas project proposal*.
- 2019 National Research Foundation, South African Agency for Science and Technology Advancement, FAMELAB Alumni Network Event, *Public engagement with citizen science in South Africa*.
- 2018 Transatlantic Science Education Cooperative, Annual Workshop, Stellenbosch University, *Cape Citizen Science: methods of youth engagement*.
- 2018 Imbovane Outreach Workshop, Centre for Excellence in Invasion Biology, Stellenbosch University, *Microscopic organisms: why and how we study them*.
- 2018 Plant Conservation Unit, University of Cape Town, *Benefits and challenges of citizen science: the experiences of @CapeCitSci in South Africa*.
- 2018 Farm to Table Working Group, North Carolina State University, *Citizen science in South Africa: applications for agriculture* (teleconference).
- 2018 University of Pretoria, Forestry and Agricultural Biotechnology Institute, 20th Anniversary Meeting, *Inspiring a new generation of plant health specialists in Africa*.
- 2018 University of Washington, School of the Environment and Forests, Harvey Lab Meeting, *Citizen science and plant disease in South Africa*.
- 2016 Stellenbosch University, Dept. of Conservation Ecology and Entomology, Regional Universities Forum for Capacity Building in Agriculture (RuForum) visit, *Conserving Biodiversity with citizen science*.
- 2016 Agricultural Research Council, Stellenbosch University, Dept. of Plant Pathology, Pre-symposium Fungal Pathogens Discussion Group, ARC-PPRI 24th Interdisciplinary Symposium on Soil-borne Plant Diseases, *Public engagement to survey plant destroyers in South Africa*.
- 2016 Stellenbosch University, Centre of Excellence in Invasion Biology, Dept. of Zoology, Invasives in the Cape Discussion Group, *Is the greatest threat to South Africa's natural resources something we cannot see?*
- 2015 Oregon State University, Dept. of Integrative Biology, Undergraduate Club, Spring Term Meeting, *Deciding how to impact the world: Issues, options, and tools*.
- 2015 Oregon State University, Science Communication Brown Bag Lunch Seminar Series, *Crowdfunding: creating new possibilities for science*.
- 2014 Oregon State University, Science Communication Brown Bag Lunch Seminar Series, *The Process of Podcasting: Using College Radio to Communicate Science*.
- 2014 Oregon State University, College of Forestry, Researcher Teacher Partnerships: Making global climate change relevant in the classroom, Spring Workshop, *Invasive Species: Service Learning Opportunities for K-12*.

- 2014 Oregon State University, College of Forestry, Researcher Teacher Partnerships: Making global climate change relevant in the classroom, Spring Workshop, *Inspiring Science as Graduate Students*.

Competitive Presentations

Travel Awards

- 2020 Washington State University, Innovation and Research Engagement Office, Research Week, *Washington State Forest Health and Climate Change Research Cooperative*.

Science Communication

- 2013 Scholars Insights, Oregon State University, *It only takes one spore to start an epidemic*.

Public Engagement

Public Presentations

- 2022 Forest Health Watch, Tacoma Community Science Introduction (Virtual Presentation).
- 2022 Washington State University, Forest Health Watch. Sooty Bark Disease Bi-Monthly Information Sessions (Virtual Presentation).
- 2022 Forest Health Watch, Monthly Research Updates (Virtual Presentations).
- 2022 Washington State University, WSU Forestry Webinar, Western Redcedar Dieback Webinar *Community science to advance knowledge and learning about western redcedar dieback* (Virtual Presentation).
- 2022 Washington State University, *Forest Health Watch - Collaborator Update Meetings (2 events)* (Virtual Presentation).
- 2021 Tacoma Tree Foundation, Growing Skills Webinar Series, *Tracking sooty bark disease in the Pacific Northwest* (Virtual Presentation).
- 2021 Comox Valley Nature (Vancouver Island, BC), *Western Redcedar Dieback and Community Science in the Pacific Northwest* (Virtual Presentation).
- 2020 Tacoma Tree Foundation, Growing Skills Webinar Series, *Forest Health Watch - recognizing signs and symptoms of tree pests and diseases in our neighborhoods* (Webinar Presentation).
- 2020 Washington State University, *Forest Health Watch - Collaborator Update Meetings (3 events)* (Virtual Presentation).
- 2018 South African Citizen Science Project Fair, International Citizen Science Day, Old Mutual Conference Center, Kirstenbosch National Botanical Garden, *Cape Citizen Science*.
- 2018 Friends of Brackenfell Nature Reserve, Brackenfell Nature Reserve, monthly meeting, *How citizens can protect the Cape Floral Kingdom from new plant diseases*.
- 2018 Wildlife and Environment Society of South Africa, Tygerberg Nature Reserve, Big Friends Group Event, *How citizens can protect the Cape Floral Kingdom from new plant diseases*.
- 2017 South African National Biodiversity Institute, Kirstenbosch National Botanical Garden, Room To Grow Wednesday Talks Series, *Cape Citizen Science: plant disease in the fynbos*.

Youth Engagement Activities

- 2023 Forest Management Class, Science and Math Institute, Tacoma Washington *Forest Health and Invasive Species walk*.
- 2023 Ecology Club, Chief Leschi, Puyallup Tribe of Indians School District, *Soil sampling and monitoring*.
- 2022 Northwest Youth Corps, Capitol Land Trust, Inspiring Kids Preserve, *Forest Health and Invasive Species walk*.
- 2022 Muckleshoot Tomanamus Forest, Muckleshoot Tribal College - Early College Program and College and Career Education Opportunities Program, *Invasive Species* (1 event).
- 2022 Ecology Club, Chief Leschi, Puyallup Tribe of Indians School District, Ecology Club, *Earth Day tree planting*.
- 2022 Hilltop Heritage Middle School, Thrive Program, *Educational walk and tree identification* (1 event), Point Defiance Park, Tacoma, Washington.

- 2021 Mount Tahoma High School, Botany class *Forest Walk at Lincoln Tree Farm*, Spanaway, Washington.
- 2021 Muckleshoot Tribal College - Early College Program, *Educational Walks in Tomanamus Forest* (2 events), Tomanamus Forest, Green Water, Washington.
- 2021 Muckleshoot Tribal College - Early College Program, *Research Tour*, Washington State University, Puyallup Research and Extension Center.
- 2018 Kluitjieskraal and Waterval Junior Rangers, *Part 2: Collecting bark and ambrosia beetles*, Cape Nature, Wolseley.
- 2018 Littlewood Primary, *Part 2: Collecting bark and ambrosia beetles*, Cape Nature, Wolseley.
- 2018 Littlewood Primary, *Part 1: Collecting bark and ambrosia beetles*, Cape Nature, Wolseley.
- 2018 Kluitjieskraal and Waterval Junior Rangers, *Part 1: Collecting bark and ambrosia beetles*, Cape Nature, Wolseley.
- 2017 SANParks Junior Rangers, *Hike to De Mond*, Cape Point, Table Mountain National Park.
- 2017 Noordhoek Primary, *Cape Citizen Science Presents: Cape Nature Junior Ranger Adventures in Rochepan Nature Reserve*, Cape Nature, Veldrift.
- 2017 Littlewood Primary, *Cape Citizen Science Presents: Cape Nature Junior Ranger Adventures in Drift Sand Nature Reserve*, Cape Nature, Blue Downs.
- 2017 Se7en +1 homeschool group, *Cape Citizen Science Presents: Lab Visit with Se7en +1*, Stellenbosch University, Stellenbosch.
- 2017 Fish Hoek Girl Guides, *Adventures with First Fish Hoek Girl Guides*, Fish Hoek.
- 2017 Se7en +1 homeschool group, *Mountain hike with Seven+1*, Fish Hoek.
- 2017 Mamre Girls Brigade, *Cape Citizen Science Presents: Adventures in Silwer Stream*. Cape Nature, Mamre.
- 2017 South African Education and Environment Project, *SAEP and Cape Citizen Science Present: Adventures in Helderberg Nature Reserve*, three activities (July 29, August 5, and October 7), Cape Town Municipality, Somerset West.
- 2017 South African Education and Environment Project, *SAEP and Cape Citizen Science Present: Adventures in Cape Point*, three activities (June 10, 17 and 24), Cape Point, Table Mountain National Park.
- 2017 Vision Afrika, *Pathogen hunting in Jonkershoek Nature Reserve on Earth Day*, Jonkershoek Nature Reserve, Stellenbosch.
- 2016 Helderberg Eco-Rangers, *Sampling streams for Phytophthora and monitoring stream health with miniSASS*, Edward Wood Environmental Education Center, Somerset West.
- 2016 Helderberg Eco-Rangers, *Training to be citizen scientists: reporting dying plants with IspotNature*, Helderberg Eco-Rangers, Edward Wood Environmental Education Center, Somerset West.
- 2016 Four Cape Town Scout Troops, *Cape Citizen Science: plant disease on Hoys Koppie*, Hermanus, Scout excursion.
- 2016 Helderberg Eco-Rangers, *Disease in our fynbos*, Edward Wood Environmental Education Center, Somerset West.
- 2015 Se7en +1 homeschool group, *Sampling in Kirstenbosch National Botanical Garden*, South African National Biodiversity Institute, Cape Town.
- 2014 Wood Magic Volunteer, *Forest products in everyday materials*, World Forestry Institute, Portland, Oregon.
- 2013 Wood Magic Volunteer, *Forest products in everyday materials*, World Forestry Institute, Portland, Oregon.

Outdoor Events

- 2023 *Tacoma Tree Foundation*, Maple Health Watch walk and happy hour, Franklin Park, Tacoma, Washington.
- 2022 *Tacoma Tree Foundation*, Private hike with donor, Madrone Ecology, Point Defiance, Tacoma, Washington.
- 2022 *City of Renton and Renton School District*, Redcedar Tree Planting, Black River Riparian Area, Renton, Washington.

- 2022 *Tacoma Tree Foundation*, Redcedar Tree PLanting, Swan Creek, Tacoma, Washington.
- 2021 *Issaquah Alps Trail Club*, Forest Health, Tiger Mountain, Issaquah, Washington.
- 2021 *Tacoma Tree Foundation*, Madrone Ecology, Swan Creek, Tacoma, Washington.
- 2020 *Arbutus ARME*, Madrone Ecology, Point Defiance, Tacoma, Washington.

Promotional Table Events

- 2023 Forest Health Watch, Fall State Fair - NW Outdoors Exhibit, Puyallup, Washington.
- 2023 WSU INVASIVES-R Project, Affiliated Tribes of Northwest Indians,
- 2023 WSU INVASIVES-R Project, Northwest Intertribal Agricultural Council Regional Meeting, Pendleton Oregon.
- 2023 Forest Health Watch, Tacoma Garden Festival, Tacoma, Washington.
- 2023 Forest Health Watch, South Sound Sustainability Fair, Tacoma, Washington.
- 2023 Forest Health Watch, Spring State Fair - NW Outdoors Exhibit, Puyallup, Washington.
- 2022 Forest Health Watch, Focus on Forestry, Monroe, Washington.
- 2022 WSU Puyallup Research and Extension Center, Tomanamus Community Day, Muckleshoot Indian Tribe, Green Water, Washington.
- 2022 Forest Health Watch, Climate Science on Tap, Seattle, Washington.
- 2022 WSU INVASIVES Project, Affiliated Tribes of Northwest Indians Annual Convention, Tulalip, Washington.
- 2022 Forest Health Watch, South Sound Sustainability Fair, Tacoma, Washington.
- 2022 Forest Health Watch, Tacoma Tree Foundation, Hilltop Tree Giveaway, Tacoma, Washington.
- 2018 Science Forum South African, Council for Scientific and Industrial Research, Pretoria.
- 2018 Biodiversity Careers Day, Kirstenbosch Research Centre, Cape Town.
- 2017 Science Forum South African, Council for Scientific and Industrial Research, Pretoria.
- 2017 National Science Week __, __ African Institute of Mathematical Sciences, Khayelitsha.
- 2017 Open Day, Faculty of AgriSciences, Stellenbosch University.
- 2016 Hermanus Botanical Society Flower Festival, Hermanus.
- 2016 Funky Fynbos Festival, Gaansbai.
- 2015 Arbor Week Expo, Stellenbosch.
- 2013 Spring Discovery Days, Oregon State University.
- 2013 Fall Discovery Days, Oregon State University.

Stakeholder Engagement

Presentations

- 2023 Intertribal Agriculture Council, Pacific Northwest Region Meeting, *No-cost educational materials to amplify awareness and mitigate the impacts of invasive species.*
- 2023 Washington State University Extension Western Washington Family Field Day, *Emerging Diseases in the Pacific Northwest.*
- 2023 Cascadia User Group of Open Source (CUGOS) meeting, *Western redcedar dieback: open analyses of open data*, Seattle, Washington.
- 2023 Port of Tacoma, Invasive Species Workshop, *Sentinel Plantings in Tacoma: a tool for detecting new arrivals of invasive species*, Tacoma, Washington.
- 2023 Ravenholt Urban Forest Health Webinars, *Tacoma Sooty Bark Disease Vulnerability Study* (Online Webinar).
- 2023 South Sound Mushroom Club, *Fungi and tree health in the Pacific Northwest*, Olympia, Washington.
- 2023 Northwest Natural Resources Group, Fireside Chat, *Monitoring tree health: community mapping to study western redcedar dieback.*
- 2022 Northwest Innovative Forestry Summit, Forest Guild, *Forest Health Watch - data for public engagement and project implementation*, UW Pack Forest, Eatonville, Washington.
- 2022 Washington State University Extension Online Field Day, *Emerging Diseases in the Pacific Northwest* (Pre-Recorded Online Presentation).

- 2022 Pacific Northwest International Society of Arboriculture Meeting, *Sooty Bark Disease: Diagnostics & Research in the Pacific Northwest* (Pre-Recorded Online Presentation).
- 2022 Affiliated Tribes of Northwest Indians, Natural Resource Committee, *Brief introduction to WSU /USDA APHIS INVASIVE Project*.
- 2022 Intertribal Agriculture Council, Pacific Northwest Region Meeting, *FY22 USDA APHIS PPA 5.0595: Increasing Native Vigilance, Awareness and Surveillance of Invasions via Education (INVASIVE) Project*.
- 2022 WSU Master Gardeners, Lewis County Chapter, *Community science to study the dieback of western redcedar*.
- 2022 Washington State University, Master Naturalist Programming, *Community science to study the dieback of western redcedar*. (Two Virtual Presentations).
- 2022 Washington Native Plant Society, Koma Kushan Chapter, *Community scientists needed for Western redcedar dieback in Pacific Northwest*. (Virtual Presentation).
- 2022 Selkirk Alliance for Science, *Community Science for western redcedar research* (Webinar Presentation).
- 2022 Washington State Department of Transportation, Revegetation Climate Change Discussions *Forest Health Watch and western redcedar dieback research* (Webinar Presentation).
- 2022 Washington State University, Washington Forest Owners' Winter School, *Sooty Bark Disease in the PNW - what to look for in your maple trees* (Webinar Presentation).
- 2022 City of Seattle, *Sooty Bark Disease in the Pacific Northwest*, Integrated Pest Management and Recertification Webinar (Virtual Presentation).
- 2022 South Sound Educators, Science Leadership Collaborative, *Linking ecology education and research with iNaturalist* (Virtual Presentation).
- 2021 - 2022 Washington State University, *Forest Health Watch - Research Updates*, Montly (June-Dec) (Virtual Presentations).
- 2021 Issaquah Alps Trail Club, *Community scientists needed for Western redcedar dieback in Pacific Northwest*. (Virtual Presentation).
- 2021 Idaho Native Plant Society, Kinnikinnick Chapter, *Community scientists needed for Western redcedar dieback in Inland Northwest*. (Virtual Presentation).
- 2021 Idaho Native Plant Society, White Pine Chapter, *Community scientists needed for Western redcedar dieback in Inland Northwest*. (Virtual Presentation).
- 2021 Montana Native Plant Society, Flathead and Kelsey chapters *Community scientists needed for research about western redcedar dieback* (Virtual Presentation).
- 2021 USFS Region 6 Advanced Silviculture Training *Community science to accelerate research and enhance biosecurity in the Pacific Northwest* (Virtual Presentation).
- 2021 WSU Extension Lewis County Invasive Species Workshop *Keeping trees healthy in Washington - WSU research and extension services* (Virtual Presentation).
- 2021 Washington State University, Master Gardener Advanced Diagnostic Training Workshop *Forest Health Watch: community science to accelerate research* (Virtual Presentation).
- 2021 Shoreline Green Cities Partnership Forest Stewards Training, *Community scientists needed for redcedar dieback research* (Virtual Presentation).
- 2021 Redmond Green Cities Partnership Forest Stewards Training, *Community scientists needed for redcedar dieback research* (Virtual Presentation).
- 2021 Issaquah Green Cities Partnership Forest Stewards Training, *Community scientists needed for redcedar dieback research* (Virtual Presentation).
- 2021 Washington State University Extension SW Washington Forestry Tech Series, *Tracking forest health issues with iNaturalist* (Virtual Presentation).
- 2021 Seattle Green Cities Partnership Forest Stewards Training, *Western redcedar dieback in Seattle* (Virtual Presentation).
- 2021 Thurston County Master Gardeners, *Forest health concerns and community science in the Pacific Northwest* (Virtual Presentation).
- 2021 Portland Metro, monthly conservation teams meeting, *Forest Health Watch: community science to accelerate research* (Virtual Presentation).
- 2021 WSU Grays Harbor & Pacific County Master Gardeners, *Forest Health Watch: community science*

- to accelerate research (Virtual Presentation).
- 2021 Bainbridge Island Watershed Council, *Forest Health Watch: community engagement for healthy forests* (Virtual Presentation).
- 2021 Washington State University, *Pacific Northwest Forest Biosurveillance Training (June)* (Virtual Presentation).
- 2021 Washington State University, *March Forest Health Watch - Collaborator Update Meetings (4 events)* (Virtual Presentation).
- 2021 Washington State University, Washington Forest Owners' Winter School, *Western redcedar dieback: what's happening and how you can help* (Webinar Presentation).
- 2021 Duwamish River Re-vegetation Partners Meeting, King County, *Insights for healthy restoration practices* (Virtual Presentation).
- 2020 Green Cities Partnership Network Meeting, *Forest Health Watch - keeping forests healthy* (Virtual Presentation).
- 2020 Washington State University, *November Forest Health Watch - Collaborator Update Meetings (3 events)* (Virtual Presentation).
- 2017 South African National Biodiversity Institute, *Introduction to Phytophthora*, Plant Pest Monitoring and Prevention Workshop, International Plant Sentinel Network, Kirstenbosch National Botanical Garden, November 6-7, 2017.
- 2017 South Africa National Parks, *Forest Phytophthoras: invisible threats or contributors to plant community diversity?* Garden Route National Park SANParks Office, Knysna, South Africa.
- 2017 Cape Town Municipality, *Plant disease in the Cape Floristic Region*, Branch Meeting, Cape Town.
- 2017 Cape Town Municipality, Cape Nature, World Wildlife Foundation, *Plant disease in the Cape Floristic Region*, BioNet Steering Committee Meeting, Cape Town.
- 2016 South Africa National Parks, *Cape Citizen Science: Sampling Phytophthora with Citizen Science*, Research Committee Feedback Discussion, Cape Research Centre, Tokai, Cape Town.
- 2016 Cape Nature, *Involving Cape Nature to study dying plants in the fynbos*, Eastern Division Quarterly Ecological Meeting, George.
- 2016 Cape Nature, *Engaging citizens in research through workshops and targeted sampling*, Central Division Quarterly Ecological Meeting, Fernkloof Nature Reserve, Hermanus.
- 2016 Cape Nature, *Community driven research about plant disease in the fynbos*, Western Division Quarterly Ecological Meeting, Porterville.

WSU Puyallup REC Tours

- 2023 Tacoma Community College, Environmental Science students.
- 2023 Tacoma Community College, Math Engineering and Science Achievement (MESA) students.
- 2022 Conservation District Foresters.
- 2022 Pierce County Americorps Crew.
- 2022 City of Tacoma, Washington Conservation Corps Crew.

Community Science Events

- 2023 Issaquah Alps Trail Club, Northwest Tiger Mountain, Issaquah, Washington.
- 2022 Tacoma Tree Foundation, Redcedar walk, Swan Creek, Tacoma, Washington.
- 2022 Issaquah Alps Trail Club, Squak Mountain, Issaquah, Washington.
- 2023 Issaquah Alps Trail Club, North Tiger Mountain, Highline Trail, Issaquah, Washington.
- 2021 Transition Fidalgo and Friends, Anacortes, Washington.

Plant Health Workshops

- 2022 Forest Health Watch, Wapato Park Tour, Co-hosted with Forterra and City of Tacoma Open Spaces, Tacoma, Washington.
- 2017 South African National Parks, *Hunting for Phytophthora in West Coast National Park*, SANParks office, Langebaan, West Coast.
- 2017 Stellenbosch Municipality, *Surveying Phytophthora in Jan Marais Nature Reserve*, Stellenbosch.

- 2016 Cape Nature, *Surveying Phytophthora in Marloth Nature Reserve*, Marloth Nature Reserve, Swellendam.
- 2016 South African National Biodiversity Institute, *Recognizing plant disease, sampling soil, and testing hypotheses*, Harold Porter Botanical Garden, Bettys Bay.
- 2016 Stellenbosch University, *Recognizing plant disease and sampling soil for Phytophthora spp.*, Stellenbosch University Botanical Garden, Stellenbosch
- 2016 South African National Biodiversity Institute, *Hypothesis testing in Kirstenbosch National Botanical Garden with Citizen Science*, Kirstenbosch National Botanical Garden, Kirstenbosch Garden Office, Cape Town.
- 2016 South African Botanical Society, *Surveying Phytophthora species in Fernkloof Nature Reserve*, Fernkloof Nature Reserve Hall, Hermanus.
- 2016 South Africa National Parks, *Surveying Phytophthora species in Agulhas National Park*, SANParks Office, Agulhas.
- 2016 South African National Biodiversity Institute, *Phytophthora soil baiting in the Protea Garden*, Kirstenbosch National Botanical Garden, Kirstenbosch Garden Office, Cape Town.
- 2016 South Africa National Parks, *Sampling dying plants and the Breede river in Bontebok National Park*, Bontebok National park, Swellendam.
- 2016 South African National Biodiversity Institute, *Recognizing plant disease: why and how*, Kirstenbosch National Botanical Garden, Kirstenbosch Garden Office, Cape Town.
- 2016 South Africa National Biodiversity Institute, *Introduction to Phytophthora: plant destroyers in South Africa*, Kirstenbosch National Botanical Garden, Kirstenbosch Garden Office, Cape Town.

Mentorship and Supervision

- 2023 Jah'Niya Myers. Internship Project (Senior), College of Agricultural, Human, and Natural Resource Sciences Internship Program, Washington State University
- 2023 Anne Marie Ring. Part-time Summer lab and field technician, University of Puget Sound Biology and Geography undergraduate student.
- 2022 Noah Willards. Part-time Lab Technician and prospective graduate student.
- 2022 Fig Dewitz. Part-time Lab and Field Technician.
- 2022 Taylor McNees. Capstone Project and Lab Technician, Microbiology, University of Washington Tacoma
- 2022 Hibaaq Arte, Capstone Project (Senior), Environmental Studies, University of Washington
- 2022 Daviti Vardishvili, Internship Project (Junior), High-Value Agriculture Research and Extension Experiences for Undergraduate Students (REEU) Program, Washington State University
- 2022 Grant Irey, Internship Project (Freshmen), College of Agricultural, Human, and Natural Resource Sciences Internship Program, Washington State University
- 2022 Nicole Vonberckefeldt, Capstone Project (Senior), Natural Resources, Green River College
- 2022 Jennifer Olson, Capstone Project (Senior), Natural Resources, Green River College
- 2022 Lyndsay Felthoven, Capstone Project (Senior), Environmental Studies, University of Washington
- 2022 Angela Mabel Gaither, Capstone Project (Senior), Environmental Studies, University of Washington
- 2021 Brieanne Laia & Hailey Dilow, Marine Chemistry Science Project (Grade 12), Bellarmine Preparatory Highschool, Tacoma, Washington.
- 2018 Eric Norton, BSc Honors (4th year), Dept. of Conservation Ecology and Entomology, Stellenbosch University.
- 2018 Ashleigh Basel, BSc Honors (4th year), Dept. of Conservation Ecology and Entomology, Stellenbosch University.
- 2017 Grég Thiry, MSc Environmental Education, Université of Montpellier, France. South African Environmental Education Project Intern.
- 2017 Nicolas Louw, BSc Honors (4th year), Dept. of Conservation Ecology and Entomology, Stellenbosch University.
- 2017 Adam Wentzel, Work Integrated Learning Student, Cape Nature, Jonkershoek Nature Reserve, Dept. of Biodiversity and Conservation, Cape Peninsula University of Technology.
- 2017 Tara Nair Van Ryneveld, BSc Honors (4th year), Plant Conservation Unit, Dept. of Biological

Sciences, University of Cape Town.

- 2017 Liza-Marie Dippenaar, BSc Plant Pathology 4th year project, Dept. of Plant Pathology, Stellenbosch University.
- 2017 James Coldrey, BSc Plant Pathology 4th year project, Dept. of Plant Pathology, Stellenbosch University.
- 2016 Jeff Groenewald, BSc (3rd year), Biodiversity and Ecology, Dept. of Botany and Zoology, Stellenbosch University.
- 2014 Emma Buczkowski, BSc Zoology, Dept. of Botany & Plant Pathology Undergraduate Mentorship Program (BUDS) Oregon State University.
- 2014 Joey DeSheilds, BSc Molecular and Cell Biology, Dept. of Botany & Plant Pathology Mentorship Program (BUDS), Oregon State University.
- 2014 Kayla Nass, BSc Wood Science and Engineering, Hourly Morrell Lab Student Employee, Oregon State University.
- 2014 Al Pancoast, BSc Forest Engineering, Forestry Graduate Undergraduate Mentorship Program (GUMP), Oregon State University.
- 2014 Alex Abair, BSc Botany & Plant Pathology, Hourly Hansen Lab Student Employee, Oregon State University.
- 2013 Josh Petitmermet, Hourly Hansen Lab Student Employee, Oregon State University.
- 2013 Jake Kotche, Hourly Hansen Lab Student Employee, Oregon State University.
- 2013 Patrick Duyck, BSc Forest Engineering, Personal Initiative.

Mentorship Outcomes

- Arte H, White E, Felthoven L, Gaither A, Billo T, McDonald S, **Hulbert JM** (Manuscript in Prep). Western redcedar dieback is associated with urban heat in King County Washington.
- Olson J, Vonberckefeldt N, **Hulbert JM** 2022. Oomycete communities associated with redcedar on Green River College campus, Green River College Capstone Presentation.
- Vardishvili D, Shrader K, Harvey S, **Hulbert J**, Chastagner G. 2022. Post-harvest hydration treatment effects on the vase life of Peonie, Washington State University, Summer Undergraduate Research Symposium. (Poster Presentation.)
- Gaither A, Billo T, **Hulbert JM** 2022. Redcedar dieback and urban heat in Renton, Environmental Studies Capstone Project Presentations, University of Washington. Poster Presentation.
- Felthoven L, Billo T, **Hulbert JM** 2022. Redcedar dieback and environmental health disparities in Seattle, Environmental Studies Capstone Project Presentations, University of Washington. Oral Presentation.
- Laia B, Dilow H, **Hulbert J** 2021. Phytophthora species associated with unhealthy red alder trees at Titlow Park, Bellarmine Preparatory Highschool Science Fair.
- Basel A, **Hulbert JM**, Midgley G, Jacobs S, Dreyer L, Roets F. 2018. Disease or drought? A physiological analysis on the effects of *Phytophthora* infection and water stress on *Leucadendron argenteum*, Fynbos Forum, Worcester, South Africa. Oral Presentation.
- Groenewald J, Roets F, **Hulbert JM**. 2017. *Phytophthora cinnamomi*: a driver behind endangered flora in the CFR?, South African Association of Botanists, Annual Meeting, Cape Town, South Africa. Poster Presentation.
- Louw NL, Roets F, **Hulbert JM**. 2017. The diminishing silver lining: re-evaluating the microscopic threats to South Africa's silver tree, Fynbos Forum, Swellendam, South Africa. Oral Presentation.

Professional Development

- 2022 Columbia River Inter-Tribal Fish Commission, Aquatic Invasive Species Workshop, Aquatic Ecology Laboratory, Washington State University Vancouver.
- 2021 Integrating Climate into Hazard Mitigation Plans (Western Region), Tribes & Climate Change Program, Institute for Tribal Environmental Professionals, Northern Arizona University.
- 2021 CC101: Introduction to Climate Change Adaptation Planning for Tribes, Tribes & Climate Change Program, Institute for Tribal Environmental Professionals, Northern Arizona University.

- 2021 Software/Data Carpentry workshop at the UW eScience Institute, University of Washington.
- 2021 Partnership Development Training, USDA Forest Service
- 2020 PI Roles and Responsibilities Training, Washington State University.
- 2020 Working with Industry 101, Washington State University.
- 2020 Study Circle on Racism and Equity, Washington State University.
- 2018 Citizen science and youth education in South Africa, Transatlantic Science Education Cooperative, Stellenbosch University.
- 2017 The People Side of Ecology, Social Science Methods Workshop, Dept. of Conservation Ecology and Entomology, Stellenbosch University.
- 2016 Introduction to Phylogenetics Workshop, Forestry and Agricultural Biotechnology Institute, University of Pretoria.
- 2016 Microsatellite Workshop, Forestry and Agricultural Biotechnology Institute, University of Pretoria.

Digital Media Production

Data Visualization

- Tacoma schools, urban heat and trees, (ArcGIS storymap).
- *Phytophthora* communities in eastern Cascade waterways, (ArcGIS storymap).
- Western Redcedar Dieback Map - Community Scientists (daily update), (Tableau Public).
- Western Redcedar Dieback Map - Preliminary Analysis (daily update), (Tableau Public).

YouTube Channels

- WSU Invasive Project - USDA APHIS Project # 5.0595
- WSU Ravenholt Urban Forest Health Lab

Video Production

- 2021 Western Redcedar Dieback Research and Community Science at Washington State University. YouTube.
- 2021 Western Redcedar Dieback Map - Adding Observations to iNaturalist. YouTube.
- 2020 Forest Health Watch - Puyallup High School Introduction. YouTube.
- 2017 A year of empowering young minds. YouTube.
- 2016 Engage Kayamandi youth in Cape Citizen Science with Vision Afrika. Experiment.com.
- 2016 Release your inner scientist (website header). YouTube.
- 2015 Discovering plant destroyers in South Africa with citizen science. Experiment.com.

Podcast Production

- 2017 *Dylan*, Cape Citizen Science.
- 2015 *Behind the Research*, Oregon State University, College of Forestry.
- 2012-2014 *Inspiration Dissemination*, Oregon State University, 88.7fm KBVR.

Web Development

- 2023- WSU Ravenholt Urban Forest Health Lab, Wordpress (<https://treehealth.wsu.edu/>)
- 2023- WSU Invasive Species, Wordpress (<https://extension.wsu.edu/invasive-species/>)
- 2020- Ornamental Plant Pathology, Wordpress (<https://ppo.puyallup.wsu.edu/>).
- 2020- PNW Citizen Science, Github Pages (<https://pnwcitsci.org/>).
- 2019- Forest Health Citizen Science Community, Github Pages (<https://fhcs.page/>).
- 2018- R Workshop Series, html & R Markdown (<https://jmhulbert.github.io/r/>).
- 2015- Cape Citizen Science, Wordpress (<https://citsci.co.za>).
- 2015-2016 Personal website, Drupal (<https://jmhulbert.me>).
- 2013-2014 Inspiration Dissemination, Drupal (oregonstate.edu/inspire).

- 2013-2014 Botany and Plant Pathology Graduate Student Association, Drupal (<https://gsa.bpp.oregonstate.edu>).
- 2013-2014 Western Forestry Graduate Research Symposium, Drupal (gradsymp.forestry.oregonstate.edu).
- 2013-2014 Forest Graduate Undergraduate Mentorship Program, Drupal (gump.forestry.oregonstate.edu).

Selected Popular Writing

- Zobrist K, Shults P, Hulbert JM. 2022. Focus on: emerald ash borer, WSU Puget Sound Extension Forestry Fall E-Newsletter.
- Zobrist K, Shults P, Hulbert JM. 2022. Washington residents should anticipate impacts from emerald ash borer, Forest Stewardship Notes, Washington Department of Natural Resources.
- Hulbert JM. Community scientists needed for western redcedar dieback research. Kelseya, Montana Native Plant Society, Volume 34, Issue 4, Summer 2021.
- Hulbert JM. Forest Health Watch – Opportunities to contribute to research and strengthen our biosecurity. PNW ISA Trees, Spring Issue 2021.
- Hulbert JM. Pacific Northwest Forest Bio-Surveillance Training Available, DNR & WSU Forest Stewardship Notes.
- Hulbert JM 2021. Community science and the dieback of western redcedar, treeline, Bonneville Environmental Foundation, Watersheds Program.
- Hulbert JM 2020. Forest Health Watch - a new community science initiative in the Northwest, Forest Stewardship Notes, Washington Department of Natural Resources.
- Hulbert JM 2020. You can contribute to western redcedar dieback research, Small Forest Landowner News.
- Hulbert JM, Roets F. 2017. Citizen science: how ordinary people can guard Cape Town's biodiversity, The Conversation-Africa.
- Hulbert JM. 2017. Pathogen Hunters: citizen scientists track plant diseases to save species, The Conversation-Africa.
- Hulbert JM. 2017. Two species of plant killing genus *Phytophthora* found in a Western Cape garden, Veld & Flora Vol 103(1).
- Hulbert JM. 2017. Citizen Science, Supernova: the magazine for curious kids Vol 6.1.
- Hulbert JM. 2016. Citizen driven science: the citizen science movement in South Africa, Quest Magazine, Vol 12 (2).
- Hulbert JM. 2016. Plant Destroyers, Supernova: the magazine for curious kids, Vol 5.6.
- Hulbert JM. 2016. Super Fungi, Supernova: the magazine for curious kids, Vol 5.5.
- Hulbert JM. 2016. Citizen science: research experience for all, Veld & Flora, Vol 102(2).
- Hulbert JM. 2016. Recycled pathogens: avoiding accidental infection through awareness, Agrikultuur Magazine, Vol 34.
- Hulbert JM. 2015. Microbes, Supernova: the magazine for curious kids, Vol 5.3.
- Hulbert JM. 2015. Citizen engagement in research to protect fynbos—and forests, SA Forestry.
- Hulbert JM, Navarro S. 2011. Effective collaboration slows the spread of Sudden Oak Death in Oregon, Western Forester, Vol 56(3).

Selected Media Coverage

- Articles
 - Seth Truscott. 2023. WSU sentinel plantings to guard against invasive pests, diseases at Washington ports, WSU CAHNRS News
 - Joe Roberts. 2023. Engaging the curious: WSU Extension educates and empowers citizen scientists, WSU CAHNRS News
 - WSU, 2022. Climate Science on Tap explores urban forests with WSU researcher, WSU Insider
 - Nicholas Turner. 2022. Has this iconic Northwest tree reached a tipping point?, Seattle Times.
 - Pacific Education Institute. 2022. Puget Sound teachers branch out with PEI's urban forestry storylines, online article. + Anna Marie Pizzariello, Education Outreach Report Part 1, The Real Dirt, Master Gardener Foundation of Lewis County Newsletter.

- Nathan Gilles. 2022. Pac NW’s ‘trees of live’ are dying. Now we know why, Columbia Insight, Online Article.
- Craig Sailor. 2022. Another tree disease has appeared in Pierce County, and this one can injure people, too, The News Tribune, Tacoma Washington. Newspaper article.
- Pacific Education Institute. 2022. PEI’s Urban Forestry SOLS inspire PSED teachers to explore forests with students, online article.
- Truscott S. 2022. Tacoma tree planting helps young scientists learn how redcedar can survive changing climates, College of Agriculture, Human and Natural Resource Science, Washington State University. Online Article.
- Wheeler H. 2021. Takeaways from Forest Health Watch, Issaquah Alps Trail Club Newsletter.
- Editor. 2021. Using iNaturalist to track redcedar dieback. Koma Kushan Chapter WNPS Newsletter.
- Truscott S. 2021 WSU researcher engages communities in tree health research with Forest Health Watch, College of Agricultural, Human and Natural Resource Science, Washington State University, online article.
- Truscott S. 2021 WSU co-organizes first annual Pacific Northwest Citizen and Community Science Summit, College of Agricultural, Human and Natural Resource Science, Washington State University, online article.
- Editor. 2021. Comox Valley Nature lecture discusses western redcedar tree health, Comox Valley Record, newspaper.
- Kempe Y. 2021. An iconic tree is dying off in Whatcom — what’s causing it and how can you help save it?, Bellingham Herald, Bellingham.
- Extoque R. 2021. The Unlikely Partnership Supporting South Seattle Youth Through Forest Science, South Sound Emerald, Seattle, digital newspaper.
- Dunne N. 2021. Mapping Cedar Dieback, University of Washington, Arboretum Bulletin, Washington.
- Inghram I. 2021. Citizen scientists study western redcedars, Anacortes newspaper, Washington.
- Peterson C. 2021. Help needed to assist dying western redcedars. Hungry Horse News and Whitefish Pilot, Montana.
- Truscott S. 2021. Citizen scientists can help study, halt die-off of Pacific Northwest’s redcedars, College of Agricultural, Human and Natural Resource Science, Washington State University, online article.
- Media and Communication 2018. Getting citizen science into South African classrooms, University of Stellenbosch, online article.
- de Bruin L. 2018. Be part of the Cape Town hypothesis test, University of Pretoria homepage, online article.
- Duvenage E. 2017. Jy kan PhD-student help met grondmonsters, Die Burger, newspaper article.
- Burt B. 2017. Citizen scientists around the world take to the woods in an effort to improve the health of forests, IUFRO Spotlight # 49, online article.
- Duvenage E. 2017. Citizen science crowdfunding project pays off, SciBraai, online article.
- Brits E. 2016. ‘Publiek kan help om fynbos te red, Netwerk 24, newspaper article.
- Heyl A. 2016. Join the hunt for pathogens in the fynbos, UP News, online article.
- Editor. 2016. Science Project aims to boost fynbos conservation, Boland Gazette, Hermanus Times, newspaper article.
- DeKlerk, R. 2016. Identifying plant diseases at the southernmost point of Africa SanParks Times, magazine article.
- Radio Interviews
 - NPR KNKX 88.5 Tacoma Washington, Sooty bark disease vulnerability study, July 12, 2022.
 - KBCS 91.3 Bellevue Washington, The Redlined Western Redcedar Study Project, November 18, 2021.
 - treehugger podcast, Forest health and climate change (in production)
 - treehugger podcast, Madrones! with Arbutus ARME, January, 2021.
 - Cherry Creek Media, Wenatchee Washington, March 12, 2021.
 - Middag op RSG, RSG 100-104FM, January 23, 2018.

- Detour, Maties MFM 92.6FM, November 29, 2017.
- Green Living, Radio Helderberg 93.6FM, February 23, 2017.
- KLCC News, NPR KLCC 89.7, April 8, 2015.

Science Community Service

- 2022 Guest Editor, Special Issue, *Frontiers in Ecology and Evolution*, *The Role of Community and Industry Surveillance in Managing Invasive Species: a Review of Current Knowledge*
- 2021 Promotion Review, External Evaluation, Associate Professor of Practice
- 2021 Workshop Participant, *Citizen science and its future role for monitoring nature and the environment* (Joint University Initiative, United Kingdom)
- 2021 Adhoc Reviewer, Oregon State University Extension (1 Extension Publication)
- 2021 Adhoc Reviewer, *Journal of Plant Pathology* (1 Manuscript)
- 2021 Adhoc Reviewer, *African Journal of Marine Science* (1 Manuscript)
- 2020 Adhoc Reviewer, *Urban Forests Urban Greening* (1 Manuscript)
- 2020 Adhoc Reviewer, *Journal of Science Communication* (1 Manuscript)
- 2020 Adhoc Reviewer, *Journal of Plant Pathology* (1 Manuscript)
- 2020 Adhoc Reviewer, *Scientific Reports* (1 Manuscript)
- 2019 Adhoc Reviewer, *African Journal of Marine Biology* (1 Manuscript)
- 2018 Adhoc Reviewer, *Biological Invasions* (1 Manuscript)
- 2016 Adhoc Reviewer, *IMAFungus* (1 Manuscript)

Research Positions

- 2020 - 2022 Postdoctoral Research Associate, Washington State University, Dept. of Plant Pathology, Puyallup Research and Extension Center. Primary Supervisor: Gary Chastagner.
- 2015 - 2019 Graduate Student, University of Pretoria, Dept. of Plant and Soil Sciences, Pretoria, Gauteng, South Africa. Primary Supervisor: Mike Wingfield. Co-supervisors: Treena Burgess, Francois Roets.
- 2016 - 2018 Affiliate Research Student, Stellenbosch University, Dept. of Conservation Ecology and Entomology, Stellenbosch, Western Cape Province, South Africa. Supervisor: Francois Roets.
- 2012 - 2014 Graduate Research Assistant, Oregon State University, Dept. of Wood Science and Engineering, Corvallis, Oregon, USA. Supervisors: Everett Hansen, Jeff Morrell.
- 2011 - 2012 Research Technician, Oregon State University, Dept. of Botany and Plant Pathology, Corvallis, Oregon, USA. Supervisors: Everett Hansen, Paul Resser, Wendy Sutton.
- 2010 Field Technician, Oregon State University, Dept. of Forest Engineering, Resources and Management, Corvallis, Oregon, USA. Supervisors: Dave Shaw, Travis Woolley.
- 2009 Forest Service STEP Field Technician, Joint project with U.C. Davis and Forest Service Sierra Nevada Research Center, Davis, California, USA. Supervisors: Seth Bigelow, Michael Papaik, Malcolm North.
- 2008 Field Technician, Joint project with University of Idaho and Forest Service Rocky Mountain Research Station, Moscow, Idaho, USA. Supervisors: Andrew Hudak, Penny Morgan.
- 2008 Volunteer Lab Technician, Forest Pathology Lab, Forest Service Rocky Mountain Research Station, Moscow, Idaho, USA. Supervisors: Ned Klopfenstein, Mee-Sook Kim.
- 2007 - 2010 Research Technician, Washington State University, Dept. of Plant Pathology, Pullman, Washington, USA. Supervisor: Patricia Okubara.
- 2004 Research Technician, Kansas State University, Dept. of Plant Pathology, Manhattan, Kansas, USA.

References

Primary Postdoc Mentor **Gary Chastagner** Professor, Washington State University Extension Specialist, WSU Research and Extension Center in Puyallup chastag@wsu.edu

Postdoc Mentor **Marianne Elliott** Research Associate, Washington State University Research and Extension Center in Puyallup mellott2@wsu.edu

Puyallup Research and Extension Director **Todd Murray** Director, WSU Research and Extension Center in Puyallup Washington State University tmurray@wsu.edu

Primary PhD Supervisor **Mike J. Wingfield** Advisor to the Executive, University of Pretoria Past President, International Union of Forest Research Organizations Founding Director, Forestry and Agricultural Biotechnology Institute Professor, Department of Microbiology and Plant Pathology University of Pretoria, Pretoria, South Africa 0002 mike.wingfield@up.ac.za

PhD Co-Supervisor **Treena I. Burgess** Research Director - Institutes, Murdoch University Director, Centre of *Phytophthora* Science and Management Professor, Plant Biology Murdoch University, Murdoch, Western Australia 6150 t.burgess@murdoch.edu.au

PhD Co-Supervisor **Francois Roets** Assistant Professor, Dept. of Conservation Ecology and Entomology Stellenbosch University, Stellenbosch, South Africa 7600 fr@sun.ac.za

MSc Supervisor **Everett M. Hansen** Professor Emeritus, Dept. of Botany and Plant Pathology Oregon State University, Corvallis, Oregon, USA 97330 hansene@oregonstate.edu