







Travis Zalesky


Research Assistant


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About me

Experienced Ecologist, Mycologist, and Data Scientist. I have a broad earth sciences background with professional experience surveying plant, animal, and fungal species. Experienced in both the field and lab. Specializing in data analysis and data science.

Writing Ability

An experienced technical writer. I have authored or coauthored dozens of internal and external project reports, including results and methods. Lead author on peer-reviewed manuscript "Fungal cryopreservation across 61 genera: Practical application and method evaluation" (under review).

Coding and Programing

Expert in R (programing language) for data management and analysis. Familiar with many frequently used R packages, including the tidyverse, datatable, shiny, etc. Comfortable working with ArcGIS, Python, SQL, \LaTeX , JavaScript and more. Have professionally developed several specialized apps. Please see my GitHub page for additional project details.

Travis Zalesky
travisz09@live.com, (360) 915-3163.

Bibliography

I am an experienced researcher with 10+ years experience working for ecological, and microbiological labs, specializing in field surveys and data sciences. An avid outdoors man with field research background in three US states. I am highly knowledgeable in ecological field surveys with professional experience identifying and documenting plant, animal and fungal species as well as conducting hydrological, geological and habitat surveys. I have extensive experience with ecological and biotech data analysis, primarily in R (programming language), and am comfortable working with a variety of other programming languages necessary for modern scientific computing. I am a lifelong learner, and beginning this fall I will be continuing my education through the MS GIST program at University of Arizona (online).

Education

Beginning Fall 2023	MS student, GIST Research modern techniques in <i>Geographic Information Systems Technology</i> , primarily using ESRI ArcGIS software. Remote sensing techniques and geospatial data management. Raster and vector data analysis. Programming and task automation. Cartography. Requires Masters Project/Thesis, with defence.	University of Arizona
2009-2013	BS, Environmental Science Emphasis in Freshwater Ecology. Broad earth science education, including courses in Chemistry, Biology, Geology, Limnology, and Wetlands Ecology. Extensive ecological data collection education, species IDs, transects, survey methods, etc. Environmental ethics and policy. Conducted a campus-wide waste audit using geospatial data to identify perspective locations and make recommendations for additional waste receptacles in order to improve campus recycling waste streams in co-operation with the Associated Students Recycling Center (see work experience, 2012-2013).	Western Washington University

Publications

Shevtsov, J., Bair, Z., Longman, A., Peterson, C., Tuominen, L. K., Zalesky, T., Davis, R., Sercel, J., & Stamets, P. "Making Soil for Space Habitats by Seeding Asteroids with Fungi." NIAC 2021 Phase 1 Final Report. NASA, January 11, 2022.
[niac_2021_phi_shevtsov_fungi_tagged.pdf](#).

Zalesky, T., Bradshaw, A. J., Bair, Z., Meyer, K., & Stamets, P. (n.d.). Fungal cryopreservation across 61 genera: Practical application and method evaluation. Mycologia, (Under Review).

Other Education and certifications

Apr. 2023	Relational Databases.	freeCodeCamp
Mar. 2023	Data Visualization.	freeCodeCamp
Mar. 2023	Front End Development Libraries.	freeCodeCamp
Jan. 2023	Scientific Computing with Python.	freeCodeCamp
Jan. 2023	JavaScript Algorithms and Data Structures.	freeCodeCamp
Jan. 2023	Responsive Web Design.	freeCodeCamp
Aug. 2022	Biological Data Science training workshop.	Drexel U., Rohan U., U. of Chicago
Oct. 2019	Learn R.	Code Academy
May 2014	Defensive Driver.	U. of Idaho
Dec. 2008	Open Water Diver.	SSI

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Outdoors Experience

Field research experience in three US States, WA, OR, and ID. Professional experience camping and backpacking in remote locations, up to 8 consecutive days in the field. Experienced in navigation and orienteering. Comfortable with unpaved and off-road driving. Experienced boater on the Columbia River, and other PNW waterways in crafts up to 18'. Fisheries surveys, including wading and snorkeling. Experienced freshwater fisherman. Extensive travel experience, particularly to remote locations and in rugged terrain. Multiple Mts. summited.

Profesional Skills

Data Collection and Analysis

Ecology

Experimental Design

GIS

JavaScript

LaTeX

MS Office

Mycology

Python

R

Species IDs

SQL

Technical Writing

Scale: 0 (basic skills) - 6 (expert).

Work Experience

2018 - 2023	Research Assistant	Fungi Perfecti
Perform experiments and support research scientists in a variety of Research & Development projects for a mycological biotech lab. Survey and bio-prospect for novel, endemic, and understudied mushroom species found in the Pacific North West. Lead teams of varying education and technical ability on fungal forays. Cooperate with local government officials regarding land access and collection permits. Research and develop mycological biotech strategies for ecological health, including biodegradation of pollutants and biologically assisted wastewater treatment. Collaborate with many external researchers on various projects, including a Phase 1 NASA Innovative and Advanced Concepts (NIAC) research grant (see publications). Analyze complex data sets from internal and external sources representing highly specialized biotech and chemical analysis of experimental samples, including; high pressure liquid chromatography, mass spectroscopy, in vitro cell assays, multi-plex cytokine assays, etc. Conduct molecular biology assays, including DNA extractions, PCR reactions, and basic bio-informatics queries. Perform advanced data management, statistical analysis, visualization, and reporting as part of a highly collaborative team. Work simultaneously on multiple projects in a highly dynamic research lab environment, which includes a hybrid WFH/office schedule.		
2016 - 2018	Production Technician	Fungi Perfecti
Grow mushrooms and mushroom mycelium for a suite of mushroom related products, including natural nutritional supplements. Practice aseptic technique. Maintain sterile microbiological lab practices and cleanings. Prepare and inoculate bulk substrate. Operate and maintain large equipment and scientific instrumentation. Operate an autoclave. Improved chemical storage inventory and cleaning records.		
2014 - 2016	Scientific Technician	WA Department of Fish and Wildlife
Conduct monitoring and evaluation at the largest salmon hatchery in WA. Identify salmon (<i>Oncorhynchus</i>) species and report instances of non-target species capture. Juvenile fish trapping and population surveys. Habitat and breeding ground surveys. Carcass surveys and in field dissections. Snorkeling surveys. Extensive in field data and sample collection. Data entry. Operation and maintenance of government vehicles, including; trucks, trailers, RVs, and boats up to 18'.		
2014	Research Technician	University of Idaho
Collect field data from very remote locations regarding forest regrowth after fire. Plant species IDs, with an emphasis on Rocky Mountain conifers and range-land grasses. Assisted in research used for a doctoral dissertation in Fire Ecology by my direct supervisor. Data entry and statistical analysis using Excel. Position required extensive travel to remote locations, up to 8 consecutive days.		
2012 - 2013	Operations Manager	Associated Students Recycling Center
Collect and sort campus recyclables. Coordinate with local waste management services. Sell bulk recyclables for the first profitable student run university recycling center in the US. Lead a team of 10 to 15 student-employees. Drive large vehicles, including; pallet jacks, box trucks, dump trucks, and forklifts. Conducted a campus wide waste audit using spacial analysis data to identify target locations for additional waste receptacles. Promoted from laborer (Mar. 2012 to Sep. 2012).		
2010	Biological Technician Aid	Bureau of Reclamation
Collaborate with the Grande Ronde Model Watershed in surveying Catherine Creek. Coordinate work with local landowners. Assist an interdisciplinary group of Earth Scientists in biological, geological, hydrological, and habitat surveys. Assist with Geographic Information Systems (GIS) model creation and cartography. Earned Star Award for an exceptional job performance.		