Alison C. Agneray

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PROFESSIONAL EXPERIENCE

Doctoral Researcher **2017-Present**

Leger Lab, University of Nevada (Reno, NV)

- Designed, conducted, and analyzed over 13 separate experiments and determined which traits are associated with seed success in arid environments; and identified groups of plants that perform best to restore those environments. Project resulted in federal partners dedicating funding to collect from the top-performing seed sources and are working on agriculturally increasing these seed collections to restore devastated lands.
- Mentored and supervised over 15 undergraduate students on independent research projects and secured funding for their projects through local scholarships and grants.
- Co-led several large collaborative efforts with public, private, and nongovernmental groups to create new publications, host webinar series, and arrange trainings and educational events.
- Demonstrated an excellent ability to communicate complex procedures and results that aligned with funders' mission and goals. Reported results to funders in an accurate and timely manner that increased repeat funding opportunities.

Senior Botanist and Ecologist **2016-Present**

Independent Consulting (Various locations)

- Managed innovative teams through supporting independence and determining clear project goals; received excellent reviews from both participants and clients.
- Communicated complex missions and implementation strategies to remote stakeholders to ensure project success.
- Created final map products and technical reports that met 100% of client's criteria.
- Conducted botanical surveys for rare and threatened plant species and communicated with both federal partners and private landowners to satisfy diverse and often diametric objectives.
- Researched, analyzed, and created revegetation standards for mining corporations that met all federal and state requirements to ensure appropriate conservation efforts were made following mine closures.
- Created customized project proposals, established appropriate vegetation monitoring protocols, and performed wetland delineations through collaborations with civil engineers in California and Nevada.
- Served as a biological monitor for Integrated Vegetation Management crews in sensitive habitat areas in California to reduce impacts on endangered plant populations.

Regional Program Coordinator **2014-2016**

Great Basin Institute, Bureau of Land Management (Reno, NV)

- Managed over 24 separate, seasonal Emergency, Stabilization, and Rehabilitation; and Assessment, Inventory, and Monitoring (AIM) teams as part of a national program to collect standardized inventory and monitoring data at multiple scales across Bureau of Land Management (BLM) districts.

- Conducted all aspects of the hiring process for nearly 140 employees over two years: writing position descriptions, posting jobs, recruiting, conducting interviews, vetting references, writing contracts, and training.
- Developed several new partner relationships; personally managed 45 individuals in first year and increased to 71 individuals in second year in California, Oregon, Washington, Wyoming, Utah, and Idaho. Retained nearly 60% of original seasonal staff in the second year, an unusually high percentage at the organization.
- Co-wrote successful grant applications valued at over $7M over five years; prepared the subsequent reports on grants' activities for the BLM, U.S. Forest Service, Nevada Department of Wildlife, and U.S. Fish and Wildlife Service.
- Managed programmatic budgets and worked with project partners at the BLM when budget adjustments or other alterations to the assistance agreements were required.
- Organized and led group training events across 15 BLM field offices in the western U.S. that calibrated crews to ensure consistency through all government agencies in six states.
- Managed safety for teams, establishing field protocols and remaining in constant contact with all crew members throughout the field season.
- Planned lessons and taught multiple sections on AIM protocols, grasses of the Great Basin Desert, vascular plant families of the Great Basin and eastern Sierras, safety in fieldwork, backcountry navigation, and off-road driving techniques.

Vegetation/Habitat Assessment Field Lead **2014**

Nevada Department of Wildlife; and National Fish and Wildlife Foundation (Reno, NV)

- Managed and trained four AmeriCorps technicians to exceed performance goals.
- Maintained safety practices and navigated to backcountry sampling sites resulting in zero accident incidences.
- Performed detailed vegetation and site data collection following the BLM's AIM protocol at various restoration sites within the Walker River watershed.
- Established sampling plots and transects, identified and described soil horizons, collected vegetation data (including species inventory, foliar cover, canopy gap, and vegetation heights), and made qualitative range assessments.
- Managed data in the Database for Inventory, Monitoring, and Assessment SQL-based database, employed quality assurance/ quality control techniques, and aided with field logistics.

EDUCATION

Ph.D. in Ecology, Evolution, and Conservation Biology **2017- Matriculation in 2021**

University of Nevada, Reno (Reno, NV)

- Dissertation: "Trait and community-based approaches to restoring degraded sagebrush steppe communities."
- GPA: 4.00
- Committee: Drs. Elizabeth Leger (Chair), Thomas Parchman, Jenny Ouyang, Elizabeth Pringle, and Kevin Shoemaker.

B.S. in Biological Sciences **2012**

University of Oregon (Eugene, OR)

- Graduated with cum laude honors and Dean's List standing (two times).

RELEVANT COMMUNITY INVOLVEMENT

Volunteer Naturalist **2018-Present**
PBS Reno (Reno, NV)

Field Work Volunteer **2019-Present**
U.S. Fish & Wildlife Service and The Nature Conservancy (Reno, NV)

Board Member **2017-2019**
Lassen Land & Trails Trust (Susanville, CA)

Teaching Assistant and Museum Instructor **2017-2018**
UNR Natural History Museum (Reno, NV)

PUBLICATIONS

* indicates undergraduate author

Agneray, A.C., Forister, M.L., Parchman, T.L. & Leger, E.A. (2021 in prep.) *The relative performance of restoration mixes that differ in evolutionary history.*

Leger, E.A., **Agneray, A.C.**, Baughman, O.W., Brummer, E.C., Erickson, T.E., Hufford, K.M., & Kettenring, K.M. (2021 in prep.) *Maintaining function and evolutionary potential during agricultural production of seeds for restoration: research needs to meet seed demands for the decade of restoration.*

Agneray, A.C., Parchman, T.L. & Leger, E.A. (2021 in prep.) *Trait-based approaches to restoring degraded rangelands.*

Faske, T.M., **Agneray, A.C.**, Jahner, J.P., Sheta L.M.*, Leger, E.A., Parchman, T.L. (2021 in prep.) *Geography and environment shape genetic structure and seedling traits in rubber rabbitbrush, a foundational Great Basin shrub.*

Leger, E.A., Barga, S., **Agneray, A.C.**, Baughman, O.W., Burton, R., & Williams, M. (2020) *Selecting native plants for restoration using rapid screening for adaptive traits: methods and outcomes in a Great Basin case study.* Restoration Ecology. https://doi.org/10.1111/rec.13260

Carter, T.* & **Agneray A.** (Spring 2020) *Variability of whitebark pine (*Pinus albicaulis *Engelm.) leaf traits in the Great Basin.* Nevada State Undergraduate Research Journal. http://dx.doi.org/10.15629/6.7.8.7.5_6-1_S-2020_1

Baughman, O.W., **Agneray, A.C.**, Forister, M.L., Kilkenny, F.F., Espeland, E.K., Fiegener, R., Horning, M., Johnson, R.C., Kaye, T.N., Ott, J.E., St. Clair, B., & Leger, E.A. (2019) *Strong patterns of intraspecific variation and local adaptation in Great Basin plants revealed through a review of 75 years of experiments.* Ecology and Evolution; 9: 6259– 6275. https://doi.org/10.1002/ece3.5200

CONFERENCE PRESENTATIONS

Agneray, A.C., Parchman, T.L., & Leger, E.A. (2020, October). *Surviving in the invaded desert: A climate- and trait-based approach to restoration in the Great Basin.* Contributed talk presented virtually at the Natural Areas Association Annual Conference.

Baughman, O.W., **Agneray, A.C.**, Forister, M.L., Kilkenny, F.F., Espeland, E.K., Fiegener, R., Horning, M., Johnson, R.C., Kaye, T.N., Ott, J.E., St. Clair, B., & Leger, E.A. (2020, October). *Strong patterns of intraspecific variation and local adaptation in plants of the Great Basin, USA, revealed through a review of 75 years of experiments on 121 taxa.* Contributed talk presented virtually at the Natural Areas Association Annual Conference.

Leger, E.A., Barga, S., **Agneray, A.C.**, Baughman, O.W., Burton, R., & Williams, M. (2020, October). *Restoration from seed in the Great Basin: What are we doing well, and is there room for improvement?* Contributed talk presented virtually at the Natural Areas Association Annual Conference.

Agneray, A.C., Parchman, T.L., & Leger, E.A. (2020, August). *What does it take to survive in an invaded desert? A trait-based approach to restoration in the Great Basin.* Contributed talk presented virtually at the Ecological Society of America Annual Meeting.

Agneray, A.C., Parchman, T.L., & Leger, E.A. (2019, November). *Trait-based approaches to restoring degraded rangelands: a multi-species experiment in the Great Basin Desert.* Contributed talk presented at the Society for Ecological Restoration Southwest Chapter Meeting in Tucson, AZ.

Agneray, A.C., Parchman, T.L., & Leger, E.A. (2019, November). *Trait-based approaches to restoring degraded rangelands: a multi-species experiment in the Great Basin Desert.* Project update presented at the USDA Forest Service office in Reno, NV, to the project advisory board members, including USDA Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service personnel.

Baughman, O.W., **Agneray, A.C.**, Forister, M.L., Kilkenny, F.F., Espeland, E.K., Fiegener, R., Horning, M., Johnson, R.C., Kaye, T.N., Ott, J.E., St. Clair, B., & Leger, E.A. (2019, November). *Patterns of local adaptation in plants of the Great Basin after review of over 300 experiments.* Poster session presented at the Society for Ecological Restoration Southwest Chapter Meeting in Tucson, AZ.

Baughman, O.W., **Agneray, A.C.**, Forister, M.L., Kilkenny, F.F., Espeland, E.K., Fiegener, R., Horning, M., Johnson, R.C., Kaye, T.N., Ott, J.E., St. Clair, B., & Leger, E.A. (2019, September). *Strong patterns of intraspecific variation and local adaptation in the Great Basin, USA.* Poster session presented at the Society for Ecological Restoration World Conference in Cape Town, South Africa.

Agneray, A.C. (2019, August). *Restoring the most ecologically disturbed portions of the Great Basin Desert*. Guest speaker circuit for the Sagebrush in Prisons Initiative with the Institute for Applied Ecology in Lovelock, Herlong Federal, Northern Nevada, and Warm Springs Correctional Centers.

Faske, T.M., Sheta, L.M.*, **Agneray, A.C.**, & Leger, E.A., Parchman, T.L. (2019, July). Geography and environment shape genome and phenotype variation in a foundational plant of the Great Basin. Contribute talk presented at the Evolution conference in Providence, RI.

Sheta, L.M.*, Faske, T.M., **Agneray, A.C.**, & Leger, E.A., Parchman, T.L. (2019, July). Range-wide landscape genomic structure of rubber rabbitbrush (*Ericameria nauseosa*) and the potential for reproductively isolated subspecies. Poster session presented at the Evolution conference in Providence, RI.

Carter, T.A.*, **Agneray, A.C.**, & Leger, E.A. (April, 2019). *Changes in leaf morphology in whitebark pine using decades of herbarium specimen.* Student poster presentation at the University of Nevada, Reno Undergraduate Research Symposium.

Agneray, A.C., Parchman, T.L. & Leger, E.A. (2019, January). *Mapping traits of three perennial grasses in the northeastern Californian desert.* Poster session presented at the Northern California Botany Symposium in Chico, CA.

Agneray, A.C., Parchman, T.L. & Leger, E.A. (2018, August). *Intraspecific functional diversity among dominant plant species in the Great Basin Desert.* Contributed talk presented at the Ecological Society of America Annual Meeting in New Orleans, LA.

Sheta, L.M.*, Jahner, J.P., **Agneray, A.C.,** Leger, E.A., & Parchman, T.L. (2018, April). *Quantification of population structure of Ericameria nauseosa to inform northern Great Basin restoration efforts.* Student poster presentation at the University of Nevada, Reno Undergraduate Research Symposium.

Agneray, A.C. (2018, February). *A summer of seeds: the kickoff to a native plant research project*. Guest speaker presentation for the Nevada Native Plant Society in Reno, NV.

Agneray, A.C., Sheta, L.M.*, Parchman, T.L. & Leger, E.A. (2017, February). *Methods for Creating Resilient Sagebrush Ecosystems in the Great Basin.* Poster session presented at the Great Basin Consortium Conference in Reno, NV.

MEDIA MENTIONS

Gilkeson, J. (2020, June 19). Using Local Seeds to Save the Sage. U.S. Fish & Wildlife Service: Pacific Southwest Region. https://www.fws.gov/cno/newsroom/Featured/2020/Using_Local_Seeds/

Quinton, S. (2019, July 2). Invasive Grass Increases Wildfire Threat in Western States. Pew Charitable Trusts. https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2019/07/02/invasive-grass-increases-wildfire-threat-in-western-states + (2019, July 2). Republished on the Huffington Post. https://www.huffpost.com/entry/invasive-cheat-grass-wildfire-west_b_5d1b693ce4b0f6f04992afd2

Zender, B. (2018, January 10). *How These Seeds Could Help Prevent Nevada Wildfires.* KUNR 88.7 Reno Public Radio. http://kunr.org/term/alison-agneray#stream/0

Wolterbeek, M. (2017, November 28). *New Genetic Study Methods, Targeted Seed Production in Four-year Study by CABNR, College of Science.* NEVADAToday. https://www.unr.edu/nevada-today/news/2017/great-basin-seed-study