**Malia A. Santos, PhD CURRICULUM VITAE** (Nov 2025)

Post-doctoral Researcher, Smith Lab - Department of Ecology and Evolutionary Biology

University of Colorado Boulder 1800 Colorado Ave. •Boulder, CO 80309

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**EDUCATION**

**University of Wyoming, PhD Program in Ecology and Evolution** *2021 – 2025*

1000 E University Ave • Laramie, WY 82071

Advisor: David Tank, PhD

**University of Idaho, PhD Biological Sciences** *2017- 2021*

875 Perimeter Dr • Moscow, ID 83844

Advisor: David Tank, PhD

*\*Transferred with advisor to University of Wyoming*

**Willamette University, BA Biology** *May 2016*

900 State Street • Salem, Oregon 97301

Biology Major, Chemistry Minor • 3.0 GPA

Advisor: Christopher Smith, PhD

**APPOINTMENTS**

**Research Scientist**

*Tank Lab, Botany Department, University of Wyoming Aug – Oct 2025*

**Research Technician**

*Baucom Lab, Ecology & Evolutionary Bio, University of Michigan 2016 – 2017*

**Field Technician/ Crew Lead**

*Smith Lab, Department of Biology, Willamette University 2015 – 2016*

**Laboratory Assistant**

*Smith Lab, Department of Biology, Willamette University 2014 – 2016*

**Departmental Assistant**

*Department of Biology, Willamette University 2013 – 2015*

**PUBLICATIONS**

*In Review*

1. **Santos MA**, Robbrecht E, Tank DC. Late Miocene Cooling drives range evolution of *Tricalysia* (Rubiaceae-Coffeeae). *Botanical Journal of the Linnean Society.*

*In Preparation or In Submission:*

1. **Santos MA**, Jacobs SJ, Latvis M, Tank DC. Painting the evolutionary history of a multicompartmentalized syngameon in North American *Castilleja* L. (Orobanchaceae). *To be submitted to PNAS.*
2. **Santos MA,** Robbrecht E, Tank DC. Phylogenetic and Geographic Patterns of Foliar Domatia in *Tricalysia* (Rubiaceae). *To be submitted to Evolution.*

*Published:*

1. Leducq JB, Sneddon D, **Santos MA**, Condrain-Morel D, Bourret G, Martinez-Gomez NC, Lee JA, Foster JA, Stolyar S, Shapiro BJ, Kembel SW, Sullivan JM, Marx CJ. 2022. Comprehensive Phylogenomics of Methylobacterium Reveals Four Evolutionary Distinct Groups and Underappreciated Phyllosphere Diversity. Genome Biol Evol. 14(8):evac123. <https://doi/10.1093/gbe/evac123>
2. Grond K, Bell K, Demboski J, **Santos MA**, Sullivan J, Hird S. 2020. No evidence for phylosymbiosis in western chipmunk species. *FEMS Microbiology Ecology*. 96:1, fiz182, <https://doi.org/10.1093/femsec/fiz182>.
3. Kessler AE, **Santos MA**, Flatz R, Batbayar N, Natsagdorj T, Batsuur D, Unenbat T, Belyalov O, Bidashko FG, Galbadrakh N, Khrokov V, Vagner I, Wang MY, Smith CI. 2018. Mitochondrial Divergence between Western and Eastern Great Bustards: Implications for Conservation and Species Status. *Journal of Heredity,* esy025,  <https://doi.org/10.1093/jhered/esy025>.

**GRANTS**

**Meritorious Proposal**

NSF Postdoctoral Research Fellowship in Biology *2024*

*NSF ID: 25008023: “Predicting the Evolutionary Trajectories of Parasitic Plants in Ecologically Diverse Castilleja”*

**Highly Meritorious Proposal**

NSF Postdoctoral Research Fellowship in Biology *2023*

*NSF ID: 2410535 “Exploring the Evolutionary Trajectories of Parasitic Plants: A Comprehensive Study on Castilleja”*

**AWARDS AND HONORS**

**Best Presentation** *2022*

*University of Wyoming Program in Ecology and Evolution Graduate Symposium*

**BSA Graduate Research Awards** *2021*

*For the Proposal: Investigating species relationships and evolutionary patterns of defense strategies in Tricalysia (Rubiaceae)*

**Under-Represented Domestic Minorities (URDM) Graduate Assistantship** *2021-22*

*Intended to increase access and opportunities to graduate education for US students from under-represented/under-served communities and to increase student diversity at University of Wyoming*

**SSE/BEACON Undergraduate Diversity at Evolution Travel Award**  *2016*

*Awarded to those who are talented and will increase diversity at the Evolution meetings*

**Willamette University Biology Departmental Honors**  *2016*

**Martha Springer Biology Scholarship**  *2015*

*Scholarship awarded for students of high scholarship, potential in pursuing a post-baccalaureate education, and "willingness to expend personal effort in obtaining such education”*

**Arthur A. Wilson Research Scholarship Award**  *2013*

*Awarded to women pursuing a career in biological sciences with emphasis on molecular biology, cellular biology, or biochemistry*

**PRESENTATIONS AT PROFESSIONAL MEETINGS**

1. **Santos MA,** Jacobs SJ, Latvis M, Tank DC. Genomic evidence for widespread hybridization in *Castilleja.* Botany meeting, Palm Springs, CA, 2025.
2. Tank D, **Santos MA**, Latvis M, Jacobs SJ. Paintbrushes and Printmaking: Investigating diversification dynamics in Castilleja and communicating biodiversity science to broader audiences. Botany meeting, Palm Springs, CA, 2025.
3. **Santos MA,** Jacobs S, Tank DC. Painting the phylogenetic history of *Castilleja* using the Angiosperm-353 dataset. Botany meeting, Grand Rapids, MI, 2024.
4. Turner CV, Coles D, Brose C, **Santos MA**, Legler B, Tank DC. Searching for climate change refugia in the Bighorn Mountains using herbarium data. Botany meeting, Grand Rapids, MI, 2024.
5. Bentley E, Harrington S, **Santos MA**, Tank DC. Between Two Dunes: Investigating the Demographic History of *Penstemon haydenii.* Botany meeting, Boise, ID, 2023 (poster).
6. **Santos MA**, Robbrecht E, Tank DC.Phylogenomics and biogeography of the Coffeeae alliance Rubiaceae with an emphasis in Tricalsyia. Botany meeting, Anchorage, Alaska, 2022.
7. **Santos MA**, Tank DC. Investigating species relationships and evolutionary patterns of defense strategies in Tricalysia. Botany meeting, Virtual, 2021.
8. **Santos MA**, Flatz R, Smith CI. Determining the Genetic Differentiation Between Populations of Great Bustards *(Otis tarda)*. Evolution meeting, Austin, Texas, 2016 (poster).
9. **Santos MA**, Smith CI. A Demographic Study of Joshua Tree’s Response to Climate Change. M.J. Murdock Charitable Trust - 23rd Regional Conference, Oregon, 2014 (poster).

**TEACHING EXPERIENCE**

**Instructor of Record**

Department of Botany, University of Wyoming

*Evolution Fall 2024*

**Graduate Teaching Assistant**

Department of Botany, University of Wyoming

*Genetics*  *Spring* *2025*

*Advanced Field Botany Summer 2022 – 2024*

*Plant Structure and Function Fall 2022*

*Herbarium Internship Summer 2024*

Institute of Ecology of the National Autonomous, University of Mexico

*Bioinformatics Workshop (3 days) 2021*

Department of Biology, University of Idaho

*Advanced Field Botany Summer 2019*

*Biological Structure and Function Spring 2018 – 2021*

*Mammalogy Fall 2019, 2020*

*Cells and the Evolution of Life Fall 2017*

**Undergraduate Teaching Assistant**

Department of Biology, Willamette University

*Cell Biology & Genetics Spring 2016*

*Gene Structure and Function Fall 2015*

*Research Immersion in Evolutionary Ecology* *Spring/Summer 2015*

**COMMUNITY & PUBLIC OUTREACH**

**Botanical Foray of the Rocky Mountain Herbarium**

Kootenai National Forest, MT ***(Lead Botanist)*** *June 5-10, 2025*

*Botanical forays focused on engaging the community when surveying and documenting regional plant diversity through field collection and identification.*

**Kaleidoscope Science**, Laramie, WY ***(Volunteer)*** *2024-present*

*Art/Science program dedicated to educating the public about natural history collections and to uncovering the benefits of inter- and transdisicplinary approaches to outreach on the public, and how these approaches can change the approaches of researchers.*

**The Paintbrush Project**, Laramie, WY ***(Organizer)*** *2022-present*

*Program dedicated to educating the public about Castilleja and their native hosts as well as incorporate Castilleja in the local landscape.*

**RWiS: IDEA,** Moscow, ID ***(Vice-Chair)*** *2021-2022*

**Randall Women in Science: Inclusion, Diversity, Equality Alliance**

*This program is dedicated to building an inclusive community to support women, women-identified, non-binary, and their allies in STEM by hosting educational workshops and discussions on current IDEA topics.*