MALIA ANNE SANTOS

UNIVERSITY OF IDAHO, BIOLOGY DEPARTMENT, PHD CANDIDATE
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EDUCATION

University of Idaho, PhD Biological Sciences *May 2017- Current*
875 Perimeter Dr • Moscow, ID 83844
Advisor: Dr. David Tank, PhD

Willamette University, BA Biology *May 2016*
900 State Street • Salem, Oregon 97301
Biology Major, Chemistry Minor • 3.0 GPA

Advisor: Dr. Christopher Smith, PhD
Honors thesis: Determining the genetic differentiation between populations of Great Bustards *(Otis tarda)* in Europe and Asia

RESEARCH EXPERIENCE

Graduate Researcher **iBEST, University of Idaho**
Research Technician *Summer 2020*
Topic: Gene synteny in *Methylobacterium*

Graduate Researcher **Department of Biology, University of Idaho**
Research Technician *2017-2018*
Topic: Understanding the genetic structure of PNW Lepidoptera using the COI barcoding gene

Undergraduate Researcher **Department of Biology, Willamette University**
Honors Thesis *May 2015 – June 2016*
Topic: Determining the genetic differentiation between populations of Great Bustards *(Otis tarda)* in Europe and Asia

Arthur A. Wilson Scholarship *May 2014 – August 2014*
Topic: A Demographic Study of Joshua Tree's Response to Climate Change

EMPLOYMENT EXPERIENCE

Research Technician
Baucom Lab, Ecology & Evolutionary Bio, University of Michigan *2016 - 2017*
Assisted in multiple projects while managing the laboratory and the greenhouse for the PI and two graduate students. Some duties include:

- Investigating the differences in soil microbial communities between flower colors in *Ipomoea purpurea* that involved basic microbiology techniques such as agar preparation, bacterial spreading, and colony counting
- Perform crosses on *Ipomoea trifida* to evaluate the selective agent on leaf shape variation
- Converting mRNA into a library using Illumina's TruSeq Stranded mRNA Sample Preparation kit.

Field Technician/ Crew Lead

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

Supervised a field crew collecting transect data in the Joshua Tree National Forest in Nevada and Arizona:

- Directed field preparatory work and data entry for 30 people
- Applied protocols for collecting data on Joshua Tree locations (GPS) and morphology
- Navigated via GPS and compass in the Mojave in Arizona and Nevada
- Hiked 5-8 miles/day in harsh desert conditions while carrying up to 30lbs of equipment

Laboratory Assistant

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

Assisted in research projects investigating speciation and adaptation to climate change on Joshua Trees.

- Extracted DNA and PCR for over 100 samples
- Propagated over five hundred seeds and supervising care of seedlings

Departmental Assistant

Department of Biology, Willamette University *2013 – 2015*

Performed various jobs to maintain a clean and organized Biology Department:

- Cleaned lab microscopes and tested calibration of micropipettes
- Prepped multiple introductory labs: made agar plates, aliquoted samples, and propagated bean plants
- Established a protocol for preserving the department's 80-year-old specimen collection. The protocol was developed under a sustainability grant to rid the collection of hazardous preserving agents such as formalin.

AWARDS AND HONORS

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.

CONFERENCES ATTENDED

ASN, SSB, SSE - Evolution Meetings *2016*
Poster Presentation: Determining the Genetic Differentiation Between Populations of Great Bustards *(Otis tarda)*
Botanical Society of America - Botany Conference *2015*
Poster Presentation: A Demographic Study of Joshua Tree's Response to Climate Change
M.J. Murdock Charitable Trust - 23rd Regional Conference *2014*
Poster Presentation: A Demographic Study of Joshua Tree's Response to Climate Change

TEACHING EXPERIENCE

Laboratory Teaching Assistant

Department of Biology, University of Idaho

Biological Structure and Function	*Spring 2018 – 2021*
Mammalogy	*Fall 2019, 2020*
Cells and the Evolution of Life	*Fall 2017*

Department of Biology, Willamette University

Cell Biology & Genetics	*Spring 2016*
Gene Structure and Function	*Fall 2015*
Research Immersion in Evolutionary Ecology	*Spring/Summer 2015*

PUBLICATIONS

1. 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.
2. 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.