Diana Gerardo

Research Technician

Summary

Research technician with 2+ years of experience in laboratory, greenhouse, and field settings. Identification skills for different species of flora and fauna in the southwest and Caribbean. Very familiar with sterile procedures and collection techniques of samples.

Experience

04-2016 - 09-2016

Field Research Technician

USDA Agricultural Research Service

- Identification and collection of grassland plant species and removal of invasive and toxic species
- Intact root extractions; scanning of root samples using WhinRhizo software
- Phenotypic characterization of leaf pubescence and analysis of leaf tensile strength using a hydraulic universal testing machine
- Grinding of root samples; preparation for nitrogen and carbon content testing
- Assisted in mapping cheatgrass using GPS technology
- Assisted in mapping of bird nests and tagging of birds for population counts
- Data entry and analysis

01-2016 - 12-2016

Research Technician

Colorado State University

- Maintenance of plant lines and collection of seeds
- Generated DNA sequences from mitochondrial and plastid genomes
- Development of methods for DNA extraction and mitochondrial isolation
- PCR and gel electrophoresis; analysis of gels and isolation of DNA bands
- Genome assembly and analysis using MEGA software
- Sanger sequencing purification and analysis
- Analysis of phylogenetic relationships using Bootstrap measures
- Protein quantification using Quibit; detection of protein function using spectrophotometry

04-2017 - 07-2017

Research Intern

University of California-Riverside

- Identification and capture of different stream species
- Forest management and stream manipulation
- Visible implant elastomer mixing and tagging
- Manipulation of low predation versus high predation environmental settings
- Collection of tissue for genetic analysis
- Data entry and analysis

07-2017 - 07-2018

Field Assistant

Northern Arizona University

- Identification of different native and invasive Arizona stream species
- Snorkel surveys

Personal Info

Address

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Phone

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E-mail

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Skills

Teamwork

Part of a small research team who surveyed grasses and bird populations in Wyoming and Northern Colorado.

Adaptability

Worked as a summer intern in the jungles of Trinidad and Tobago, where we sampled streams and collected guppies, as part of a long-term population and evolutionary biology survey.

Project Management

Currently in charge of designing my own experiments and carrying out my own project.

Computer Skills

Advanced knowledge of MS Excel (data entry, pivot tables, data visualization). Proficient in GraphPad Prism (creating and modifying tables, statistical analyses). Knowledge of Python language and usage of Bash terminal.

Bilingual

Spanish

- GPS mapping of river sites
- Collection of stream invertebrates
- Habitat surveys
- Data collection

09-2017 - present

Research Technician

University of Arizona

- Aseptic technique for cell cultures/sample collections
- RNA isolation; cDNA synthesis
- Generation of plasmid sequences by restriction and Gibson cloning
- Fecal pellet gDNA purification; 16S sequencing and analysis
- Intracellular staining, and surface cell staining; LSRII analysis
- Octet kinetic assays
- Manipulation of Immunoglobulin sequences
- PCR and gel electrophoresis; analysis of gels and isolation of DNA bands
- Data entry and analysis

Education

08-2013 - 12-2016

Colorado State University, Biological Sciences, Cellular, Molecular, & Genetic Biology, BS

- Relevant Coursework: Wildlife Biology, Genetics, Evolutionary biology, and Ecology

Research Topics

USDA Agricultural Research Service

Climate Change

- Studied the relationship between climate change, phenotypic expression, and adaptive evolution of grassland species

Colorado State University

Genome Assembly & Mitonuclear interactions

- Genome assembly using mitochondrial and total DNA
- Studied the effects of mitonuclear incompatibilities in hybrid generations created by crossing F2 populations of different nuclear and mitochondrial backgrounds; Effects on protein function and phenotypic expression

University of California-Riverside

Evolutionary Biology

- Studied the process of evolution by natural selection in natural populations of Trinididian stream guppies (Poecilia reticulata) and tested the effects of low and high predation on evolutionary mechanisms

University of Arizona

Mucosal Immunology

- Studied how to develop a heteromeric IgA antibody to target specific bacteria found in the intestine