

CHRISTAL NIEDERER  
27 Bishop Lane  
Menlo Park, CA 94025  
christal "at" creeksidescience.com

## EXPERIENCE

*Creekside Center for Earth Observation*, Menlo Park, CA  
Biologist (December 2005 to present)

### Selected Projects

#### **San Mateo Thornmint Habitat Enhancement and Introduction**

Lead biologist on project to restore single extant site of federal- and state-endangered San Mateo thornmint (*Acanthomintha duttonii*) and to create additional colonies. Created experimental design, directed experimental treatments, and collected and analyzed soil moisture and composition data at potential introduction sites. This is a collaborative effort with UC Berkeley Botanical Garden, which is conducting a successful seed increase program.

#### **Fountain Thistle Adaptive Management Plan**

Lead biologist on management plan for federal- and state-endangered fountain thistle (*Cirsium fontinale* var. *fontinale*). Project includes experimental seeding, creation of monitoring protocols, and identification and implementation of appropriate management actions.

#### **Adaptive Management Plan for Inspiration Point**

Creating adaptive management plan for serpentine grassland site in the Presidio of San Francisco, based on results of prior projects to restore federal- and state-endangered Presidio clarkia (*Clarkia franciscana*) and federal- and state- threatened Marin dwarf flax (*Hesperolinon congestum*).

#### **Presidio Clarkia and Marin Dwarf Flax Restoration at the Presidio**

Created experimental design to test efficacy of different habitat restoration techniques at Inspiration Point. Led data collection and completed data analysis. Successful treatments included post-germination scraping, tarping, and flaming/thatch burning. Clarkia seeding was successful in areas where annual grass was controlled. Managers have used these results to increase Clarkia numbers and distribution. This data is also being used to reintroduce state- and federal-threatened Marin dwarf flax and locally significant species to the site.

#### **Serpentine Prairie Restoration**

Contributed extensively to adaptive management plan for restoring the Serpentine Prairie at Redwood Regional Park, East Bay Park District. This plan uses the federal- and state-endangered Presidio clarkia (*Clarkia franciscana*) as an umbrella species. Developed population monitoring plan, as well as experimental design for prairie enhancement treatments.

#### **Mission Blue Butterfly Recovery at Twin Peaks**

Contributed extensively to writing and implementation of Recovery Action Plan for the Mission Blue Butterfly (*Icaricia icarioides missionensis*) at Twin Peaks Natural Area, a federally endangered species. Project includes translocation of adult butterflies, demographic monitoring, and habitat monitoring and enhancement. As of year 2, butterflies have successfully reproduced and are expanding into areas outside immediate release sites.

### **Grassland Management at Edgewood Natural Preserve**

Lead on project to control weeds and enhance native cover in Edgewood's grasslands. Targeted weeds include medusahead (*Taeniatherum caput-medusae*), Harding grass (*Phalaris aquatica*), yellow starthistle (*Centaurea solstitialis*), annual falsebrome (*Brachypodium distachyon*), and others. Created experimental design to test treatments of medusahead and annual falsebrome, as well as a NONON (no nonnative) experiment to determine the efficacy of increasing weeding intensity. Initiated revegetation program with site-collected stock.

### **Barbed Goatgrass Management at Coyote Ridge**

Lead on weed management plan for barbed goatgrass (*Aegilops triuncialis*), which is threatening core Bay checkerspot butterfly (*Euphydryas editha ssp. bayensis*) habitat. Current treatments include burning, spraying with grass-specific herbicide (Envoy), string cutting, and hand pulling. This project includes coordination among multiple agencies, landowners, and contractors.

### **Checkerspot Larvae Monitoring**

Conduct population monitoring for federally threatened bay checkerspot butterfly larvae at various properties. Analyze and report results.

### **Vegetation Composition Monitoring**

Conduct vegetation monitoring at various properties. Analyze and report results.

### **National Park Service, Yosemite National Park, El Portal, CA**

Biological Science Technician, vegetation and ecological restoration (seasonally June 2001 to October 2007)

- Conducted statistical analysis of vegetation plots and groundwater data for Cook's Meadow restoration project.
- Assisted in rare plant survey in Tuolumne River corridor for Tuolumne River Plan.
- Mapped individual sequoias in Mariposa Grove using GPS/GIS and total station equipment. Matched individual trees to existing database and linked it to GIS.
- Collaborated on protocol development for erosion and vegetation monitoring along Merced River to assess visitor impacts. Collected and analyzed data, synthesized into report.

### **California State Parks, San Mateo coast sector, 95 Kelly Avenue, Half Moon Bay, California, 94019**

Environmental Services Intern (seasonally January 2004 to March 2006)

- Lead planner for levee removal project at Pescadero Marsh Natural Preserve, including design, permitting, contracting, and CEQA documentation.
- Negotiated mitigation requirements with USFWS and CDFG for above project, a recovery action for endangered San Francisco garter snakes and threatened California red-legged frogs.
- Used GPS and ArcGIS to map habitat for sensitive plant and animal species at various park units.
- Took water quality measurements at Pescadero Marsh Natural Preserve as part of investigation into annual steelhead dieoff.

## **EDUCATION**

### **San Francisco State University, San Francisco, California, 94132**

Botany B.S.

- Graduated with Honors

**San Jose State University**, San Jose, California, 95192

B.S. in magazine journalism, with minor in urban planning/environmental studies

- Dean's Scholar, Graduated with Great Distinction.

**West Valley Community College**, Saratoga, California, 95070

A.S. in Park Management

- Park Management Scholar

## **COLLABORATING AGENCIES AND PARTNERS**

United States Fish and Wildlife Service

California Department of Fish and Game

California Department of Food and Agriculture

East Bay Regional Park District

National Park Service

San Francisco Department of Parks and Recreation

San Francisco Public Utilities Commission

San Mateo County Parks Department

San Mateo County Weed Management Area

Santa Clara County Open Space Authority

Santa Clara County Parks Department

Santa Clara County Weed Management Area

Silicon Valley Land Conservancy

The Presidio Trust

University of California Botanical Garden

## **MEMBERSHIPS**

California Native Plant Society

California Invasive Plant Council

Friends of the Jepson Herbarium

Committee for Green Foothills

Friends of Edgewood, Board Member