

2017

Plant Identification and Restoration of the Interpretive Garden

Shasta-Trinity National Forest

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Acknowledgements

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Executive Summary

The Mt. Shasta Interpretive Garden exhibits native plants from the Shasta-Trinity National Forest. The garden is representative of the varying habitats and the biodiversity of native plants in the forest. From negligence, lack of maintenance and proper resources, the interpretive garden is now overgrown with weeds and impromptu plants.

The goal of this project is to restore the appearance of the garden and increase the available information provided to visitors. The desired outcome is to inspire locals to grow native plants and inform others on how imperative it is to preserve the habitats, native plants, and pollinators in the Shasta-Trinity National Forest.

Project Objectives

The ideal goal of this project is to restore the garden back to its ideal purpose; to illustrate the beauty of the native plants and significance of the habitats, native plants, and pollinators in the Shasta-Trinity National Forest. The project involves 4 main steps: clearing out any obstructing weeds and plants, replanting native plants back into the garden, identifying the plants present in the interpretive garden and designing a PowerPoint available to visitors to inform the

about the meaning behind the garden, the importance of native plants and if interested, how to effectively propagate them.

As a new undergraduate student in biology, I have an interest in plants and in environmental conservation. My goal is to dive into a realm of botany and have on-hand experience on how a greenhouse functions and the processes behind ecological restoration. My involvement in this project was an ideal opportunity to apply the knowledge I've gained throughout this internship, such as identifying plants or the significance of the native plants present, and provide a positive impact on the overall preservation of the Shasta-Trinity National Forest.

Reorganized garden to supplement the extension of the best management practices instilled by the greenhouse this summer.

Project Approach

For the identification process of the garden's plants, a list of plants constructed previously by Twyla Miller served as a reference point. The list was relatively outdated and the garden had simultaneously transfigured into a field of uncontrolled variety of plants. The previous plant markers had been removed and stored in the greenhouse. I revised a new list filled with plants that were left in the garden and plants that Twyla and I had planned to insert into the garden. Table 1 demonstrates the native plants in the Shasta-Trinity Forest that is not only grown in the garden, but also is grown in the greenhouse for potential ecological restoration projects such as Antlers, an empty freeway site with little to no plants, and many others. I inserted information about growing techniques and facts about each plant on Table 1 into a PowerPoint so that future visitors may use it as an initial guide if they were interested in growing the plant.

Table 1. Revised List of Plants found at the Mt. Shasta Interpretive Garden

Plant Nameplate Order List			
Genus	Species	Family	Common Name
Arctostaphylos	viscida	Ericaceae	Sticky Whiteleaf Manzanita
Arnica	chamissonis	Asteraceae	Meadow Arnica
Aquilegia	formosa	Ranunculaceae	Western Columbine
Artemisia	douglasiana	Asteraceae	California Mugwort
Asclpia	fascicularis	Apcynaceae	Narrowleaf Milkweed
Calycanthus	occidentalis	Calycanthaceae	Spice Bush
Clematis	lasiantha	Ranunculaceae	Pipestem Clematis
Clematis	lingusticifolia	Ranunculaceae	Virgin's Bower
Corylus	cornuta	Cornaceae	California Hazelnut
Epilobium	angustifolium	Onagraceae	Fireweed
Eriogonum	compsitum	Polygonaceae	Arrowleaf Buckwheat
Festuca	idahoensis	Poaceae	Idaho Fescue
Fragaria	vescu	Rosaceae	California Strawberry
Fragaria	virginiana	Rosaceae	Wild Strawberry
Juncus	balticus	Juncaceae	Baltic Rush
Linum	lewisii	Linaceae	Lewis Flax
Lonicera	ciliosa	Caprifoliaceae	Orange Honeysuckle
Lupinus	microcarpus	Fabaceae	Chick Lupin
Oenthera	cespitosa	Onagraceae	Fragrant Evening Primrose
Penstemon	humilis	Plantaginaceae	Low Beardtongue
Penstemon	laetus	Plantaginaceae	Mountain Blue Penstemon
Potentilla	fruticosa	Rosaceae	Shrubby Cinquefoil
Potentilla	glandulosa	Rosaceae	Sticky Cinquefoil
Prunus	virginiana	Rosaceae	Western Chokecherry
Rosa	pisocarpa	Rosaceae	Cluster Rose
Rubus	leucodermis	Rosaceae	Blackcap Raspberry
Sequoiadendron	giganteum	Cupressceae	Giant Sequoia
Solidago	canadensis	Asteraceae	Canada Goldenrod
Spiraea	douglasii	Rosaceae	Rose Spiraea
Symphoricarpos	mollis	Carpifoliaceae	Creeping Snowberry
Vitus	californica	Vitaceae	California Wild Grape
Woodwardia	fimbriata	Blechnaceae	Giant Chainfern

After this, restoring the plants in the garden was the next step. The lack of maintenance led to a massive spread of weeds. With the help of the YCC, the volunteers, and my coworkers, we were



able to clear out any weeds and overpopulation of California Poppies in the garden. We set the removed California Poppies on a black tarp to collect any seed pods left over for future usage. The garden was relatively barren after, so Twyla and I selected plants in the

greenhouse that represented the native plants in the Shasta-Trinity National Forest to add into the garden.

Project Outcomes

It was hard to detail the impact of the project as it is reliant on the visitors' response to the information provided. With insufficient data and time restraints, I couldn't determine if the project with a complete success of not. However, previous records indicated a surge in visitations during festivals and flower blooming events. With the available resources, the influence of the garden may help preserve the native plants at the Shasta- Trinity National Forest by the inhabitants that live there. This is not concrete, however, the newly vamped garden does please the volunteers and at the least, influences them to adopt more native plants in their garden.

Conclusion

My project was an overall success in helping the Mt. Shasta Forest Service Office in preserving the native plants. It targeted the inhabitants that lived around the area to realize the aesthetical value and the importance of these plants. If I could revise what I had done, I would have provided a survey to understand the impact the garden's newly available information had on visitors. Then determine the influential factors.

My ultimate objective from this internship was to determine whether botany is a field of study I would want to devote myself to in the future. Overall, this internship has led me to expand my boundaries in suitable jobs through the USDA. Through field experiences and cross-training, I realized there is more job opportunities that the USDA offers than just a Ranger. An available job I found intriguing was the biology technician job. They worked side by side with the Greenhouse department and helped plan some of the ecological restoration projects.