

Native Coastal Chaparral at the Unitarian Universalist Fellowship Campus in Solana Beach, California

Prepared by

Dawn M Lawson

John La Grange

October 24, 2021

The property owned by the Fellowship is approximately 6 acres with 75 percent native habitat. Habitat on the UU campus consists of coastal chaparral with elements of coastal sage scrub (Table 1). It supports two rare shrubs: California adolphia (*Adolphia californica*) and wart-stemmed ceanothus (*Ceanothus verrucosus*). The ranges of both these plants extend into Mexico but in the United States are limited in distribution to coastal southern California. In addition, parts of the site support diverse biocrusts on the soil surface which include native lichens, mosses and algae. Biocrusts serve to stabilize the soil and impede non-native plant invasions (Hernandez 2009).

Shrublands on the southwest coast of California support high levels of biodiversity even though they exist within a larger landscape that is developed and where remaining natural habitats are highly fragmented (Underwood et al 2018). Since the 1950's in coastal San Diego County the area of natural habitats has been reduced by about half and mean habitat patch size has decreased a factor of approximately 70 (Lawson 2011). The UU habitat is important because the rare plants it supports do not occur in less developed regions where large tracts of land could be set aside. And contrary to expectations, rare plant populations in small areas within developed landscapes are not necessarily more likely to die out than those in less developed regions (Lawson et al. 2008). Given its location where it is accessible to the fellowship members and the Sandy Hill Preschool this habitat can also serve an important educational resource to increase appreciation and awareness of natural habitats and biodiversity.

While the UU habitat has a high proportion of native plants there are several non-native plants that should be managed or eradicated if possible. Strategic control now would prevent future habitat degradation. There are three problematic tree species, Acacia, Eucalyptus and Brazilian pepper. While the expense of removal of mature trees may make that prohibitive, removal of seedlings and saplings should be feasible. At this time there seem to be relatively few seedlings and saplings. Their removal and future removal when new ones establish should keep these species in check. The jade plant should be eradicated if possible but it can be done incrementally, a little at a time. In addition, we removed a small population of stinkwort on 10/24/21. It was just starting to set seed and some flowers had already released seed. The seed lives for a couple years so the area should be checked and plants removed for the next two or three years.

Table 1. Native and Non-native plants in natural areas on the UU Fellowship Campus based on site visit on 10/24/21.

Native Plants			
Genus	Species	Common names	Notes
<i>Acmispon</i>	<i>glaber</i>	deerweed	
<i>Adenostoma</i>	<i>fasciculatum</i>	chamise	
<i>Adolphia</i>	<i>californica</i>	California adolphia	2B.1*
<i>Artemisia</i>	<i>californica</i>	California sagebrush	
<i>Baccharis</i>	<i>pilularis</i>	coyote brush	
<i>Bahiopsis</i>	<i>laciniata</i>	San Diego County viguiera	may have been planted
<i>Ceanothus</i>	<i>verrucosus</i>	wart-stemmed ceanothus	2B.2**
<i>Cneoridium</i>	<i>dumosum</i>	bush rue	
<i>Diplacus</i>	<i>spp.</i>	bush monkey flower	
<i>Dudleya</i>	<i>pulverulenta</i>	chalk dudleya	
<i>Encelia</i>	<i>californica</i>	bush sunflower	
<i>Eriogonum</i>	<i>fasciculatum</i>	California buckwheat	
<i>Eriophyllum</i>	<i>confertiflorum</i>	golden yarrow	
<i>Heteromeles</i>	<i>arbutifolia</i>	toyon	
<i>Isocoma</i>	<i>menziesii</i>	coastal goldenbush	
<i>Malacothamnus</i>	<i>fasciculatus</i>	chaparral bush mallow	
<i>Malosma</i>	<i>laurina</i>	laurel sumac	
<i>Opuntia</i>	<i>littoralis</i>	coast prickly pear	
<i>Pseudognaphalium</i>	<i>spp.</i>	cudweed	
<i>Rhus</i>	<i>integrifolia</i>	lemonade berry	
<i>Salvia</i>	<i>mellifera</i>	black sage	
<i>Stephanomeria</i>	<i>spp.</i>	wire lettuce	
<i>Stipa</i>	<i>spp.</i>	needlegrass	
<i>Xylococcus</i>	<i>bicolor</i>	mission manzanita	
<i>Yucca</i>	<i>schidigera</i>	Mohave yucca	
*California Rare Plant Rank - rare, threatened, or endangered in CA; common elsewhere; seriously threatened in Ca			
**California Rare Plant Rank - rare, threatened, or endangered in CA; common elsewhere; fairly threatened in Ca			
Non-native Plants			
<i>Acacia</i>	<i>spp.</i>	Acacia	
<i>Crassula</i>	<i>ovata</i>	jade plant	
<i>Dittrichia</i>	<i>graveolens</i>	stinkwort	
<i>Eucalyptus</i>	<i>spp</i>	Eucalyptus	
<i>Schinus</i>	<i>terebinthifolius</i>	Brazilian pepper tree	

Literature Cited

Hernandez, R.R. (2009). Effects of Disturbance of Biological Soil Crust on Emergence of Exotic Vascular Plants in California Sage Scrub. Masters Thesis. California State University, Fullerton. 72 pages.

Lawson, D.M., Lamar, C.K., & M.W. Schwartz (2008) Quantifying plant population persistence in human-dominated landscapes. *Conservation Biology*, 22, 922-928.

Lawson, D.M. (2011). Examination of Habitat Fragmentation and Effects on Species Persistence in the Vicinity of Naval Base Pt. Loma and Marine Corps Air Station Miramar, San Diego, CA and Development of a Multi-Species Planning Framework for Fragmented Landscapes. Final Report; Project Number 1473. pp 81, Arlington, VA, U.S. Department of Defense, SERDP.

Underwood, E. C., Safford, H. D., Molinari, N. A., & Keeley, J. E. (Eds.). (2018). Valuing chaparral: Ecological, socio-economic, and management perspectives. Cham, Switzerland: Springer International Publishing.