



# CROSSOSOMA

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SOUTHERN CALIFORNIA BOTANISTS  
Rancho Santa Ana Botanic Garden, Claremont, CA 91711

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Crossosoma Vol. 7, No. 4  
Editor: M. Chesebro

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August, 1981

## SENSITIVE PLANTS IN THE CLEVELAND NATIONAL FOREST

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Drawings by Mark Ford

In keeping with the concern for threatened and endangered plants and animals, the Cleveland National Forest in southern California maintains a Sensitive Plant Species List (USDA/FS, 1980). The plants on this list are considered sensitive for various reasons, but perhaps mostly because of their vulnerability to environmental impacts or stresses.

This paper includes the sensitive plants of the Trabuco and Descanso Districts (exclusive of the Laguna-Moreno Demonstration area) of the Cleveland National Forest, California, as well as species found during extrapolation surveys within a few kilometers of the forest borders. More detailed reports of these surveys are on file at the headquarters of the Cleveland National Forest (CNF) in San Diego. Similar surveys have been done in other districts of the forest; Fred T. Sproul, for example, surveyed the Laguna-Moreno Demonstration area and Ricardo Villasenor the Palomar District.

The Trabuco Ranger District is located in the Santa Ana Mountains, the northernmost extension of the Peninsular Ranges in southern California. Most of the range is divided between Riverside and Orange counties; a small portion in the south is in San Diego county (Lathrop and Thorne, 1978: Fig. 1).

The Descanso Ranger District (exclusive of the Laguna-Moreno Demonstration area) is approximately 54,540 hectares in area and is located in eastern San Diego county roughly west and south of Cuyamaca Rancho State Park (Fig. 1). The gabbro soils, which influence the distribution of many of the sensitive plant species of the Descanso District are described by Oberbauer (1979). The relation of soil diversity to distribution of some of the sensitive species is also elucidated by Kruckeberg (1969).



The rarity of the species is not indicated in the CNF Sensitive Plant Species list. This information, for most but not all of the species, is included in Shevock (1976), Beauchamp (1978) and Powell (1980).

The critical distribution and rarity of the sensitive species are shown in Table 1. Argemone munita Dur. & Hilg. ssp. robusta G. Ownby and Dudley visida (Wats.) Moran were found only in the Trabuco District. The remaining 7 species are reported for the Descanso District. Three other species, which were on the 1979 CNF list when the surveys were started and subsequently removed, are also found in the area. Haplopappus arborescens (Gray) Hall occurs in both districts. Dicentra chrysantha (H & L) Walp. and Cupressus quadalupensis Wats. ssp. forbesii (Jeps.) Beauchamp ex Thorne were found only in the Trabuco District.

#### Extrapolation Surveys

The species listed here were not found within at least one of the two district boundaries but could feasibly occur in one or the other because of their reported habitat and nearby location. These are:

Astragalus brauntonii Parish, reported near the Trabuco District in Coal Cyn. on the N. slope of Sierra Peak.

Brodiaea orcuttii (Greene) Baker and Myosurus minimus L. var. apus Greene occur in or about the vernal pools of the Santa Rosa Plateau which borders the Trabuco District in the south.

Satureja chandleri (Bdg.) Druce also occurs on the Santa Rosa Plateau in DeLuz Canyon and near the USFS Tenaja Guard Station.

Calochortus dunni Purdy is found near the Descanso District at Guatay Mtn. and Desert View south of Julian.

Grindelia hallii Steyermer is found in Cuyamaca Rancho State Park which borders the Descanso District.

Limnanthes gracilis Howell var. parishii (Jeps.) C. Mason is found about Cuyamaca Lake but is not likely to occur in the Descanso District because the preferred habitat of wet grassy depressions is not well represented there.

The 9 sensitive plant species and 2 of the extrapolation species (Astragalus brauntonii and Satureja chandleri) are illustrated in Figures 2-12. Due to lack of space, the reader is referred to the author's full file reports of these species, alluded to previously, for more detailed information, especially habitat requirements and management recommendations. However, a few comments should be made about some of the more critical areas where most of the sensitive species occur.

1. Ortega Highway. Dudleya viscida is fairly well protected here by virtue of its habitat-the steep rocky cliffs of San Juan Canyon.



2. King Creek. The good stands of Cupressus stephensonii on this canyon slope are well protected by the personnel of both the Descanso Ranger District and Cuyamaca Rancho State Park.
3. Lyons Peak. Access to this important area, an adjunct to the Descanso District, is controlled by a locked gate. Thus the three sensitive plant species here (Table 1) are afforded some protection.
4. Lawson Peak. This area, while not as scenic as Lyons Peak, is truly a valuable botanical area. Four sensitive species occur here (Table 1) and the spring flora is relatively rich in chaparral and ground cover species. Unfortunately there are no locked gates on the access roads leading to this area. It has been recommended to the Forest Service that access to this area should be controlled, at least during the flowering season of the sensitive species.
5. Moreno Dam. Ribes canthariforme is well protected here by controlled access. Drought periods may be its only threat. Ribes canthariforme, unlike R. indecorum Eastw. which grows in the same areas, is found mostly in rocky ravines or among large boulders where water harvesting is possible, perhaps indicating the need for extra moisture by this species.
6. Viejas Grade, Viejas Mtn. This area is mentioned more for what hasn't been found here recently, namely Acanthomintha ilicifolia. While this annual has been reported from this area in the past, the author was unable to find it in 1980, despite frequent trips there throughout the spring and summer. Since it is an annual, it may have failed to appear simply because of inadequate rainfall. In any case, it is rare.
7. Hagador Canyon, Sanitago Peak. Aside from subspecies of the prickly poppy (Argemone), considered to be endemic to the Trabuco District, these two areas are floristically very rich.

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Note: Dr. Lathrop is a professor in the Department of Biology, Loma Linda University. His research interests are in floristics and plant ecology. He is a member of SCB. Mark Ford is a graduate student in the same department.



\* Figure 1. Map of the Trabuco and Descanso Ranger Districts, Cleveland National Forest.



Table 1. Critical areas and rarity status of sensitive plant species. Species marked (\*) occur only in the Trabuco District; all others are in the Descanso District.

Species	Location(s)	Rarity Status
<u>Acanthomintha illicifolia</u> (Gray)	Viejas Grade	seldom reported, endangered in part
<u>Argemone munita</u> Dur. & Hilg. ssp. <u>robusta</u> G. Owenby*	Hagador Canyon Santiago Peak	ssp. endemic to the Trabuco District, reported as rare by Shevock
<u>Brodiaea orcuttii</u> (Greene) Baker	King Creek	rare, of limited distribution, endangered in part
<u>Calamogrostis densa</u> Vasey	Lawson and Lyons peaks King Creek, Los Pinos mountain	confined to several populations, not endangered
<u>Cupressus stephonsonii</u> C. B. Wolf	King Creek	confined to several populations, not endangered
<u>Dudleya viscida</u> (Wats.) Moran*	Ortega Highway .3 km E of USFS San Juan Station	occurrence within the district confined to one population, not endangered, reported as rare by Shevock
<u>Monardella hypoleuca</u> Gray ssp. <u>tanata</u> (Abrams) Munz	Lawson and Lyons peaks (Cuyamaca Park by extrapolation)	confined to several populations, not endangered
<u>Ribes canthariforme</u> Wiggins	Lawson and Lyons peaks Moreno Dam	confined to several populations, not endangered
<u>Senecio ganderi</u> Barkley & Beauchamp	Lawson Peak (Cuyamaca Park by extrapolation)	confined to several populations, not endangered

Table 1. Critical areas and Rarity Status



*Senecio ganderi* (groundsel)  
Figure 2



*Cupressus stephensonii*  
(Cuyamaca cypress)  
Figure 3



*Dudleya viscida*  
(live forever)  
Figure 4



*Monardella*  
*hypoleuca* ssp.  
*lanata*  
(pennyroyal) Fig. 6



*Satureja chandleri*  
(chandler's savory)  
Figure 7



*Argemone munita* ssp. *robusta*  
(prickly poppy) Figure 5



*Ribes cantharifolium*  
(currant) Figure 8



*Acanthomintha*  
*ilicifolia*  
(thornmint)  
Figure 9





*Brodiaea orcuttii* (blue dick relative) Figure 10



*Calamagrostis densa* (reedgrass) Figure 11



*Astragalus brauntonii* (loco weed) Figure 12

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*Crossosoma* is published bi-monthly (February, April, June, August, October and December) by Southern California Botanists, a non-profit association. Dues are on a calendar year basis. Regular \$6.00. Students and Retirees \$4.00. Groups \$10.00.



Lathrop, Earl W. 1981. "Sensitive Plants in thee Cleveland National Forest." *Crossosoma* 7(4), 1–7.

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