# Postfire Regeneration


Fires are often sensationalized in the press and reported to have "destroyed" thousands of acres of wildlands. Native shrublands are resilient to infrequent fires and have numerous adaptations that allow them to recover quickly after fire. Native diversity is highest in the first two years after fire because of the germination of native herbs from the seed bank.

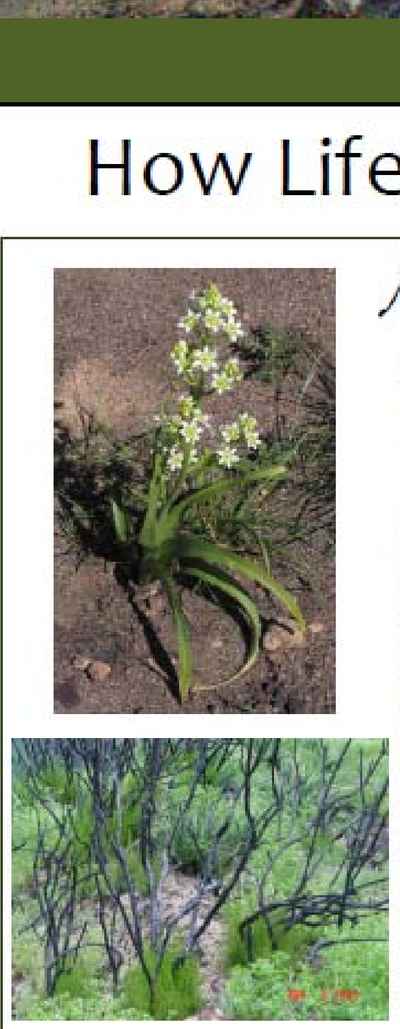
## How Life Returns

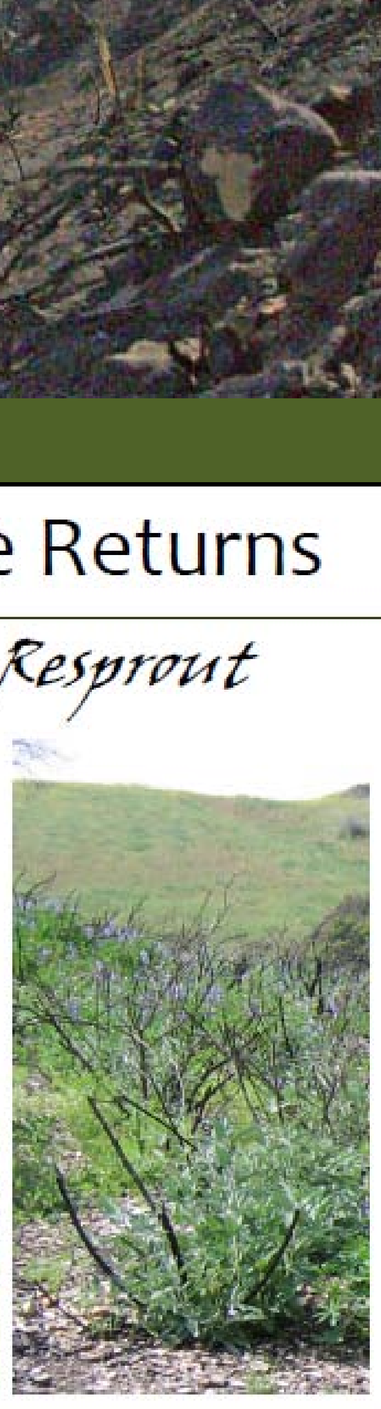
### Seed




### Resprout







Coast Live Oaks
Tuna Canyon
1993 Old Topanga Fire
and
Five Years Postfire

Dagit, Rosi. 2002. *Post-fire Monitoring of Coast Live Oaks (Quercus agrifolia) Burned in the 1993 Old Topanga Fire.* USDA Forest Service Gen. Tech. Rep. PSW-GTR-184.

## Associated Shrub Adaptations

### *Seeders*

- Shallow rooted
- Drought tolerant
- High postfire seedling survival
- Short fire return eliminates

### *Sprouters*

- Deep rooted
- Drought "avoider"
- No seedling recruitment or low to no postfire seedling survival
- Seedling establishment in gaps in long fire-free intervals

### Non-sprouters

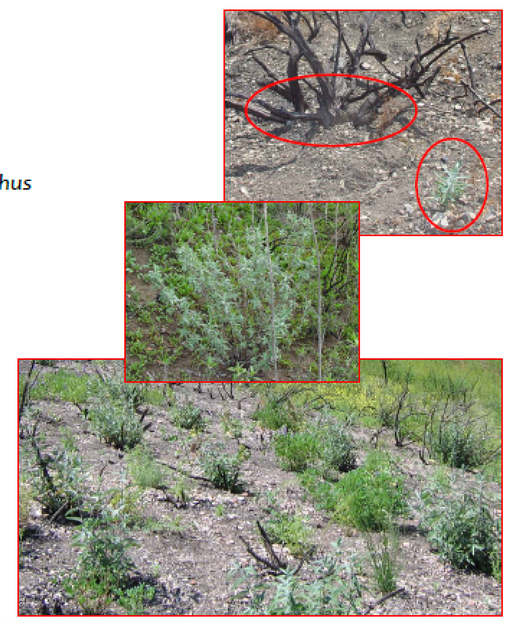
- Annuals
- Herbaceous perennials
  *Dicentra ochroleuca, Plagiobothrys nothofulvus*
- Suffrutescent shrubs
  *Lotus scoparius, Helianthemum*
- Obligate seeding shrubs
  *Ceanothus, Arctostaphylos*

### Obligate Sprouters

- Herbaceous perennials
  Most bulbs, vines, herbs
- Perennial grasses
- Shrubs without a seed bank
  *Cercocarpus, Quercus, Heteromeles, Lonicera, Rhamnus, Prunus, Hazardia, Encelia, Eriogonum cinereum*

### Facultative sprouters

- Herbaceous perennials
  *Malacothrix saxatilis, Helianthus gracilentus, Erigeron foliosus*
- Perennial grasses
  *Bromus carinatus*
- Woody vines
  - *Calystegia*
- Coastal Sage shrubs
  *Eriogonum fasciculatum, Salvia leucophylla, Salvia mellifera, Solanum*
- Chaparral shrubs
  *Adenostoma, Ceanothus, Arctostaphylos, Ribes, Rhus, Malosma laurina*



Poster by Marti Witter, SAMO Fire Ecologist, May 2010