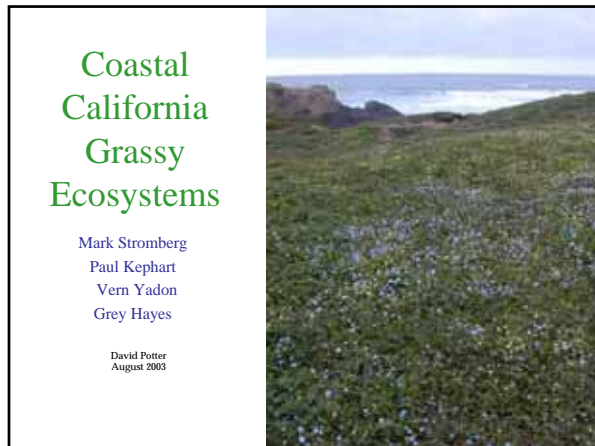


# The Conservation and Ecology of California's Coastal Prairie May 1, 2003



"The first rule of  
intelligent tinkering is to  
keep all the pieces"  
- Aldo Leopold

## Coastal Grasslands: Why are they important?

1. Highest Diversity In Coastal Ecosystems
2. Less than 1% Remain Undisturbed
3. Management by Humans- Required
4. Significant, Real Threats Remain

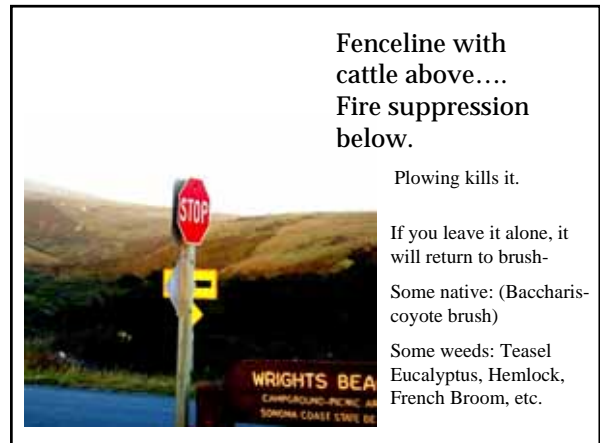
California Coastal Grasslands



Very typical  
California coastal  
terrace grassland  
habitat.

- Agriculture
- Housing
- Roads
- Fire Suppression
- Grazing Removal

Reduced to small patches....



Fenceline with  
cattle above....  
Fire suppression  
below.

Plowing kills it.

If you leave it alone, it  
will return to brush-  
Some native: (Baccharis-  
coyote brush)

Some weeds: Teasel  
Eucalyptus, Hemlock,  
French Broom, etc.

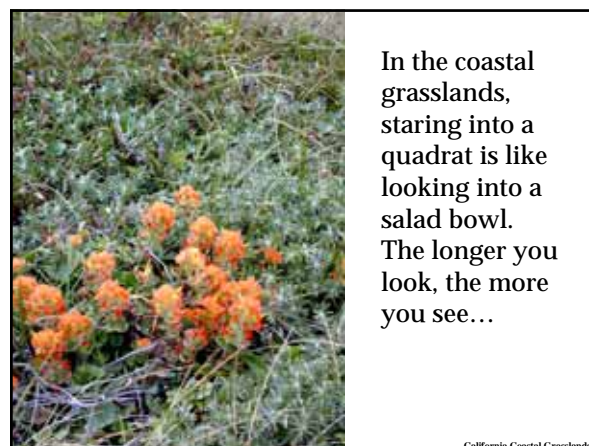
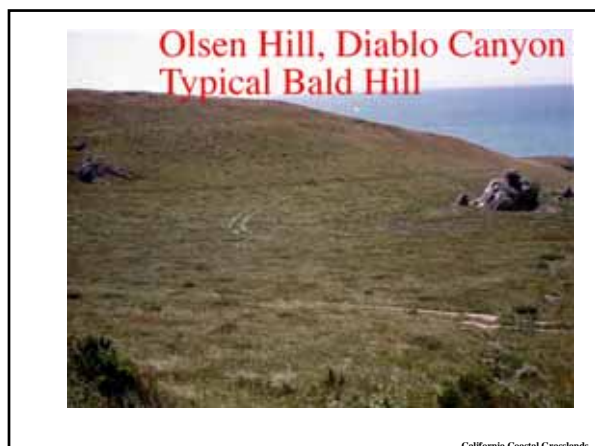


California Coastal Grasslands



California Coastal Grasslands

The Conservation and Ecology of California's Coastal Prairie  
May 1, 2003



# The Conservation and Ecology of California's Coastal Prairie May 1, 2003

Often on Steep Cliffs- Between Ocean, Hwy 1



California Coastal Grasslands

Laureles Grade, Barker Ranch, Calera Canyon



California Coastal Grasslands

Hearst Lands, Piedras Blanco Light House



California Coastal Grasslands

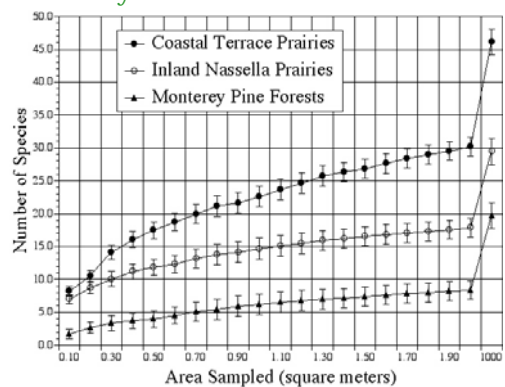
Tom's Point - Petaluma area



California Coastal Grasslands



Diversity of Coastal California Grasslands





# The Conservation and Ecology of California's Coastal Prairie May 1, 2003

## Diversity of Coastal California Grasslands

### Number of Species per square meter

	Count	Mean	Std. Err.
Coastal Terrace Prairies	32	22.6	1.58
Inland Nassella Grasslands	80	14.7	0.78
Monterey Pine Forests	46	6.17	0.58
Coastal Scrub	141	0.69	0.16

### Comparison of Means (INP, CTP, MPF)

Category	df	Mean Square	F Value	P-value
Category	2	2615.2	62.9	<0.0001
Residual	155	41.6		

California Coastal Grasslands

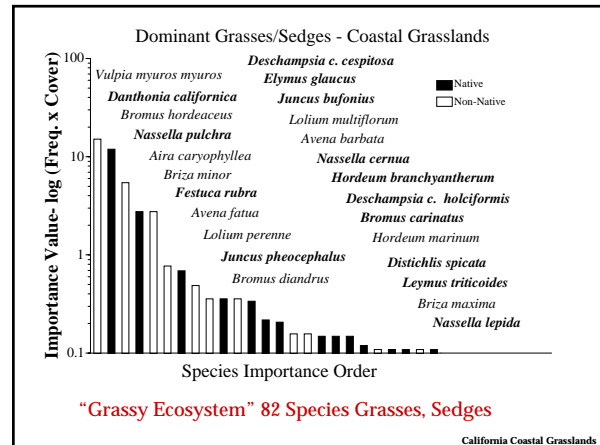
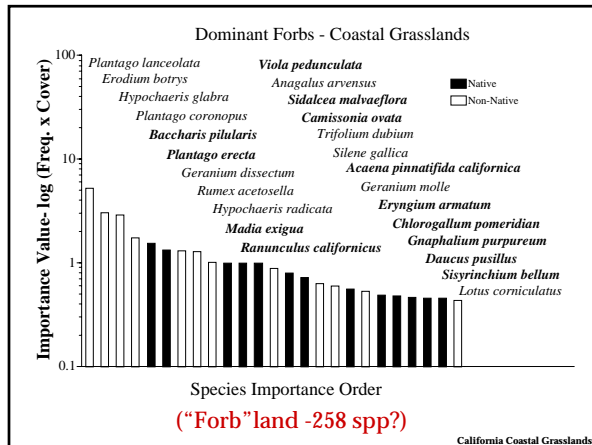
## Diversity of Coastal California Grasslands

### compared to other NA grasslands

### Study No. Spp. 1 m<sup>2</sup>

Coastal Grasslands	22.6 (± 8.9)
Interior Dry Grasslands, CA Nassella/Annual (Stromberg, Griffin 1996)	14.7 (± 0.7)
Serpentine Meadows, CA Napa Co. (Harrison, 1999)	12.3 (± 2.3)
Pawnee Buttes, CO Shortgrass (Stohlgren, 1999a)	8.5 (± 0.4)
Tallgrass Prairie, MN (Stohlgren, 1999a)	12.2 (± 0.7)

California Coastal Grasslands



### Grassland Restoration, or "Intelligent Tinkering"

- Restoration of major grasses is possible.
  - Packard Elkhorn Slough properties
  - Adding the flowers (forbs) is hard.

Academic researchers in plant ecology are busy studying the basic biology of California grasslands.  
UC Davis, Berkeley, Santa Barbara, Santa Cruz

Restorationists are practicing the art...

- California Chapter of the Society for Ecological Restoration.
- Various contractors, consultants.

We need to save the models. Goals for intelligent tinkering...

