



information on wild California plants for conservation, education, and appreciation

# Distilling Data with Calflora

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The Calflora Database aggregates and serves information on

- > 8,500 native and introduced plant species

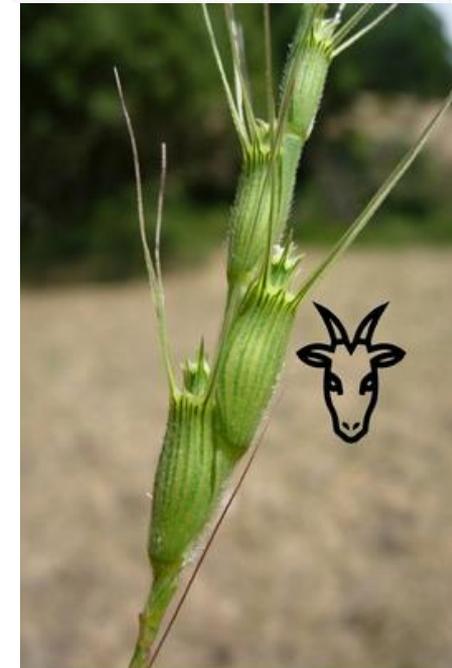
- > 3 million plant location observations

- > 30,000 relationships between old and new plant names

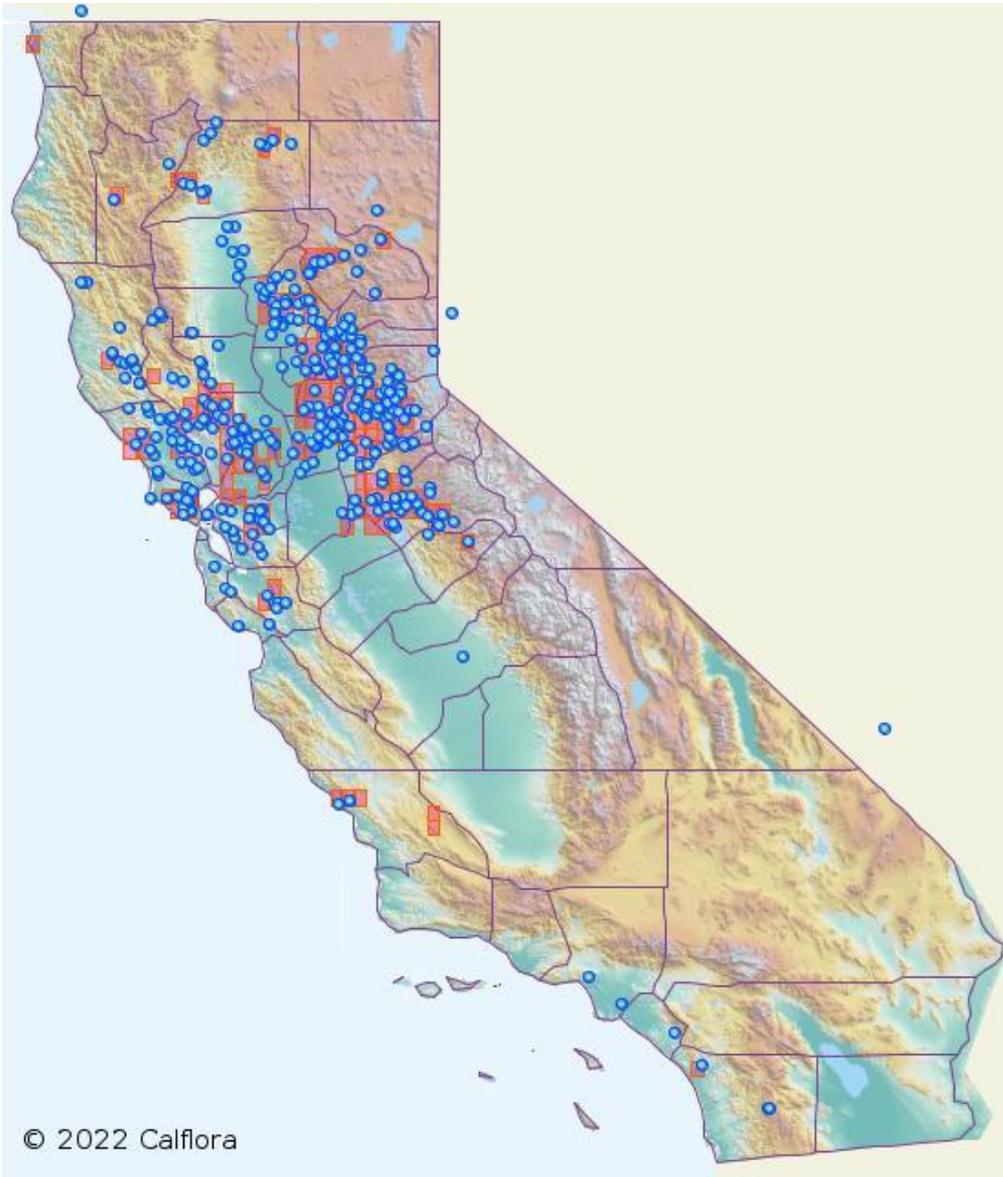
*Aegilops triuncialis*, or Barbed goatgrass, is an annual grasslike herb that is not native to California. Cal-IPC rating: High



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© 2022 Scott Oneto



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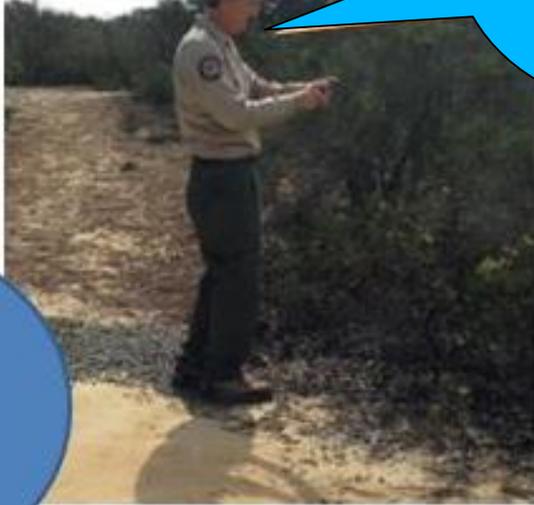
Weed Manager (WM) was released in 2014. Dozens of agencies engaged in land management depend on WM to track weed infestations and treatments over time.



Weed Manager (WM) subscription is \$3,500/year for one group with up to ten users and unlimited projects. Each project may have its own customized data collection form.



I need a point with a radius.



My agency requires polygons.



Percent cover and plant count are key.

...all available via customized data collection forms



Percent cover  
and plant count  
are key in  
designing a  
management  
plan.



My organization  
requires polygons  
that reflect the  
size of the  
infestation.



Weed Manager (WM) offers customized reports to track and visually display progress, e.g.

## August 2021 Herbicide Usage

Product 1	Observer	Product 1 Concentrated Units	Product 1 Concentrated Amount	Solution Amount
	User W		0	0
		<b>Totals</b>	<b>0</b>	<b>0</b>
	User X		0	0
		<b>Totals</b>	<b>0</b>	<b>0</b>
	User Y		0	0
		<b>Totals</b>	<b>0</b>	<b>0</b>
	<b>Totals</b>	<b>Totals</b>	<b>0</b>	<b>0</b>
Roundup Custom	User Z	ounces	4	4
		<b>Totals</b>	<b>4</b>	<b>4</b>
	<b>Totals</b>	<b>Totals</b>	<b>4</b>	<b>4</b>
Roundup Pro Max	User Y	ml	74	74
		<b>Totals</b>	<b>74</b>	<b>74</b>
	<b>Totals</b>	<b>Totals</b>	<b>74</b>	<b>74</b>
<b>Totals</b>	<b>Totals</b>	<b>Totals</b>	<b>78</b>	<b>78</b>

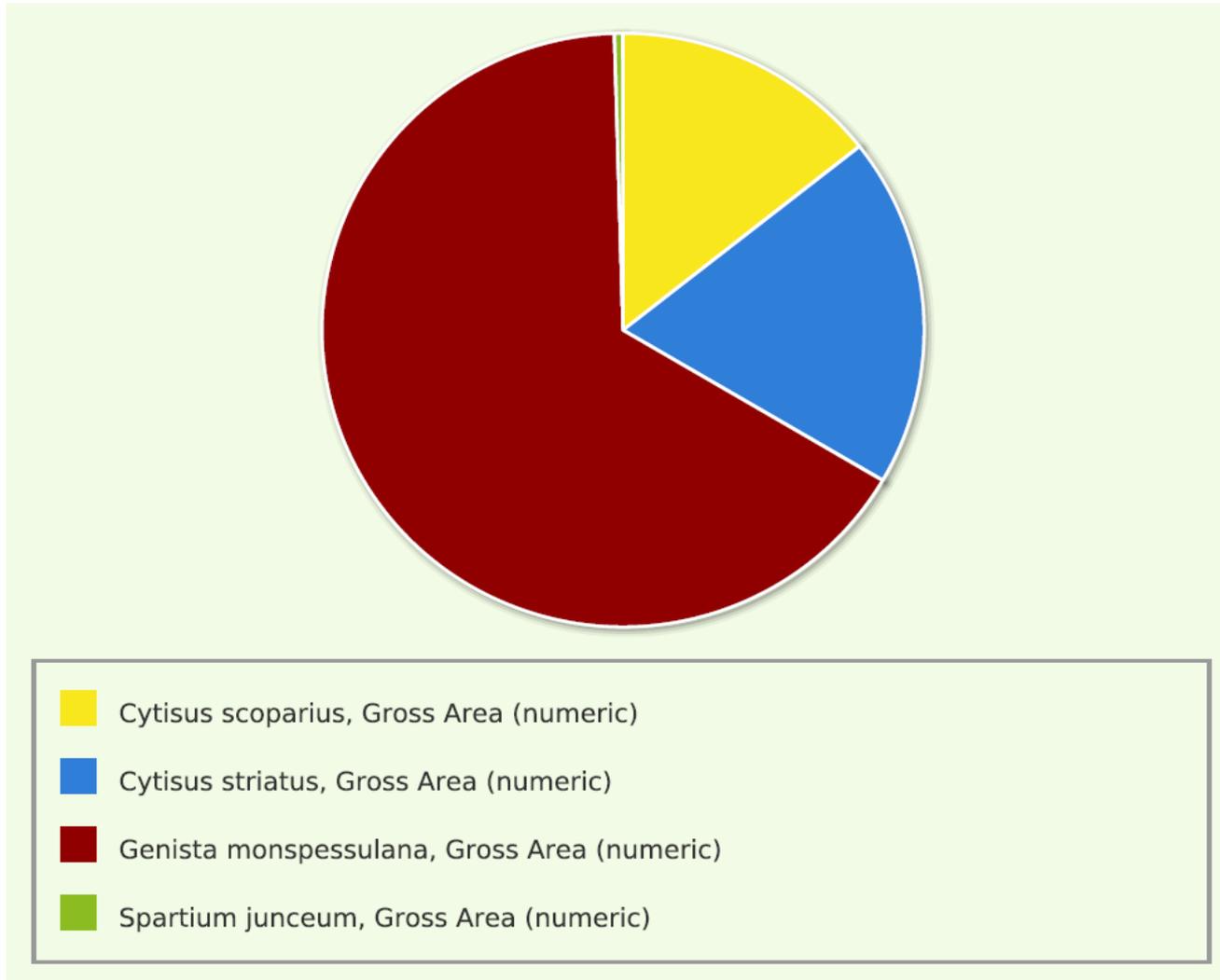
## Gross Area, Infested Area, and Plant Count Midpoints in Region X for selected species

<b>Taxon</b>	Gross Area (acres)	Gross Area (m <sup>2</sup> )	Infested Area (m <sup>2</sup> )	Plant Count Midpoint
Arundo donax	0	48	24	32
Brassica tournefortii	85	342041	20206	122580
Carduus pycnocephalus	2	7719	98	5465
Centaurea solstitialis	22	89810	263	4047
Cirsium vulgare	0	0	0	1
Cynara cardunculus	252	1021714	363	450
Eucalyptus camaldulensis	0	30	30	12
Eucalyptus globulus	0	14	14	13
Eucalyptus polyanthemos	0	36	36	10

## Gross Area, Infested Area, and Plant Count Midpoints in Region X for selected species

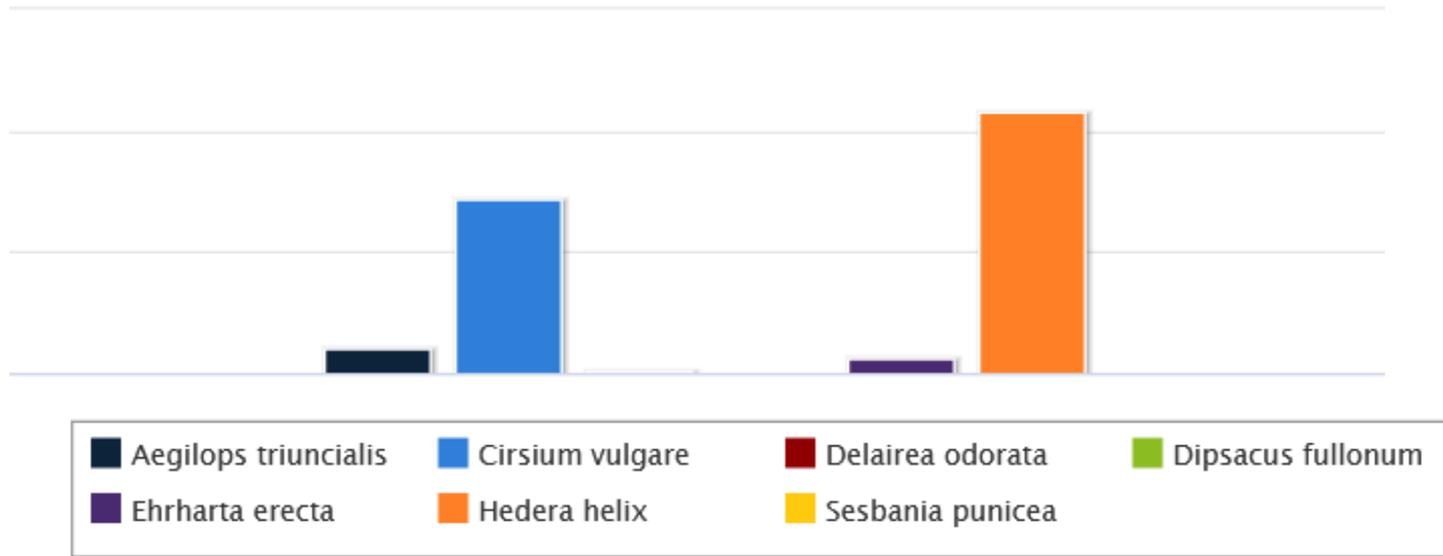
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<i>Eucalyptus polyanthemos</i>	0	36	36	10
<i>Eucalyptus sideroxylon</i>	0	19	19	5
<i>Ficus carica</i>	0	1	0	1
<i>Foeniculum vulgare</i>	194	785010	242	2227
<i>Gazania linearis</i>	0	31	5	28
<i>Lepidium latifolium</i>	1	2555	16	1000
<i>Marrubium vulgare</i>	204	827218	98	674
<i>Nerium oleander</i>	0	4	2	1
<i>Nicotiana glauca</i>	8	33212	1290	1558
<i>Oncosiphon pilulifer</i>	0	25	1	2
<i>Oncosiphon piluliferum</i>	0	81	4	79
<i>Pennisetum setaceum</i>	2	8694	199	169
<i>Ricinus communis</i>	6	22743	129	474
<i>Silybum marianum</i>	173	701155	4224	17518
<i>Spartium junceum</i>	0	5	3	3
<i>Tamarix parviflora</i>	0	55	11	9
<i>Tamarix ramosissima</i>	1	2031	6	136
<i>Tribulus terrestris</i>	0	0	0	1
<i>Verbesina encelioides</i>	0	590	15	25
<b>Totals</b>	<b>950</b>	<b>3844843</b>	<b>27298</b>	<b>156522</b>

## Square meters of broom in group X

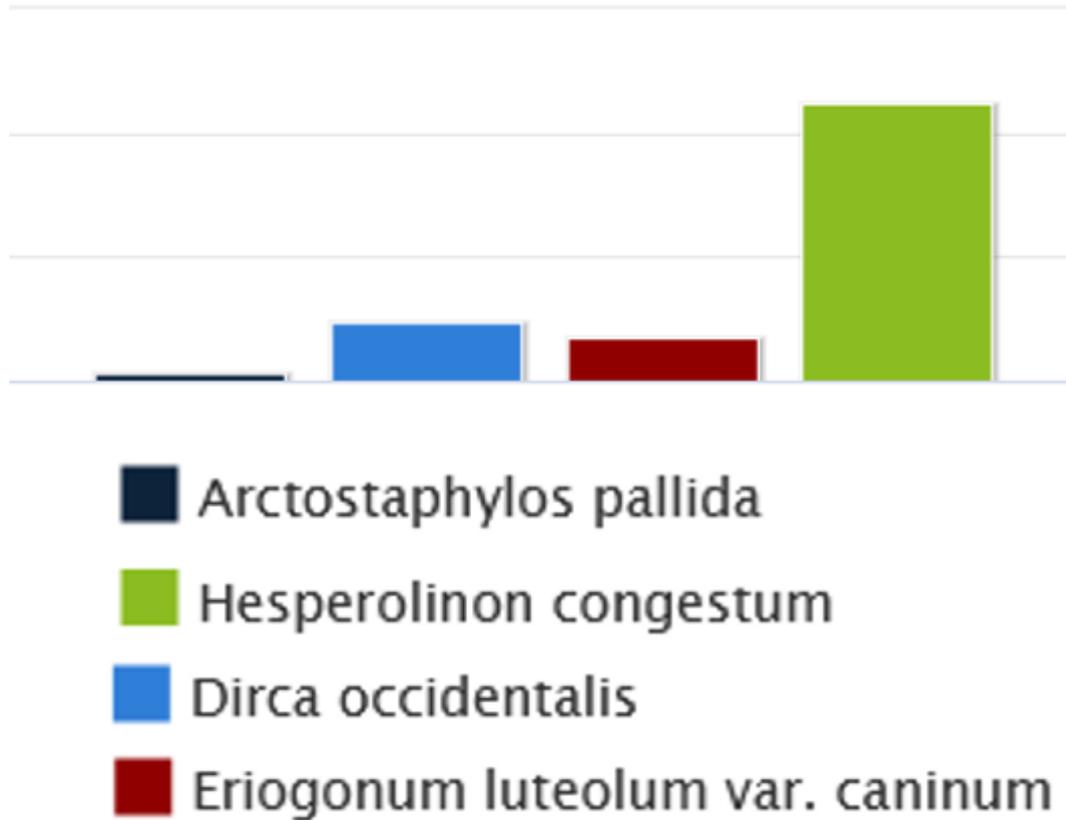


Spanish broom coverage very low (tiny sliver) in comparison with other 3 brooms

## Gross area comparison for 7 species we've been tracking in our region



Gross area comparison for 4 rare species we've been tracking in our region



Dicots did well vs. the shrubs...



### Who's seen what

David Neville	Acroptilon repens
	Centaurea stoebe
	Chondrilla juncea
Diana Wing	Acroptilon repens
	Euphorbia dendroides
	Linaria dalmatica
John Beall	Acroptilon repens
	Carthamus creticus
	Carthamus sp.
	Chondrilla juncea
	Ditrichia graveolens
	Ditrichia graveolens
	Emex spinosa
	Euphorbia dendroides
	Euphorbia terracina
	Linaria dalmatica
	Solanum elaeagnifolium
Mary Crane	Centaurea stoebe



## Observations by Group / Project, January 1, 2020 to present

	Observations
<b>CDFW Orange County</b>	
<b>UNBER - invasive Limonium Totals</b>	29
<b>UNBER - Sahara mustard Totals</b>	9
<b>CDFW Orange County Totals</b>	38
<b>Irvine Ranch Conservancy</b>	
<b>Agua Chinon Totals</b>	2
<b>COI Weed Control Totals</b>	1
<b>OCP Weed Control Totals</b>	4
<b>Seed Collection Totals</b>	240
<b>TIC Weed Control Totals</b>	2
<b>Irvine Ranch Conservancy Totals</b>	249
<b>Orange County Parks Plantopia</b>	
<b>IROS 2014 Lands 2021 Survey Totals</b>	4
<b>Laguna Canyon Foundation Data Collection Totals</b>	9
<b>NCC EDRR Totals</b>	2
<b>OC Parks Contractor Weed Surveys (Psomas) Totals</b>	30
<b>OC Parks Staff Data Collection Totals</b>	148
<b>OC Parks Volunteer Data Collection Totals</b>	19
<b>PROJECT - NCC EDRR Ehrharta calycina CONTROL Totals</b>	18
<b>PROJECT - NCC EDRR Ehrharta calycina SURVEY Totals</b>	83
<b>Sage 2021 Weed Control Totals</b>	191
<b>Orange County Parks Plantopia Totals</b>	504

## Invasive Plant Records - OC Parks & State Parks 2020

Measures	Populations	Root Records
Taxon		
Ageratina adenophora	1	1
Ailanthus altissima	1	0
Arundo donax	7	1
Asparagus asparagoides	1	0
Asphodelus fistulosus	3	0
Brassica tournefortii	4	2
Carduus pycnocephalus	3	0
Carpobrotus edulis	6	2
Cenchrus longispinus	1	1
Cirsium vulgare	2	0
Conium maculatum	35	7
Cortaderia selloana	3	0
Cynara cardunculus	259	153

Dittrichia graveolens	86	59
Echium candicans	4	1
Ehrharta calycina	9	2
Emex spinosa	34	6
Foeniculum vulgare	10	4
Gazania linearis	1	0
Glebionis coronaria	10	3
Lepidium draba	2	0
Lepidium latifolium	4	3
Malephora crocea	3	3
Myoporum laetum	1	0
Phoenix canariensis	5	0
Ricinus communis	14	3
Robinia pseudoacacia	1	1
Salpichroa organifolia	1	0
Salsola tragus	2	0
Schinus molle	1	0
Schinus terebinthifolius	7	3
Silybum marianum	23	0
Spartium junceum	1	0
Tamarix ramosissima	1	1
Tropaeolum majus	30	6
Washingtonia robusta	2	0
<b>Totals</b>	<b>646</b>	<b>280</b>

<b>Measures</b>	Observation Count	Gross Area (m <sup>2</sup> )	Infested Area (m <sup>2</sup> )	Plant Count Midpoint
<b>Taxon</b>				
Acacia cyclops	141	16,616.30	866.28	951.50
Arundo donax	180	120,337.24	62.00	14,071.00
Cirsium vulgare	172	68,131.30	0.00	52,521.50
Dittrichia graveolens	124	157,670.82	124.82	54,938.50
Tamarix ramosissima	164	114,754.40	0.00	7,702.00
<b>Totals</b>	<b>781</b>	<b>477,510.06</b>	<b>1,053.10</b>	<b>130,184.50</b>

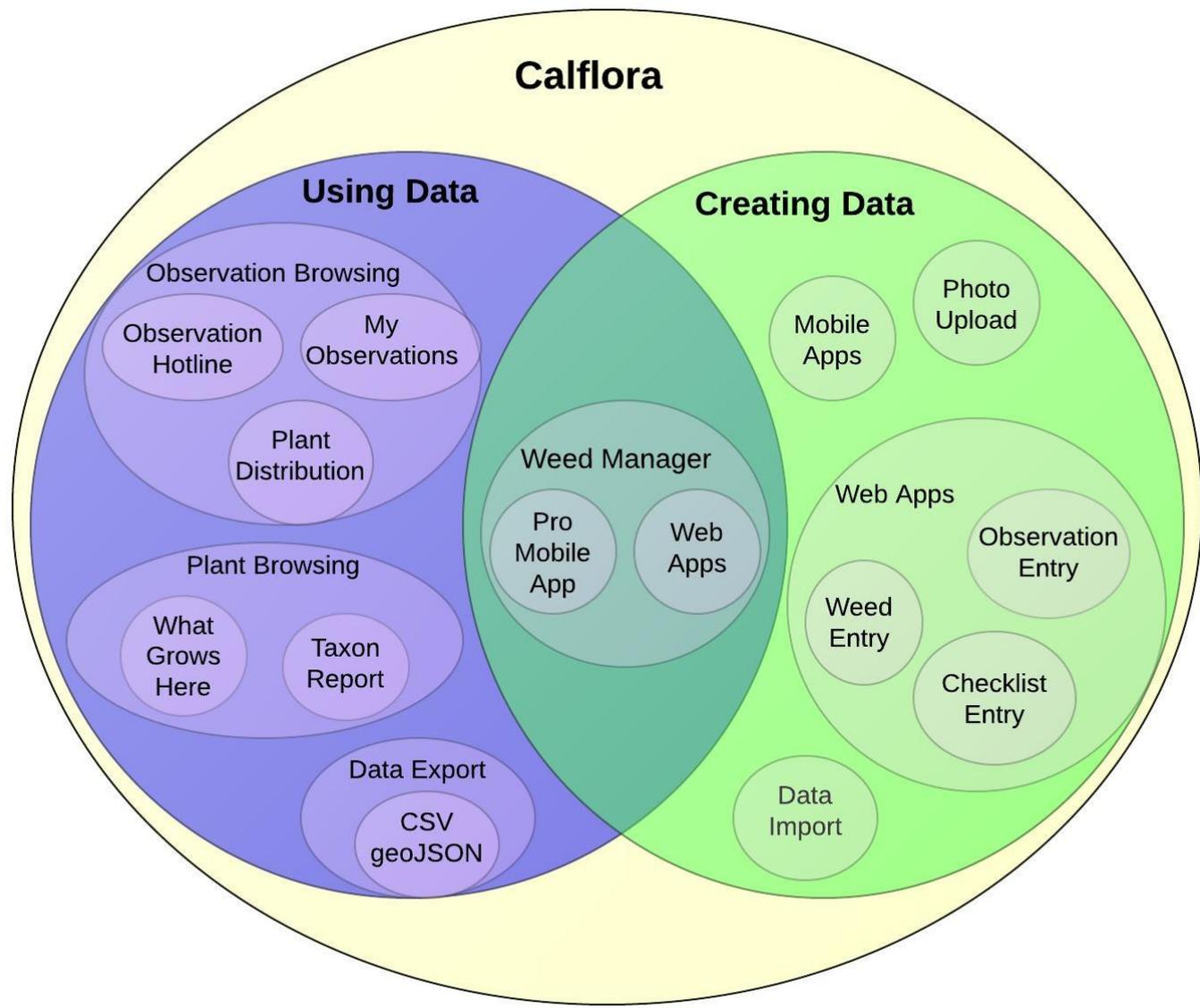
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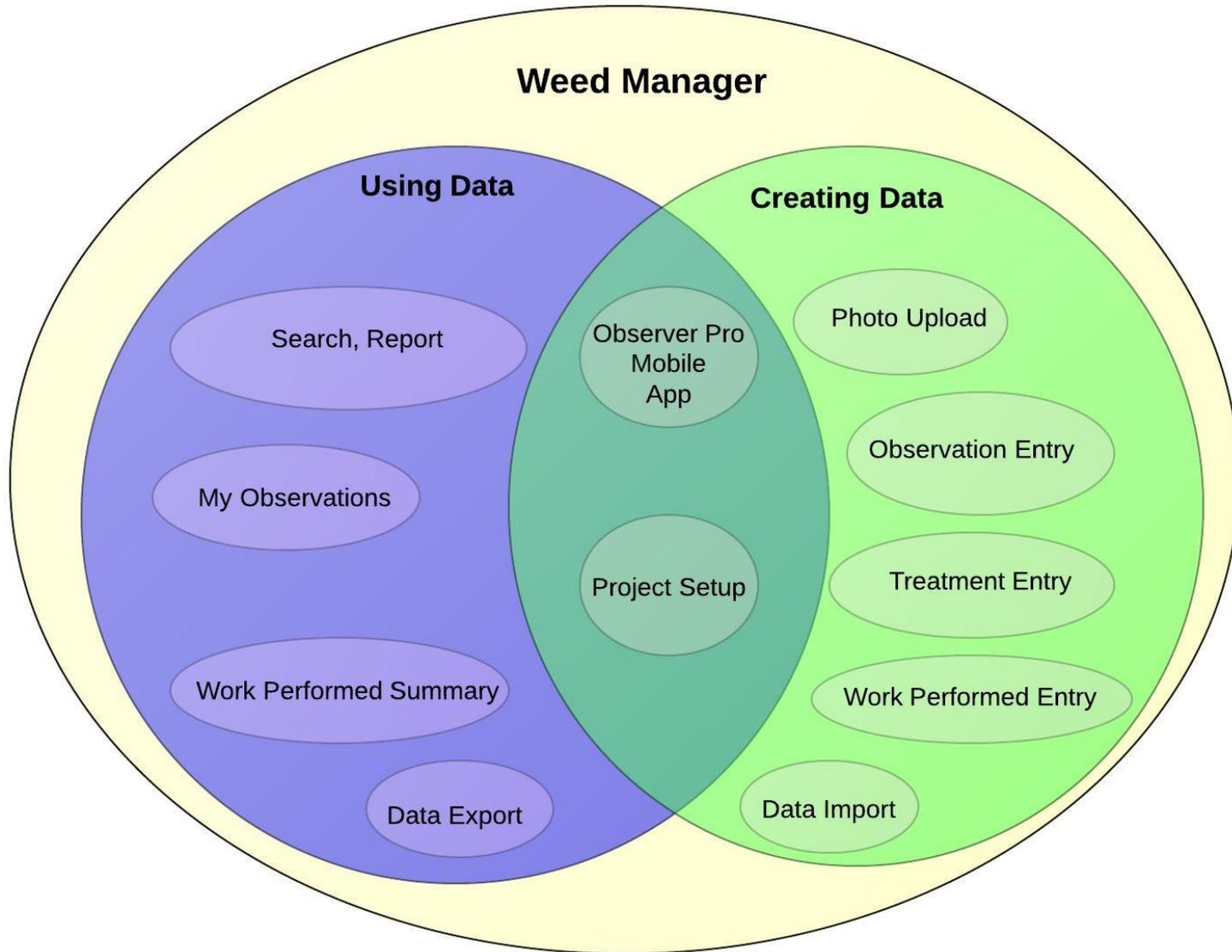
## Five invasive species in Region Z

<b>Measures</b>	Observation Count	Gross Area (m <sup>2</sup> )	Infested Area (m <sup>2</sup> )	Plant Count Midpoint
<b>Taxon</b>				
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Weed Manager (WM) users may set up multiple projects within their group(s), share shapes and plant lists, and establish coordinating groups to share data across jurisdictions.







# Weed Manager

→ Collect data

spatial & tabular

field or office

→ Personalized forms, data dictionaries

→ Searchable/viewable online

→ Run customized reports

→ Export to many formats



Calflora

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# Acquiring data



FID	Shape	Controller	Name	Date	Species_Co	Scientific
0	Polygon	volunteer	Ken Kadlec	8/1/2012	Artichoke Thistle	Cynara cardunculus
1	Polygon	volunteer	Ken Kadlec	8/1/2012	Tree Tobacco	Nicotiana glauca
2	Polygon	volunteer	Ken Kadlec	8/1/2012	Castor Bean	Ricinus communis
3	Polygon	volunteer	Ken Kadlec	8/1/2012	Artichoke Thistle	Cynara cardunculus
4	Polygon	volunteer	Ken Kadlec	8/1/2012	Artichoke Thistle	Cynara cardunculus
5	Polygon	volunteer	Ken Kadlec	8/1/2012	Artichoke Thistle	Cynara cardunculus
6	Polygon	volunteer	Stephen Chung	8/3/2012	Tamarisk	Tamarix ramosissima
7	Polygon	volunteer	Stephen Chung	8/3/2012	Tamarisk	Tamarix ramosissima
8	Polygon	volunteer	Stephen Chung	8/3/2012	Castor Bean	Ricinus communis

Upload shapefiles / geodatabases



GPS receivers increase location accuracy

Observer Pro phone app on iOS and android

Calflora Plant Observation Entry

TOOLS ▶

**Organization** **Project** unavailable

**Access by others** History ▶ none

**Shape** ▶ none **Point Location** ▶ none

**Photos:** none

**Management Status** **Natural Status**

**Region** **Collection / Survey**

**NEW RECORD**



Online



Geotagged Photos



Questions about Weed Manager?  
Contact Calflora: [spprt@calflora.org](mailto:spprt@calflora.org)