



Ed Dorrington Developer



Cynthia Powell Executive Director



Darrell Anderson Developer



Foresta Sieck-Hill Bookkeeper

Calflora.org



John Malpas Lead Developer

Roy West Board Director





Michelle Tollett Outreach & Communication Director



Calflora basics Observation Hotline What Grows Here Create an Illustrated Plant List Planting Guide Collecting data using a smart phone





Calflora is a 501(c)3 non-profit plant database. We provide information on wild CA plants for conservation, education, and appreciation.



information on wild California plants

What is Calflora **NOT**?

We are NOT part of the UC system. We are NOT part of CalPhotos (UC). We are NOT part of Cal-IPC (non-profit). We are NOT part of CNPS (non-profit).

Calflora has been a 501(c)3 non-profit since 2000.



Calflora database contains

- > 10,000 native and introduced species
- > 2 million plant location observations (points, lines, and polygons)
- > 30,000 relationships between old and new plant names
- > 300,000 plant photos
- > 70,000 unique Calflora e-visitors each month (~2,500/day)
- > 3,000 active data contributors (you?)

Popular "taxon report" pages

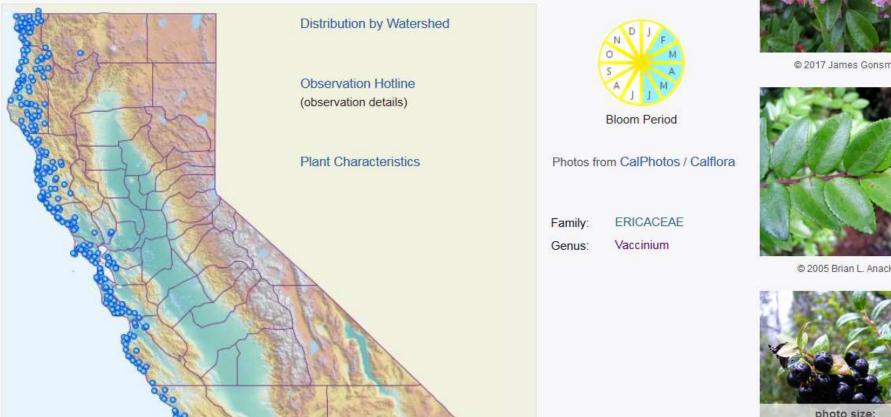
Calflora Taxon Report 8200

Vaccinium ovatum Pursh

California huckleberry, Evergreen huckleberry

Vaccinium ovatum, a dicot, is a shrub that is native to California, is also found outside of California, but is confined to western North America.

Pests and Pathogens from Calinvasives



One taxon report page for each wild plant species in CA

Cynthia P



© 2017 James Gonsman



© 2005 Brian L. Anacker



photo size:

Note scientific name, author(s), and common name(s)

Calflora Taxon Report 1152

Brickellia californica (Torr. & A. Gray) A. Gray

Brickell bush, California brickellbush, California brickellia

Brickellia californica, a dicot, is a **perennial herb** that is **native** to California, is also found outside of California, but is confined to western North America.





Bloom Period

Photos from CalPhotos / Calflora

© 2017 Steph

Family:	ASTERACEAE
Genus:	Brickellia
Subspecies	and Varieties:

... var. jepsonii



© 2018 Diar

Change photo size on taxon report pages

Calflora Taxon Report 8200

Vaccinium ovatum Pursh

California huckleberry, Evergreen huckleberry

Vaccinium ovatum, a dicot, is a **shrub** that is **native** to California, is also found outside of California, but is confined to western North America.

Pests and Pathogens from Calinvasives





Bloom Period

Photos from CalPhotos / Calflora

Family: ERICACEAE Genus: Vaccinium

Cynthia Powell EDIT - SIGN OUT

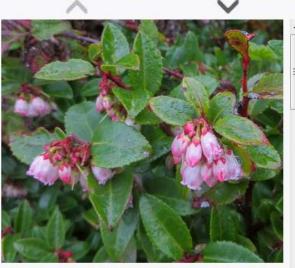
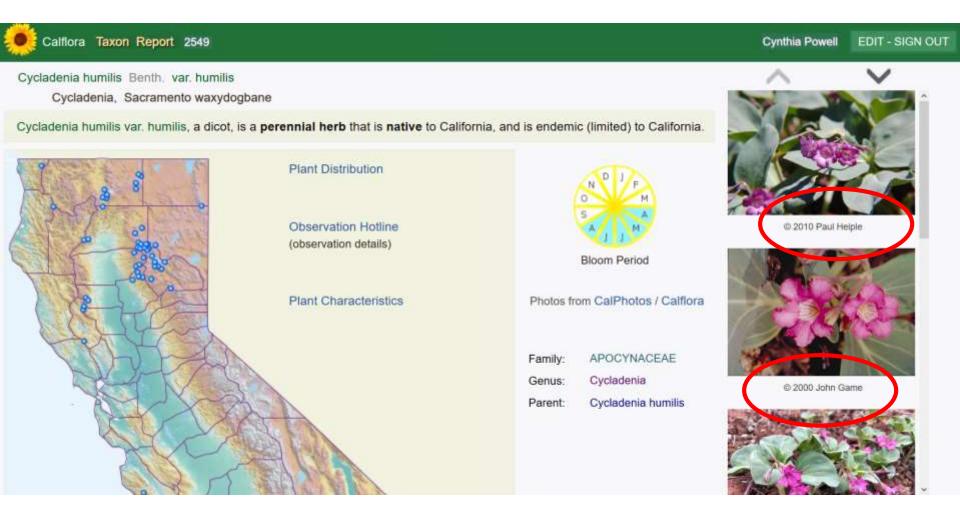


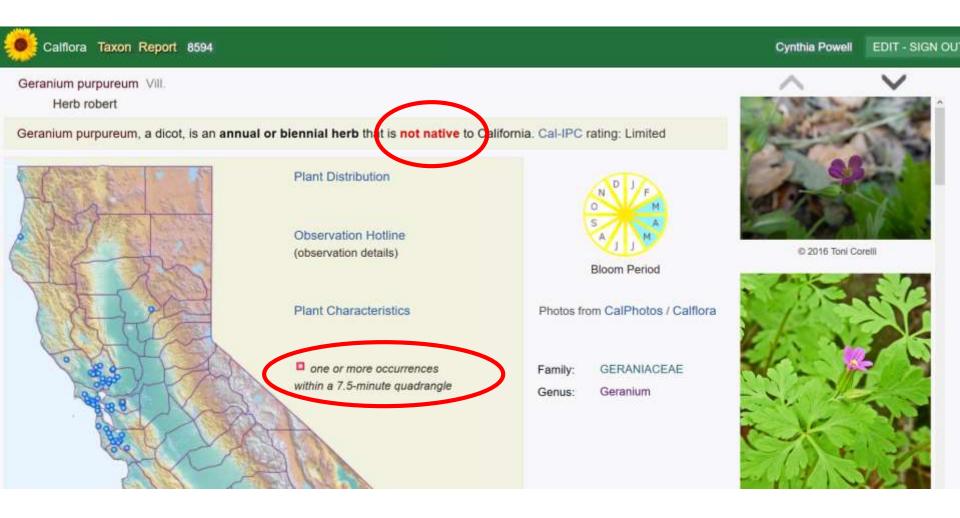


photo size:

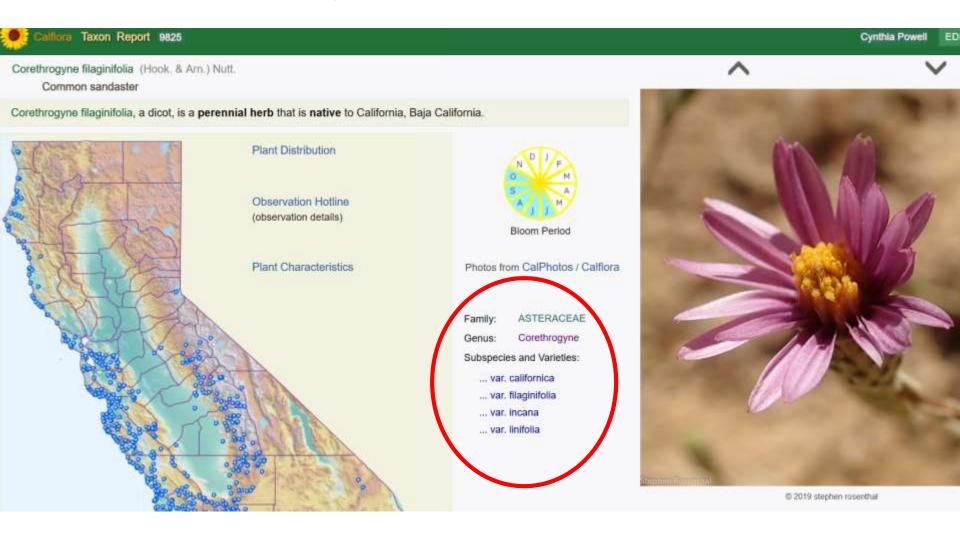
Note reference photographers



Note native status



Note family, genus, ssp. and var.





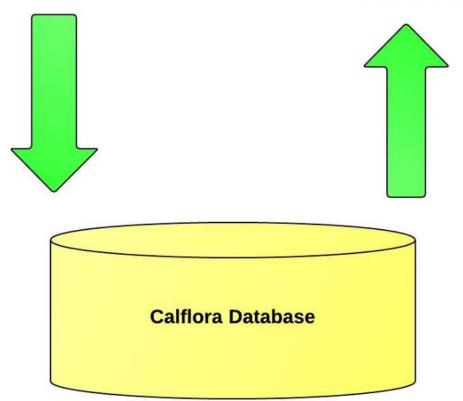
information on wild California plants

Data In

> 500 Professional Botanists
> 1000 Amateur Botanists
> 1800 Other Observers
> 100 Institutions

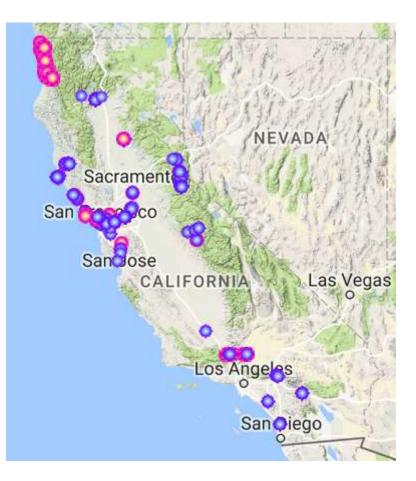
Data Out

Researchers Students Botanists Ecologists Land Managers Conservationists

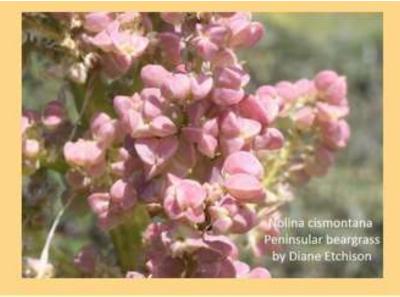




My "travel journal" showing where I've botanized in CA since I started using Calflora 8 years ago





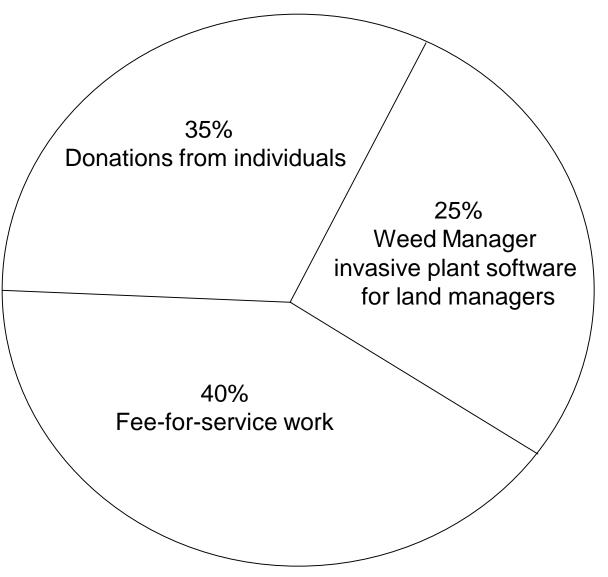


"I spend a lot (A LOT!) of time looking up species on Calflora every single day. What an incredibly useful resource it is!"

Bonnie Nickel, Calflora data and photo contributor



information on wild California plants





Q: With the millions of plant observations in Calflora, how can I find what I'm looking for?



A: There are many ways! We will go over several today.

Sign in for personalized Calflora experience:

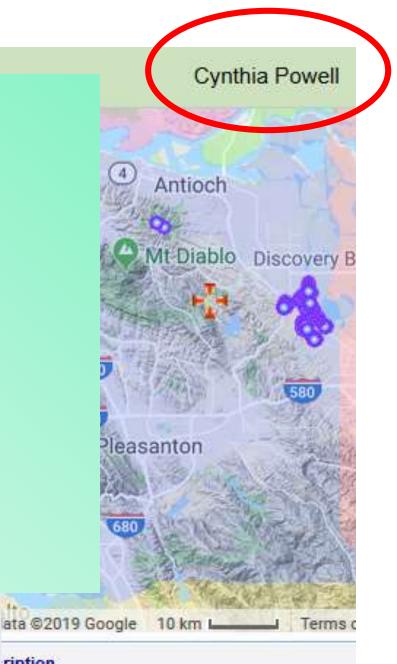
- -My observations -My preferences
- -My profile
- -My plant lists
- -My email alerts
- -My searches

Google

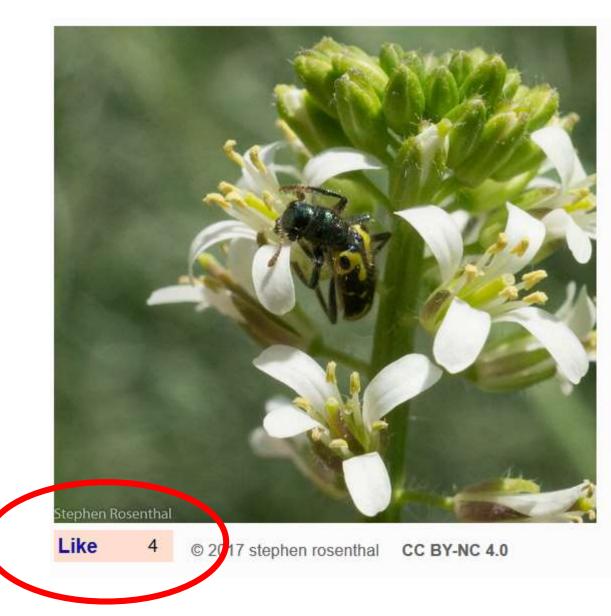
County

	EPA Ecoregion	
7	Climate	
-	Soil	

ription

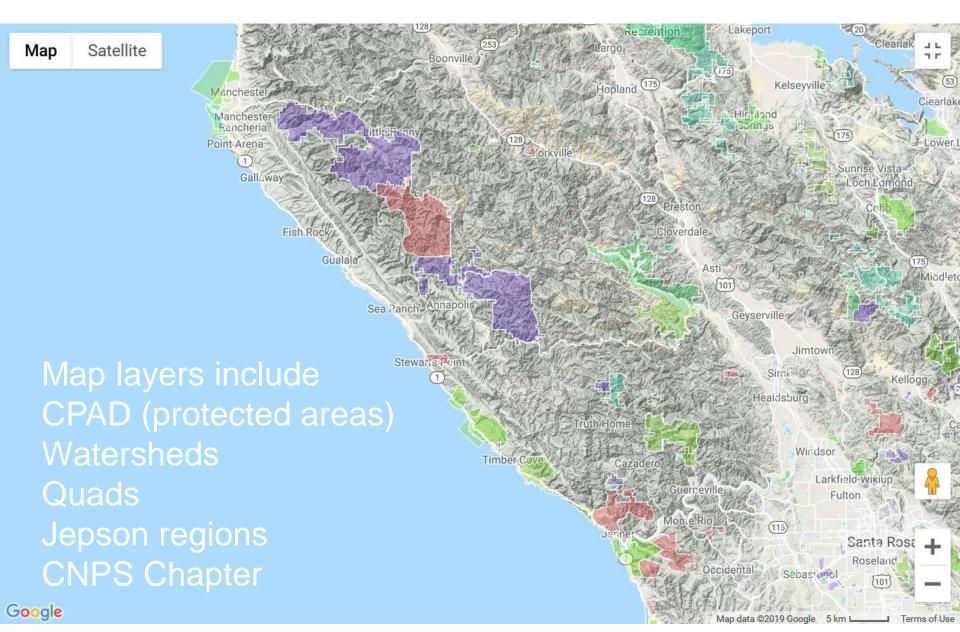


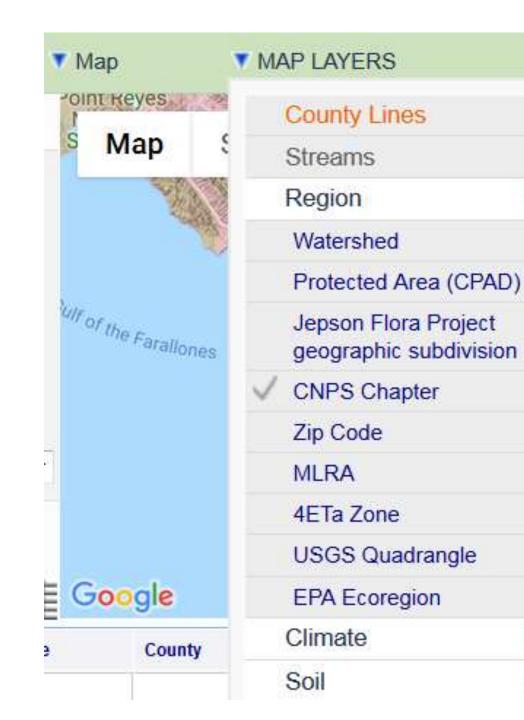
Sign in to "like" photos

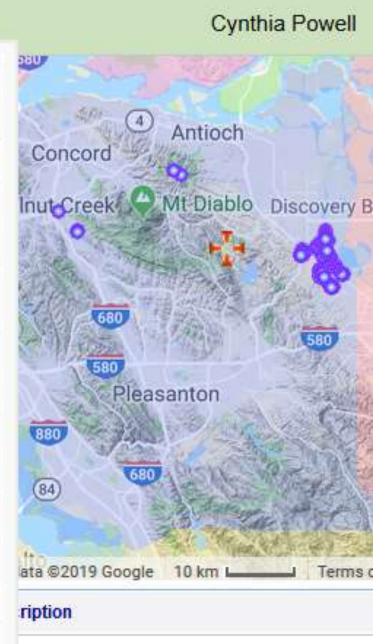


Caulanthus lasiophyllus California mustard

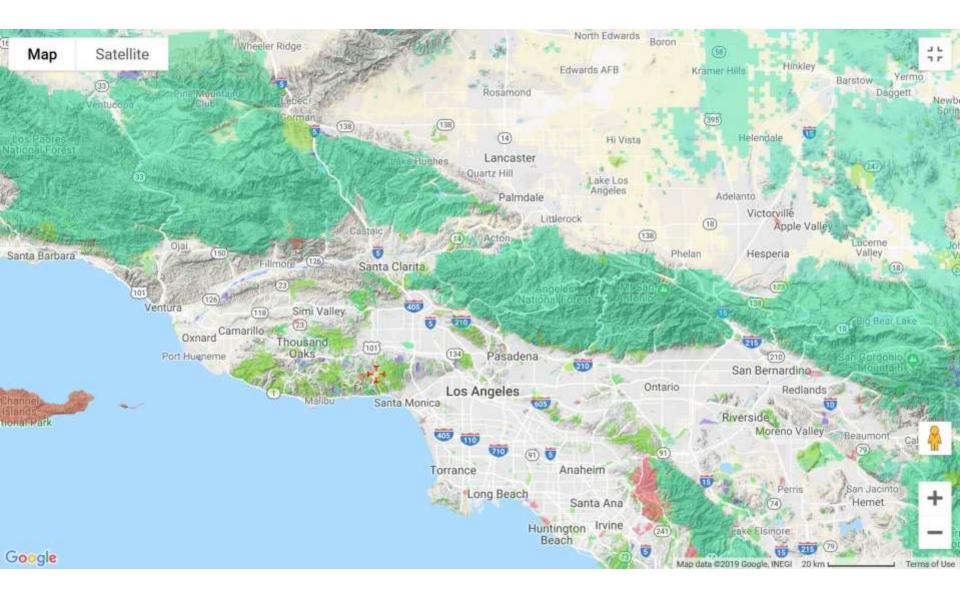
Conduct queries in your area(s) of interest



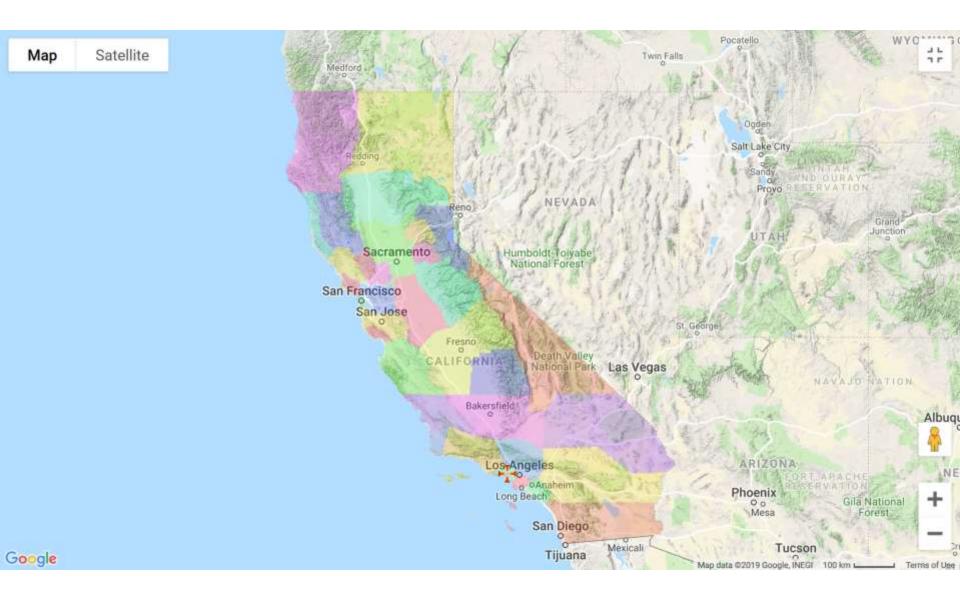




Search Calflora observations by a specific Protected Area



Search Calflora observations by a specific CNPS Chapter



Calflora home page "name wizard" type ahead for sci names

Calflora	information on wild California plants
	Search for Plants
My Calflora	SEARCH CLEAR HELP Scientific A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
My Observations	Family A B C D E F G H I J K L M N O P O R S T U V W X Y Z
Add Observations	plant name
Phone Applications	Enter part of a name: Common Scientific or Family
Donate	poppy Papaver POACEAE Amador duration Annual Iifeform Grasslike Tree Colusa
About Calflora	Contra Costa
	Perennial Herb Fern Del Norte Biennial Shrub Vine El Dorado
NEWS	Biennial Shrub Vine Fresno Glenn
Observation Hotline	status Native to California CNPS rare plants Humboldt
What Grows Here?	Not native to California Affinity to serpentine soil
Great Places	Cal-IPC invasive plants Kern Kings Lake
Planting Guide	community any category Monocot Bryophyte Lassen
NRCS eVegGuide	Alpine Fell-fields Dicot Lichen Madera
	Bristle-cone Pine Forest Gymnosperm Algae Marin Chaparral Dtraidenbute Michael Argae
Weed Manager	Closed-cone Pine Forest Mendocino
Privacy	result format Photos
	elevation below meters above meters blooms during any month



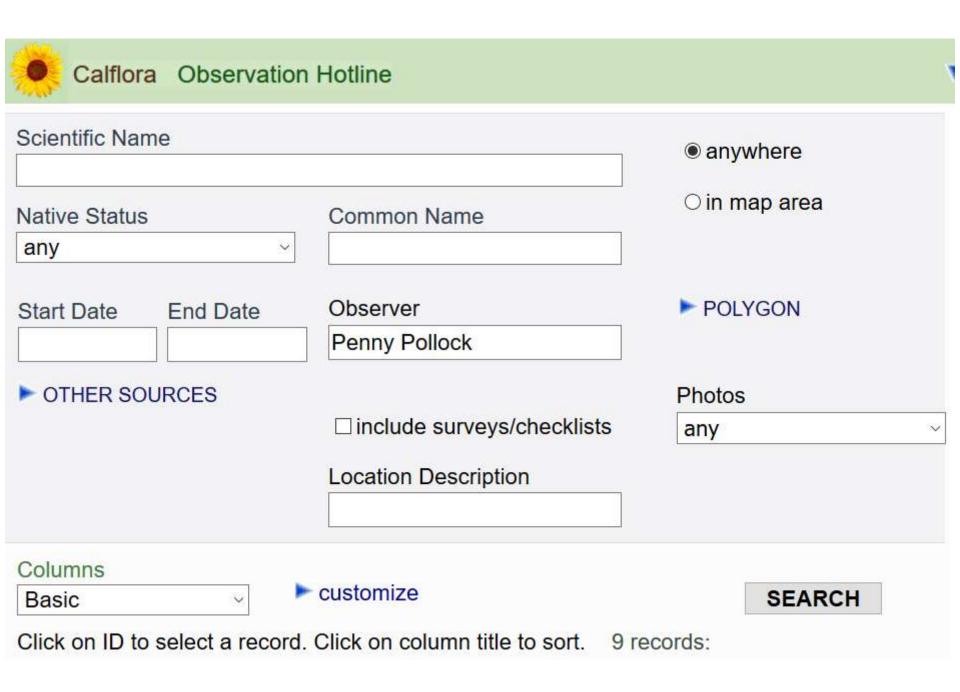
Calflora basics Observation Hotline What Grows Here Create an Illustrated Plant List Planting Guide Collecting data using a smart phone



information on wild California plants

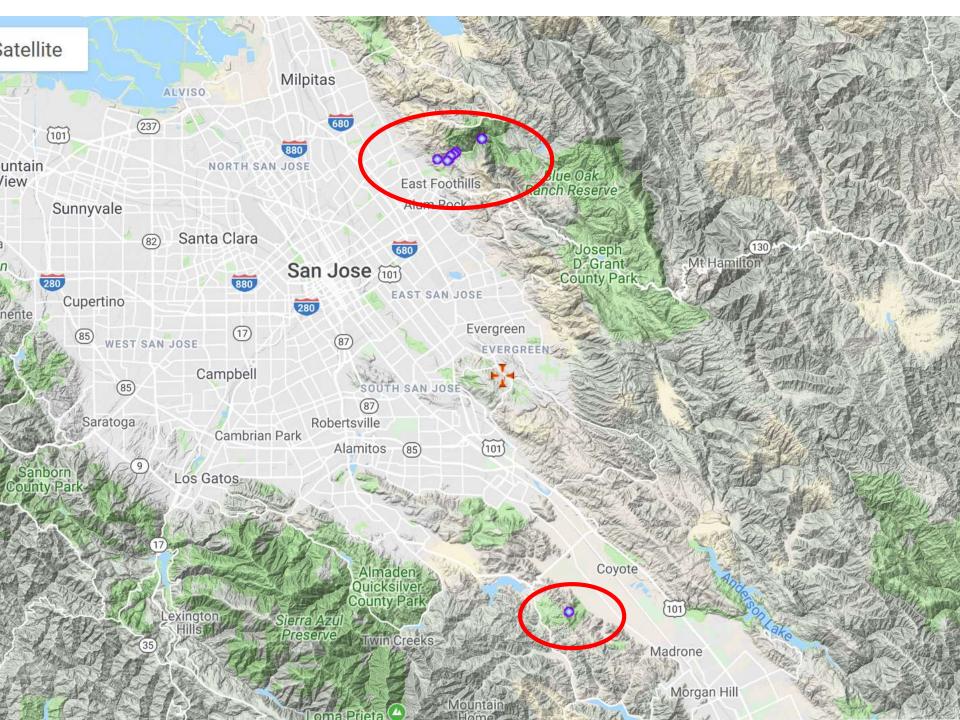
Search for P	lants	Com		GHI
My Calflora	CLEAR HELP	Scien		GНI
My Observations	OLDAR HEL	Famil	Y ABCDEF	GНI
Add Observations plant name			NAME WIZARD	0
Phone Applications	Enter part of a name: Common Scientific or Family			
Donate	poppy Papaver POACEAE			
duration	Annual lifef	orm	Grasslike	Т
About Calflora	Perennial		Herb	🔲 F
NEWS	Biennial		Shrub Shrub	🗖 v
Observation Hotline status	Native to California			
What Grows Here?	Not native to California			
Great Places	Cal-IPC invasive plants			
Planting Guide community	any categ	jory	Monocot	[
	Alkali Sink Alpine Fell-fields		Dicot	[
NRCS eVegGuide	Bristle-cone Pine Forest		Gymnosperm	[
Weed Manager	Closed-cone Pine Forest		Pteridophyte	[
Privacy result format	Photos		Order by scientifi	ic nam
elevation	below meters above meters			

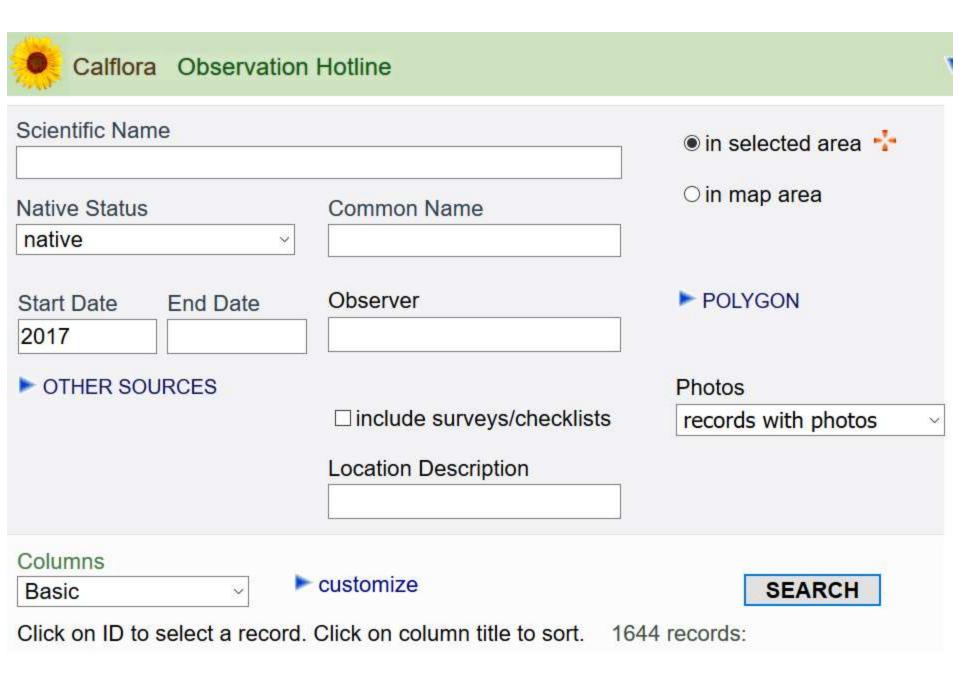
Calflora Observation Hotline		TOOLS
Scientific Name Status (native or not)	Common Name	 in selected area in map area
Start Date	Observer	► POLYGON
OTHER SOURCES	☐ include surveys/checklists	Photos any ~
	Location Description	
Columns custom	customize	SEARCH
Click on ID to select a record. C	lick on column title to sort.	Showing the first 3000 records.

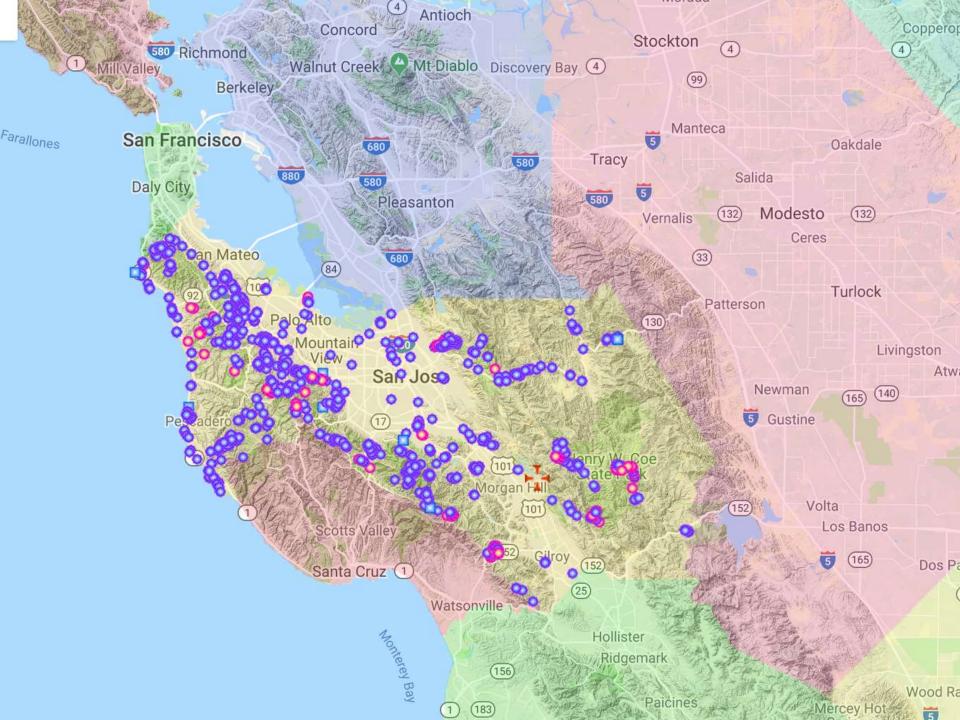


Penny has 9 observations in Calflora; here are the first 3 in table view

Plant	Photo	Observer	Source	Date	County	Location Description
Symphoricarpos albus Common snowberry		Penny Pollock		2017-08-12	Santa Clara	Upper end of Creek Trail, beginning of South Rim Switchback trail
Clinopodium douglasii Yerba buena		Penny Pollock		2017-06-16	Santa Clara	Along Maintenance road about 1/3 of way from Alum Rock Ave to Inspiration Point.
Achyrachaena mollis Blow wives		Penny Pollock	California Native Plant Society	2017-05-10	Santa Clara	Coyote Valley Open Space Preserve









Observation Hotline

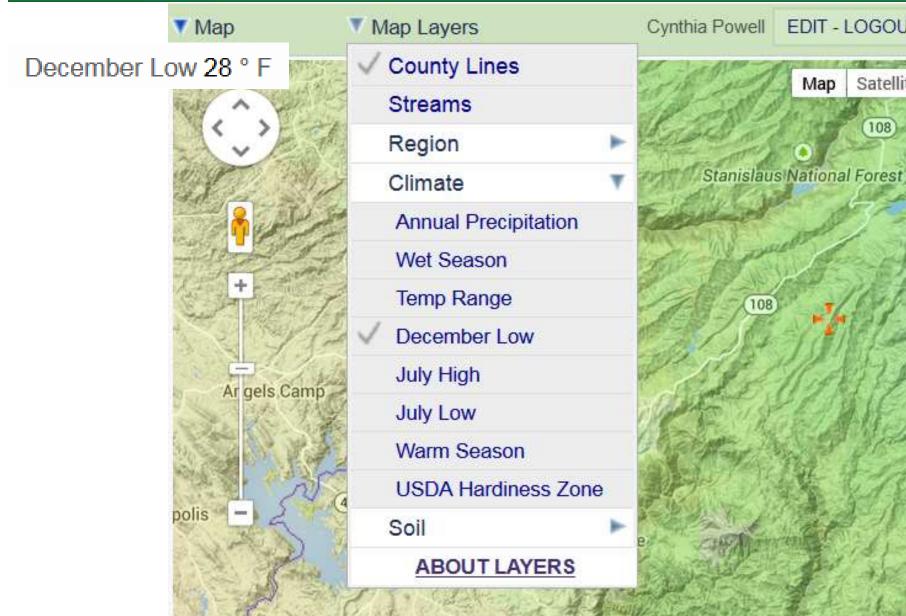
EDIT - LOGOUT

Satellite

108

Map

108





information on wild California plants

	Search for Pl	ants			Con	nmon A B C D E F	GHI
/ly Calflora	SEARCH	CLEAR HELP			Scie	entific ABCDEF	GHI
ly Observations					Fam	nily ABCDEF	GНI
Add Observations	plant name)
hone Applications		Enter part of a name: Common	Scientific	or Family			
Donate		рорру	Papaver	POACEAE			
	duration	Annual			lifeform	Grasslike	Т
About Calflora		Perennial				Herb	F
NEWS		Biennial				Shrub	🔳 v
Observation Hotline	status	Native to California	CNPS ra	re plants			
What Grows Here?		Not native to California	Affinity to	serpentine	soil		
Great Places		Cal-IPC invasive plants					
Planting Guide	community	any		24	category	Monocot	I
landing oulde		Alkali Sink Alpine Fell-fields				Dicot	Ī
NRCS eVegGuide		Bristle-cone Pine Forest				Gymnosperm	[
Veed Manager		Chaparral Closed-cone Pine Forest				Pteridophyte	[
Privacy	result format	Photos 👻	<u>j</u>	less		Order by scientif	fic <mark>na</mark> m
	elevation	below meters	above	meters			



Calflora What Grows Here

Criteria

Low water tolerant

Riparian

□ Shade tolerant

Commercially available

V PLANT FILTER

Status (native or not) any Duration any v Lifeform any V Bloom month any V Two or more photos any \sim

V RESULTS Format photo Order by Scientific Name Group by LIFEFORM Location Quality any V Minimum records / plant 1 record PLANT NAMES Scientific Name Family Plant List -- none --

VAREA

V

V

○ in map area

In selected background

DRAW A POLYGON

SAVED SEARCH POLYGONS

POINTS CLEAR POINTS 0 points **ICON PALETTE** NATIVE Native display Non-native 0 display Plants with Icons APPLY My Palettes

133%

a What Grows H	ere		▼ MAP	► TOOLS		
		SEARCH	S S B C S	5	ອງເປເມຣາ	dus
ter tolerant	► RESULTS	► AREA	Мар	Satellite	itional	Forest
olerant rcially available	► PLANT NAMES	► POINTS	-rancisco		N	ationa
FILTER		▼ LOCATION	San Jose	e 5		Sie
		Edgewood		ALC Z		1.1.5
		Edgewood Creek / uns1527		El Dorado C		resno
		uns1542 / Edgewood Creek	(Stream)	El Dorado C	ounty	•
		Edgewood Park		Marin C	ounty	IFOF
		Edgewood (Town)		Siskiyou C	ounty	
		Edgewood Creek (Stream)		Siskiyou C	ounty	- 11
		Edgewood County Park		San Mateo C	ounty	
		Edgewood Park 1		San Mateo C	ounty	5
		Edgewood Park 2		San Mateo C	ounty	
		Edgewood Park and Natural	Preserve	San Mateo C	ounty	3 Maria
		Edgewood Trail		San Mateo C		p data ©
		Gordon Valley Creek / Ledge	wood Creek (S			
		Ledgewood Creek / uns554		Solano C		
					-	



Calflora What Grows Here

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Criteria

SEARCH

- Low water tolerant
- Riparian
- □ Shade tolerant
- Commercially available

PLANT FILTER

Status (native or not)

native

Duration

any

Lifeform

any

Bloom month

September

Two or more photos

any 🗸

	U L/ ((U))
► RESULTS	► AREA
► PLANT NAMES	► POINTS
	▼ LOCATION
	Edgewood Park and Natural Pr

Corethrogyne filaginifolia Common sandaster

4 records (2 CCH)

native

Perennial herb

ASTERACEAE



2019 Bonnie Nickel



2018 Ron Vanderhoff





2018 Ron Vanderhoff

Corethrogyne leucophylla Branching beach aster

1 record

ative !

Perennial herb

ASTERACEAE



© 2016 Dean Wm. Taylor



Cyperus eragrostis Tall cyperus

4 records (1 CCH)

native

Perennial grasslike herb

CYPERACEAE



2017 Gary McDonald



2017 Gary McDonald





2012 Neal Kramer



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590 PLANTS

Click on record count to display points.

Achyrachaena mollis Blow wives

8 records (7 CCH)

native

Annual herb

ASTERACEAE



2004 Keir Morse



2004 Carol W. Witham





2018 Gary McDonald

Acmispon americanus American bird's foot trefoil

4 records (2 CCH)

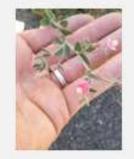
native

Annual herb

FABACEAE



2016 Jim Moore



2013 Arcangelo Wessells



2018 H Bolling



Acmispon americanus var. americanus Spanish lotus

3 records (3 CCH)

native

Annual herb

FABACEAE



2009 Neal Kramer



2017 David Wolfson





2009 Keir Morse



Plants found near 37.46606, -122.28243 San Mateo County

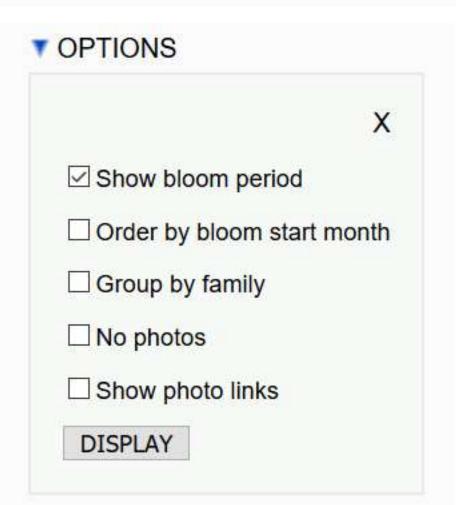
Criteria: native Location 'Edgewood Park and Natural Preserve'



37.46606, -122.28243

What Grows Here?





506 PLANTS

Abutilon palmeri	Palmer's abutilon	native	Perennial herb	MALVACEAE
Acacia baileyana	Cootamundra wattle	 invasive non-native 	Tree, Shrub	FABACEAE
Acacia cultriformis	Knife acacia	non-native	Tree	FABACEAE
Acer macrophyllum	Bigleaf maple	native	Tree	SAPINDACEAE
Acer negundo	Boxelder	native	Tree	SAPINDACEAE
Achillea millefolium	Yarrow	native	Perennial herb	ASTERACEAE
Achyrachaena mollis	Blow wives	native	Annual herb	ASTERACEAE
Acmispon glaber	Deerweed	native	Perennial herb	FABACEAE
Acmispon glaber var. glaber	Deerweed	native	Perennial herb	FABACEAE
Acmispon maritimus	Coastal lotus	native	Annual herb	FABACEAE
Acmispon maritimus var. maritimus	Coastal lotus	native	Annual herb	FABACEAE
Acmispon strigosus	Strigose lotus	native	Annual herb	FABACEAE
Acourtia microcephala	Sacapellote	native	Perennial herb	ASTERACEAE
Adenostoma fasciculatum	Chamise	native	Tree, Shrub	ROSACEAE



97 PLANTS

Alnus rhombifolia White alder

native Tree

BETULACEAE



2014 Garth Wadsworth



2014 Zoya Akulova



2008 Zoya Akulova



Ambrosia psilostachya Ragweed, Western ragweed

native Perennial herb

ASTERACEAE



2014 Richard Spellenberg



2011 Aaron Arthur



2011 Aaron Arthur

...and all 97 species on the list



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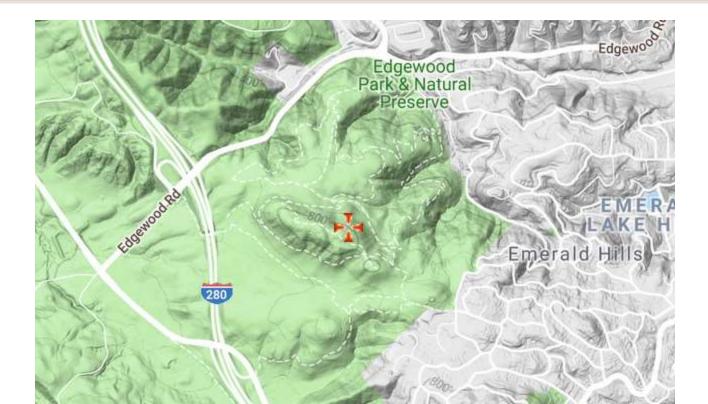
information on wild California plants

	Search for Plants		Cor	mmon A B C D E F C	GHI
ly Calflora	SEARCH CLEAR	HELP	Scie	entific ABCDEFC	GНI
ly Observations	OLLAN	HEL	Fan	mily ABCDEFO	зні
dd Observations	plant name			▲ NAME WIZARD	
hone Applications	Enter part of a n		or Family		
Donate		poppy Papaver	POACEAE		
	duration 📃 Annual		lifeform	Grasslike	Пт
bout Calflora	Perennial			Herb	🔲 F
IEWS	🔲 Biennial			Shrub	🔳 v
bservation Hotline	status 🔲 Native to Ca	lifornia 📃 CNPS ra	are plants		
Vhat Grows Here?	Not native to	California 📃 Affinity t	o serpentine soil		
Breat Places	Cal-IPC inva	isive plants			
lanting Guide	community any		category	Monocot	I
landing Oulde	Alkali Sink Alpine Fell-fields			Dicot	Ī
IRCS eVegGuide	Bristle-cone Pine			Gymnosperm	[
Veed Manager	Chaparral Closed-cone Pin	e Forest 👻		Pteridophyte	[
rivacy	result format Photos		less	Order by scientific	c <mark>na</mark> m
	elevation below	meters above	meters		



Calflora PLANTING GUIDE

T More Criteria	⊡ low water	□riparian □shade	
Check for wild plants:		✓ use soil factors to choose plants	
☑ in the same cou	unty	☑ omit plants at the edge of their tolerances	5
✓ within 10 miles ✓ easy to establish			
Plants that grow with:			
Scientific Name		Common Name	



The Planting Guide algorithm includes 1. soil

- 2. climate
- 3. plant observations for that area

County	San Mateo		
Elevation	600 ft	183 m	
Precipitation	25 inches	64 cm	
Wet Season	6 months		
Temp Range	44 ° F	24 ° C	
December Low	42 ° F	6 ° C	
July High	84 ° F	29 ° C	
Accumulated Temperature	184 ° F	84 ° C	
Growing Season	8 months		
Hardiness Zone	10a		
SOIL <u>pH</u>	6.3		
<u>Salinity</u>	0 (non-saline)		
Min Depth	26 inches	66 cm	
Texture	Slightly decomposed plant material		
CaCO3	0 % (none)		
Soil Map Unit 274	7733 (CA Soil Re	source Lab)	

Emmenanthe penduliflora *Whispering bells*

Annual herb



2005 James M. Andre



2018 Ron Vanderhoff



2019 Aaron Echols



D

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Lupinus concinnus Bajada lupine

Annual herb



2016 Ron Vanderhoff



2017 Aaron Echols



2017 B.J. Dion

Mentzelia albicaulis

White stemmed blazing star

Annual herb





2016 Richard Spjut



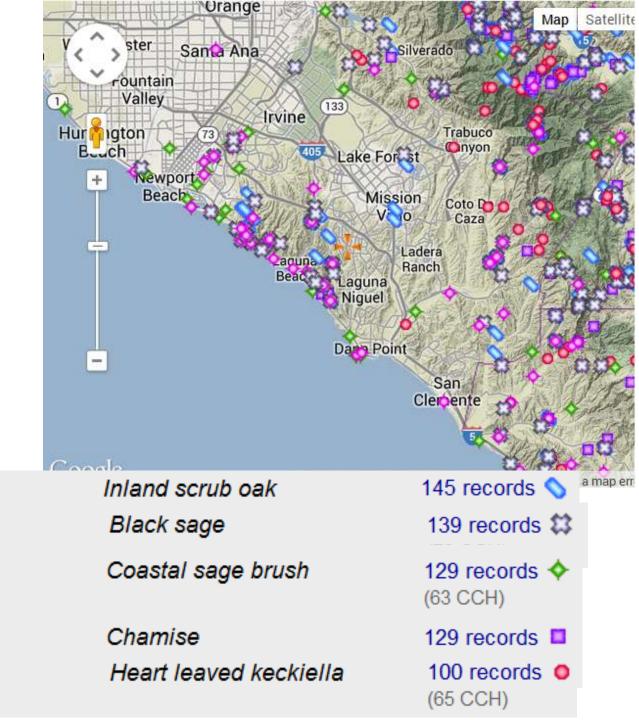


Map-making in Calflora

Quercus berberidifolia Salvia mellifera

Artemisia californica

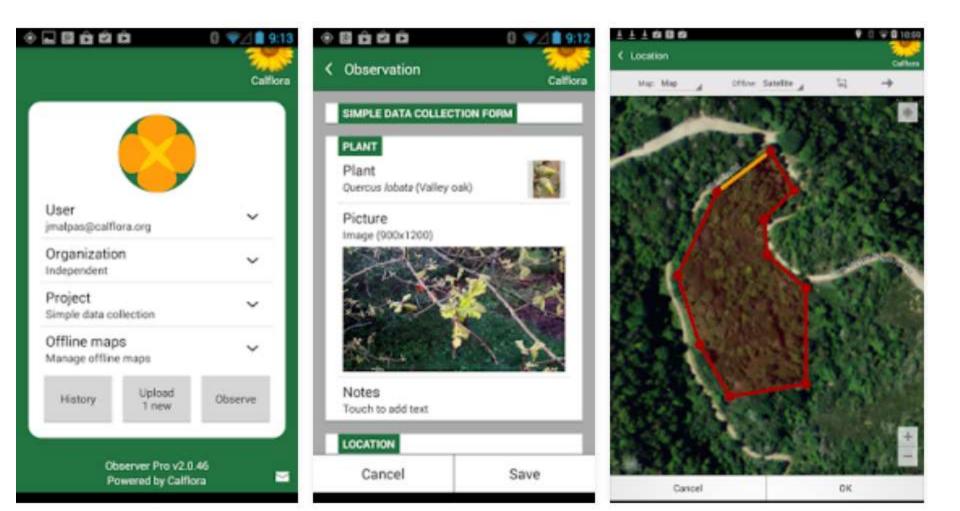
Adenostoma fasciculatum Keckiella cordifolia



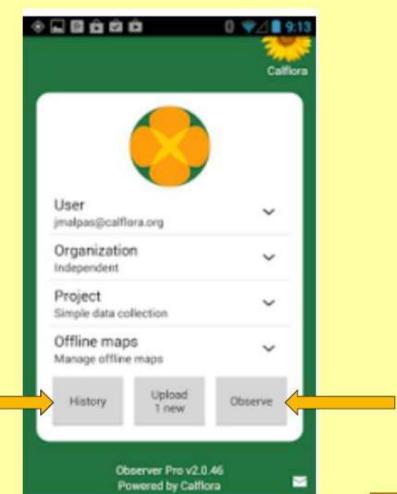


Calflora basics Observation Hotline What Grows Here Create an Illustrated Plant List Planting Guide Collecting data using a smart phone

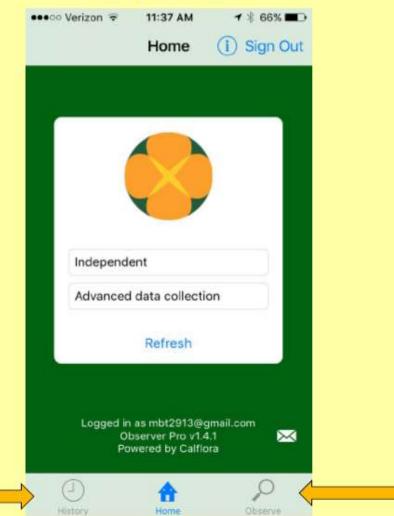
Observer Pro is free available on android and iOS



Android

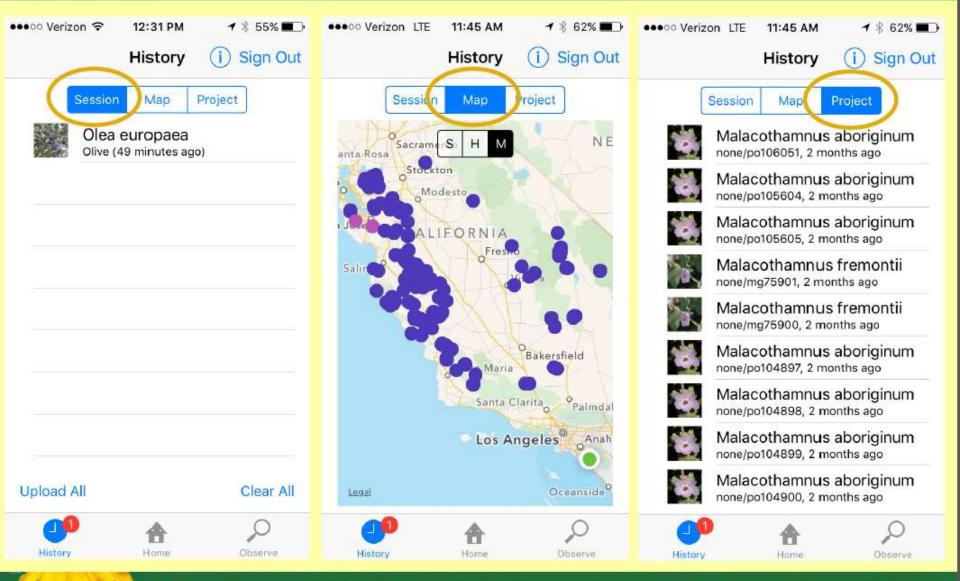


iPhone



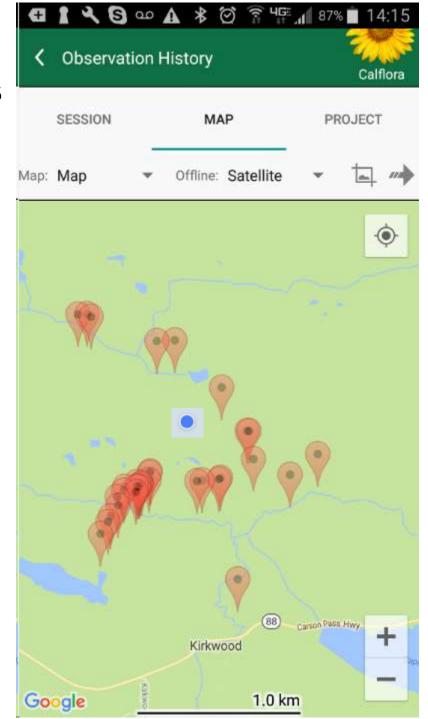
History Tab

Calflora

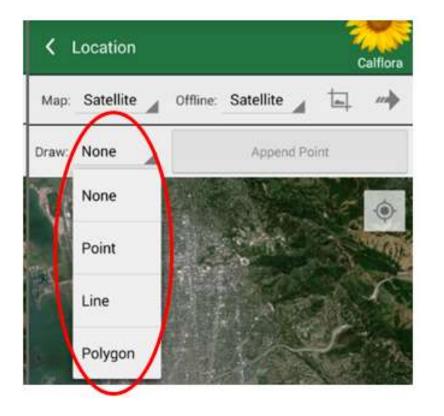


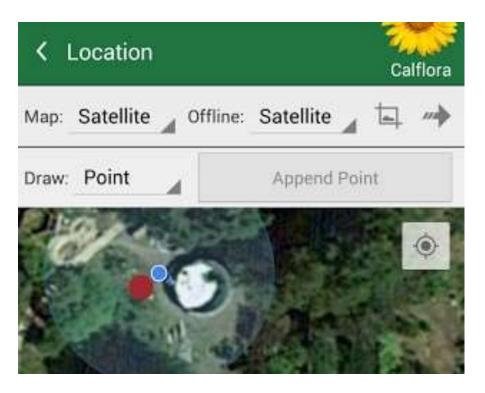
information on wild California plants for conservation, education, and appreciation

Travel to your project observations based on your blue GPS point

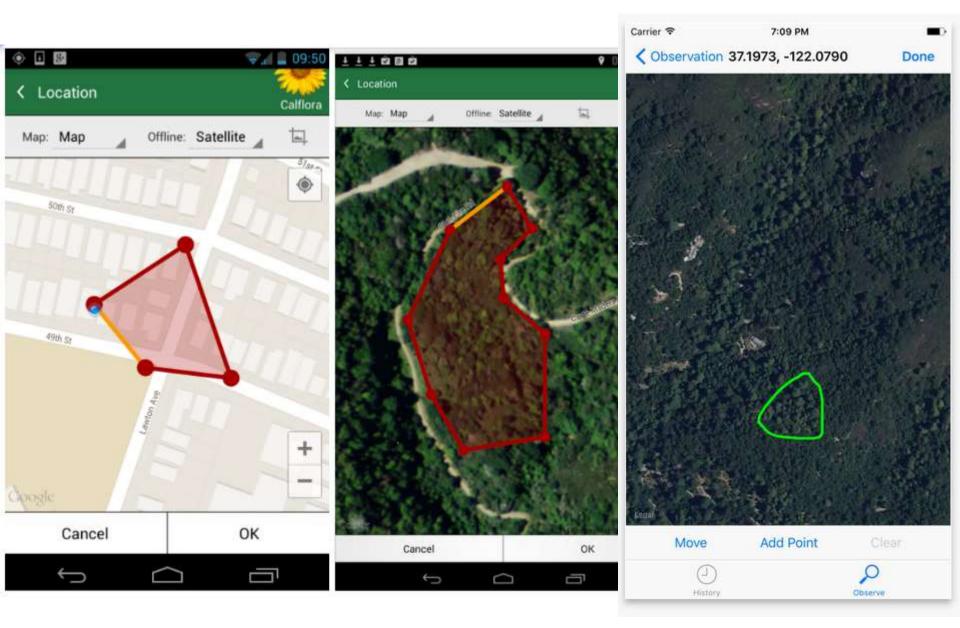




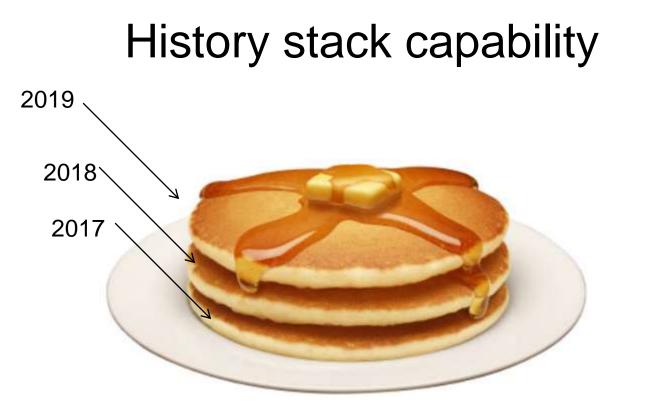




Drawing polygons: android vs. iOS







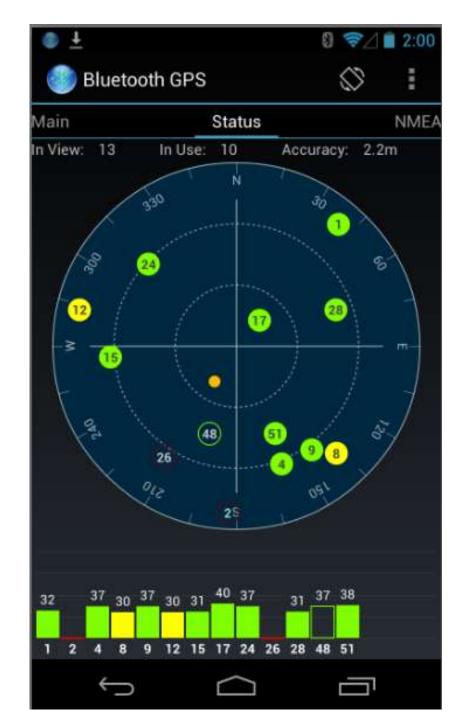
On phone app and website



- Observer Pro phone app:
- Don't need data plan at all
- Don't need wifi in the field
- Do need wifi before you go in the field and after to login and (later) upload observations

Coming back the following year for a new assessment of the same patch

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<	Observatio	n History		Calflora
	SESSION	МАР	PROJ	IECT
	Pinus co Lodgepole mg7452, 3			a
	Calocedi	rus decurrens ^{edar}	1	۵
	Project ob	oservation		
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Satellites and Accuracy

Dual XGPS150A

Universal Bluetooth® GPS receiver for portable devices

Bad Elf



Garmin GLO Bluetooth GPS for iOS and Android



GNS 2000 GPS MFI GLONASS RECEIVER



Thank you!



If you're planning on collecting data in the field using Observer Pro, you need to have the app already downloaded and be logged in with your Calflora email and password BEFORE you get there.