

There's a certain magic
in native bulbs



Welcome

- About UCCE Master Gardeners
- MG Hosts / Refreshments
- University of California Books
- Evaluation form
- Restrooms / Emergency exits

University of California
Agriculture and Natural Resources
California Master Gardener
Cooperative Extension
El Dorado County



Handout and PDF Location

2017

El Dorado County Public Education Handout

University of California
Agriculture and Natural Resources
UCCE Master Gardener Program



Seasonal Color with California Bulbs

NOTE: A PDF of this presentation, and a copy of this handout (for live internet links), are located at:

http://mgeldorado.ucanr.edu/Public_Education_Classes/Handouts_-_Presentations/

Yes, the end of that link is *Handouts Underscore Dash Underscore Presentations Slash*

http://mgeldorado.ucanr.edu/Public_Education_Classes/Handouts_-_Presentations/

Seasonal Color with California Bulbs

The persistent gardener's quest



Topics

- **Bulbs, Corms, Tubers, and Rhizomes**
Types of perennial monocots we call bulbs
- **Plants in Nature**
What makes a plant native, and why it matters
- **What to Grow**
Bulbs that will likely be successful, and their culture
- **Where to Find Plants**

Geophytes

geophyte

(jē'ə-fīt')

A perennial plant with an underground food storage organ, such as a bulb, tuber, corm, or rhizome. The parts of the plant that grow above ground die away during adverse conditions, as in winter or during the dry season, and grow again from buds that are on or within the underground portion when conditions improve.

Underground, we're talking about bulbs, corms, tubers, and rhizomes



Bulb



Corm



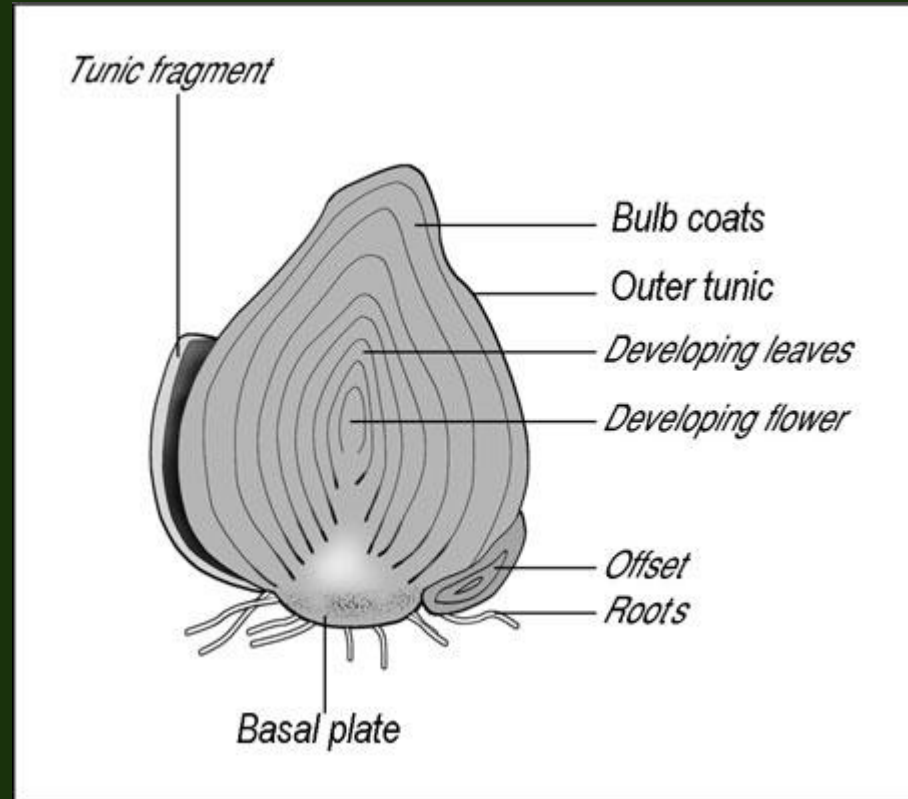
Tuberous root



Rhizome

True Bulbs

- Basic structure is modified *leaves*
- Papery skin or tunic, leaf scales with new shoots in the center

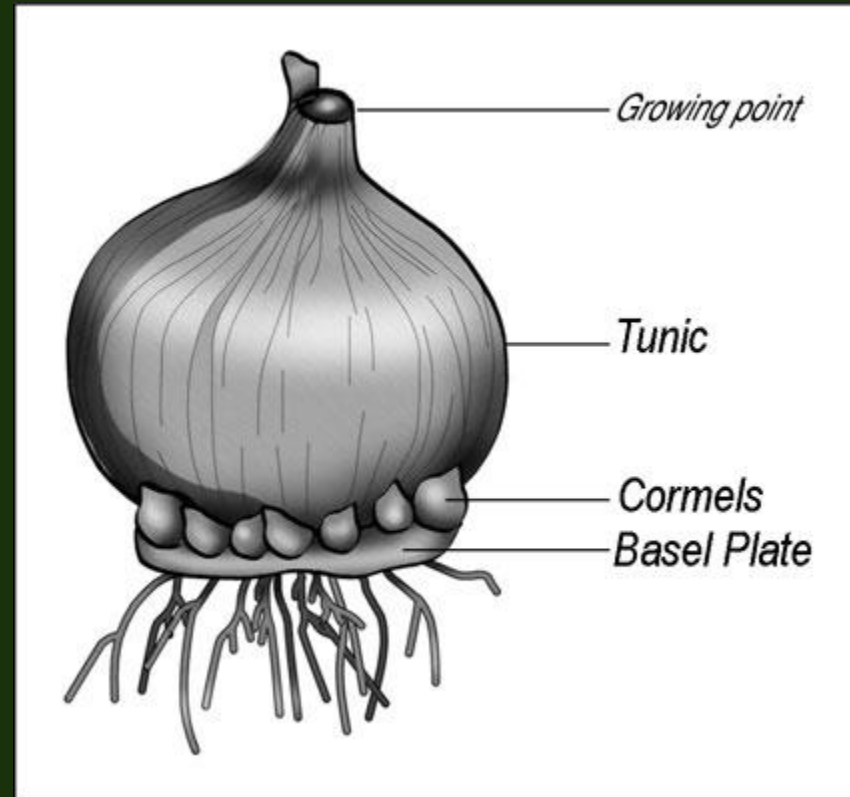


Examples: Alliums, Lily, Tulips

- After flowering, leaves produce energy which is stored in the bulb; leaves die back; bulb persists
- Vegetative reproduction by bulb offshoots

Corms

- Basic structure is modified *stem*
- Mass of storage tissue (not layers or ringed)
- Single growing point
- Each year, new corm or corms grow on top of old



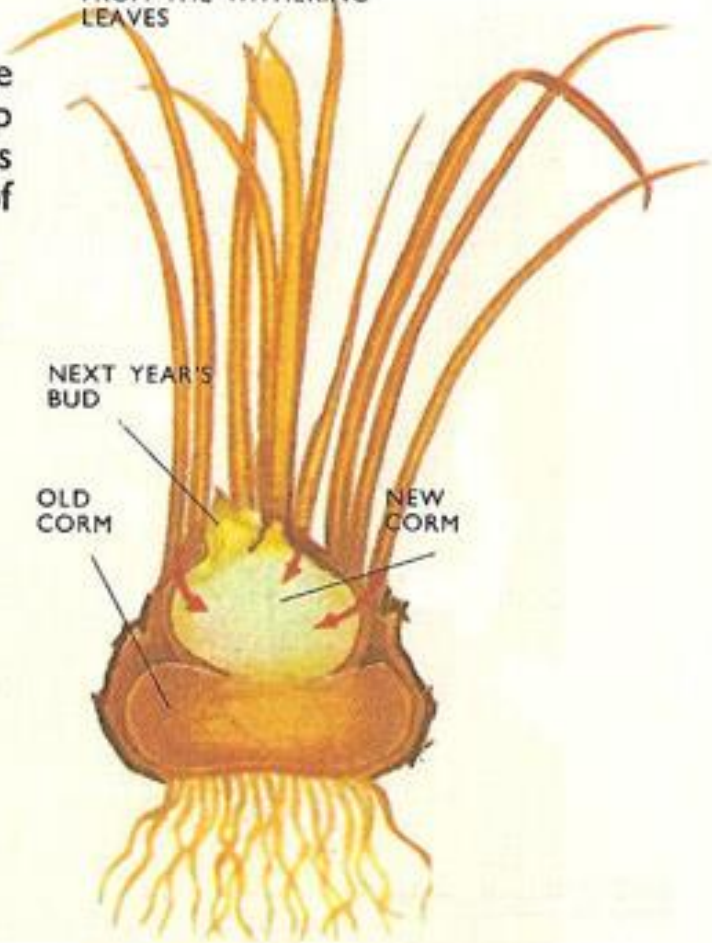
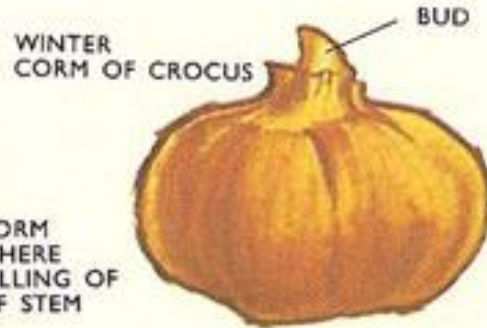
Examples: Gladiolus,
Crocus, Crocosmia,
Freesia

CA natives: Brodiaea,
Dichelostemma

IN SPRING THE FOOD PASSES INTO THE LEAVES

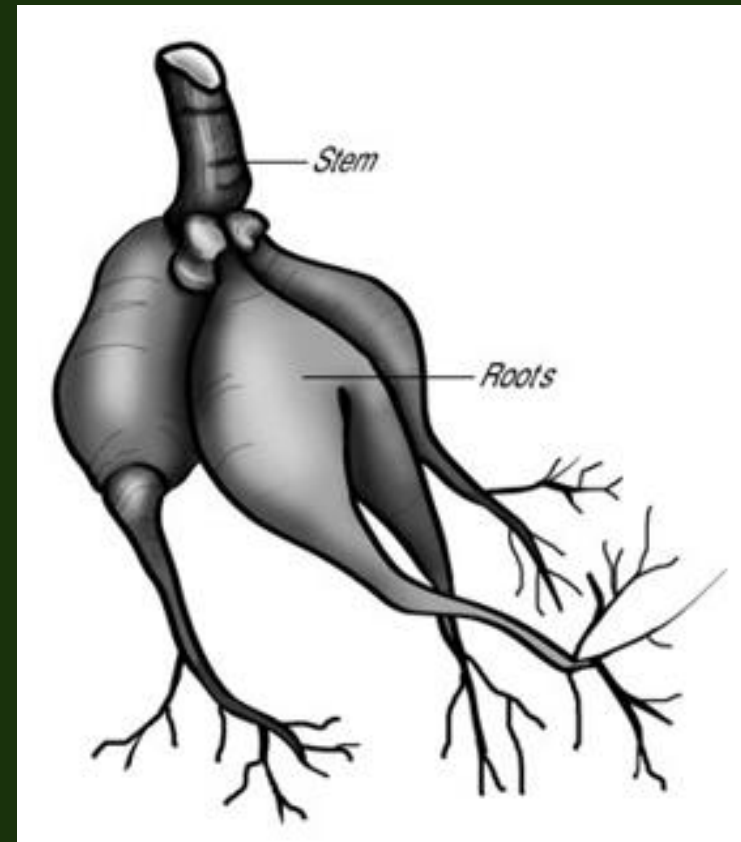
AFTER FLOWERING THE NEW CORM SWELLS AS FOOD IS PASSED INTO IT FROM THE WITHERING LEAVES

A corm stores food in the swollen stem. Buds develop each year from the base of the flower shoot.



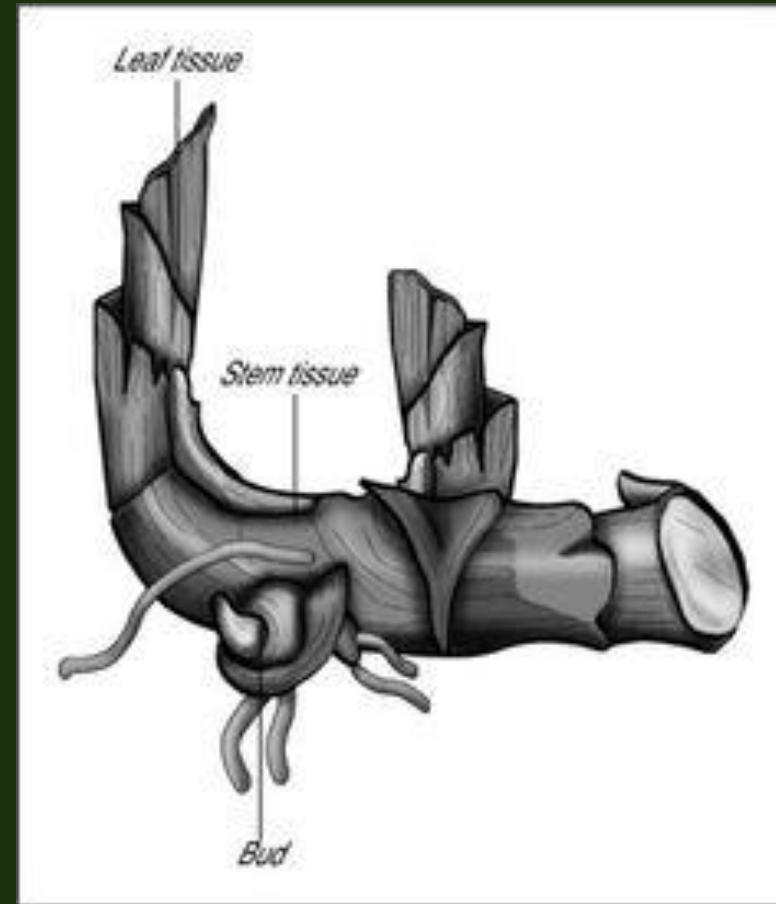
Tubers

- Basic structure is modified *root*
- So there's no rooting basal plate
- Multiple growing points



Rhizomes

- Basic structure is modified *stem*
- Grows sideways at surface of the soil or just below
- Growth is branching; each new portion develops roots and a shoot of its own.



Familiar rhizomes include Bearded Iris, Lily-of-the-valley, Canna, Peony, and Ginger

Perennial plants evolved these storage structures for plant survival



Survive long periods of:

- cold
- drought

Two means of reproduction:

- seeds
- vegetative

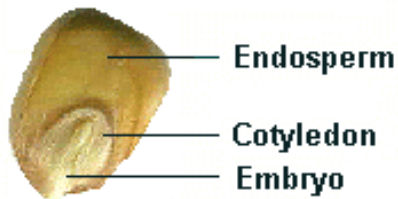
Monocots and Dicots

Monocotyledons and Dicotyledons

Monocot

Dicot

SEED

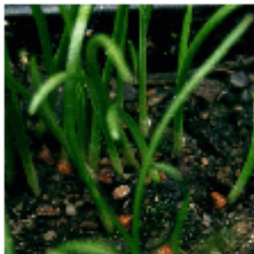


Monocots have only one seed leaf inside the seed coat. It is often only a thin leaf, because the endosperm to feed the new plant is not inside the seed leaf.



Dicots have two seed leaves inside the seed coat. They are usually rounded and fat, because they contain the endosperm to feed the embryo plant.

GERMINATION



Hemeria



Lilium



Gloriosa

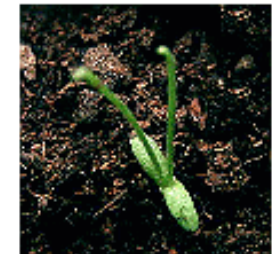
When a monocot seed germinates, it produces a single leaf. It is usually long and narrow, like the adult leaf. Even when it is quite a round shape, there is only one seed leaf in a monocot.



Eryngium



Sanguisorba



Cladanthus

When a dicot germinates, it produces two seedleaves. They contain the food for the new plant, so they are usually fatter than the true leaves. The first true leaves are often a different shape.

LEAVES



Washingtonia



Clivia



Canna



Malva



Rosa



Campanula

The leaves of monocots are often long and narrow, with their veins in straight lines up and down the leaf. Sometimes, the veins run from the centre of the leaf to the edge, parallel to one another.

Leaves of dicots come in many different shapes and sizes. The veins go from the central midrib to the edge of the leaf, crossing and joining to form a netted pattern all over the leaf.

FLOWER



Cyrtanthus



Pleione



Agapanthus



Oenothera



Epilobium



Geranium

The parts of the flower of monocots are in threes. The sepals are often the same colour as the petals, making it look as if the flower has six petals. There are usually the same number of stamens as petals.

The flowers of dicots usually have flower parts in fours or fives. The calyx is a separate ring of sepals under the corolla, and is usually green.

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What
makes
a plant
native?



What
are
endemic
plants?



Arctostaphylos mewukka Indian Manzanita,
an example of endemism

California Floristic Province



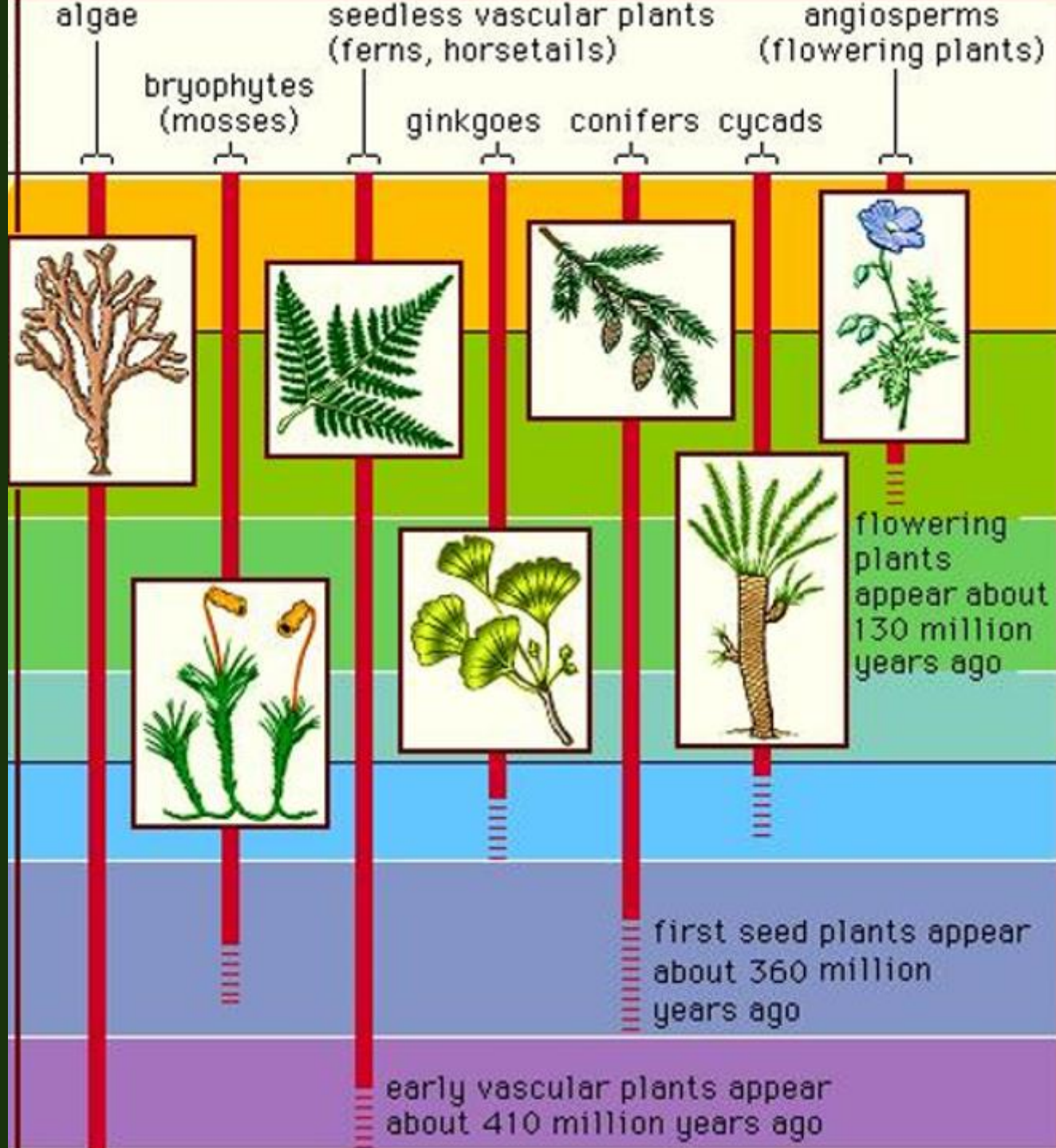
California Floristic Province *Ecological Hotspot*

Criteria:

- Over 1500 species of irreplaceable endemic vascular plants
 - CA has over 2100
- Less than 30% of original vegetation
 - CA has 24%

Plants evolved on varied substrates

They had to cultivate stems, roots, nutrient strategies, storage and reproductive strategies

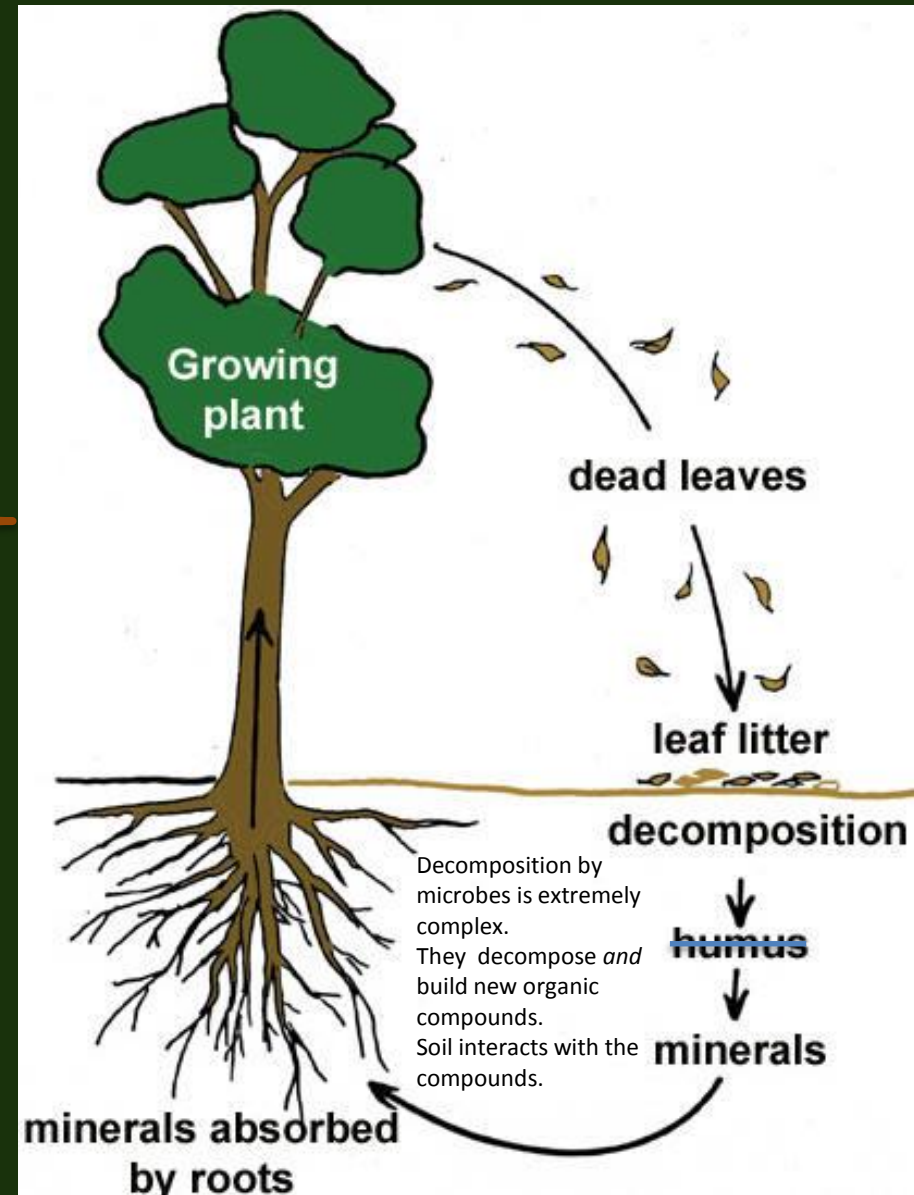


Plants in nature don't use gardeners

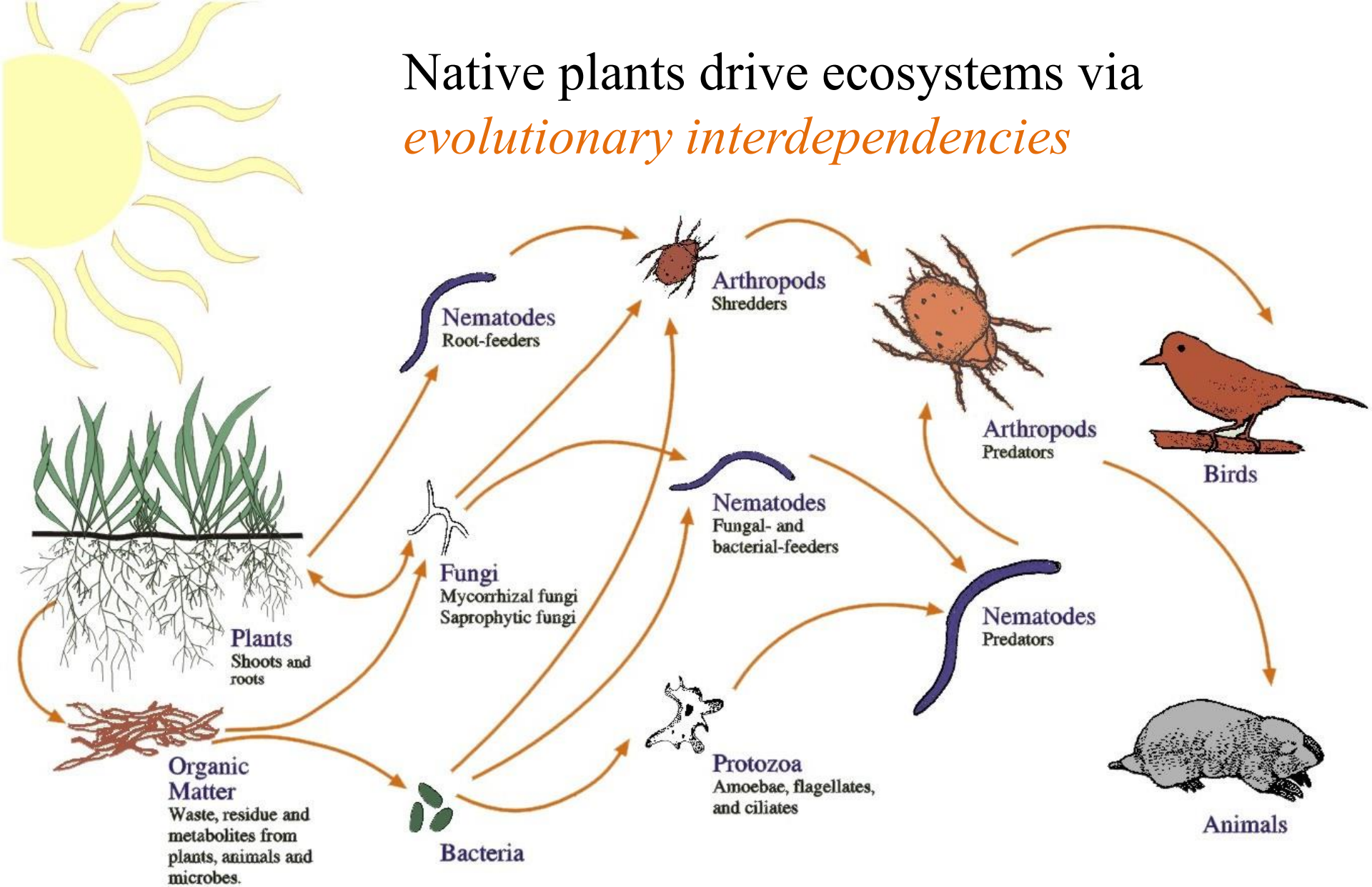
Organic matter:
leaves, stems, animal
manure, dead things...

Soil biota:
decomposers (fungi,
bacteria) and 'soil
animals' (protozoa,
nematodes)

Nutrient exchanges

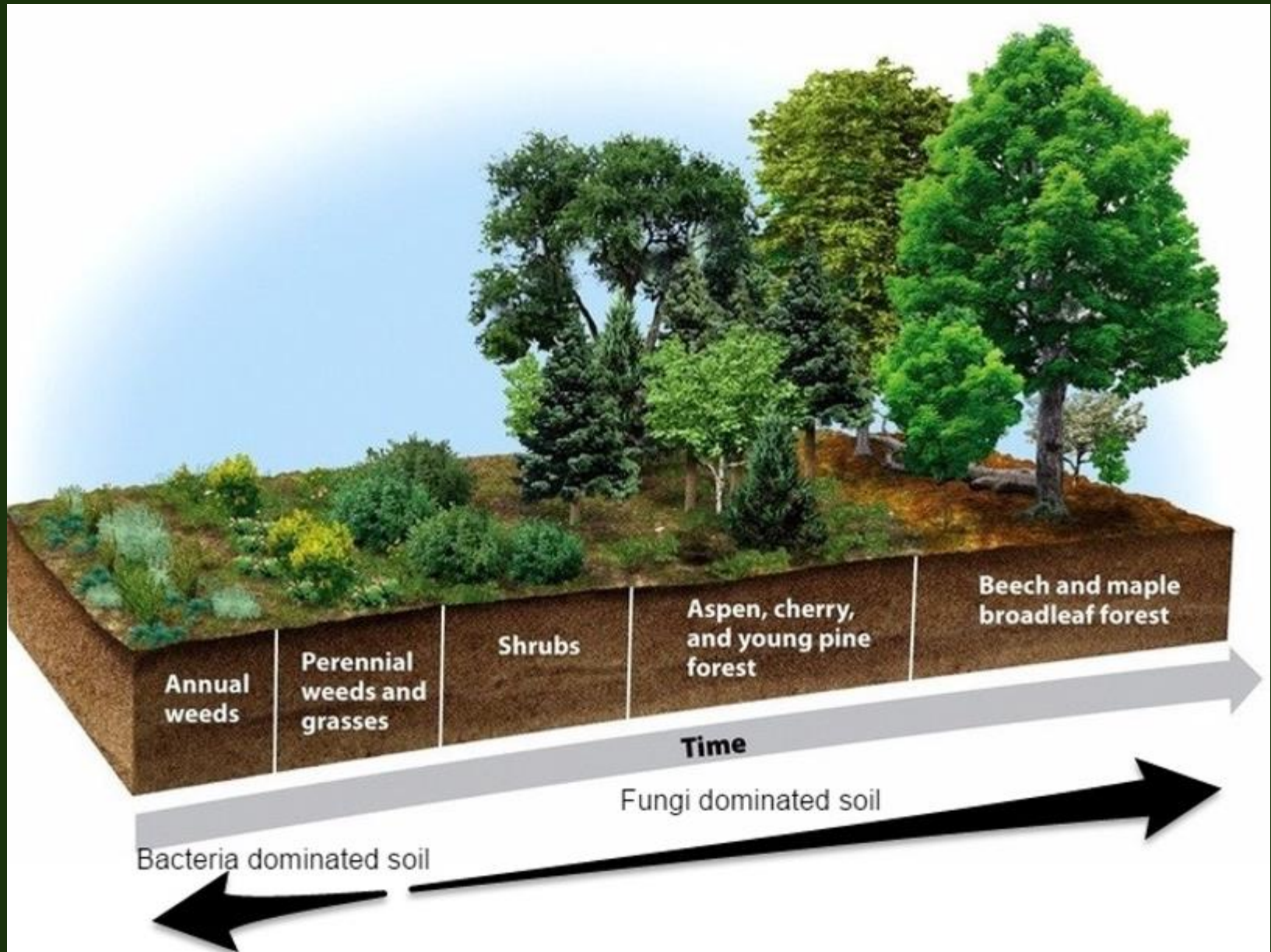


Native plants drive ecosystems via *evolutionary interdependencies*



Each member provides *ecosystem services*

There are multiple nutrition strategies



What does this have to do with bulbs!



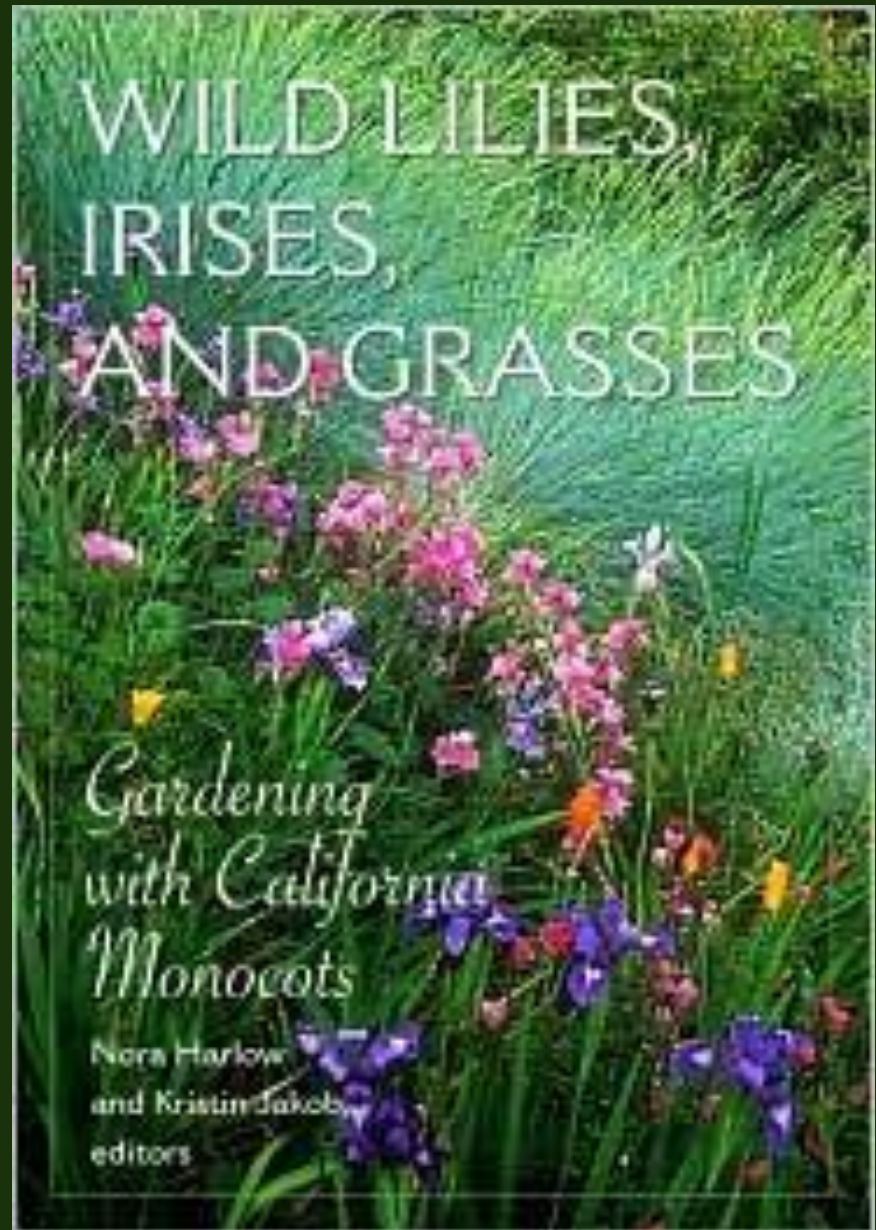
- Elevation? Hours of snow/chill? Sun, seasonal canopy? pH of soil?
- Plants that grow at 8,000 in granite won't grow at 1000' in clay.
- Many that grow on the coast can grow here, but the best varieties are bulbs from your locale.

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We'll look very
selectively at
bulbs that are
native to
California

This book is a
great resource



Nora Harlow and Kristin Jakob

I've chosen ~20 plants that you'll be able to find in other than seed form and can probably successfully grow:

- Allium
- Iris
- Brodiaea,
Dichelostemma,
Triteleia
- Chlorogalum
- Cammasia
- Lilium
- Fritilaria
- Calochortus
- Many others



In general, native bulbs need

- Sun or part sun
- Good drainage
- Native locale-specific soil, not potting soil



Plant in late fall, after first rains

- Plant at correct depth
- In most cases, do not water in summer
- Protect from slugs, rabbits, voles, and other scoundrels



Treat
yourself to
an easy start:

The
Allium
Family
(wild
onions)

- Almost 50 California native varieties to choose from (700 worldwide)
- Long blooming period
- Some will bloom in Dec-Jan and again in spring
- Naturalizes quickly from bulbets or seeds
- Some will double every year
- Flowers attract beneficial insects and birds

Narrow-leaved Onion

Allium amplexans

Native to British Columbia,
Oregon, Washington State
and California, where it
grows in woods and
especially in clay
and serpentine soils

Blooms in late spring / early
summer

Easy to grow, seeds heavily

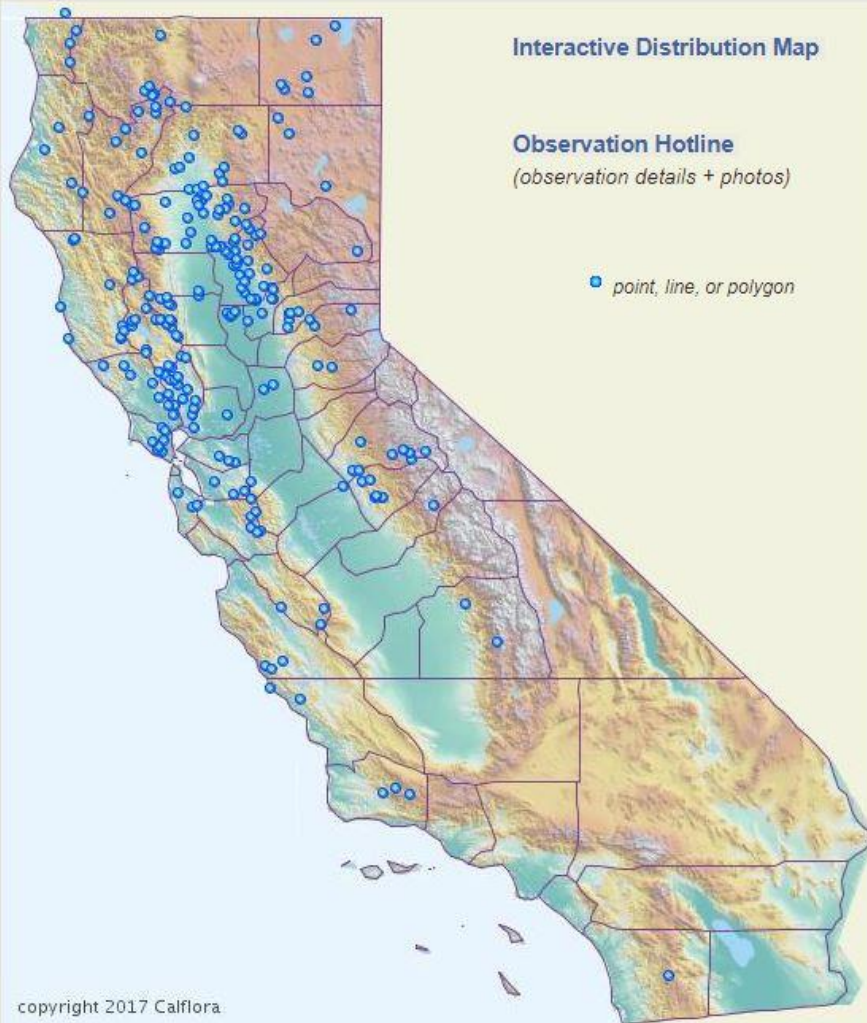




Allium ampletens Torrey

Narrow leaved onion, Narrowleaf onion

Allium ampletens, a monocot, is a **perennial herb (bulb)** that is **native** to California and is endemic (limited) to California.



Plant Characteristics and Associations



Bloom Period



© 2008 Keir Morse



© 2010 Keir Morse

Click on a photo to see it bigger.

CalPhotos



© 2010 Barry Breckling



© 2004 Carol W. Witham

Family: **ALLIACEAE**
(PLANTS: LILIACEAE)

Genus: **Allium**

Communities: Yellow Pine Forest, Foothill Woodland

Habitat: slopes [Walker]

Toxicity: MINOR [California Poison Control System 2010]

AFFINITY to serpentine soil: 2.3 (weak indicator) [Safford et al 2005]

Distribution by County

Add an Observation of *Allium ampletens*

One-leaf or Meadow Onion

Allium unifolium



Plant Family: Amaryllidaceae

Plant Type: Bulb

Height by Width: 2' H

Growth Habit: Clumps of grass-like leaves

Deciduous/Evergreen: Summer dormant

Growth Rate: Fast

Sun Exposure: Full sun to part shade

Soil Preference: Adaptable, prefers clay

Water Requirements: Infrequent to occasional

Cold Hardy to:

Flower Season: Spring/Summer

Flower Color: Pink and white

Endangered?:

Distribution: Northwestern and Central Western CA

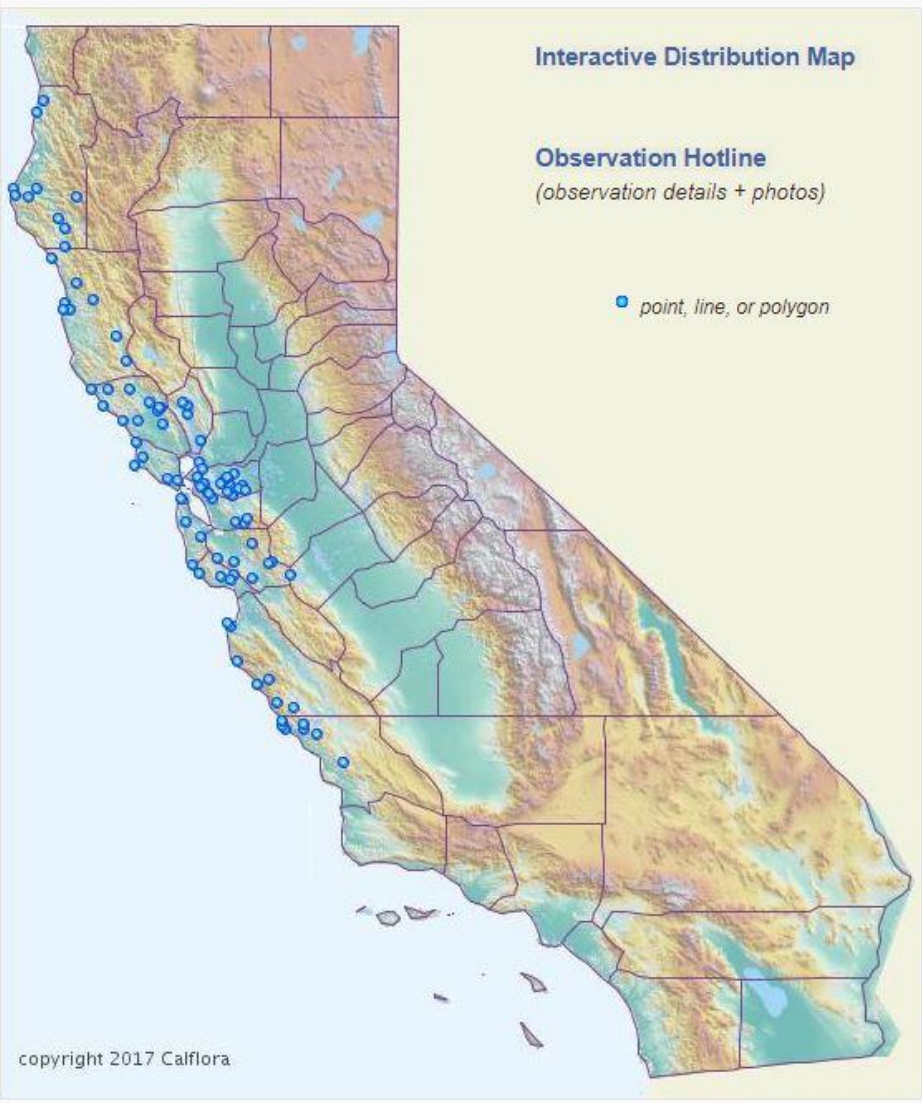
Natural Habitat: Moist clay or serpentine, especially grassy streambanks



http://www.theodorepayne.org/mediawiki/index.php?title=Allium_unifolium

Allium unifolium Kellogg
One leaf onion, Oneleaf onion

Allium unifolium, a monocot, is a **perennial herb (bulb)** that is **native** to California and is endemic (limited) to California.



Plant Characteristics and Associations



© 2011 John W. Wall



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CalPhotos



© 2007 Penny DeWind



© 2007 Neal Kramer

Family: **ALLIACEAE**
(PLANTS: LILIACEAE)

Genus: **Allium**

Communities: Closed-cone Pine Forest, Mixed Evergreen Forest, Chaparral

Toxicity: MINOR [California Poison Control System 2010]

AFFINITY to serpentine soil: 1 (weak indicator / indifferent) [Safford et al 2005]

Distribution by County

Crinkled Onion

Allium crispum

Low to mid-elevation

Sun

Dry summer dormancy

Good drainage

Native to clay and serpentine soils

Blooms in spring

Easy to grow



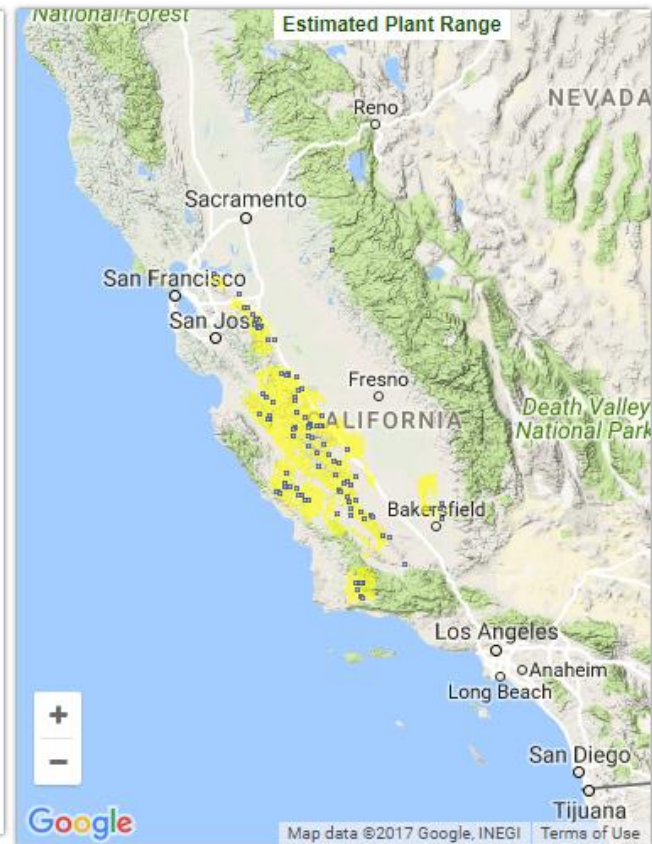
Crinkled Onion

[Add to My Plant List](#)

Allium crispum



© 2007 Stan Shebs



About Calscape Maps

[Detailed Map >](#)

About Crinkled Onion (*Allium crispum*)

Allium crispum is a species of wild onion known by the common name crinkled onion. It is endemic to California, USA, where it grows along the Central Coast, often in clays and serpentine soils. This onion grows from a bulb one to one and a half centimeters wide and sends up naked green stems topped with flower clusters of many flowers, each on a short pedicel. The flowers are magenta in color and have six triangular petals. The inner three petals are smaller and crinkled like cloth and may curl under.



3361 Allium ampletens -- Each: \$ 3.50

This pretty little California native has umbels of pale pink stars. Prefers a dry situation.



3364 Allium abramsii -- Each: \$ 5.00

NEW -- An outstanding Allium with dense clusters of deep purple flowers.



3363 Allium cratericola -- Not available this year

NEW -- One of my favorite native Alliums. Wayne Roderick said they looked like 'pink bon-bons' scattered across the scree.



3362 Allium crenulatum -- Each: \$ 3.00

NEW -- Known as the Olympic Onion, this rare species comes from the Olympic mountains of Washington state. Very pretty.



3365 Allium crispum -- Each: \$ 3.00

NEW -- Open umbels of deep magenta. Small bulbs.



3360 Allium dichlamydeum ---- Each: \$ 3.50/3 for \$ 9.00

Dense umbels of a brilliant pink make this allium one of the showiest. Stems are 6-10". Only hardy to zone 8.



3370 Allium falcifolium --- Each: \$3.50

NEW -- This wonderful small Allium has sickle-shaped leaves and large reddish-purple heads on 2-3" stems. Excellent for rock garden or container. Zone 5-9.



3390 Allium hyalinum --- Each: \$ 2.00 / 4 for \$ 6.00

A rose-pink selection of this pretty Allium, with flowers that look as though they had been varnished. Tolerates wet conditions. Grows 8-12" tall. Zone 7-9. Naturally tiny bulbs.



3380 Allium haematochiton --- Each: \$ 3.00

Dense umbels of white flowers with dark pink mid-veins on 10" stems.



3385 Allium platycaule --- Each: \$ 4.50

A stunning Allium from the Sierra Nevada mountains where it grows in scree at elevations of 6-8000'. The flowers are a brilliant metallic pink.



3400 Allium unifolium ---- Each: \$ 2.00 / 4 for \$6.00

A beautiful native allium that is very adaptable, tolerating both shade and summer water. The bright pink umbels are held on tall 12-24" stems. A superb allium for the garden. Naturally small bulbs.

Many Allium varieties are available

Be persistent in asking nurseries for our local native varieties

This is a plant you might cultivate from seed as well as bulbs

The Iris / Iridaceae Family

Native is California Pacific Iris (beardless), which generally needs

- Dappled shade or morning sun – many are coastal
- Native soil can have some amendment and needs larger grit, but must drain well, and most prefer acidic soil (like forests)
- Moisture needs vary (regular, infrequent, none) but irises are susceptible to fungus

Douglas Iris

Iris douglasiana



A very coastal plant

Many cultivars are available

Requires adequate shade in our inland area



Iris douglasiana Herbert
Douglas iris, Douglas' iris

Iris douglasiana, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



© 2005 Michael W. Tuma

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Plant Characteristics and Associations



Bloom Period



© 2007 Neal Kramer



© 2009 John W. Wall



© 1995 Saint Mary's College of California

Family: **IRIDACEAE**

Genus: **Iris**

Communities: Mixed Evergreen Forest, Coastal Prairie

Toxicity: MINOR, DERMATITIS [California Poison Control System 2010]

Distribution by County

Add an Observation of *Iris douglasiana*

Hartweg's Iris

Iris hartwegii

Our native!

<http://www.laspilitas.com/nature-of-california/plants/354--iris-hartwegii>



Iris hartwegii

Sierra Iris.

Santa Margarita, CA

Size	Quantity	Price
One Gallon	0	\$ 9.99

[View production](#)

The Sierra Iris is a creamy, butter- yellow color with darker yellow along the center of the petals and on the inner portion of the petals. Flowers can sometimes be purple! It spreads slowly through underground rhizomes forming an attractive green clump of shiny green leaves. The Sierra Iris is native to the Sierra Nevada range, from 2000-6000 foot. It can be found growing in heavy moist shade, in thick duff under firs and pines, and in sunny, moist meadow areas. Sierra Iris goes deciduous during the winter. Sierra Iris grows best in higher elevation gardens, where it can go dormant in the colder winters and grow through cooler summers.





Iris hartwegii Baker
Hartweg's iris, Rainbow iris

Iris hartwegii, a monocot, is a **perennial herb** that is **native** to California and is endemic (limited) to California.



© 2013 Barry Rice

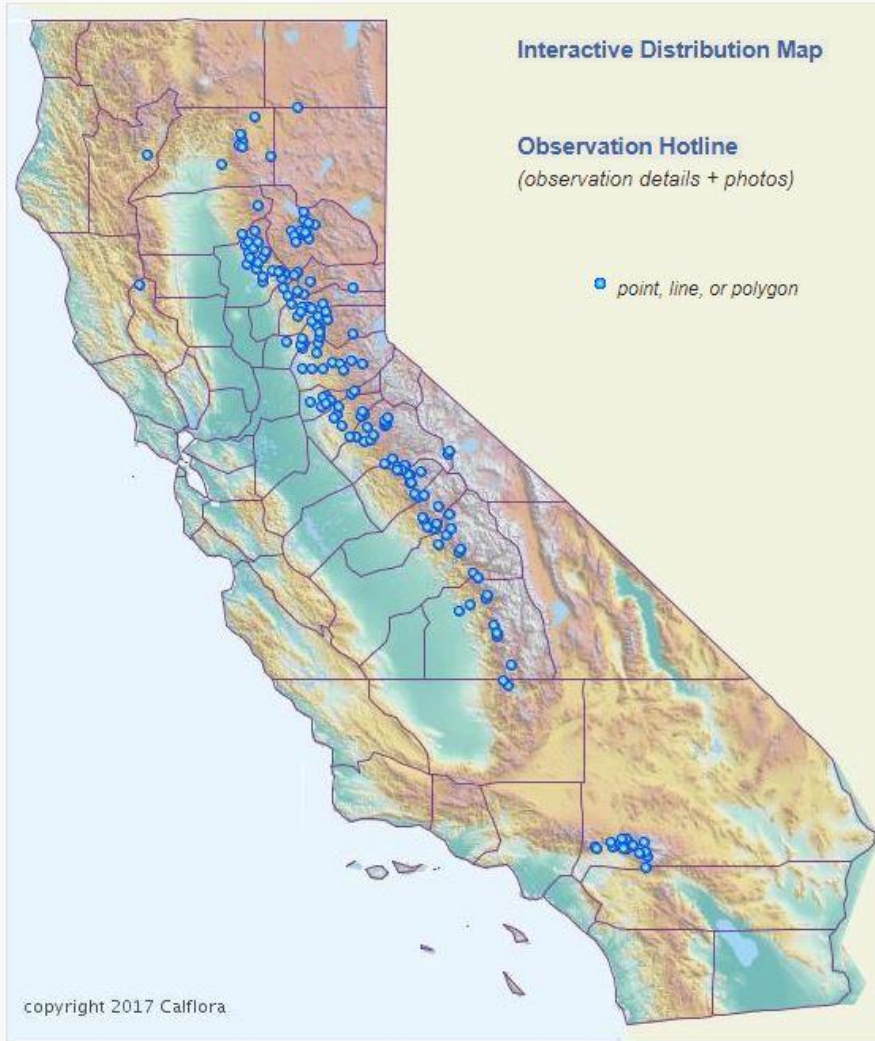
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Plant Characteristics and Associations



Bloom Period



© 2004 George W. Hartwell

Family: **IRIDACEAE**

Genus: **Iris**

Subspecies and Varieties:

- Iris hartwegii* ssp. *australis*
- Iris hartwegii* ssp. *columbiana*
- Iris hartwegii* ssp. *hartwegii*
- Iris hartwegii* ssp. *pinetorum*

Community: Yellow Pine Forest

Habitat: slopes [Walker]

Toxicity: MINOR DERMATITIS (California Poison Control System 2006)

Munz's Iris
Iris munzii



Tulare county by
the Tule River





Iris munzii R. Foster
Munz's iris

Iris munzii, a monocot, is a **perennial herb (rhizomatous)** that is **native** to California and is endemic (limited) to California.

! It is included in the CNPS Inventory of Rare and Endangered Plants on list **1B.3** (*rare, threatened, or endangered in CA and elsewhere*). 7th Edition / 8th Edition



© 2009 Irene Lindsey

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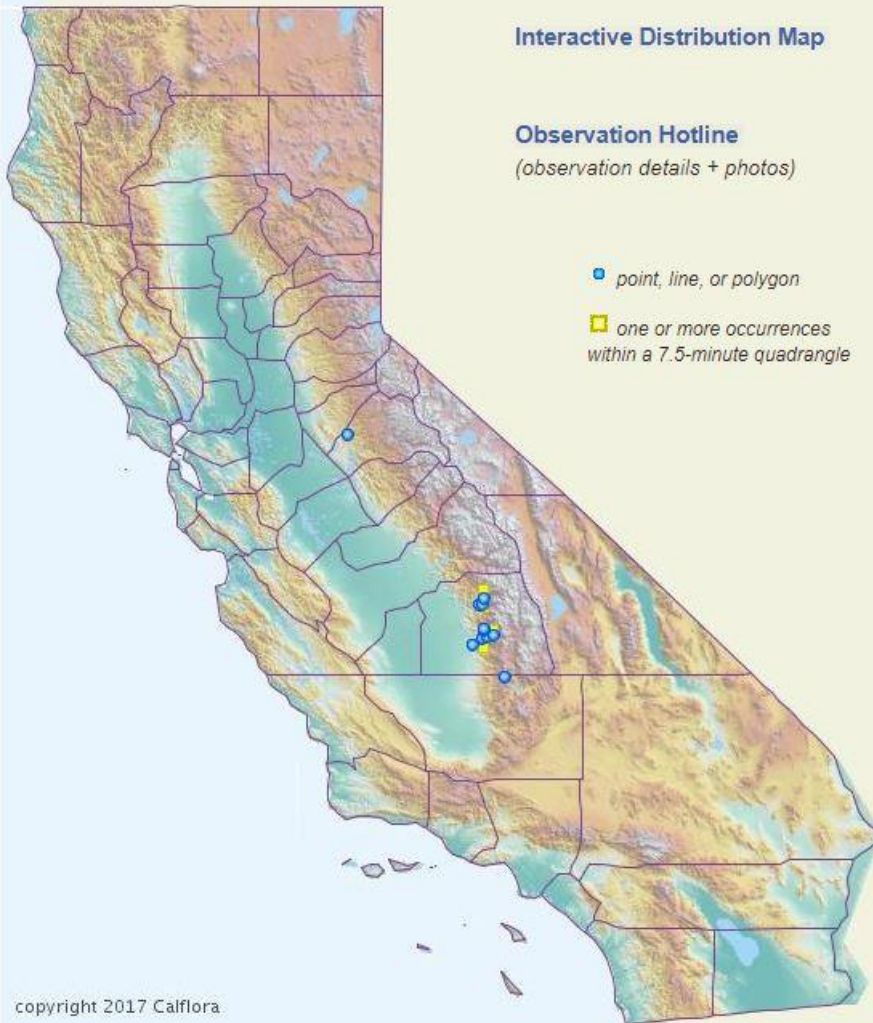
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Interactive Distribution Map

Observation Hotline

(observation details + photos)

- point, line, or polygon
- one or more occurrences within a 7.5-minute quadrangle



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Plant Characteristics and Associations



Bloom Period



© 2013 Debra L. Cook

Family: IRIDACEAE

Genus: Iris

Community: Foothill Woodland

Toxicity: MINOR, DERMATITIS [California Poison Control System 2010]

Distribution by County

Add an Observation of Iris munzii

The Brodiaea group:

- Brodiaea (bro-DY-ah)
- Tritoleia (tri-tel-AY-ah)
- Dichelostemma (dy-kel-o-STEM-ah)

A note on plant families

A note on pronunciation

These are closer to the hyacinth family

In general, these plants are abundant here
and tough as nails

Harvest Brodiaea

Brodiaea elegans

Supernative!

Low to mid-elevation

Sun and heat

Dry or moist

Accepts very heavy soil,
some summer water

Blooms in summer

Easy to grow, multiplies well





Brodiaea elegans Hoover
Harvest brodiaea

Brodiaea elegans, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



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CalPhotos



© 2005 Brian L. Anacker



© 2007 Neal Kramer

Plant Characteristics and Associations



Bloom Period



© 2002 George W. Hartwell

Family: **THEMIDACEAE**
(PLANTS: LILIACEAE)

Genus: **Brodiaea**

Subspecies and Varieties:

Brodiaea elegans ssp. *elegans*

Brodiaea elegans ssp. *hooveri*

Communities: Foothill Woodland, Valley Grassland, Yellow Pine Forest

Habitat: slopes [Walker]

Wetlands: Usually occurs in non wetlands, but occasionally found in wetland

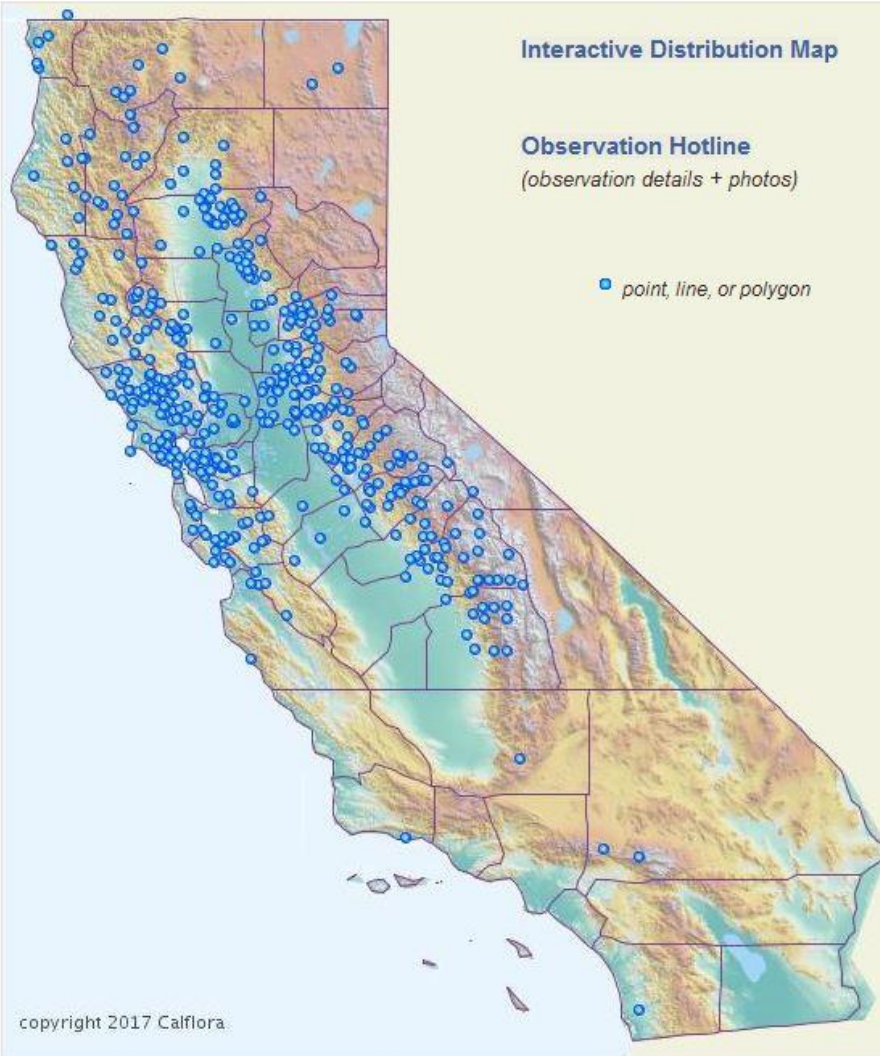
Distribution by County

[Add an Observation of *Brodiaea elegans*](#)

Interactive Distribution Map

Observation Hotline
(observation details + photos)

■ point, line, or polygon



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Bridge's Brodiaea

Triteleia bridgesii (*Brodiaea bridgesii*)

Low to mid-elevation, often found in serpentine soil
Easy to grow, multiplies well



Bridges' brodiaea

Brodiaea bridgesii, a monocot, is a **perennial herb** that is **native** to California.



Plant Characteristics and Associations



Bloom Period



© 2007 Carol W. Witham

Family: **THEMIDACEAE**
(PLANTS: LILIACEAE)

Genus: **Triteleia**

Communities: Mixed Evergreen Forest, Yellow Pine Forest, Foothill W
AFFINITY to serpentine soil: 3.3 (strong indicator) [Safford et al 2005]



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Click on a photo to see it

CalPhotos



© 2006 Matt Below



© 2012 Jason Matthias M

California Brodiaea

Brodiaea californica



1570 *Brodiaea californica* - Pink Form ---- Each: \$ 3.00 / 3 for \$ 7.50
One of the last Brodiaeas to bloom, with very large open umbels of shimmering pink.
The most beautiful Brodiaea of all.



<http://www.telosrarebulbs.com/brodiaea.html>

<http://www.watershednursery.com/nursery/plant-finder/brodiaea-californica/>

Endemic





Brodiaea californica Lindley
California brodiaea

Brodiaea californica, a monocot, is a **perennial herb** that is **native** to California and is endemic (limited) to California.



Plant Characteristics and Associations



Bloom Period



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CalPhotos



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Family: **THEMIDACEAE**
(PLANTS: LILIACEAE)

Genus: **Brodiaea**

Communities: Valley Grassland, Foothill Woodland

Distribution by County

Add an Observation of *Brodiaea californica*

Blue Dicks, Wild Hyacinth

Dichelostemma captatum

Aka Brodiaea pulchella



Dichelostemma capitatum Alph. Wood

Blue dicks, Wild hyacinth

Dichelostemma capitatum, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



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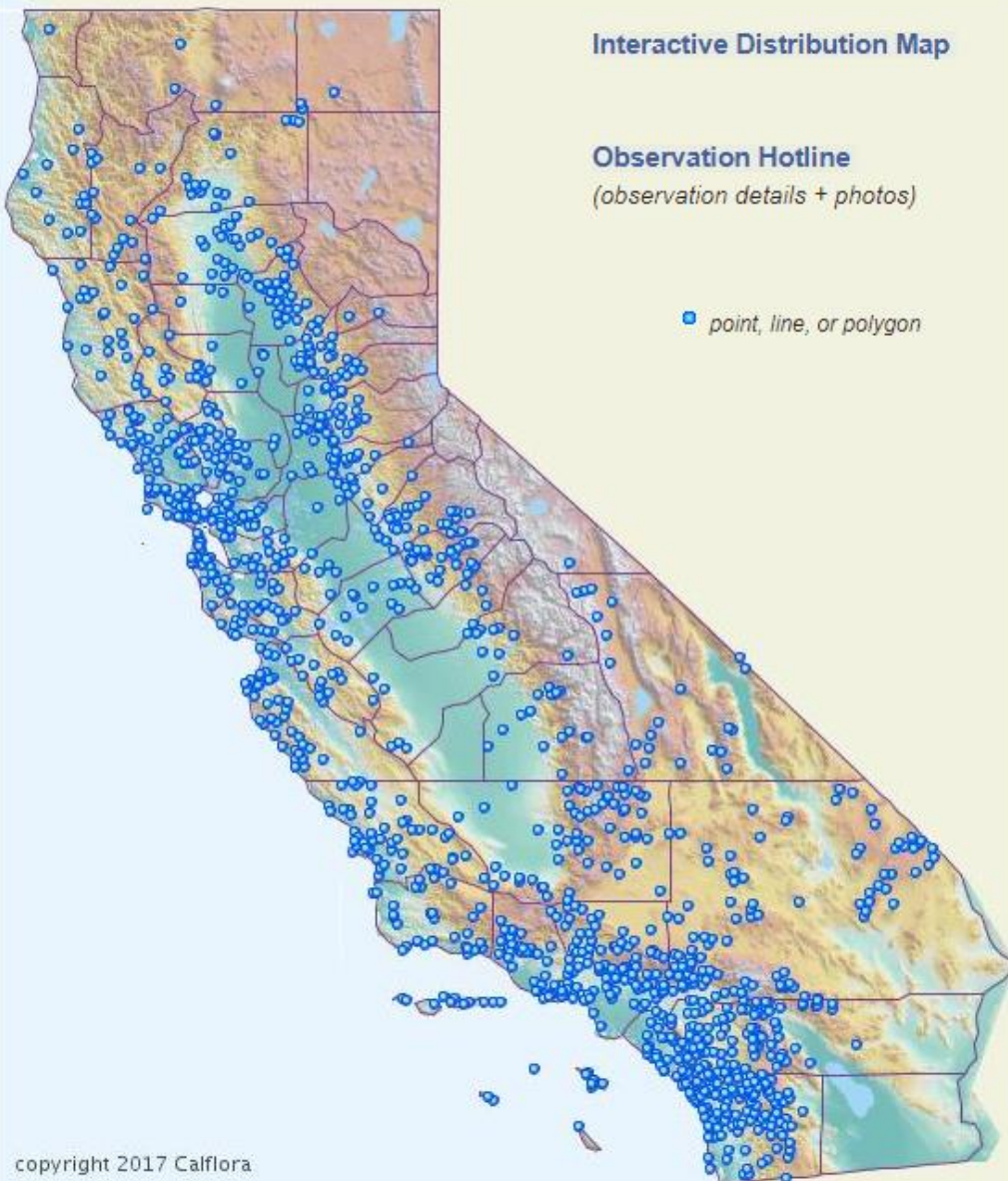
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Interactive Distribution Map

Observation Hotline

(observation details + photos)

■ point, line, or polygon



Plant Characteristics and Associations



Bloom Period



© 2006 Michelle Cloud-Hughes

Family: **THEMIDACEAE**
(PLANTS: LILIACEAE)

Genus: **Dichelostemma**

Subspecies and Varieties:

Dichelostemma capitatum ssp. capitatum

Dichelostemma capitatum ssp. pauciflorum

Communities: Yellow Pine Forest, Creosote Bush Scrub, Pinyon-Juniper Woodland, wetland-riparian

Wetlands: Equally likely to occur in wetlands or non wetlands [U.S. Fish & Wildlife Service]

Distribution by County

Ookow

Dichelostemma congestum
(*Brodiaea congesta*)

Similar to blue dicks (*D. capitatum*) but larger cluster with 6-15 flowers





Dichelostemma congestum (Sm.) Kunth

Fork toothed ookow, Ookow

Dichelostemma congestum, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



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Plant Characteristics and Associations



Bloom Period

Family: **THEMIDACEAE**
(PLANTS: **LILIACEAE**)

Genus: **Dichelostemma**

Communities: Foothill Woodland, Mixed Evergreen Forest

Distribution by County

[Add an Observation of *Dichelostemma congestum*](#)

Interactive Distribution Map

Observation Hotline
(*observation details + photos*)

■ *point, line, or polygon*



Dichelostemma *Ida-Maia*
Firecracker Flower





Dichelostemma ida-maia (Alph. Wood) E. Greene
 Firecracker brodiaea, Firecracker flower

Dichelostemma ida-maia, a monocot, is a **perennial herb** that is **native** to California and is found only slightly beyond California borders.

Interactive Distribution Map

Observation Hotline

(observation details + photos)

■ point, line, or polygon



Plant Characteristics and Associations



Bloom Period



© 2008 Neal Kramer

Click on a photo to see it bigger.

CalPhotos



© 2003 Hartmut Wisch



© 2015 John Doyen



© 2003 Hartmut Wisch

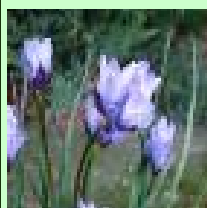
Family: **THEMIDACEAE**
 (PLANTS: LILIACEAE)

Genus: **Dichelostemma**

Communities: Redwood Forest, Mixed Evergreen Forest

Distribution by County

Add an Observation of *Dichelostemma ida-maia*



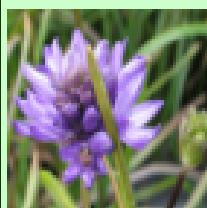
1710 Dichelostemma capitatum ---- Each: \$ 2.50 / 3 for \$ 6.00

Can bloom as early as January. Tight umbels of bell-shaped blue flowers on 8-12" stems. Easy and charming.



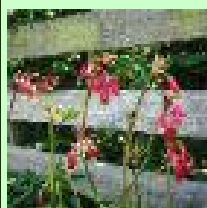
1715 Dichelostemma capitatum - Giant Form -- Each: \$ 3.50

A very rare form of *D. capitatum* that only grows on Santa Cruz Island off the coast of southern California.



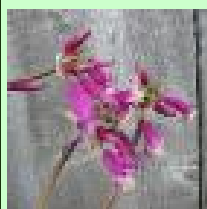
1720 Dichelostemma congestum --- Each: \$ 3.50

Unusual in that the purple flowers form a dense cylindrical raceme, not the typical spherical head. 18-24" stems. A terrific flower for cutting



1740 Dichelostemma ida-maia Firecracker Plant --- Each: \$ 3.00

The showiest of the *Dichelostemmas*, with bright crimson flowers edged green, on 18" stems. Stunning !!



1745 Dichelostemma ida-maia 'Pink Diamond' ---- Each: \$ 3.00

This lovely *Dichelostemma* is a natural hybrid between *D. ida-maia* and *D. multiflorum*. The flowers are a soft pink. From commercial stock.

Ithuriel's Spear

Triteleia laxa

Laxa means wide or loose,
maybe referring to the
looseness of the flower cluster

Leafless stalk

Blue stamens

18"-30' tall

**Named after the spear of the
angel Ithuriel in Milton's
PARADISE LOST**



Ithurriel's Spear

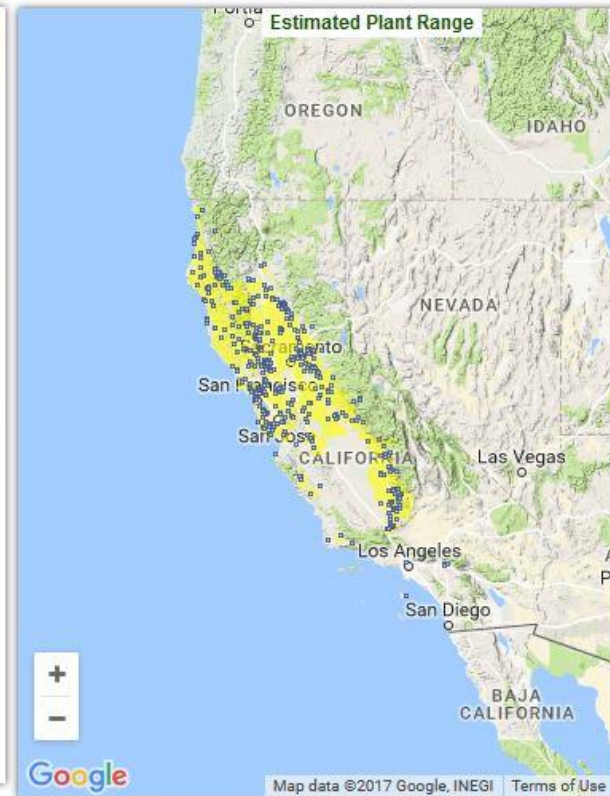
[Add to My Plant List](#)

Triteleia laxa



[<<] [<] [>]

© Copyright 2006 Lynn Watson (SB)



[About Calscape Maps](#)

[Detailed Map >](#)

About Ithurriel's Spear (*Triteleia laxa*)

Ithurriel's Spear (*Triteleia laxa*) is a common native perennial herb in the Themidaceae (Lily) family that grows primarily in northern and central California. It tends to grow in openings in forest or woodland with sandy soil, at elevations from 0-4600 feet. It is a geophyte related to lilies and onions, growing from an edible corm. In spring it sends up one or a few slender grass-like leaves, followed by a leafless stem topped with a spray of blue to purple (rarely white) flowers. After flowering it needs a dry summer dormancy. The flowers strongly resemble members of the Brodiaea and Dichelostemma genera. In the garden it is best use in mass with other geophytes and showy annuals such as California Poppy. The number of flowers in any given year is highly variable. There are many named varieties in cultivation, including 'Humboldt Star' and 'Sierra Giant'.

Ithuriel's Spear

Triteleia laxa var. "Queen Fabiola"

Larner Seeds will have this in October, but please *don't ask until October*.
Some of the larger commercial bulb companies have this variety.



Brodiaea Queen Fabiola - 100 flower bulbs

Also known as mountain lilies; these beautiful flowers produce clusters of funnel shaped flowers in a wonderful shade of bluish purple. They are...

\$7.95

100 FLOWER BULBS

Prettyface

Triteleia ixioides

Species Name: *Triteleia ixioides* 'Starlight'

Common Name: Starlight Golden Brodiaea

Large umbels of butter yellow flowers. Plant in a perennial dormancy.

Plant Family: Liliaceae

Plant Type: Bulb

Height by Width: 1' H

Growth Habit: Upright

Deciduous/Evergreen: Summer dormant

Growth Rate: Fast

Sun Exposure: Full sun

Soil Preference: Well-draining

Water Requirements: Summer dry

Cold Hardy to:

Flower Season: Spring

Flower Color: Light yellow

Endangered?:

Distribution: Selected for the garden

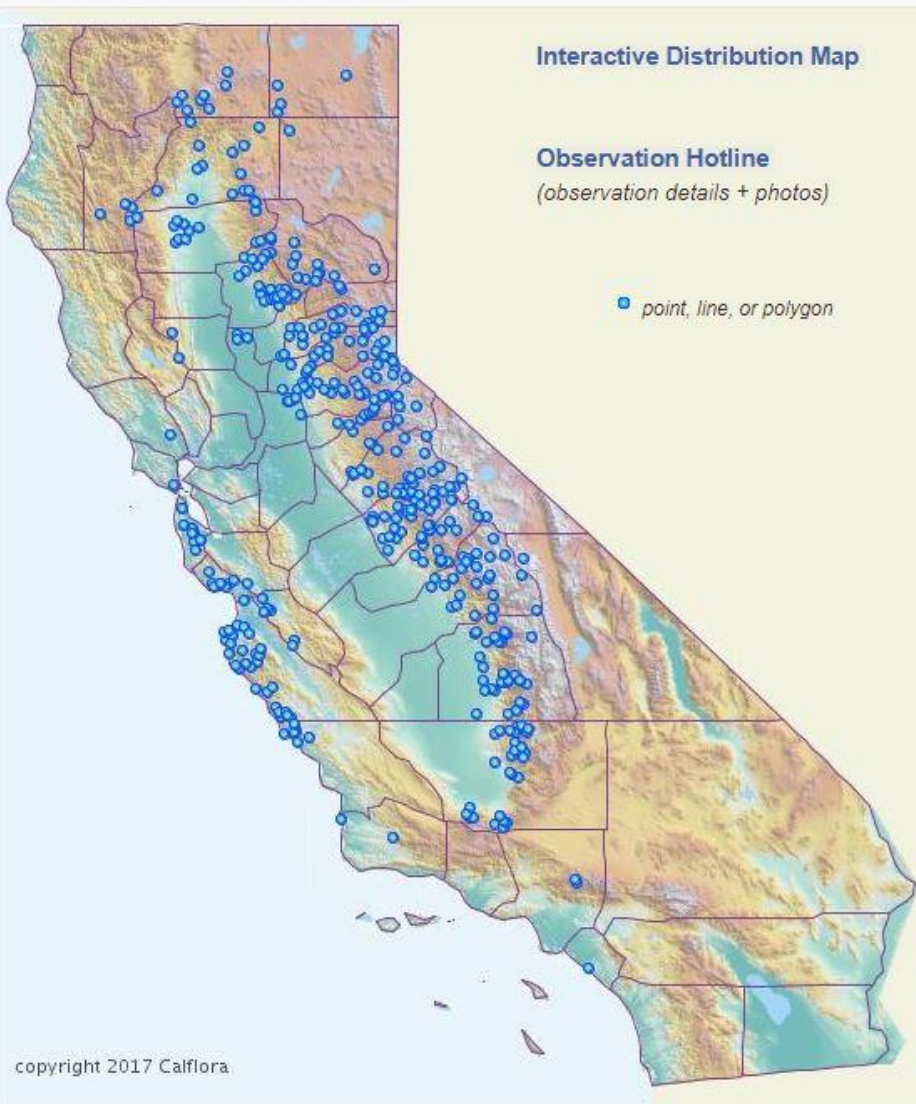
Natural Habitat: Selected for the garden





Triteleia ixioides (S. Watson) E. Greene
Golden brodiaea, Pretty face, Prettyface

Triteleia ixioides, a monocot, is a **perennial herb** that is **native** to California and is found only slightly beyond California borders.



Plant Characteristics and Associations



Bloom Period



© 2006 George W. Hartwell



© 2006 Dee E. Warenaicia

Click on a photo to see it bigger

CalPhotos



© 2005 Steven Thorsted



© 2014 Patrick Furtado

Family: **THEMIDACEAE**
(PLANTS: LILIACEAE)

Genus: **Triteleia**

Subspecies and Varieties:

- Triteleia ixioides* ssp. *anilina*
- Triteleia ixioides* ssp. *cookii*
- Triteleia ixioides* ssp. *ixioides*
- Triteleia ixioides* ssp. *scabra*
- Triteleia ixioides* ssp. *unifolia*

Communities: Closed-cone Pine Forest, Foothill Woodland, Valley Grassland, Yellow Pine Forest, Lodgepole Forest, wetland-riparian

Wetlands: Equally likely to occur in wetlands or non wetlands [U.S. Fish & Wildlife Service]

Wavy-leaved soap plant
Chlorogalum pomeridianum





Chlorogalum pomeridianum (DC.) Kunth
Amole, Soap plant, Soaproot, Wavyleaf soap plant

Chlorogalum pomeridianum, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



Plant Characteristics and Associations



Bloom Period



© 2003 David A. Tharp

Click on a photo to see it bigger

CalPhotos



© 2004 George W. Hartwell



© 2011 John W. Wall

Family: **AGAVACEAE**
(PLANTS: LILIACEAE)

Genus: **Chlorogalum**

Subspecies and Varieties:

- Chlorogalum pomeridianum var. divaricatum
- Chlorogalum pomeridianum var. minus
- Chlorogalum pomeridianum var. pomeridianum



© 2011 Hattie Brown

Communities: Valley Grassland, Coastal Sage Scrub, Northern Coastal Scrub, Foothill Woodland, Closed-cone Pine Forest, Mixed Evergreen Forest, Chaparral

Distribution by County

A.M. Chlorogalum pomeridianum

Cammasia quamash
Common camas

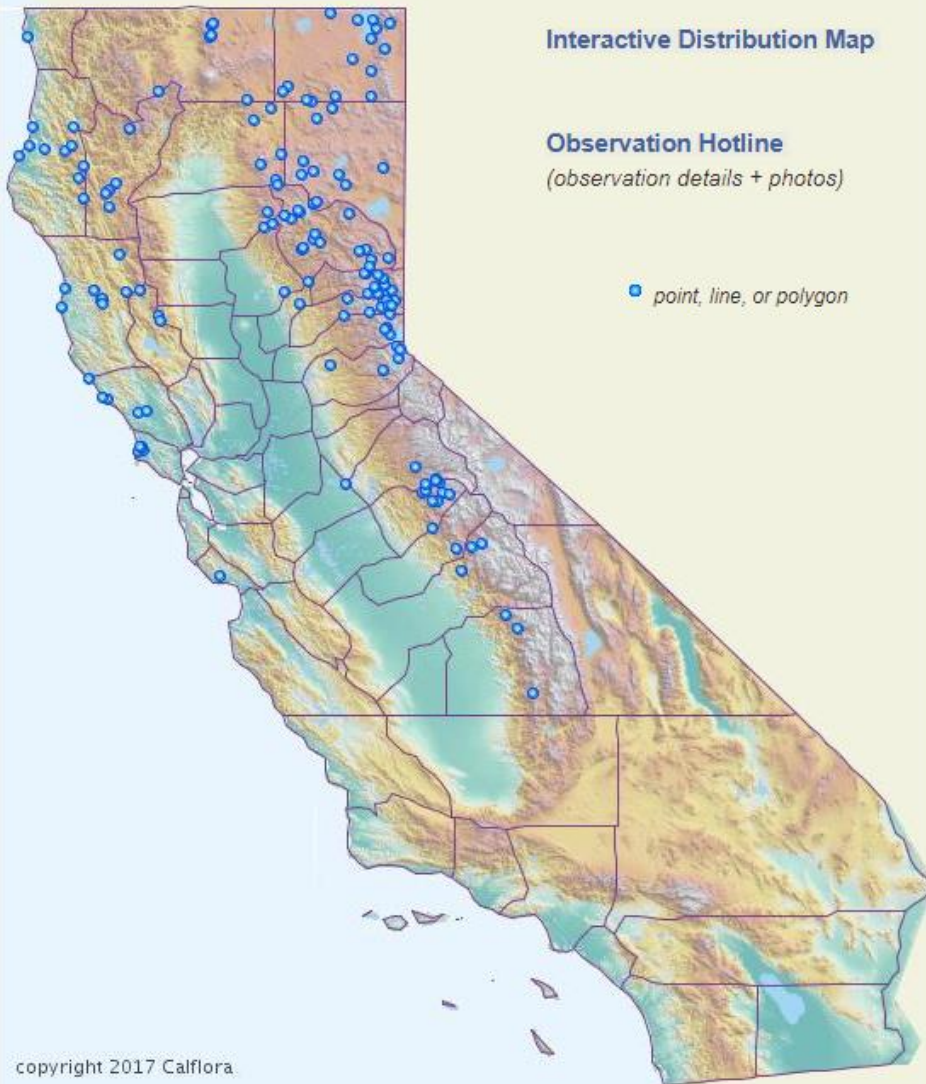
Larner Seeds after October 1





Camassia quamash (Pursh) E. Greene
Camas, Common camas

Camassia quamash, a monocot, is a **perennial herb** that is **native** to California and is also found outside of California, but is confined to western North America.



copyright 2017 Calflora.

Plant Characteristics and Associations



Bloom Period



© 1996 Christopher L. Christie

Family: **AGAVACEAE**
(PLANTS: LILIACEAE)

Genus: **Camassia**

Subspecies and Varieties:

Camassia quamash ssp. *breviflora*



© 2005 Christopher L. Christie

Click on a photo to see it b

CalPhotos



© 2010 Steven Thorsted



© Corsi © 2013 California Academy of Science

Lilium humboldtii
Humboldt's lily

<http://www.laspilitas.com/nature-of-california/plants/387--lilium-humboldtii-bloomerianum>



Large, Turk's cap
flowers

Water in spring but
very little in summer.

Lilium humboldtii Roezl & Leichtlin

Humboldt's lily

Lilium humboldtii, a monocot, is a **perennial herb** that is **native** to California and is endemic (limited) to California.

Interactive Distribution Map

Observation Hotline

(observation details + photos)

■ point, line, or polygon



copyright 2017 Calflora

Plant Characteristics

and Associations



Bloom Period



© 2004 George W. Hartwell



© 2002 Lynn Watson

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© 2014 John Doyen



© 2004 George W. Hartwell

Family: LILIACEAE

Genus: Lilium

Subspecies and Varieties:

Lilium humboldtii ssp. *humboldtii*

Lilium humboldtii ssp. *ocellatum*

Communities: Chaparral, Yellow Pine Forest

Toxicity: MINOR, DERMATITIS [California Poison Control System 2010]

Distribution by County

Add an Observation of *Lilium humboldtii*

Sierra Tiger Lily

Lilium parvum

Eastern Sierra riparian
plant

Variety that has lighter
pink flowers grows in
El Dorado foothills



<http://www.laspilitas.com/nature-of-california/plants/3491--lilium-parvum>

Lilium parvum Kellogg
Alpine lily, Sierra tiger lily



© 2009 Keir Morse

[Click on a photo to see it bigger](#)

[CalPhotos](#)



© 2009 Keir Morse



© 1992 Gary A. Monroe



© 2001 Jeff Abbas

Family: **LILIACEAE**

Genus: **Lilium**

Communities: Yellow Pine Forest, Red Fir Forest, Lodgepole Forest, wetland, riparian

Wetlands: Occurs almost always under natural conditions in wetlands [U]

Toxicity: MINOR, DERMATITIS [California Poison Control System 2010]

Distribution by County

Interactive Distribution Map

Observation Hotline

(observation details + photos)

■ point, line, or polygon



Plant Characteristics and Associations



Bloom Period

Washington Lily, Shasta Lily

Lilium washintonianum





Lilium washingtonianum Kellogg
Washington lily

Lilium washingtonianum, a monocot, is a **perennial herb** that is **native** to California.



© 2011 Dee E. Warenaicia

[Click on a photo to see it big](#)

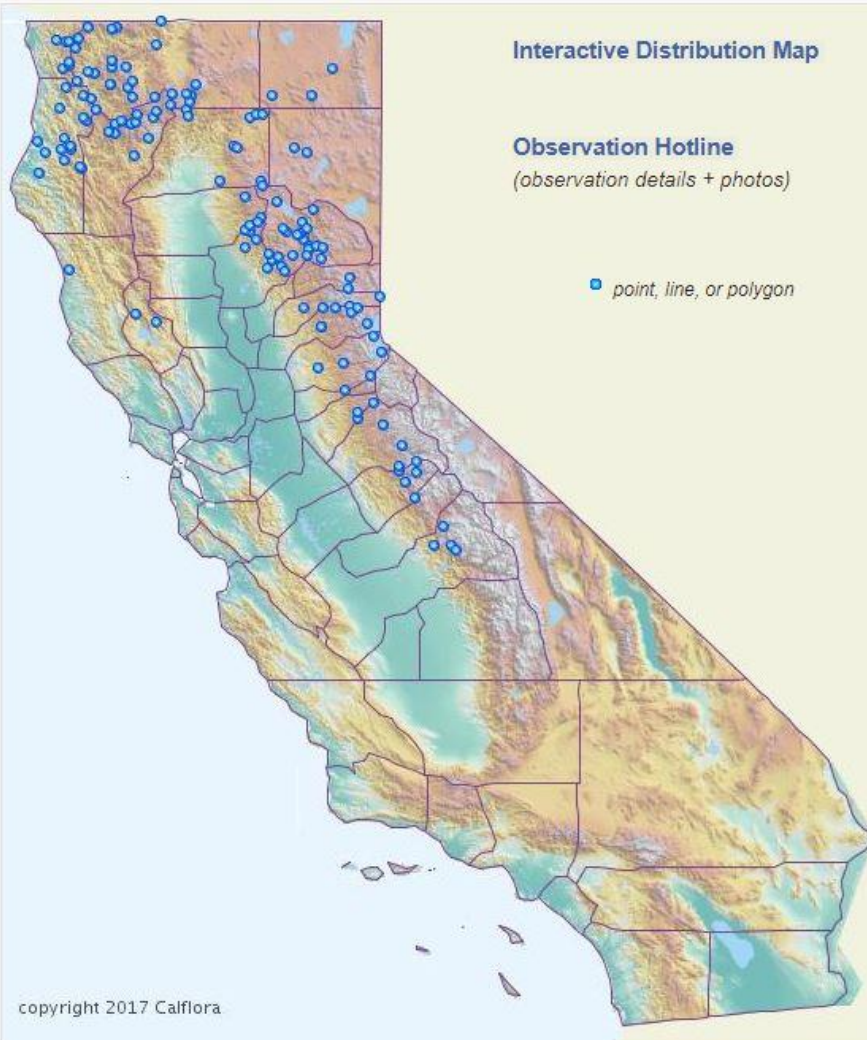
CalPhotos



© 1993 Steve Matson



© 2012 Jean Pawek



Plant Characteristics and Associations



Bloom Period



© 2001 Steven Thorsted

Family: **LILIACEAE**

Genus: **Lilium**

Subspecies and Varieties:

Lilium washingtonianum ssp. *purpurascens*

Lilium washingtonianum ssp. *washingtonianum*

Communities: Chaparral, Yellow Pine Forest, Red Fir Forest

Toxicity: MINOR, DERMATITIS [California Poison Control System 20

Distribution by County

- Not all native bulbs will adapt to gardens, but the ones that do can be vigorous and beautiful.
- A few specific families are more readily available.
- Overall, they're getting harder to find, so start now!

Even if
nurseries are
sold out this
year, express
your interest,
tell them if
you are
willing to
make a paid
pre-order



1780 Triteleia bridgesii ---- Each: \$ 3.50

A most beautiful Triteleia with large umbels of white-throated flowers that vary from pale blue to violet, often strongly tinted plum-purple. The petals have a brilliant sparkling sheen. Grows 12-18" tall.



1785 Triteleia clementina ---- Each: \$ 4.50

This very rare species is found only on Clementina Island off the coast of southern California.



1820 Triteleia hyacinthina - White Form ---- Not available this year

The open umbels of sparkling white flowers, striped green on the outside, are sweetly scented. These bloom at the same time as *Dichelostemma multiflorum*, and a meadow of both swaying together in the breeze is an unforgettable sight.



1810 Triteleia hyacinthina - Blue Form ---- Not available this year

A beautiful pale blue form of this lovely Triteleia. From higher elevations than the typical form, this one is hardy to Zone 6.



1830 Triteleia ixioides ssp. scabra Pretty Face ---- Not available this year

Loose umbels of pale buttery yellow flowers on 8-12" stems. Zone 6.



1832 Triteleia ixioides 'Starlight' -- Each: \$ 3.00

Large umbels of butter-yellow flowers on sturdy 12" stems.



1834 Triteleia ixioides ---- Each: SOLD OUT

A Robinett selection, this strikingly beautiful Triteleia has a deep purple-brown stripe to each rich yellow petal.

Topics

- **Bulbs, Corms, Tubers, and Rhizomes**
Types of perennial monocots we call bulbs
- **Plants in Nature**
What makes a plant native, and why it matters
- **What to Grow**
Bulbs that will likely be successful, and their culture
- **Where to Find Plants**



Welcome to the **El Dorado Chapter** of the California Native Plant Society. Our chapter lies in El Dorado County on the west slope of the Sierra Nevada, stretching from the foothills at the edge of the Sacramento Valley to the mountains at Echo Summit. Our chapter works to protect and teach about all native plants in the county, from rare to common. Learn about our [chapter history](#).

Tuesday, September 26, 7:00 pm [general meeting]

Landscape Design

Our next speaker will be Bernadette Balics of Ecological Landscape Design. Her design for the spectacular Big Sky Garden in Davis was featured in Pacific Horticulture this summer:
<https://www.pacifichorticulture.org/articles/planting-new-california-garden-part-3-bernadette-balics/>.

The El Dorado Chapter of the California Native Plant Society is sponsoring the talk in Placerville at 7pm on September 26th at the Planning Commission Room, Building C, 2850 Fair Lane Court. The talk is free and open to the public.



Pollinator Garden at Big Sky Garden.
Photo by Jennifer Jewell.

[Get driving directions and learn more about our general meetings](#)

Native Plant Sale

Our next Native Plant Sale is Saturday, October 7, 2017, from 9 am to noon, in front of Bldg C, 2850 Fair Lane Court. Click

[Calendar of events](#)

[Visit us on Facebook](#)

[Sign up for email alerts](#)

[Search our website](#)

Latest chapter news

- [Current Newsletter](#)
- [Plant News from Facebook](#)
 - [Upcoming Weed Events](#)
- [Outreach Events](#)

Upcoming chapter events

- Tuesday, September 26 at 7 pm**
General Meeting

Want to get involved?

Check out our [Volunteer](#) and [Outreach](#) opportunities

Nancy and Ames Gilbert Far West Bulb Farm

Used to have a native nursery and
were very active in bulb
propagation

Experts in local native bulbs, but
no longer in business

Nancy is in the Redbud CNPS



THEODORE PAYNE FOUNDATION

for WILD FLOWERS
and NATIVE PLANTS



10459 Tuxford Street
Sun Valley, California 91352
818-768-1802

Summer Hours (until Oct 31): Thursday – Saturday
8:30 AM – 4:30 PM
Closed Sunday – Wednesday

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SEED + BULBS

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Bulb Program

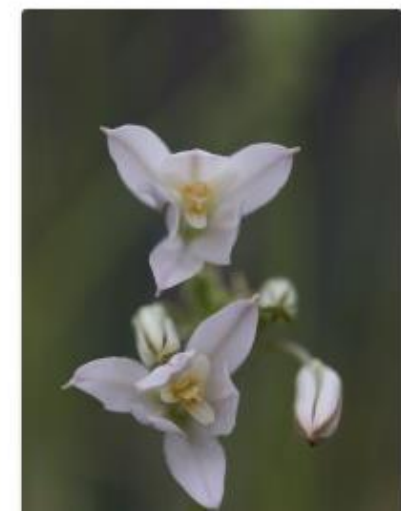
California is home to hundreds of native geophytes, many of which are rare and endangered. The California Native Bulb Program at TPF was resurrected in 2004 to grow native geophytes (bulbs) and to develop a deeper and broader understanding of these unique wild flowers. Staff and volunteers working in the program develop, test and share horticultural practices to help expand the use and appreciation of these plants among horticulturists, botanists, gardeners, landscape designers and the general public.

TPF's Genny Arnold discusses California native bulbs with North State Public Radio host Jennifer Jewell. [Listen](#)

The Fred Smith Bulb House was dedicated in 2004 in honor of a volunteer who created the Foundation's original bulb program. This growing yard was specially designed and constructed to protect and propagate the Foundation's bulb collection, which currently contains over 150 taxa – one of the largest collections of California native geophytes in the world.

• Who Was Fred Smith?

Fred Smith was an avid bulb horticulturist who, in the 1990's, worked to grow California bulbs for the Payne nursery. Smith was particularly fond of the Mariposa lilies, though he preferred to call them tulips. Lacking adequate resources, the program was unsustainable and then languished when Smith moved on to other projects. Following his death in 2003, the Foundation's Fred Smith Bulb House, was dedicated in his honor.





Orders are generally shipped within two to three weeks after your order is processed and they normally take an additional 2 - 5 business days to arrive.
You may return damaged or defective merchandise within 10 days of the original purchase date for a full refund minus shipping charges. We will also be glad to exchange the damaged merchandise for anything on our site of equal or lesser value.

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Bulbs



Bloomeria crocea

\$6.00



Calochortus kennedyi

\$10.00



Calochortus venustus

\$10.00



Dichelostemma capitatum (seed)

\$6.00



Lilium pardalinum

\$10.00



Marah macrocarpa

\$6.00

Telos Rare Bulbs

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2017 CATALOGUE



Telos Rare Bulbs

P. O. Box 1067

Ferndale, CA 95536

telosrarebulbs@suddenlink.net

Featuring hard-to-find bulbs from around the world, many that have never been offered before, all grown in our nursery. We specialize in bulbs from the western US, bulbs from South America, and bulbs from southern Africa, as well as rarities from other parts of the world. Our offering of Oxalis is unequalled. Whether your love is Calochortus, Arums or Stenomesson, you will find something to cherish on our list.



Arum dioscoridis



Western USA

[Allium](#)
[Brodiaea](#)
[Calochortus](#)
[Camassia](#)
[Dichelostemma](#)
[Erythronium](#)
[Fritillaria](#)
[Lilium](#)
[Trillium](#)
[Triteleia](#)
[More natives](#)

South America

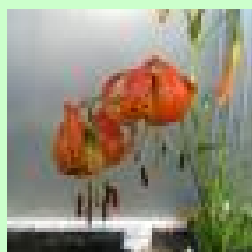
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**NO
PICTURE**

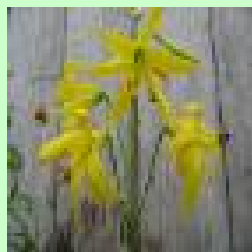
3679 *Lilium humboldtii* -- Not available this year

NEW -- This is a magnificent lily from the dry foothills of the Sierra Nevada, where it can grow to six feet tall. It needs completely dry summers.



3676 *Lilium pardalinum* -- Not available this year

A widespread and variable lily from California, with deep orange flowers heavily spotted in crimson. Suitable for the native garden.



3677 *Lilium parryi* -- Not available this year

Known as the Lemon Lily, this beautiful native lily is from the San Bernardino mountains of southern California. Intensely fragrant.

**NO
PICTURE**

3678 *Lilium washingtonianum* -- Not available this year

Another stunningly beautiful lily from the Sierra Nevada and Cascade mountains where it grows in very dry conditions. The fragrant flowers are white spotted purple. Not easy to grow. Bulbs are almost mature.

They don't have their fall 2017 lists up yet



Las Pilitas Nursery

California Native Plants are all we grow!

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Santa Margarita, CA 93453

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This website is dedicated to Bert Wilson. His genius continues to inspire us.

[Native Plants](#) [Nature of California](#) [Native gardens](#) [Native Plant Pictures](#) [Selected Native Plants](#) [Garden DIY](#) [Birds and the Bees.](#)

[Home](#) > [Nature of California](#) > [Native Plants](#)

Lilium pardalinum

Panther lily and Leopard Lily.

Santa Margarita, CA

Size	Quantity	Price
One Gallon	2	\$ 9.99



Lilium pardalinum is similar to *Lilium Humboldtii* but a species that is next to streams. (The British call it a panther lily, California calls it Leopard Lilly) It needs a little more water and is a little smaller. The plant can reach 3 ft. tall and have flowers that are 3 inches across. These will grow fine in inside patio or Mall planter as long as there is @30% sun and regular water. *Lilium pardalinum* tolerates clay, serpentine and seasonal flooding.

Lilium pardalinum's foliage type is deciduous.
Lilium pardalinum's flower color is red.

Communities for *Lilium pardalinum*: Red Fir Forest, Mixed-evergreen Forest, Riparian (rivers & creeks) and Yellow Pine Forest.

ph: 4.00 to 8.00
usda: 5 to 10
height[m]: 0.70 to 1.00
width[m]: 0.20 to 0.20
rainfall[cm]: 83.00 to 680.00

What does all this mean!?!

Shop Online

This plant is sold out right now. The worker bees are working on it.

[Images \(2\)](#)

[New: Movies \(1\)](#)

←

Lilium pardalinum, Leopard Lily has a large flower.

+

→



Judith Larner

Camassia
quamash

Camassia
leichtlinii -- a
limited amount

Dichelostemma
congestum

Dichelostemma
ida-maia

Triteleia laxa
'Queen Fabiola'

NATIVE BULBS

We are all sold out of native bulbs for the 2016 season! Thanks and please check back next year.

Our native geophytes are too seldom grown in gardens. They are a varied and beautiful group, once of great importance to California's indigenous peoples. Each selection comes with a detailed description of how to grow them in the garden, as well as how to prepare them for eating, for those who are interested. They are an important component of our native grasslands and meadows and can be grown in your "mini-prairie." They also do very well in large containers.

[Display single-page list](#)



[Large Camas Bulbs](#)

Camassia leichtlinii ssp.
suksdorfii

Sale!

(out of stock)



[Native Bulb Combo](#)

Dichelostemma capitatum,
Triteleia laxa, and *Triteleia*
hyacinthina
(out of stock)



[Ithuriel's Spear](#)

Triteleia laxa
(out of stock)

Anni Jensen

Annie's Annuals & Perennials

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Bulb ▾ Category ▾ Color ▾ Lifespan ▾ Availability ▾ Water ▾ Sun ▾ Zone ▾

Bulbs

113 Results



Brodiaea laxa
'Queen Fabiola'
'Ithuriel's Spear'



Bulbinella latifolia ssp.
latifolia



Chives (*Allium tuberosum*)
'Garlic Chives' AKA
'Chinese Chives'



Chives: 6-pack (*Allium*
schoenoprasum)



Crocosmia masonorum



Cypella coelestis



Dahlia
'Dark Side of the Sun'



Dichelostemma ida-maia
syn *Brodiaea coccinea*
'Firecracker Brodiaea'



Please don't ever dig up bulbs on public lands, or private lands without permission.

It's not just antisocial, it's illegal.

Happy geophyting



Optional Add-Ons

- **Plant Communities and Corridors**
*Plant ecosystems, the flora and fauna they support,
and how to make your yard a habitat corridor*
- **Native Plants in Home Gardens**
How to know what's native to your area
Lots of pretty pictures of native plants
How to grow these plants