

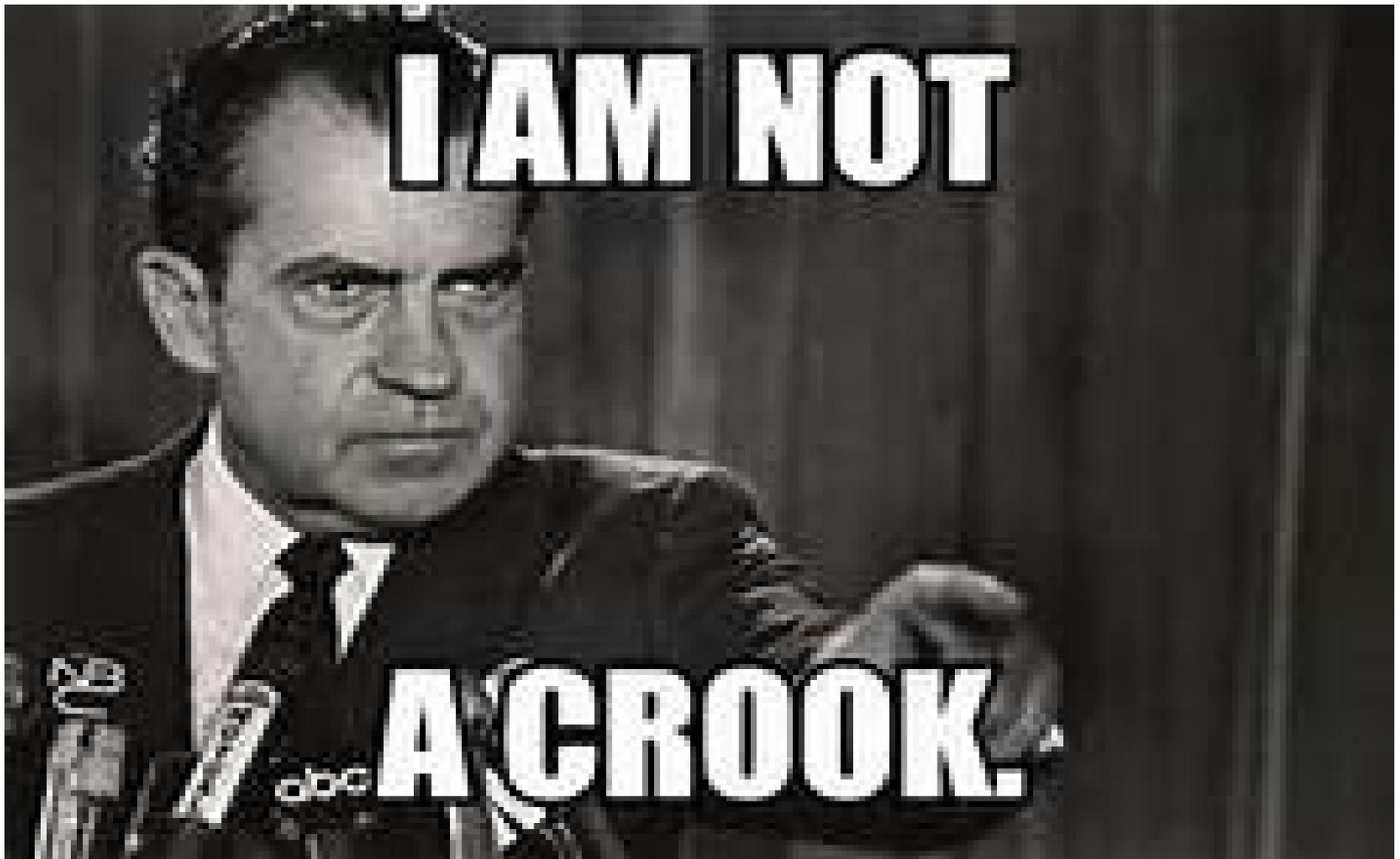
# Use of Apps and Field Guides

Bird App evaluation

Plant lists for hikes – Washington Native Plant  
Society

Demonstration of Flower Apps

I am NOT an app salesman



# Bird Identification apps

There are many options

Sibley Birds

Peterson Bird Guide

Ibird Pro

Audubon Bird Guide

Merlin (Cornell Laboratory - Free)



**Browse Birds**



**By Shape**



**By Family**



**By Name**



**Find Birds with eBird**



**Advanced Search**



**About Birds and Birding**



**My Sightings**



finch



## Species Likelihood by State/Province/Month

<<Select State and Province>>

**Shape**



**Habitats**



**Regions**



**Colors**



**Sizes**



**Wing Shapes**



**Song Or Call Type**



**Song Or Call Patterns**



- FIRST
- LAST
- SCIENTIFIC

- DETAILS
- RANGE
- VOICE
- SIMILAR
- SIGHTINGS



**Finch, Cassin's**

*Haemorhous cassinii*



**Finch, House**

*Haemorhous mexicanus*



**Finch, Purple**

*Haemorhous purpureus*



**Goldfinch, American**

*Spinus tristis*



**Goldfinch, Lawrence's**

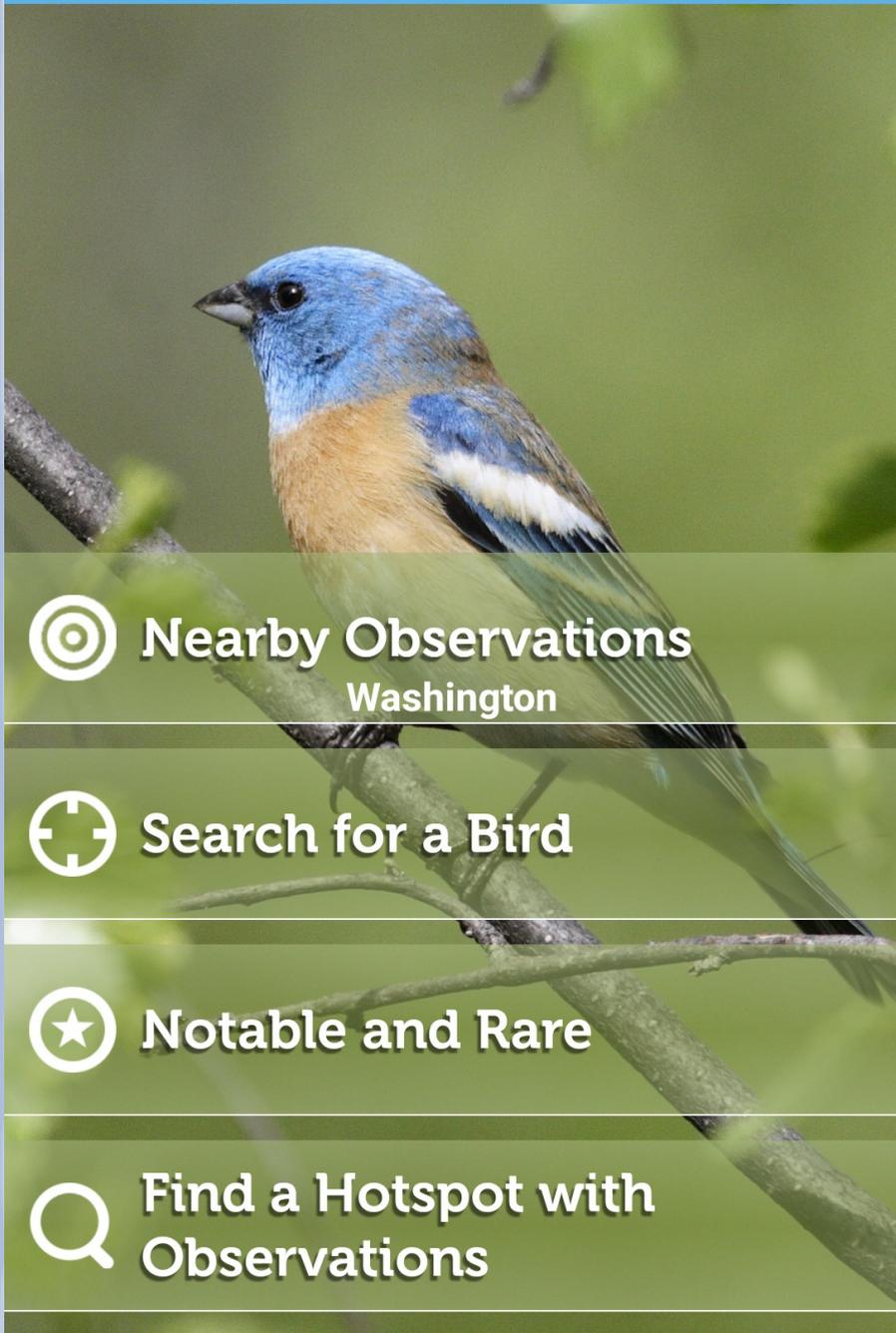


adult male ©Brian E. Small/VIREO



**Family:** Finches

**Description:** Very similar to Purple Finch (which is absent from many areas of the west). Cassin's is slightly larger, with slightly longer bill. Note dark streaks on white undertail coverts. Male has sharply defined red cap, paler pink chest. Female has plainer face, sharper streaks below than female Purple; often shows pale eye-ring. Compare also to House Finch, usually at lower elevations.



**Nearby Observations**  
Washington

**Search for a Bird**

**Notable and Rare**

**Find a Hotspot with Observations**

RECENT

NOTABLE



*Pelecanus erythrorhynchos*  
yesterday  
23 observations



**American Wigeon**  
*Anas americana*  
last week  
4 observations



**Anna's Hummingbird**  
*Calypte anna*  
4 weeks ago  
3 observations



**Bald Eagle**  
*Haliaeetus leucocephalus*  
today  
1 observations



**Band-tailed Pigeon**  
*Patagioenas fasciata*  
today

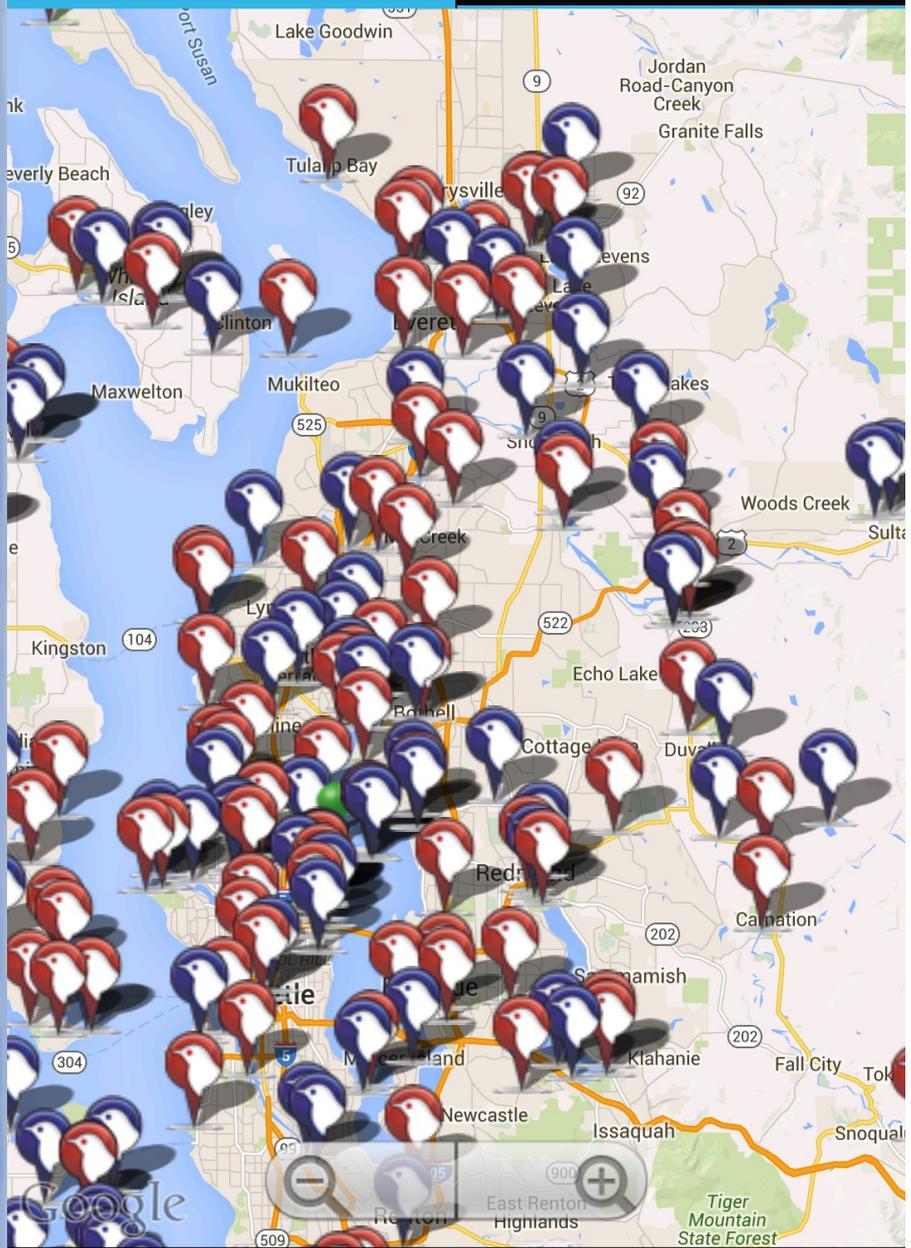
# Bald Eagle

Near Washington, United States



MAP

LIST



# iBird-Pro

iBird Pro Guide to Birds

☰ Set View / Sort Mode Search >

Species: 16

finch COMMON NAME

 **American Goldfinch**  
*Spinus tristis*  
Fringilline & Cardueline Finches (Fringillidae)

B

 **Black Rosy-Finch**  
*Leucosticte atrata*  
Fringilline & Cardueline Finches (Fringillidae)

A  
B  
C  
E  
G

 **Brown-capped Rosy-Finch**  
*Leucosticte australis*  
Fringilline & Cardueline Finches (Fringillidae)

H  
L  
O  
P  
S

C

 **Cassin's Finch**  
*Haemorhous cassinii*  
Fringilline & Cardueline Finches (Fringillidae)

Close American Goldfinch ^ v

FIELD MARKS OFF FAVORITE OFF

 ♂ ♀

*Spinus tristis* PASSERIFORMES

General(5) Range Photos(4)  
Sounds Similar Birdpedia ▶

# Plant lists for hikes

- Washington Native Plant Society
- [http://www.wnps.org/plant\\_lists/exploring\\_native\\_plants.html](http://www.wnps.org/plant_lists/exploring_native_plants.html)
- Click county on map, view list of hikes
- Lists are in pdf or word doc form
- Example: Cougar mountain
- Organized by genus and species (not common or family names)

# Plant list map



### Cougar Mountain

Cougar Mountain, King County, WA. List covers plants found along the trails on Cougar Mountain, located south of I-90 between Bellevue and Issaquah. List by Fred Weinmann and Warren Jones, September 2000, with several additions by D. Avolio, King County Park Ambassador, May, 2013. 114 spp.

These lists represent the work of different WNPS members over the years. Their accuracy has not been verified by the Washington Native Plant Society. We offer these lists to individuals as a tool to enhance the enjoyment and study of native plants.

\* - Introduced

<u>Scientific Name</u>	<u>Common Name</u>	<u>Family Name</u>
Abies procera	Noble fir	Pinaceae
Acer circinatum	Vine maple	Aceraceae
Acer macrophyllum	Big-leaf maple	Aceraceae
Achillea millifolium	Yarrow	Asteraceae
Achlys triphylla	Vanilla leaf	Berberidaceae
Adiantum pedatum	Maidenhair fern	Polypodiaceae
Agrostis tenuis*	Colonial bentgrass	Poaceae
Ajuga reptans*	Ajuga	Lamiaceae
Alnus rubra	Red alder	Betulaceae
Anaphalis margaritacea	Pearly everlasting	Asteraceae
Anemone deltoidea	Columbia windflower	Ranunculaceae
Arbutus menziesii	Pacific madrone	Ericaceae
Asarum caudatum	Wild ginger	Aristolochiaceae
Athyrium filix-femina	Lady fern	Polypodiaceae
Berberis nervosa	Cascade Oregongrape	Berberidaceae

# King county hikes

[Home](#) > [Native Plant Lists](#)

## **King County**

[King County](#) (List for entire county)

[Asahel Curtis](#)  
[Beaver Valley](#)  
[Big Tree Trail](#)  
[Carkeek Park](#)  
[Carnation Marsh](#)  
[Cougar Mountain](#)  
[Deadhorse Canyon](#)  
[Discovery Park](#)  
[Dorothy Lake](#)  
[Double Beaver](#)  
[Edith Moulton Park](#)  
[Federation Forest](#)  
[Granite Mountain](#)  
[Hazel Wolf Wildlife Sanctuary](#)  
[Hylebos Park](#)  
[Iron Goat Trail](#)  
[Iron Goat Trail 2](#)  
[Issaquah Alps](#)  
[Jenkins Creek Park](#)  
[King's Lake Bog](#)  
[Little Mount Si](#)  
[Lodge Lake](#)  
[Madrona Woods](#)  
[Markworth Forest](#)  
[Marymoor Park](#)  
[Mercer Slough](#)  
[Middle Fork Snoqualmie](#)  
[Moss Lake](#)  
[Mt. Peak](#)  
[Mount Si](#)  
[Mount Si Snag Flat](#)  
[Mount Si Vista](#)  
[Mount Si Wetland](#)

# Plant identification apps

Three (or more) options in our area

1. Washington Wildflowers by Mark Turner and Burke Museum – Android and Iphone/Pad versions
2. Audubon wildflower identification app (for whole country)
3. 2250 Washington Wildflowers – Flora NW LLC

WASHINGTON

*Wildflowers*



A Guide to the Wildflowers, Shrubs, and Vines  
of Washington and Surrounding Areas

University of Washington, Burke Museum  
& High Country Apps, LLC  
Copyright ©2013 | All rights reserved



Saving screenshot...

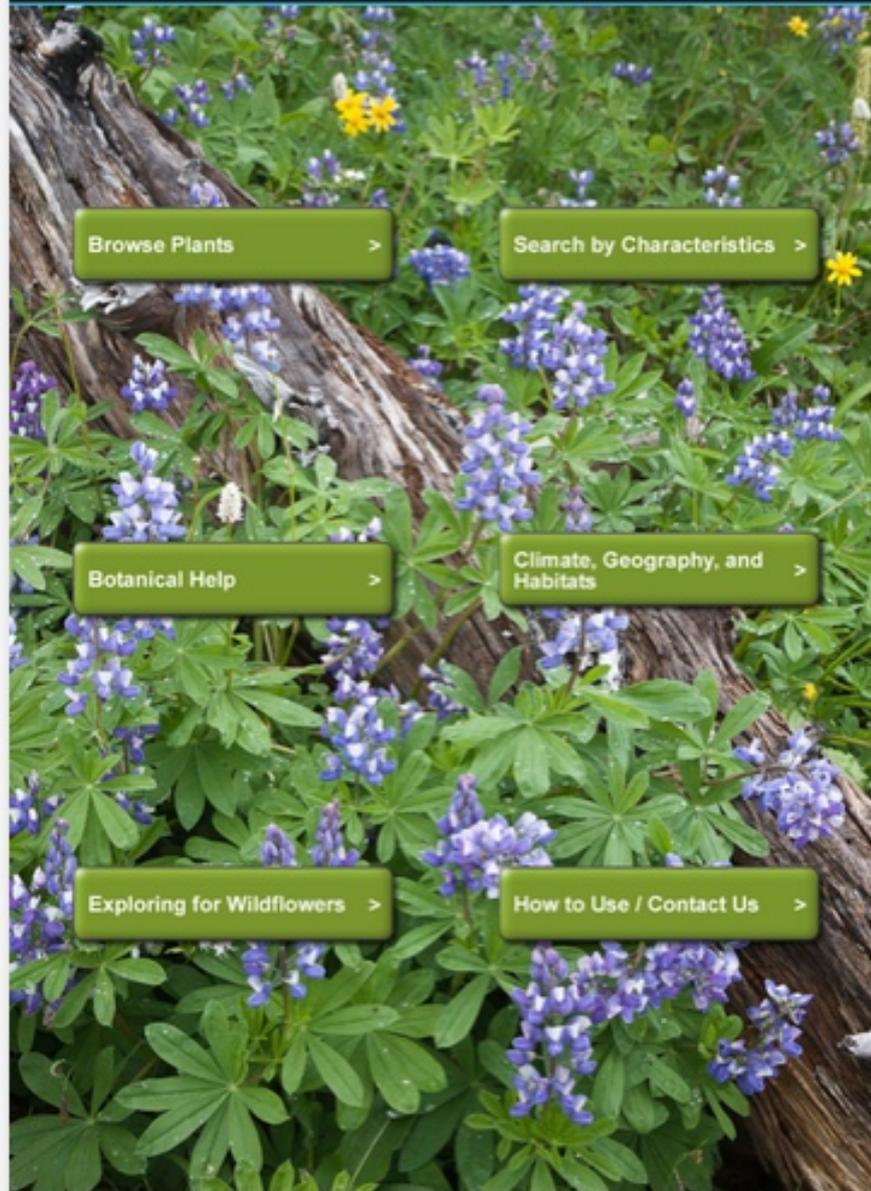


Washington Wildfl...

HOME

SEARCH

DISPLAY



Browse Plants >

Search by Characteristics >

Botanical Help >

Climate, Geography, and Habitats >

Exploring for Wildflowers >

How to Use / Contact Us >



Washington Wildflowers: Sear... HOME SEARCH HELP

Reset Select characteristics. Show

[Instructions](#)

73 Found

Growth Habit: Wildflowers  
Above ground stems not woody, die back each year.

Main Flower Color: Red or Pink

Flowering Period: June

May **June** July August Sept October

Region: Puget Sound-North Cascades

Habitat: Forest  
Forested areas at low-mid elevation.

**Forest** Mountain-High Open Fresh Water-Wet Saltwater-Beach Disturbed

Leaf Arrangement:

    Absent or Modified

Washington Wildflowers: Bro... HOME SEARCH HELP

73 results Sort: Common Name

 **seablush, shortspur**  
*Plectritis congesta*  
Valerianaceae (Valerian Family)

 **shootingstar, Cusick's**  
*Dodecatheon pulchellum*  
Primulaceae (Primrose Family)

 **shootingstar, Henderson's**  
*Dodecatheon hendersonii*  
Primulaceae (Primrose Family)

 **slipper, fairy**  
*Calypso bulbosa*  
Orchidaceae (Orchid Family)

 **springbeauty, lanceleaf**  
*Claytonia lanceolata*  
Montiaceae (Miner's Lettuce Family)

 **springbeauty, Siberian**  
*Claytonia sibirica*  
Montiaceae (Miner's Lettuce Family)

Washington Wildflowers: Vie... HOME SEARCH HELP 9:43

common camas  
*Camassia quamash*  
Asparagaceae (Asparagus Family)



Flower



IMAGES DESCRIPTION RANGE MAP

Washington Wildflowers: Vie... HOME SEARCH HELP

**common camas**  
***Camassia quamash***  
Asparagaceae (Asparagus Family)

<b>Flowering Time</b> April to June	<b>Height</b> 6-26 inches
<b>Relative Abundance</b> Common	<b>Life Cycle</b> Perennial

**Habitat**  
Forest, Open, Open, Freshwater Wet

**Description**  
Stem erect. Leaves slender and long, hairless. Flower spike with many flowers open all at the same time. Flowers blue to purple, occasionally white, star-shaped, opening wide; pollen bright yellow or dull yellow to violet. Grows in moist meadows that dry by summer at low to high elevations. Plant varies in size and color over its very large range. Subsp. *quamash* is slender, flowers somewhat sparse on stem, anthers dull yellow to violet. Subsp. *breviflora* is stout, flowers dense, anthers bright yellow. Lewis and Clark reported that this plant occurred in such huge quantities that the meadows resembled lakes of clear water.

IMAGES DESCRIPTION RANGE MAP

common camas  
*Camassia quamash*  
Asparagaceae (Asparagus Family)



Distribution data provided by the Consortium of Pacific Northwest Herbaria. Dots show where the species has been collected. Counties are highlighted if the species occurs somewhere within the county boundaries.

Washington Wildflowers: Plan... HOME SEARCH HELP

## Plant Families

Tap to view plants in family.

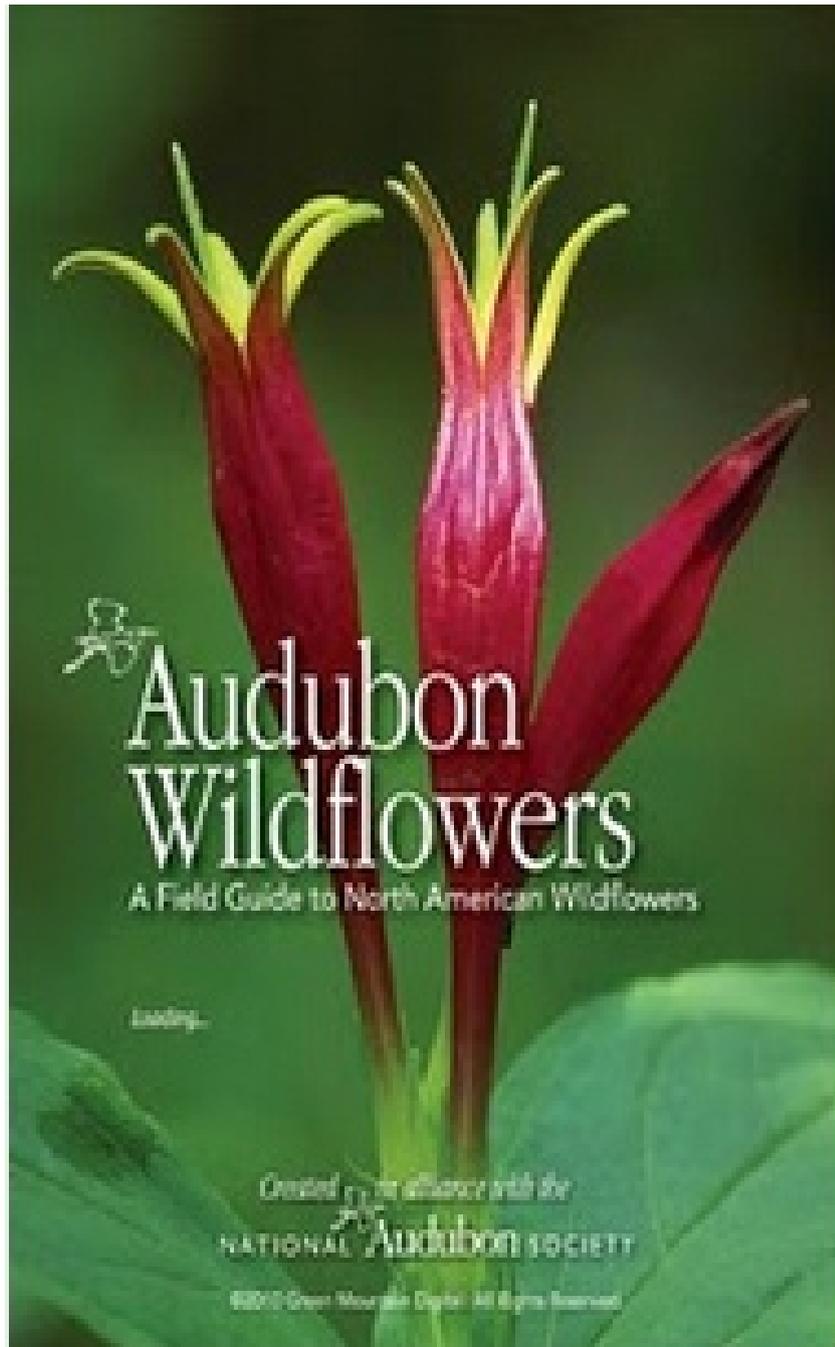
**Alismataceae (Water Plantain Family)**  
Annual, perennial herbs, plants aquatic or growing in mud; leaves often submersed, palmately veined, blades above water linear to arrow-shaped; flowers in clusters atop leafless stem (scape); sepals 3, green; petals 3, showy; stamens many; ovary superior; fruit an achene.

**Amaranthaceae (Amaranth Family)**  
Annual, biennial, perennial herbs, shrubs, plants often in saline soils; leaves simple, alternate or opposite; flowers in clusters or solitary, often inconspicuous, hermaphroditic, monoecious, or dioecious; sepals 1-5 or absent, free or fused; petals absent; stamens 1-5, opposite the sepals; ovary superior; fruit an achene or utricle.

**Amaryllidaceae (Amaryllis Family)**  
Perennial herbs, plants from bulbs; leaves simple, linear, parallel-veined, mostly basal, alternate; flowers in clusters, often showy; tepals (sepals and petals that look identical) 6, free or fused; stamens 6; ovary inferior; fruit a capsule.

**Anacardiaceae (Sumac Family)**  
Vines or shrubs, some plants toxic, may produce contact dermatitis; leaves compound, deciduous, alternate, palmately 5-fingered, bipinnately 5-fingered, fruit...





# Audubon Wildflowers

A Field Guide to North American Wildflowers

Lesley J. Carter

Created in partnership with the  
NATIONAL AUDUBON SOCIETY

©2010 Green Mountain Digital. All Rights Reserved



# Audubon Guides

Next



## Pasqueflower

Previous



*Pulsatilla patens* ssp. *multifida* (Puls...

Wild Crocus



## Pasqueflower

©Pat and Tom Leeson/Photo Researchers, Inc.

1 of 4

Add a Sighting

Add to Life List



Images



Range



Description

# Audubon Wildflowers

Search species



## Advanced Search

### Shape

Daisy And Dandelion-like Flowers



### Habitats



Mountains (alpine +subalpine)

### Regions



Northwest

### Colors



### Months



### Plant Size



### Plant Growth Form



### Flower Size



### Flower Inflorescence Shape



### Flower Parts



# Audubon Wildflowers

Search species



Advanced Search

Shape

All

All

Seeds And Fruits



Cacti, Yuccas, And Agaves



Radially Symmetrical Flowers



Daisy And Dandelion-like Flowers



Bilaterally Symmetrical Flowers



Rounded Clusters



Elongated Clusters



Flower Inflorescence Shape



Flower Parts



Flower Color



Leaf Size



# Audubon Wildflowers

Barberry (5)

First

Last

Scientific



**Blue Cohosh**

*Caulophyllum thalictroides*



**May-apple**

*Podophyllum peltatum*



**Northern Inside-out Flower**

*Vancouveria hexandra*



**Twinleaf**

*Jeffersonia diphylla*



**Vanilla Leaf**

*Achlys triphylla*

# Audubon Wildflowers

Next

**Vanilla Leaf**

*Achlys triphyll*

Previous

Sweet-after-death



©Ronald J. Taylor  
1 of 1

Add a Sighting

Add to Life List



Images



Range



Description

# Audubon Wildflowers

Next



**Vanilla Leaf**

*Achlys triphyll*

Previous



1 of 1

Add a Sighting

Add to Life List



Images



Range



Description

## Audubon Wildflowers

Next

**Vanilla Leaf**

*Achlys triphyll*

Previous



**Family:** Barberry

**Alternate Name:** Sweet-after-death

**Description:** Pairs of low slender stalks grow in patches, one stalk actually a petiole, having at its tip a round leaf blade with 3 broad, fan-shaped leaflets; the other stalk ending in a narrow spike of small white flowers. Leaves: leaflets 2-4" (5-10 cm) long, with blunt teeth on ends, the central leaflet with 3-5 or up to 8 teeth. Height: 10-20" (25-50 cm).

**Habitat:** Woods.

**Range:** Southern British Columbia to near the coast of northern California; in California mostly outside the redwood region.

**Discussion:** When the leaves are dried, they smell like vanilla. The large, 3-parted leaf is unusual, like that of its only close relative, California Vanilla Leaf (*A. californica*), found nearer the coast, but which generally has 6-8 (rarely up to 12) teeth on the central leaflet.

**Flower:** April-June. Spike 1-2" (2.5-5 cm) long; the flowers without sepals or petals but with 6-13 white stamens, the outer ones swollen toward tip.

Add a Sighting

Add to Life List



Images



Range



Description



# Comparison of Flower Apps

## Turner

- Great for Washington
- Has Browse and Advanced Search Mode
- Can look up by common name or latin name
  - Has range maps from Burke site
  - Does not have all species from Burke site
  - Does not use GPS to get location/elevation
- Sortable by common, scientific, common family or latin family names
- Has life zone info, flower basics and glossary
  - Does not allow you to identify family by attributes

# Comparison of Flower apps

## Audubon flowers

- Organized by scientific or common name
- Has a grid view as well as list view
- Advanced search is more like Stewart's family attributes (i.e. linear venation vs net, 3,4 or 5 petals, bilateral or radial symmetry, etc.)
- Can search by name or growth form
- Can have multiple choices in advanced search but is AND search (Turner allows only one attribute for each class)
- Not available for all platforms
- Is for entire country, cannot be localized to Washington state only NW
- 3000+ photos, no trees (there is a tree app)
- Both usable without web connection

- Washington Wildflower App
- Has many more species for Washington than Turner app (takes a lot of space)
- Does not have range maps
- Has a much more detailed search engine
- Allows forgiveness (i.e. guessing wrong)
- Hard to read labels on photos
- Overwhelming for beginner

# Other useful apps for the field

## Audubon nature apps

- 1) Trees (and shrubs)
- 2) Mammals
- 3) Mushrooms
- 4) Butterflies
- 5) Reptiles and Amphibians
- 6) Insects and Spiders
- 7) Fish
- 8) Northwest Ecosystem

All have advanced search, life list, reporting, don't need connection  
only apply to some 'platforms'. All have same feel and organization

# Other useful apps

- For trees

Virginia Tech Tree Identification – uses gps or location

- has a series of questions to narrow list of possibilities (growth form, habitat, leaf structure, flower type, fruit type, leaf organization, lobed?, leaf edges, leaf shape, leaf, twig or needle organization)
- It is free

# Audubon Trees



Browse by Shape



Browse by Name



Browse by Family



All About Trees



Advanced Search



My Content



## **Virginia Tech Tree Identification**

### **OBTAIN LOCATION**

Once your location is obtained  
you can display local trees.

### **IDENTIFY TREES**

Provide more information to  
restrict the list of possible trees.

### **ASK DR. DENDRO**

### **ABOUT THIS APP**

# Field Guides – there are many, many options

- Do I need a field guide?
- Plants
- Pojar and MacKinnon – BC coast into Washington – organized by family, has ferns, shrubs and trees, mosses, liverworts and lichens. Has uses by native americans and other fun facts
- Turner and Gustafson – in my opinion superceded by Turner's app. There is a new shrub book by Turner. His photos are excellent (also a fine web page by him). Organized by color and form.

# How to use field guides in the field

- Find a way to carry and protect them – tolerance for this varies between people
- Try to figure out what a species is before looking in the book
- There are dichotomous key books (e.g. David Biek's book on Mt. Rainier), which are great if you really want to know, but you need to know jargon and may have to carry a hand lens.
- Don't be chagrined if you fail, but try recording the plant by photo or drawing or description. You will improve at this over time (cell phones fine).
- Unless you are experienced or incredibly anal don't spend too much time on any plant. Sometimes you will get better examples and you'll surely see more.