

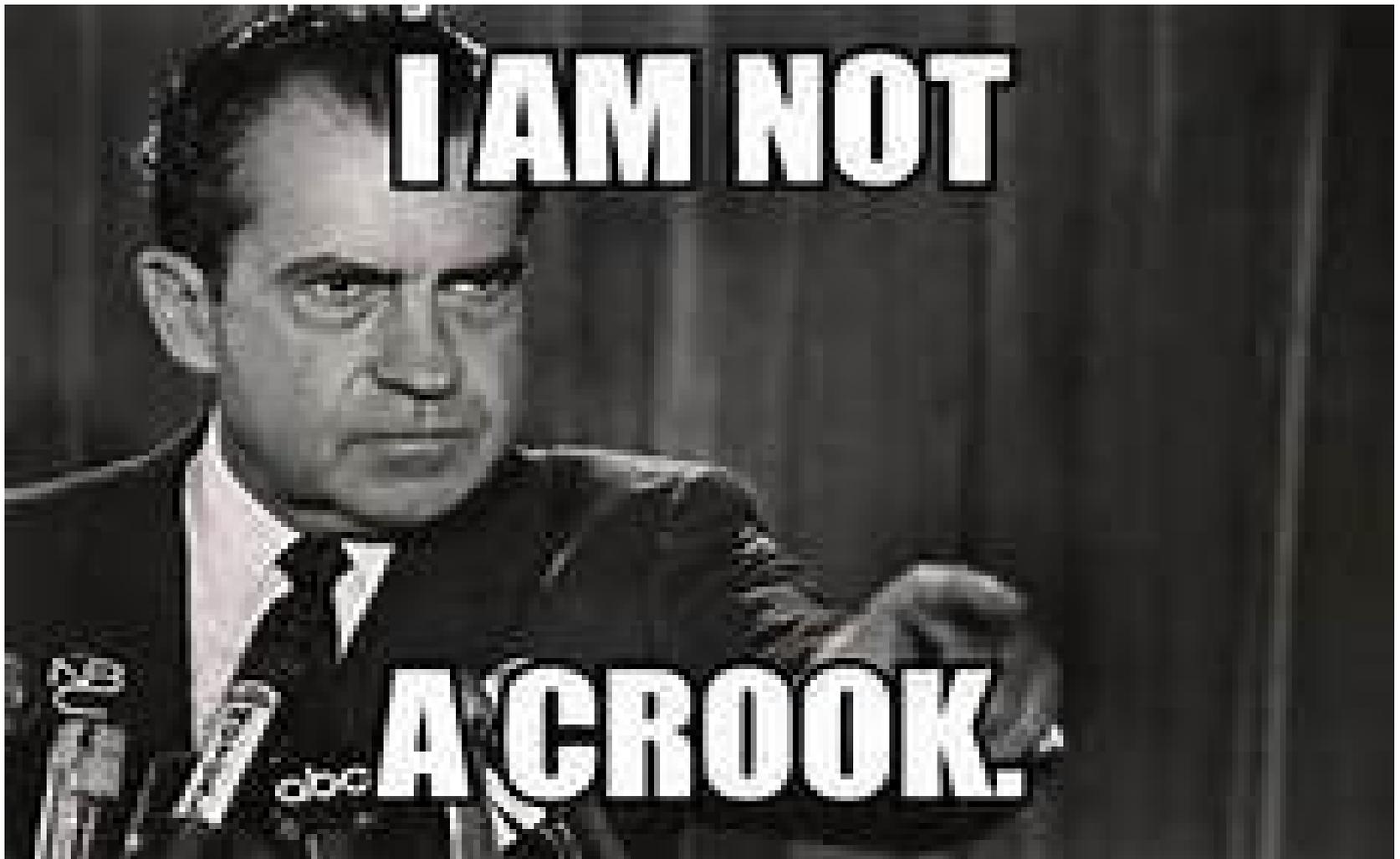
Use of Apps and Field Guides

Bird App evaluation

Plant lists for hikes – Washington Native Plant
Society

Demonstration of Flower Apps
Field and Home Guidebooks

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)



finch



Browse Birds



By Shape



By Family



By Name



Find Birds with eBird



Advanced Search



About Birds and Birding



My Sightings

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

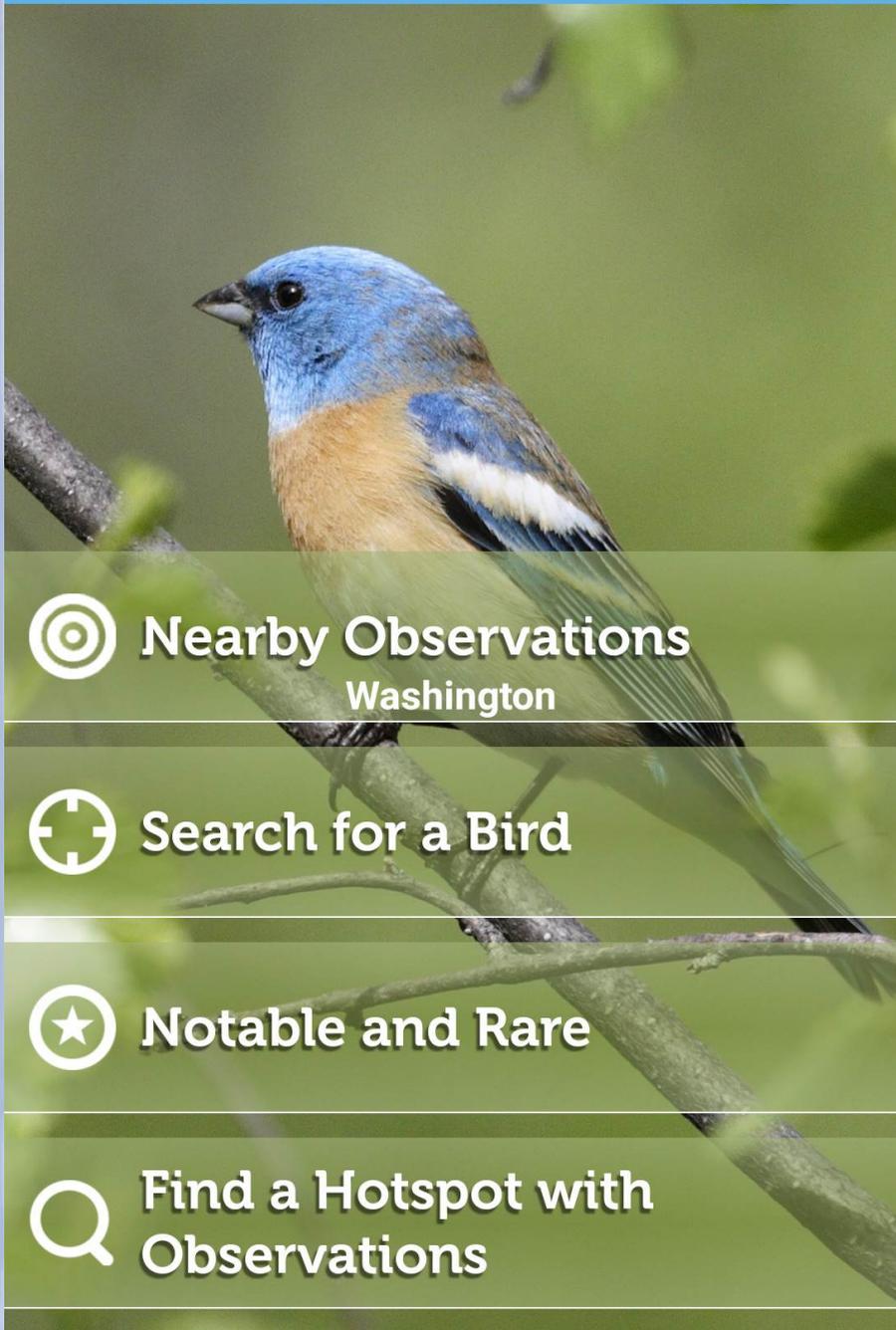


adult male ©Brian E. Small/VIREO



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

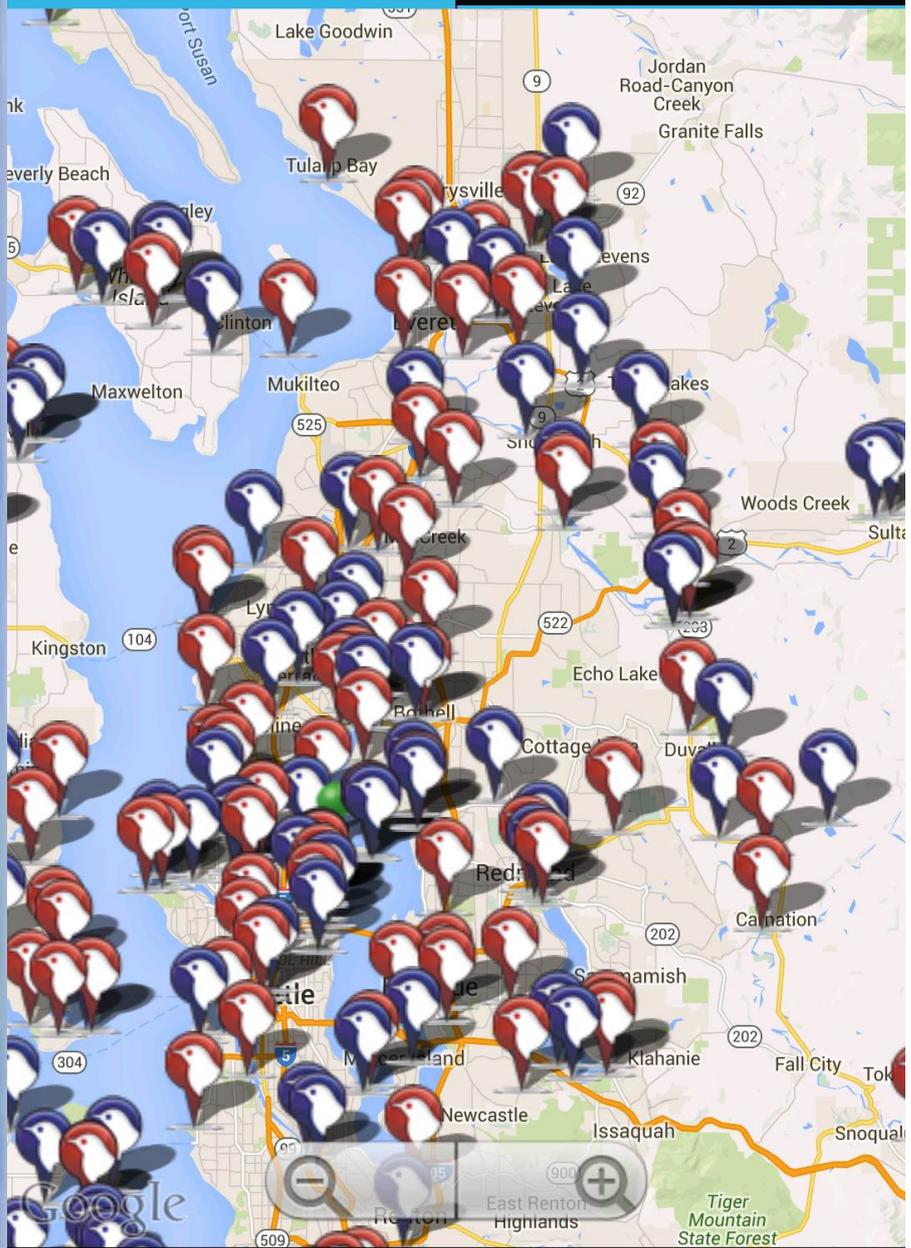
Bald Eagle

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
- 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

Four (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
4. Washington Wildflower Search (FREE)

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)

Flowering Time April to June	Height 6-26 inches
Relative Abundance Common	Life Cycle 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.

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)

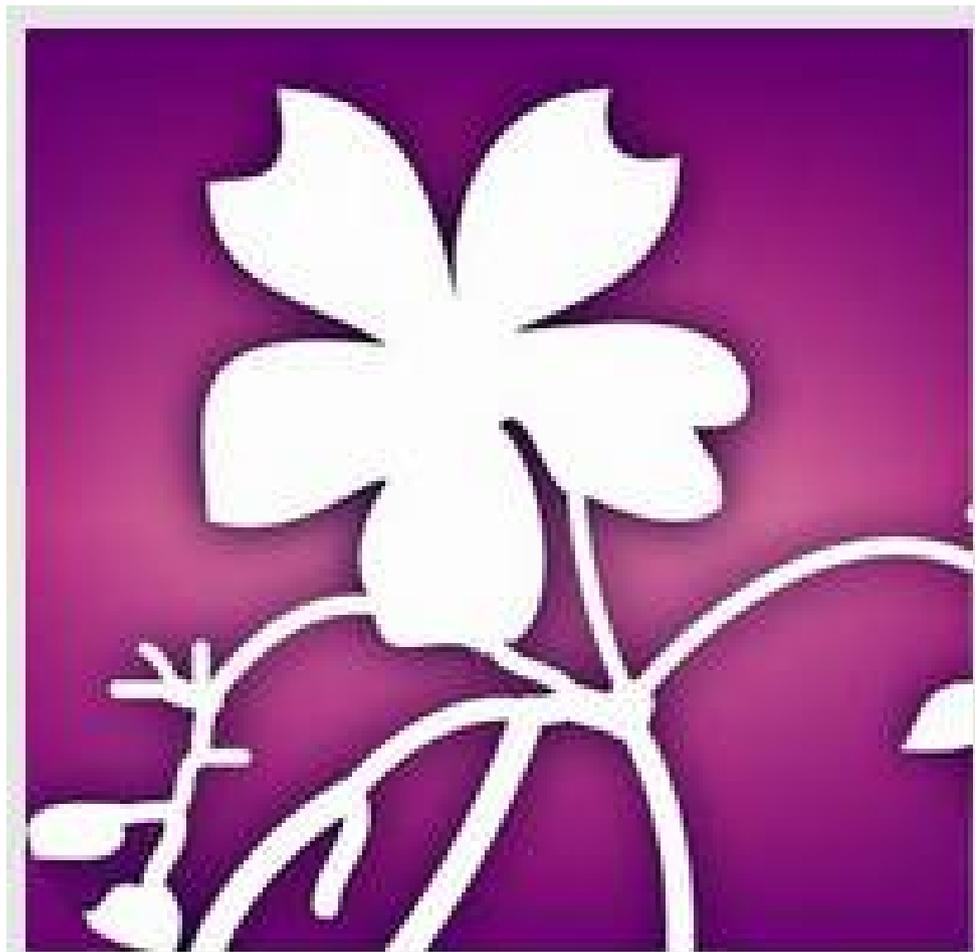
Annual, biennial, perennial herbs, shrubs, plants often in saline soils; leaves simple, alternate or opposite; flowers in clusters or solitary, often inconspicuous, hermaphroditic, monoecious, or dioecious; sepals 1-5 or absent, free or fused; petals absent; stamens 1-5, opposite the sepals; ovary superior;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

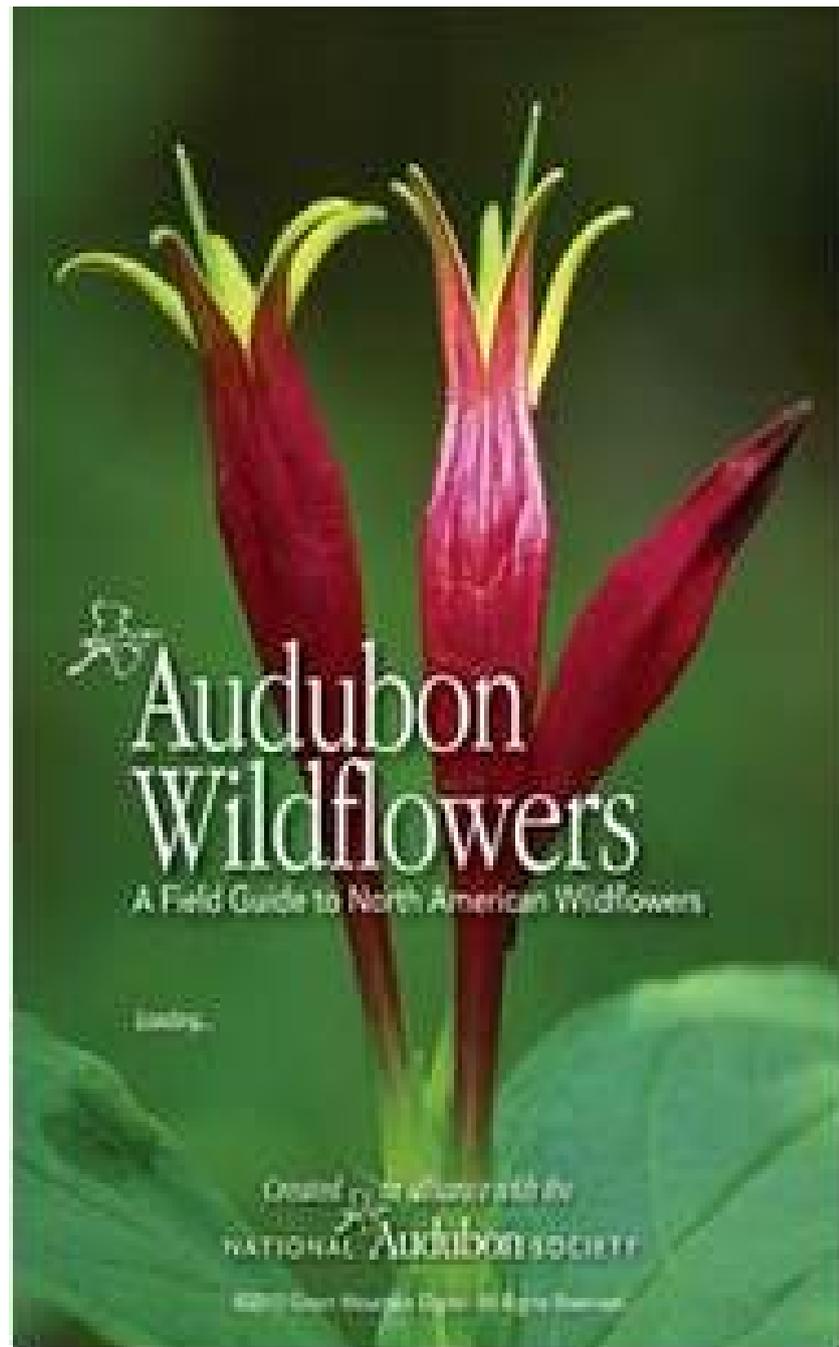
Amaryllidaceae (Amaryllis Family)

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,





Audubon Wildflowers

A Field Guide to North American Wildflowers

Robinson

Created in collaboration with the
NATIONAL AUDUBON SOCIETY

©2001 Simon & Schuster, Inc. & the Trustees



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 Lea:

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 separate tree app)
- Both usable without web connection

Comparison of Wildflower Apps

- Washington Wildflower App 2250
- 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

Comparison of Wildflower apps

- *Washington wildflower search (free)
- There is an app for each state and a few provinces
- Has trees, shrubs, ferns, mosses, lichens, aquatic, grasses and vines
- Has a search engine including color, petals, leaf, location (lat-lon), elevation, month and habitat
- Newest upgrade has description and photo(s).
- Lists search result in order of highest probability
- Has a range map, description and links to other descriptions of plant (requires data connection)

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?
- Pojar and MacKinnon – BC coast into Washington – organized by family. Has uses by native americans and other fun facts. Other books on alpine and eastern mountain plants.
- Turner and Gustafson – superceded by Turner's app. Organized by color and form. New shrub book by Turner. Excellent photos His photos
- ***Daniel Mathews – Natural History of Pacific NW Mts.** Informative, colorful, broad in scope. Better at home than in the field. Plants organized by form. Fish, fowl and flowers.

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 phone's fine for photos).
- 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.