



Weed ID of High Priority Species on CDLT Properties



What's out there???



Trees

Brush

Flowers

Grass

The 8 Great Things to Notice About Plants

Plant Character Analysis

1. Plant Habit
2. Leaf Arrangement
3. Leaf Shape and Texture
4. Inflorescence Type
5. Flower structure
6. Fruit Type
7. Roots and underground structures
8. Other Observations

1. Plant Habit



ascending



erect



sprawling



climbing



creeping

HABIT

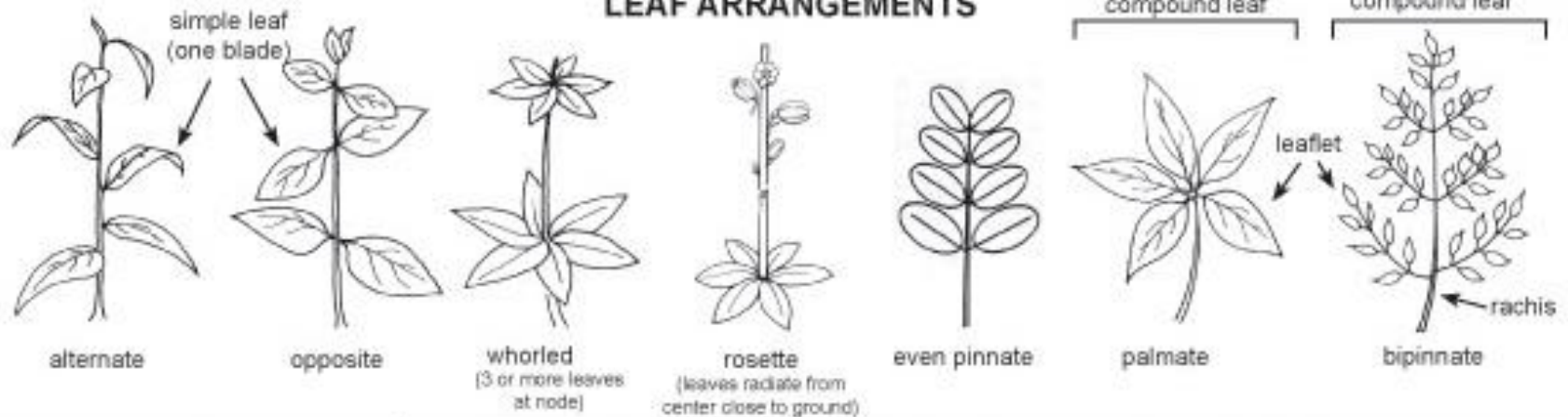
4th edition 2009
Copyright 1991 University of Florida
Center for Aquatic and Invasive Plants

<http://plants.ifas.ufl.edu/education>

UF UNIVERSITY of
FLORIDA
IFAS Extension
Center for Aquatic
and Invasive Plants

2. Leaf arrangement

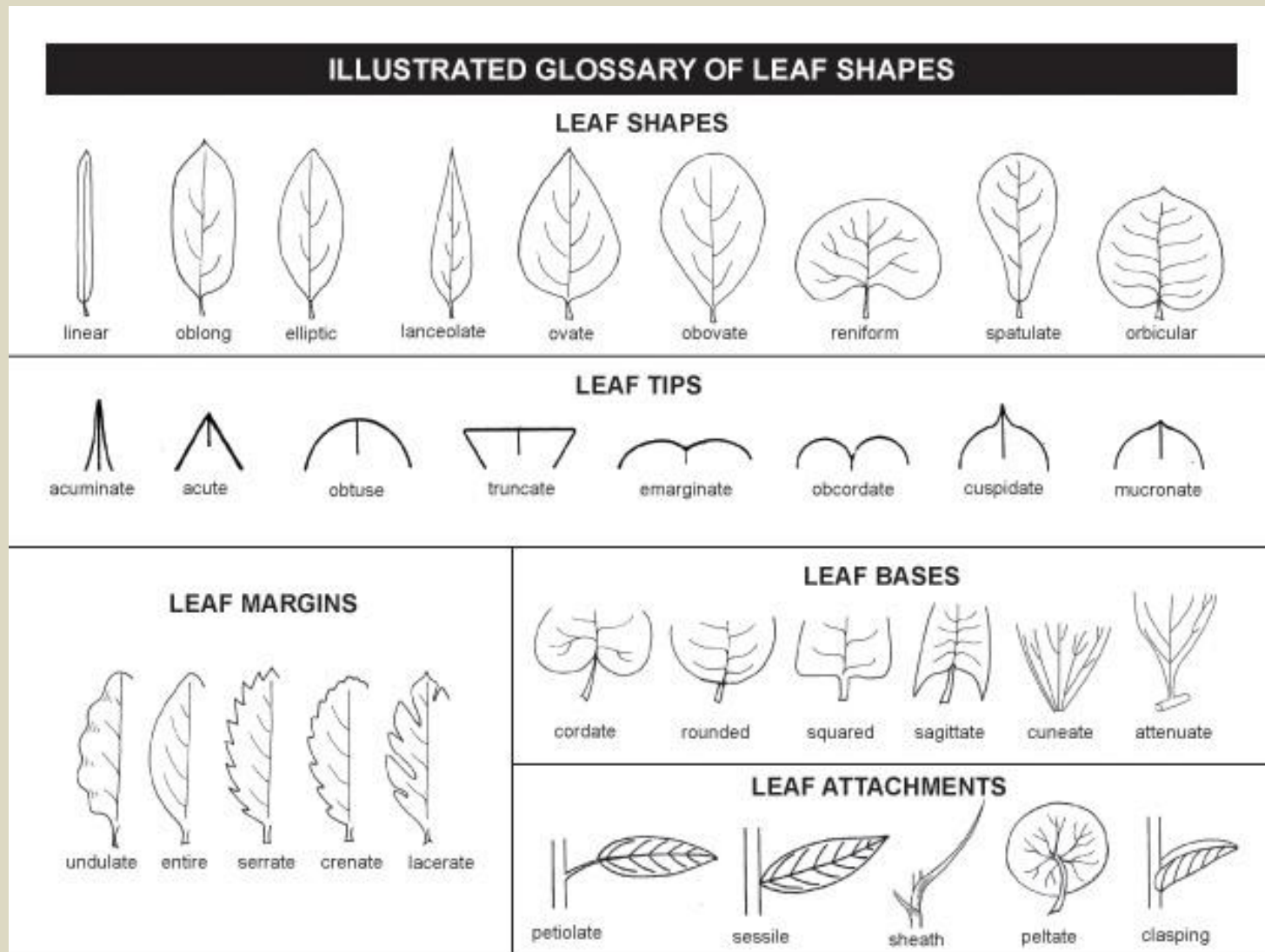
LEAF ARRANGEMENTS



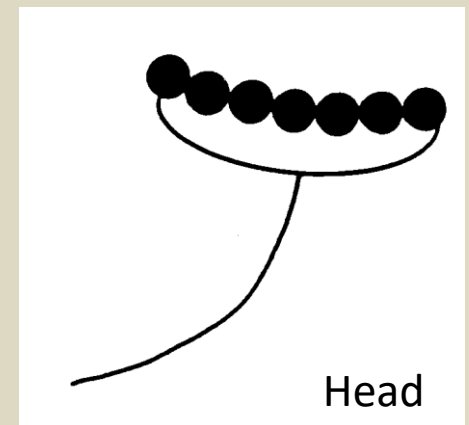
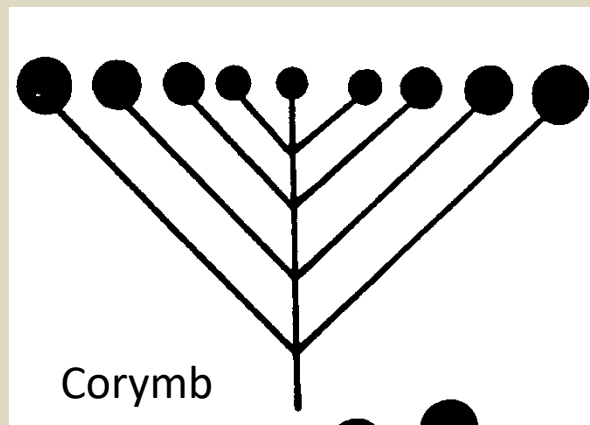
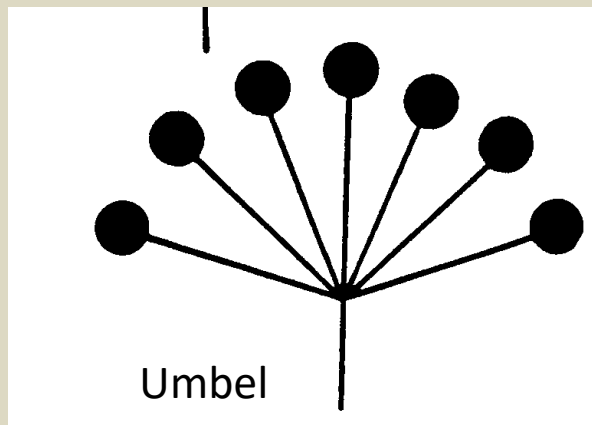
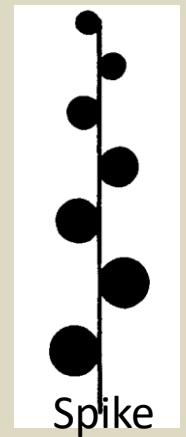
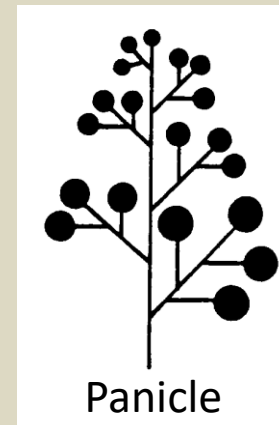
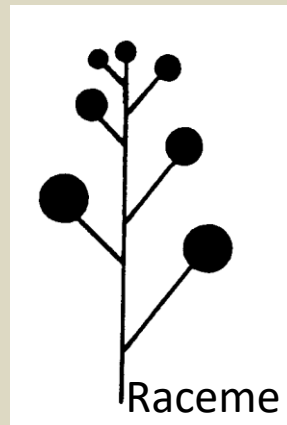
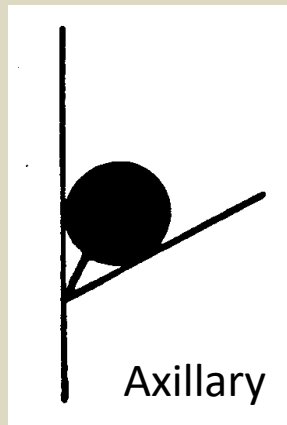
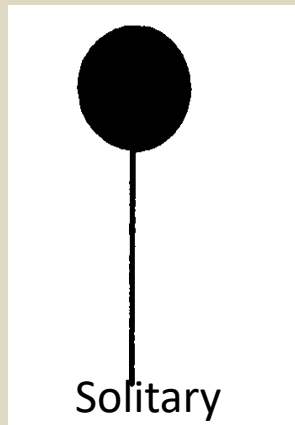
HABIT



3. Leaf shape and texture

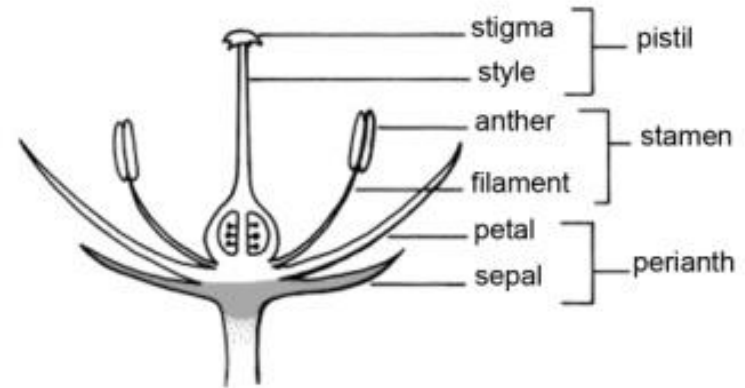
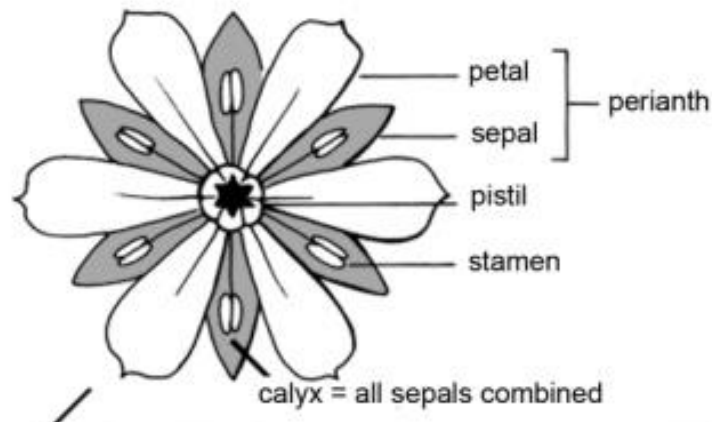


4. Inflorescence Type

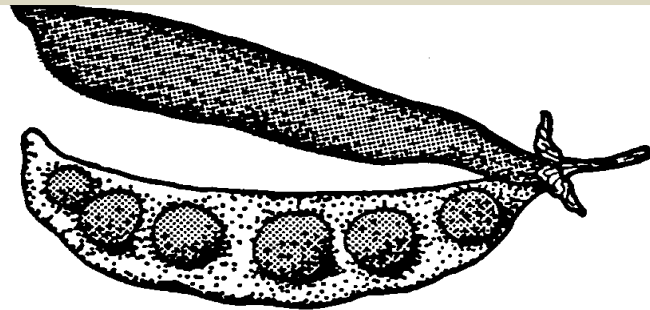
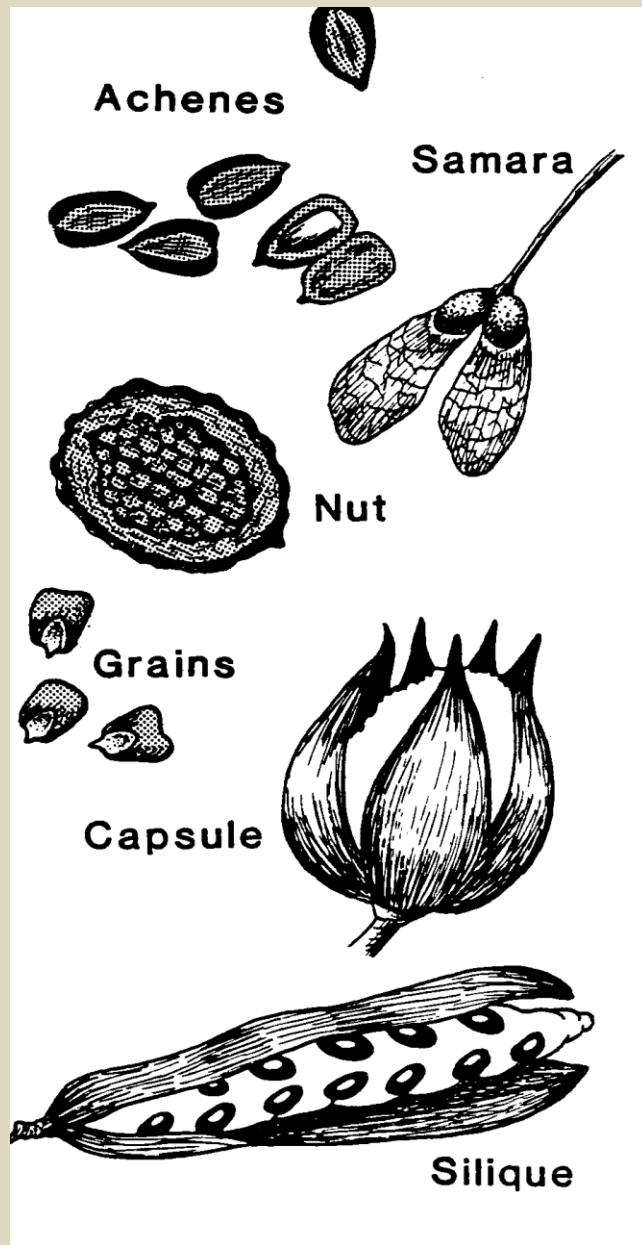


5. Flower Structure

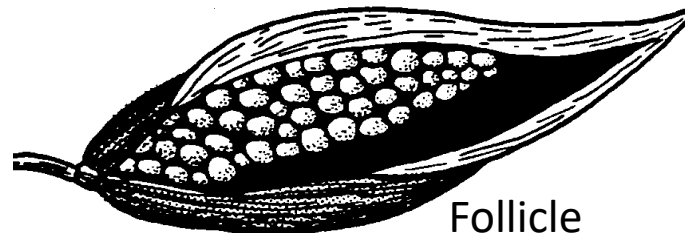
ILLUSTRATED GLOSSARY OF FLOWER PARTS



6. Fruit Types



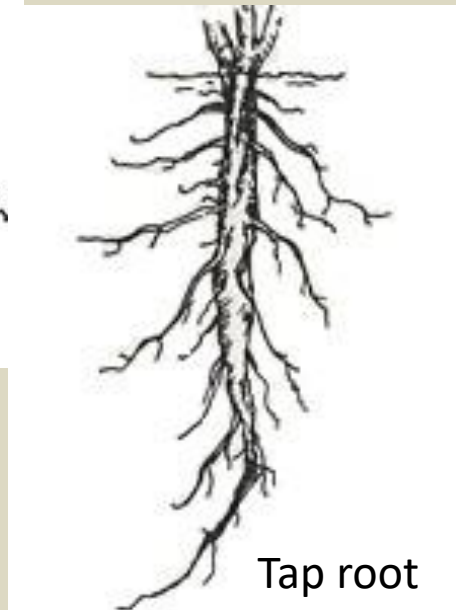
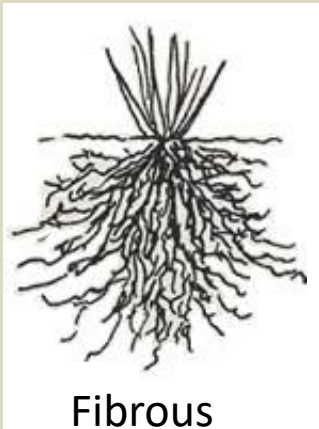
Legume



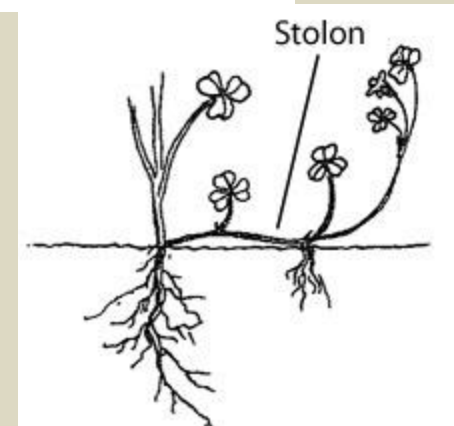
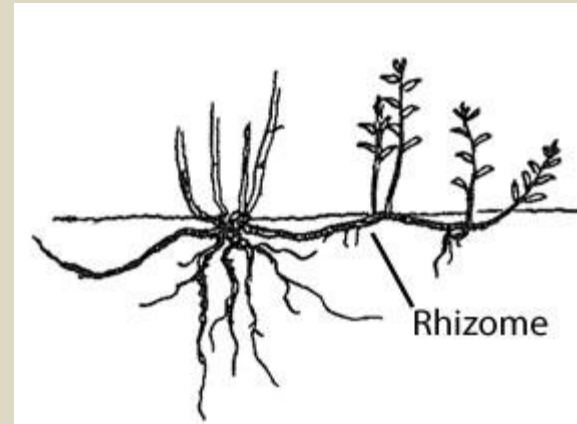
Follicle

7. Roots and Underground structures

Roots



Rhizomes and Stolons



8. Other Observations

- Unusual odor
- Sticky texture
- Plant juice – milky, sticky, viscous, watery
- Overall color – bright green, gray, yellow
- Bracts, spines, thorns or hairs
- Associated insects

Let's look at some high priority species



Tree of heaven *Ailanthus altissima*
Class C, new to list 2013

- Woody perennial
- Strongly rhizomatous
- Leaves alternate and compound



Spotted lantern fly



E. Swackhamer



PA Department of Agriculture



PA Department of Agriculture



PA Department of Agriculture



PA Department of Agriculture

- A. Egg masses
- B. Early nymph
- C. Late nymph
- D. Adult, wings closed
- E. Adult, wings open

Young plant sprouting





1560106



1560110

- Flowers in dense clusters, blooming in mid summer
- Fruits winged, very effective wind dispersal
- Fruits lodge in cracks
- Trees often seen sprouting in cement and along foundations in urban areas



UGA1150029



UGA2307009





[News](#)

[Report Sightings](#)

[About the Council](#)

[Council Projects](#)

[About Invasives](#)

[Priority Species](#)

[Documents](#)

[WISE](#)

Butterfly Bush

Photo: Tim Miller, Washington State Noxious Weed Control Board



Washington Invasive Species Council

News and Events

- › [March 28th Council Meeting](#)
- › [What the Bug is That? Webinar](#)
- › [Crayfish Invasions Webinar](#)

[Read More](#)



Report Invasive Species



Use the **WA Invasives** mobile app to report
invasive species sightings.



Follow Us





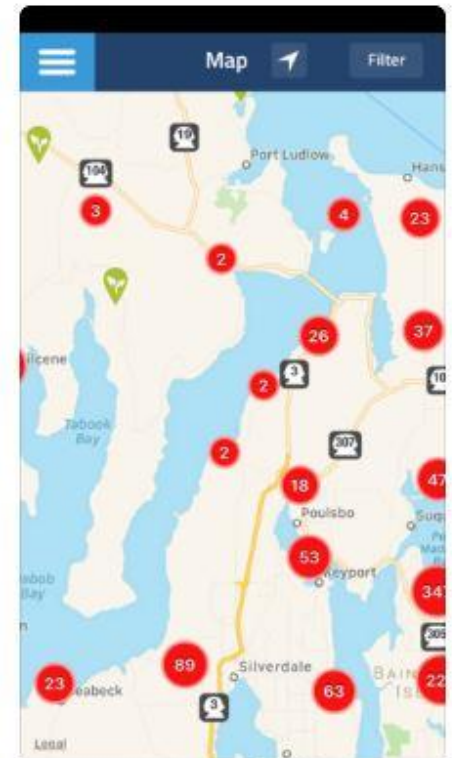
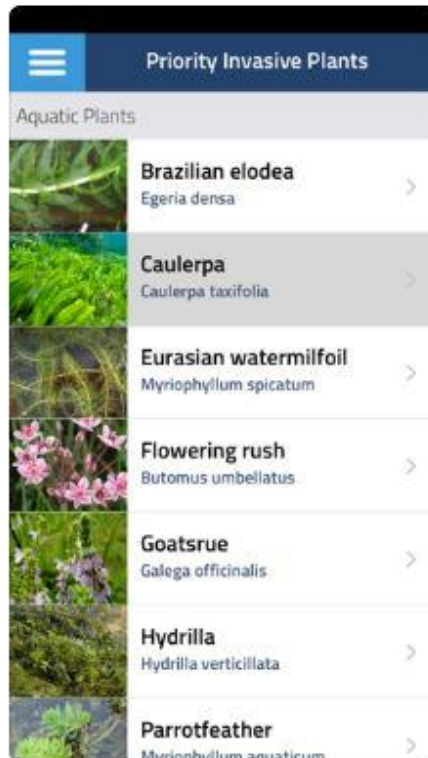
WA Invasives 4+

Charles T. Barger

★★★★☆ 3.8, 5 Ratings

Free

iPhone Screenshots





Whitetop

- A.K.A. Hoary cress, Pepperweed*
- Perennial forb, extensive root system
- Lance-shaped, blue/green leaves
- White flowers
- Early emergence, set seed by summer
- Common on alkaline disturbed soils



UGA2149045

UGA2149060

White top – Class C



- Perennial forb, extensive root system
- Lance-shaped, blue/green leaves
- White flowers
- Early emergence, set seed by summer
- Common on alkaline disturbed soils
- Seed pod is a silicle
- Seeds become sticky when wet



Hoary alyssum *Berteroa incana*



Hoary Alyssum (*Berteroa incana*)



Weed of stressed areas
Toxic to livestock
Can be annual, biennial or short perennial



The Knapweeds, which one???

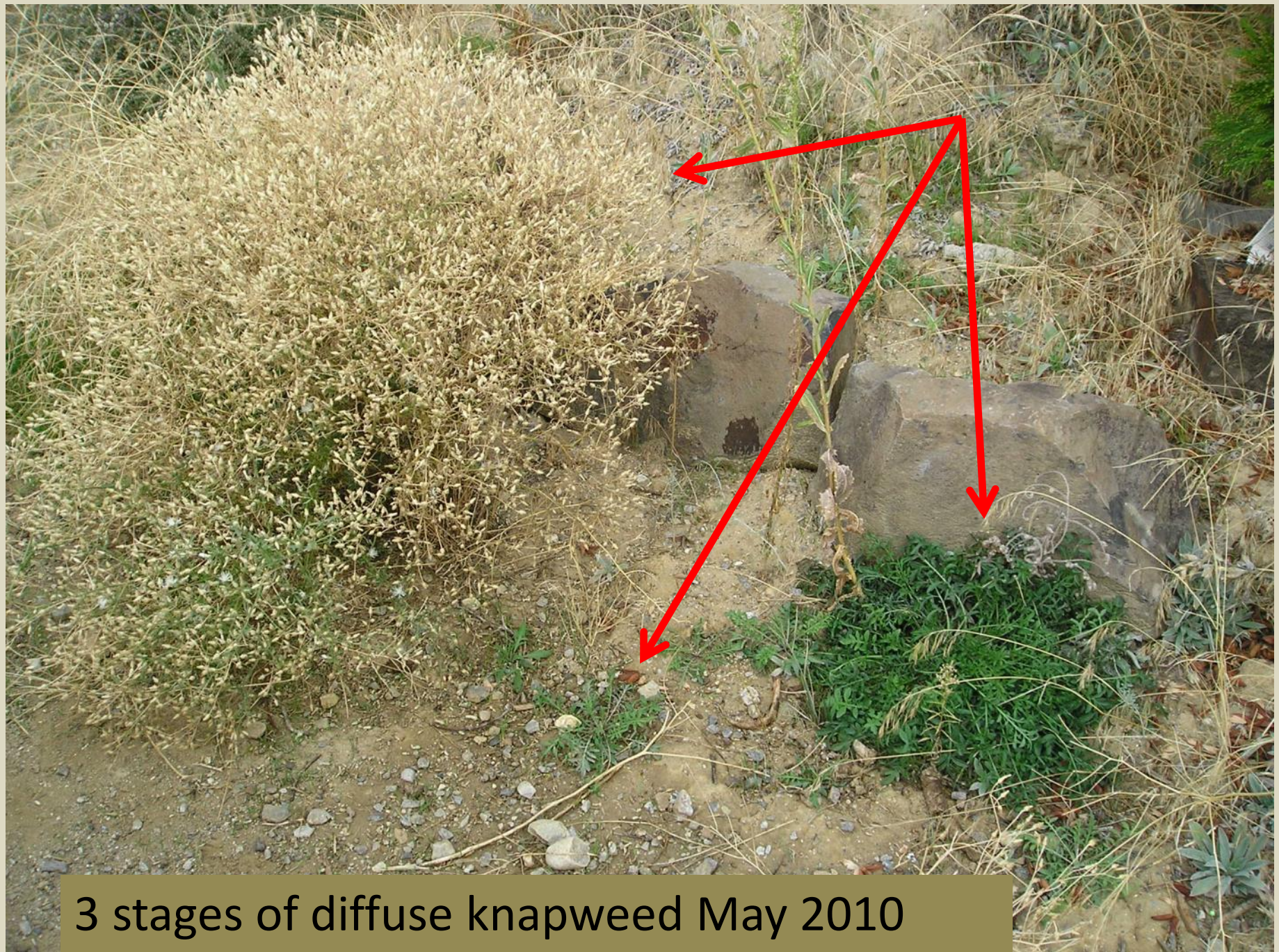


Diffuse knapweed – Class B



- Biennial or short-lived perennial
- Flowers are white, rose-purple or lavender
- Stems upright, 6 to 30 inches tall and highly branched
- Basal leaves, stalked and divided into narrow, hairy segments. Stem leaves smaller and alternate
- Spiny bracts below flowers





3 stages of diffuse knapweed May 2010

Spotted knapweed— Class B designate



- Perennial
- 2 to 4 feet tall with one or more erect stems
- Floral bracts are tipped with dark, short spines
- Leaves are deeply lobed
- Extensive taproot
- 140,000 seeds



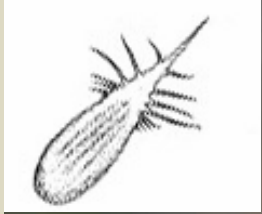
Russian knapweed – Class B



- Perennial, strongly rhizomatous
- Flowers are pink or purple with papery bracts
- Stems erect, thin, branched and covered with soft, short, grey hairs
- Leaves narrowly oblong to lance-shaped, lower lobed, upper toothed to entire



Look at the bracts



Scentless mayweed

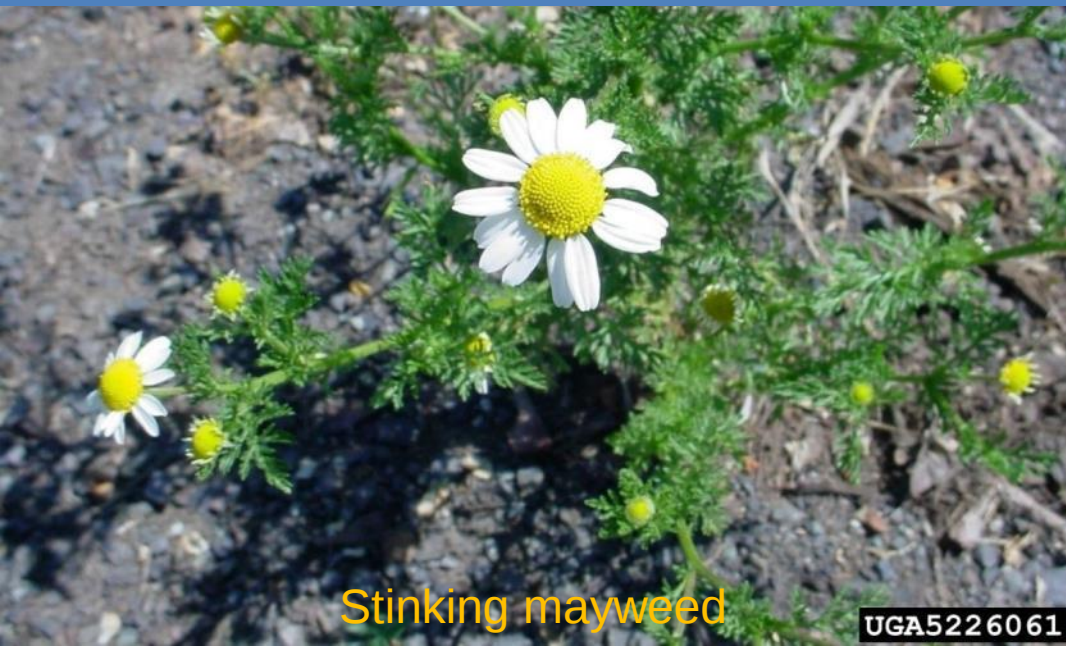


Oxeye daisy



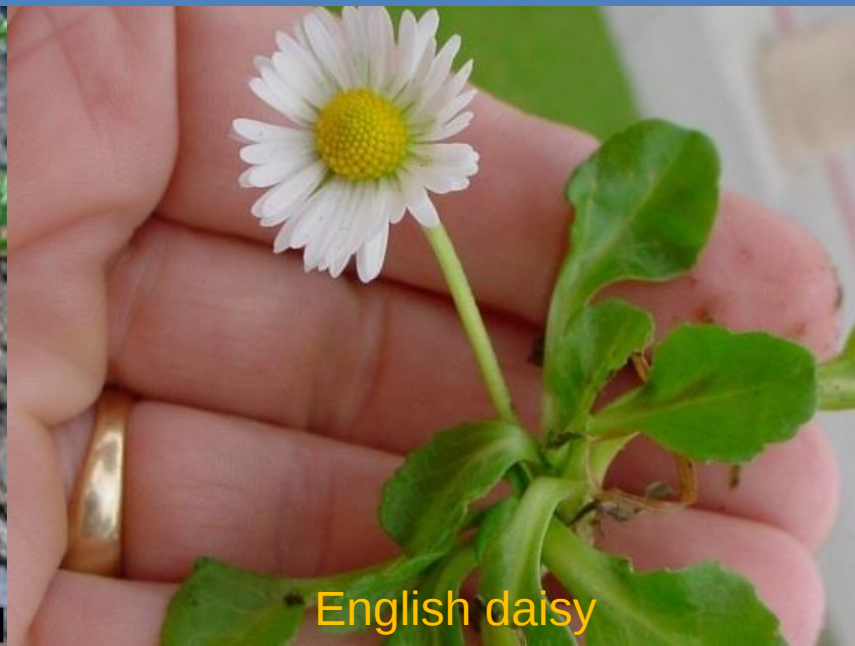
Daisies, we love them, we love them not.

Stinking mayweed



UGA5226061

English daisy



Daisies with finely divided leaves

Photo by:
Richard Old
www.xidservices.com

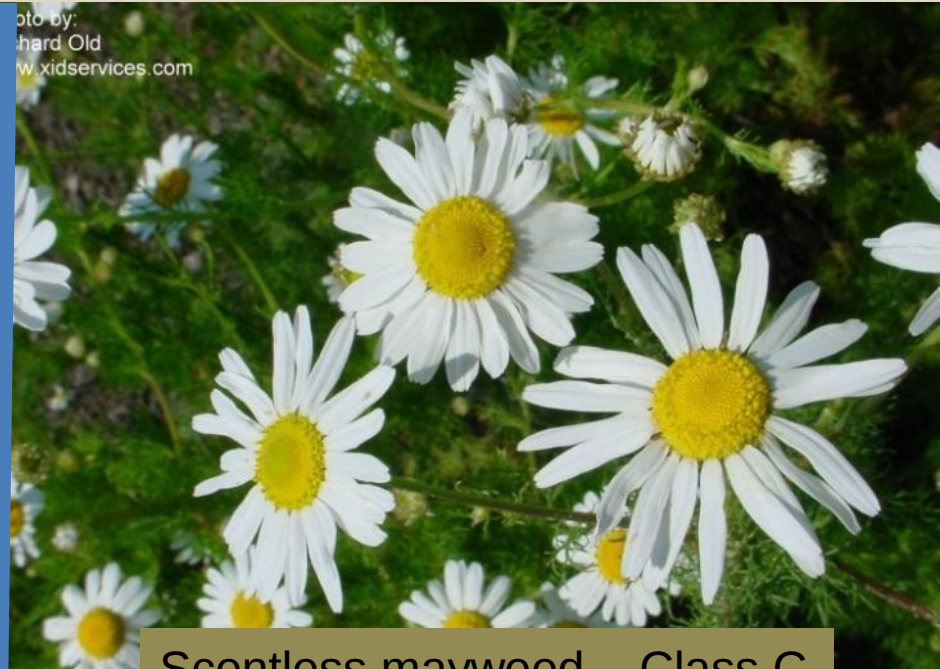


Stinking mayweed

Richard Old
www.xidservices.com



Photo by:
Richard Old
www.xidservices.com



Scentless mayweed – Class C



Daisies with oval, toothed basal leaves



English daisy

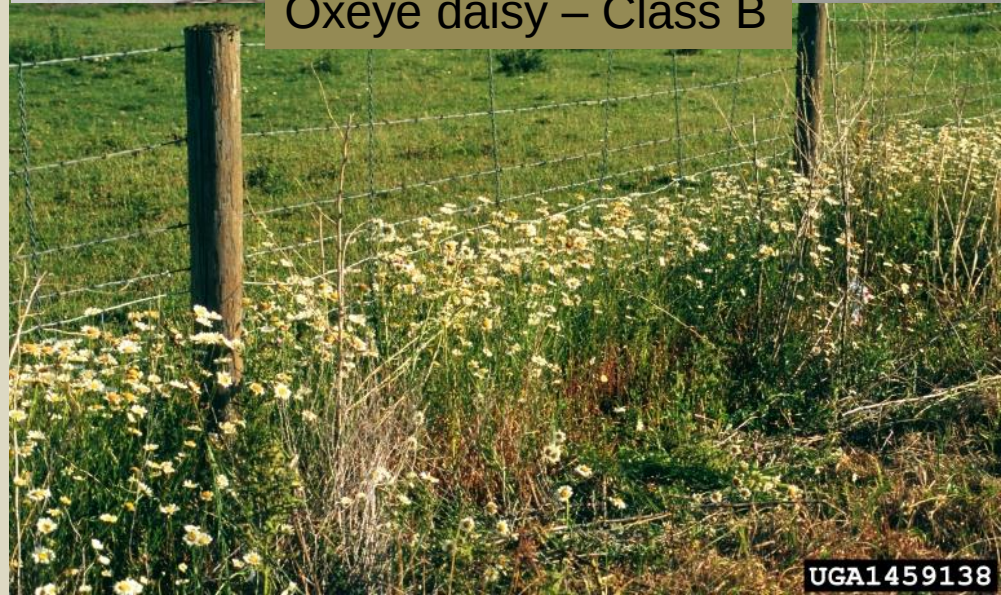


UGA52



Oxeye daisy – Class B

UGA1196047



UGA1459138

Ox-eye daisy



Class B – Designated Region
6, Selected Region 3

Jointed goatgrass

Aegilops cylindrica



Figure 2. Hairs extend from the margin of the leaf blade of jointed goatgrass (left), particularly near the collar or stem, distinguishing it from winter wheat (right), which is hairless.

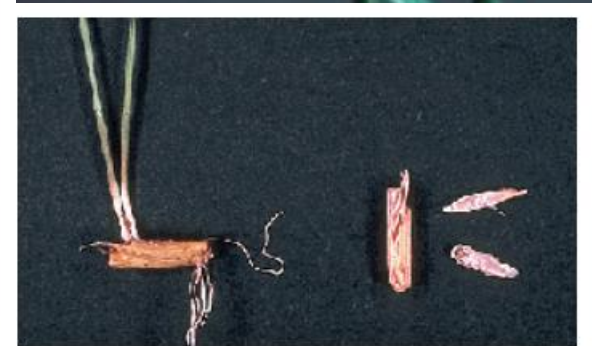
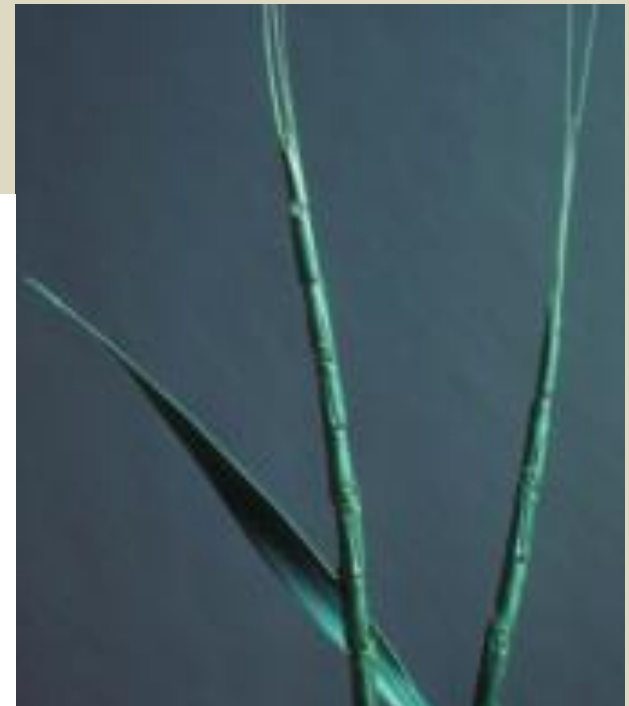


Figure 4. The jointed goatgrass spikelet (center) may contain one to four seeds (right) and each spikelet may produce multiple seedlings (left).

- Occurs in every Eastern Washington county
- Winter annual, seeds persist 5 years

Medusahead grass



Medusahead grass

- Stays green longer than other winter annual grasses
- Seed heads have very bristly appearance
- Forms a dense thatch, decomposes slowly



Medusahead grass

Grass Manual on the Web

Illustrator(s) Linda A. Vorobik and Hana Pazdírková.

Taeniatherum caput-medusae

Themeda
Themeda arguens
Themeda quadrivalvis
Themeda triandra
Thinopyrum
Thinopyrum intermedium
Thinopyrum junceum
Thinopyrum ponticum
Thinopyrum pycnanthum
Thysanolaena
Thysanolaena latifolia
THYSANOLAENAEAE
Pterochloa
Pterochloa erecta

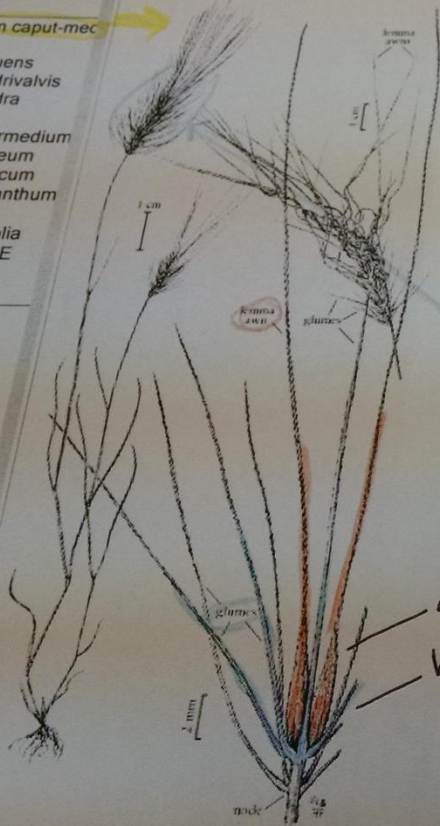
Choose Species

p
stration
e
ment
ymy

ifications

ap data

Home

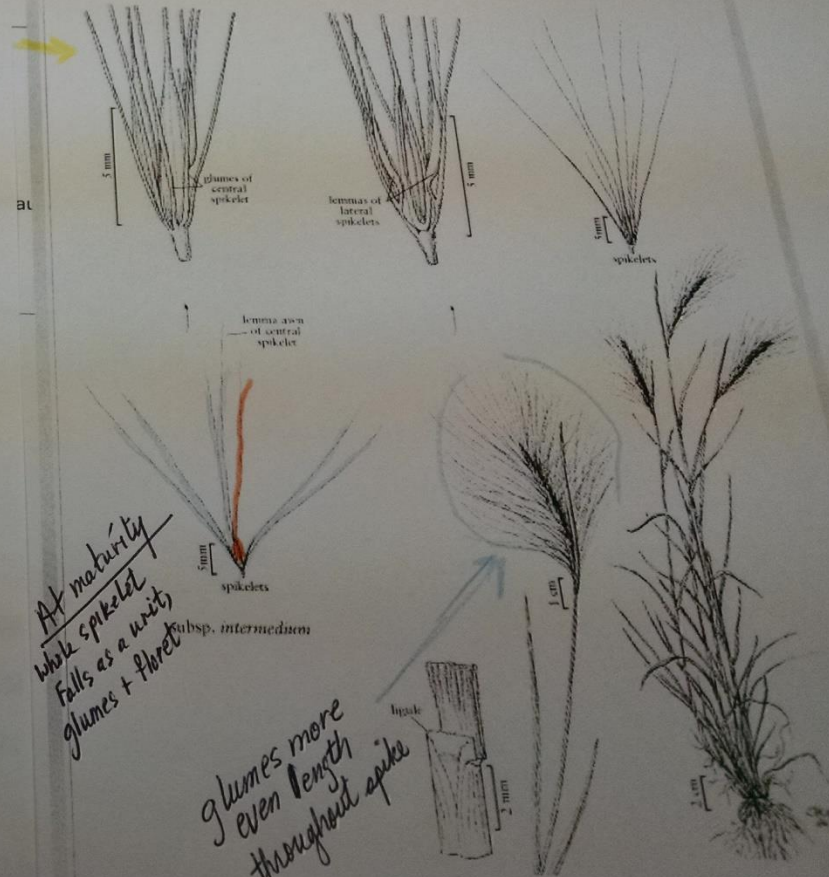


T. caput-medusae

shorter glumes at bottom of spike

At maturity
orange-florets fall out of spike
blue-glumes persist

Illustrator(s) Cindy Roché and Annaliese Miller.



At maturity
whole spikelet
falls as a unit
glumes + florets

glumes more
even length
throughout spike

Th. triandra

St. John's Wort



Class C - Selected for control



Nathan Belliston



Puncturevine *Tribulus terrestris* (goatheads)



Plants prostrate radiating in all directions from a central point

Puncturevine *Tribulus terrestris*



Sulfur Cinquefoil



Green + green = mean
Green + white = it's all right



Copyright © 2007 The Regents of the University of California

UGA2153093

Houndstongue – *Cynoglossum officinale*

Class B

Photo by:
Richard Old
www.xidservices.com



- Biennial
- Stems erect, single or multiple stems/plant
- Flowers reddish-purple to burgundy and 3/8" wide





Houndstongue rosettes and seedlings

- Stems erect, single or multiple stems/plant after bolting
- Leaves wide, rough, hairy, lacking lobes
- Basal leaves with narrow petiole



Houndstongue fruits made up of 4 nutlets with tiny hooks (like velcro)



Dalmatian toadflax – Class B



- Perennial, rhizomatous
- Flowers are bright yellow and resemble snapdragons
- Stems are 1 to 3 feet tall containing 1 to 25 vertical floral stems
- Leaves broad, tear-shaped with a waxy cuticle



Yellow starthistle – *Centaurea solstitialis*

Class B



Yellow starthistle – *Centaurea solstitialis*

Class B

- Erect annual, long tap root
- Leaves narrow, simple, smooth margined
- Stems winged
- Leaves and stems covered with short feltlike hairs, grey-green color



- Bright yellow flowers
- Flower heads are distinguished by sharp, straw-colored thorns, up to 2 cm long
- Two types of seeds: plumed and plumeless
- 4 - 10 year seed viability





- Mature plants up to 48 inches tall, having winged stems covered with fine cottony hairs.
- Toxic, causes chewing disease in horses



Infestation of yellow starthistle

Plants can flower and produce seed at only
6 inches tall



The most common thistles



Canada thistle



Bull thistle



Musk thistle



Scotch thistle

Look at a combination of characters:
flowers, stems, and leaf surfaces.

Do you have any native look alike?



Check your local flora: Flora of the Pacific Northwest

Cirsium undulatum – wavyleaf thistle



One of our native thistles



Canada thistle – Class C



- Perennial, spreads by rhizomes
- Small flowers < 1", purple
- Spineless bracts below flowers
- Smooth spineless stem
- Green leaves, not hairy, sharp spines on leaf lobes

Musk thistle – Class B



- Biennial or winter annual
- Flowers large 1.5-3", broad spiny bracts, "artichoke –like"
- Stems spiny somewhat winged
- Leaves green, not hairy



Musk thistle



Scotch thistle – Class B



Steve Dewey, Utah State University, Bugwood.org



Bonnie Million, National Park Service, Bugwood.org



- Biennial
- Over 6 feet tall
- Flowers 1 -2", pink, narrow spiny bracts
- Stem spiny, strongly winged
- Leaves, large, gray-green, with fine felted hair, strong spines

Scotch thistle



Wavyleaf vs. Scotch thistle



Bull thistle – Class C



- Biennial
- Larger flowers 1.5-2" with long spiny bracts
- Stem spiny, somewhat winged
- Leaf surface hairy
- Class C noxious weed

Thistle rosettes – best stage to spray?

Canada thistle



Bull thistle



Musk thistle



Scotch thistle





Rush Skeletonweed

Chondrilla juncea

Class B



- Plant with erect to ascending stems
- Basal rosette leaves lobed, look much like dandelion
- Stem leaves very reduced to absent
- Looks like a skeleton
- Stems contain sticky white latex

Plant early season, bolting but no flowers yet, basal leaves often die back late summer

Characteristic coarse downward pointing hairs at base of stem



The stiff down-turned hairs on the lower part of the stem are the diagnostic chara **UGA5230051**

Rush skeletonweed – Class B



- Perennial, long taproot, with lateral roots that can produce new rosettes
- Flower heads with 10 to 12 strap-shaped, bright yellow flowers, with lobed ends
- Fruit is a plumed achene, wind dispersed

Tips for collecting material for ID

- Press if you can
- Or, store cool in a plastic bag with a dry paper towel
- Collect all parts, including the root
- Put id # in bag or on plant to connect to your notes





Chelan County Noxious
Weed Control Board

Julie Sanderson, Coordinator
Chelan County Noxious Weed Control Board
julie.sanderson@co.chelan.wa.us
509-667-6550

BUGWOODids
Image Database System
images.bugwood.org

Thanks for the use of photos and figures:
Invasive.org
Center for Invasive Species and Ecosystem Health