

# Seedling Identification Guide

for Columbia Basin Shrub-Steppe and Grassland  
Restoration Projects

10/18/2011



Washington  
Department of  
**FISH and  
WILDLIFE**



**Suggested citation.**

Tveten, R. K. and Asher, M. 2011, Seedling Identification Guide for Columbia Basin Upland Restoration Sites

**Acknowledgements**

This guide was made possible by funding from the Bonneville Power Administration and BLM for whom WDFW and other numerous entities do habitat restoration and maintenance work. We gratefully acknowledge the assistance of the following entities that allowed us to use images or photograph plants. Especially helpful sources include the Oregon State University Larry Burrell and Jed Colquhoun photo Collection, University of Washington Burke Museum, BFI Native Seeds, Derby Canyon Natives and Desert Jewels Nursery. Permission was obtained for using images unless sources expressly indicated that there were no restrictions on image use.

**Authors**

Richard Tveten, WDFW

Melissa Asher, BFI Inc.

**Updates, Feedback, Questions.**

The guide is a work in progress and will be updated as better images become available and the inventories of available restoration species and invasive species change over time. Contributions to the manual in the form of images are most welcome. Please send such materials along with instructions on how to cite images if copyrighted.

Email address

[Richard.Tveten@dfw.wa.gov](mailto:Richard.Tveten@dfw.wa.gov)

Or mailed to:

Richard Tveten

Washington Department of Fish and Wildlife

600 Capitol Way North

Olympia, WA 98501

## Introduction

The purpose of this guide is to help people identify native plants and potentially harmful weeds on shrub steppe and grassland restoration sites in the Columbia Basin. This guide is a companion document to the [Shrub-Steppe and Grassland Restoration Manual for the Columbia River Basin](http://wdfw.wa.gov/publications/01330) (<http://wdfw.wa.gov/publications/01330>) within which the species are discussed. As native plants and weeds often germinate together on restoration sites the primary focus of this guide is on early seedling identification so weeds can be controlled before they become firmly established. This is not intended to be an encyclopedic guide and only contains the following plants,

- native species that are commonly used on restoration sites (Common names bolded in the species list),
- important native species that have been known to colonize restoration sites, and
- introduced weeds that commonly occur on restoration sites with a focus on species that can threaten the success of projects.

This guide consists of a species list and corresponding pages of photographs associated with each listed species. Photographs of seedlings are provided to help one identify seedling as early as possible. Grass seed photographs are included because seeds sometimes remain attached to seedling root systems and can sometimes be used help one identify young grasses. To the degree that helpful photographs of mature plants are available, such photographs are included as well. Notes and arrows pointing out distinguishing characteristics are provided when they can be helpful with species identification.

We acknowledge that this guide should be regularly upgraded. Species should be added as more native species become commercially available and as new weed problems are identified. Likewise, existing photographs should be replaced as better photographs become available. Guide users are encouraged to contribute photographs by sending them to [Richard.Tveten@dfw.wa.gov](mailto:Richard.Tveten@dfw.wa.gov).

### **Helpful hints for identifying seedlings.**

Inventory mature plants on and near the site before starting a restoration project. Most seedlings on a restoration site will be the progeny of plants that previously dominated the site. Identify mature plants and collect seed samples to aid in seedling identification later in the project. It is much easier to identify seedlings from a short a list of suspect species than starting with a botanical key containing all species in a region. Also, nearby mature plants can be used to confirm seedling taxonomy by comparing plant attributes like color, hair, etc.

Seed a sample tray with native plants. Plant a little bit of the restoration seed mix in weed-free soil at the office (outside) at the same time the restoration site is seeded. Observing native species as they germinate will help you to become familiar with germination times and appearance of planted seedlings. Also, by keeping track of the amount of seed tested this way, the germinability can be roughly calculated. Periodically pull a few grass seedlings up as they grow to associate seedlings with seeds and learn how long the seeds remain identifiable.

Consider drill planting patterns. If a site is planted with a drill, most desirable plants will only be growing in rows, whereas undesirable species will tend to be everywhere.

When you can't identify grass seedlings in the field, carefully pull up a few seedlings and see if the seed is still attached. If the seed is still attached, the seed can be compared to seeds in the grass seed photographs provided in this guide, to seeds in the planting mix or to mature weed seed samples collected prior to the project.

Use on-line resources to confirm identification. Helpful sites include:

- **Pacific Northwest Weed ID Image Collection**  
(<http://uspest.org/pnw/weeds?weeds/id/index.html>)
- **USDA Plant database noxious weed plant profiles and an associated image gallery**  
(<http://plants.usda.gov/java/noxiousDriver>)
- **Invasive Plant Atlas** (<http://www.invasiveplantatlas.org/>)
- **Bugwood Image Database** (<http://images.bugwood.org/>)
- **University of Washington Herbarium Image Collection**  
(<http://biology.burke.washington.edu/herbarium/imagecollection.php>)
- **Google Images** (<http://www.google.com/imghp>)

Rely on local experts. Other restoration experts, local farmers, seed and plant nurseries, herbicide manufacturers, weed control boards, local Native Plant Society chapters and universities can all be excellent sources of expertise. The following links and email addresses identify some local experts.

- County Noxious Weed Control Boards - All linked to the **Washington State Noxious Weed Control Board** (<http://www.nwcb.wa.gov/links.htm>)
- Local NRCS plant materials specialists can be identified at <http://offices.sc.egov.usda.gov/locator/app?service=page/CountyMap&state=WA&stateName=Washington&stateCode=53>
- Dave Heimer (WDFW) [David.Heimer@dfw.wa.gov](mailto:David.Heimer@dfw.wa.gov)
- Rich Olds of XID Services. He will identify a difficult species free of charge if one scans a mature plant and emails the image to him at [info@xidservices.com](mailto:info@xidservices.com)

**Species List (Commonly planted native species in bold font)**

Growth form	Common name	Scientific name	Weed control concern
Native grasses	<b>Bluebunch wheatgrass</b>	<i>Pseudoroegneria spicata</i>	
	<b>Bottlebrush squirreltail</b>	<i>Elymus elymoides</i>	
	<b>Great Basin Wildrye</b>	<i>Leymus cinereus</i>	
	<b>Idaho fescue</b>	<i>Festuca idahoensis</i>	
	<b>Indian ricegrass</b>	<i>Achnatherum hymenoides</i>	
	Inland saltgrass	<i>Distichlis spicata</i>	
	<b>Needle and thread</b>	<i>Hesperostipa comata</i>	
	<b>Prairie Junegrass</b>	<i>Koeleria macrantha syn. cristata</i>	
	Reed canarygrass	<i>Phalaris arundinacea</i>	Native but noxious
	<b>Sand dropseed</b>	<i>Sporobolus cryptandrus</i>	
	<b>Sandberg's bluegrass</b>	<i>Poa secunda</i>	
	<b>Sherman's big bluegrass</b>	<i>Poa secunda syn. ampla</i>	Modified native, can be competitive
	<b>Thickspike wheatgrass</b>	<i>Elymus lanceolatus ssp. lanceolatus</i>	
	<b>Thurber's needlegrass</b>	<i>Achnatherum thurberianum</i>	
<b>Tufted hairgrass</b>	<i>Deschampsia caespitosa</i>		
Non-native grasses	Bulbous bluegrass	<i>Poa bulbosa</i>	Non-native, Noxious
	Cereal rye	<i>Secale cereale</i>	Non-native, Noxious
	Cheatgrass	<i>Bromus tectorum</i>	Non-native, Noxious
	Crested wheatgrass	<i>Agropyron cristatum</i>	Non-native
	Intermediate (Pubescent) wheatgrass	<i>Thinopyrum intermedium</i>	Non-native
	Jointed goat grass	<i>Aegilops cylindrica</i>	Non-native
	Medusahead	<i>Taeniatherum caput-medusae</i>	Non-native, Noxious
	North Africa grass	<i>Ventenata dubia</i>	Non-native
	Quackgrass	<i>Elytrigia repens</i>	Non-native
	Rattail fescue	<i>Festuca myuros</i>	Non-native
	Smooth brome	<i>Bromus inermis</i>	Non-Native
	Tall wheatgrass	<i>Thinopyrum ponticum</i>	Non-native
Native Shrubs	<b>Bitterbrush, antelope</b>	<i>Purshia tridentata</i>	
	Golden currant	<i>Ribes aureum</i>	
	Greasewood	<i>Sarcobatus vermiculatus</i>	
	Mock orange	<i>Philadelphus lewisii</i>	
	Nootka rose	<i>Rosa nutkana</i>	
	<b>Rabbitbrush, rubber</b>	<i>Ericameria nauseosa</i>	
	<b>Rabbitbrush, yellow</b>	<i>Chrysothamnus viscidiflorus</i>	
<b>Sagebrush, big</b>	<i>Artemisia tridentata</i>		

	Sagebrush, stiff	<i>Artemisia rigida</i>	
	Western serviceberry	<i>Amelanchier alnifolia</i>	
	<b>Winterfat</b>	<i>Krascheninnikovia lanata</i>	
Native Forbs	<b>Balsamroot, arrowleaf</b>	<i>Balsamorhiza sagittata</i>	
	Balsamroot, hooker's	<i>Balsamorhiza hookeri</i>	
	<b>Blanket flower</b>	<i>Gaillardia aristata</i>	
	Blue eyed Mary	<i>Collinsia parviflora</i>	
	<b>Buckwheat, parsnipflower</b>	<i>Eriogonum heracleoides</i>	
	<b>Buckwheat, snow</b>	<i>Eriogonum niveum</i>	
	Common camas	<i>Camassia quamash</i>	
	Desert parsley, bigseed	<i>Lomatium macrocarpum</i>	
	<b>Desert parsley, nineleaf</b>	<i>Lomatium triternatum</i>	
	<b>Dusty maiden</b>	<i>Chaenactis douglasii</i>	
	<b>Lewis's flax</b>	<i>Linum perenne</i>	
	Fleabane linear leaf	<i>Erigeron linearis</i>	
	<b>Fleabane daisy, shaggy</b>	<i>Erigeron pumilus</i>	
	<b>Fleabane daisy, showy</b>	<i>Erigeron speciosus</i>	
	<b>Hawksbeard, slender</b>	<i>Crepis atribarba</i>	
	<b>Lupine, silky</b>	<i>Lupinus sericeus</i>	
	<b>Lupine, velvet</b>	<i>Lupinus leucophyllus</i>	
	Woolly-pod milk vetch	<i>Astralagus purshii</i> var. <i>glareosum</i>	
	<b>Penstemon, Blue Mountain</b>	<i>Penstemon venustus</i>	
	<b>Penstemon, chelan</b>	<i>Penstemon pruinosis</i>	
	Showy phlox	<i>Phlox speciosa</i>	
	<b>Sunflower, common wooly</b>	<i>Eriophyllum lanatum</i>	
Western groundsel	<i>Senecio integerrimus</i>		
Yarrow, western	<i>Achillea millefolium</i>		
Non-Native Forbs	Alfalfa	<i>Medicago sativa</i>	Non-native
	Annual bursage	<i>Ambrosia acanthicarpa</i>	Non-native
	Bugloss, common	<i>Anchusa officinalis</i>	Non-native, noxious
	Burnett, small	<i>Sanguisorba minor</i>	Non-native
	Coast fiddleneck,	<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Non-native
	Dalmation toadflax	<i>Linaria dalmatica</i>	Non-native, noxious
	Flixweed	<i>Descurainia sophia</i>	Non-native
	Groundsel, common	<i>Senecio vulgaris</i>	Non-native
	Henbit	<i>Lamium amplexicaule</i>	Non-native
	Hornseed buttercup	<i>Ranunculus testiculatus</i>	Non-native
	Hound's tongue	<i>Cynoglossum officinale</i>	Non-native, noxious
	Knapweed, diffuse	<i>Centaurea diffusa</i>	Non-native, noxious
	Knapweed, Russian.	<i>Centaurea squarrosa</i>	Non-native, noxious
	Knapweed, spotted	<i>Centaurea stoebe</i>	Non-native, noxious

Knapweed, squarrose	<i>Centaurea repens</i>	Non-native, noxious
Kochia, forage	<i>Bassia scoparia</i>	Non-native, noxious
Morning glory	<i>Convolvulus arvensis</i>	Non-native, noxious
Mullien, common	<i>Verbascum thapsus</i>	Non-native
Mustard, birdsrape	<i>Brassica rapa</i>	
Mustard, black	<i>Brassica nigra</i>	
Mustard, blue	<i>Chorispora tenella</i>	Non-native, noxious
Mustard tumble	<i>Sisymbrium altissimum</i>	Non-native, noxious
Mustard, wild	<i>Brassica kaber</i>	Non-native
Perennial pepperweed	<i>Lepidium latifolium</i>	Non-native
Pinnate tansy mustard	<i>Descurainia pinnata</i>	Non-native, noxious
Poison hemlock	<i>Conium maculatum</i>	Non-native, noxious
Poverty weed	<i>Iva axillaris</i>	Non-native
Prickly(China) lettuce	<i>Lactuca serriola</i>	Non-native
Puncture vine	<i>Tribulus terrestris</i>	Non-native, noxious
Redstem filaree	<i>Erodium cicutarium</i>	Non-native, noxious
Rush skeletonweed	<i>Chondrilla juncea</i>	Non-native, noxious
Sainfoin	<i>Onobrychis viciifolia</i>	Non-native
Shield pepperweed,	<i>Lepidium perfoliatum</i>	Non-native, noxious
St. Johnswort	<i>Hypericum perforatum</i>	Non-native, noxious
Thistle, bull	<i>Cirsium vulgare</i>	Non-native, noxious
Thistle, Canada	<i>Cirsium arvense</i>	Non-native, noxious
Thistle, musk	<i>Carduus nutans</i>	Non-native, noxious
Thistle, Russian	<i>Salsola kali</i>	Non-native,
Thistle, Scotch	<i>Onopordum acanthium</i>	Non-native, noxious
Whitetop (Hoary cress)	<i>Cardaria draba</i>	Non-native, noxious
Yellow star-thistle	<i>Centaurea solstitialis</i>	Non-native, noxious
Yellow Toadflax	<i>Linaria vulgaris</i>	Non-native, noxious

## NATIVE GRASSES

### Bluebunch wheatgrass, *Pseudoroegneria spicata*, Native



Melissa Asher



Distinguishing characteristics: Leaves rolled in bud, open sheaths, auricles present, short hair



**Bottlebrush squirreltail, *Elymus elymoides*, Native**



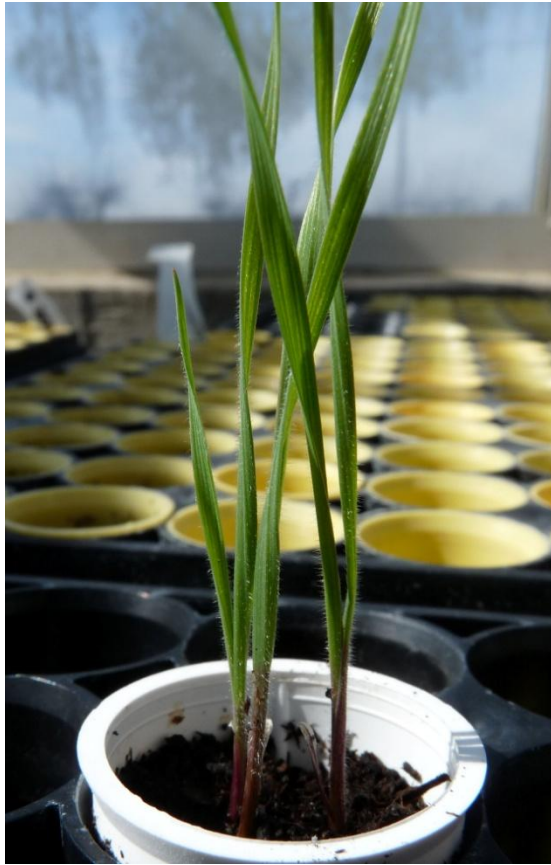
Richard. Tveten



Sheri Hagwood @ USDA-NRCS PLANTS Database

Distinguishing characteristics:  
Open sheaths, hairy auricles present. Edges of leaves hairy. Leaves distinctly veined with a prominent mid-vein on the back.

## Great Basin Wildrye, *Leymus cinereus*, Native



BFI Native Seeds



BFI Native Seeds



Cassandra Skinner @ USDA-NRCS PLANTS Database

Distinguishing characteristics:  
Seeds and seedlings are big with broad leaves. Great basin wildrye can often be differentiated from other native grass seedlings by size alone. Sheaths open, auricles present. Long stiff hairs on leaves and stems

**Idaho fescue, *Festuca idahoensis*, Native**



Richard Tveten



Steve Hurst @ USDA-NRCS PLANTS Database



Richard Tveten

Distinguishing characteristics: Leaves very narrow and rolled in the bud. Generally not hairy.

**Indian ricegrass, *Achnatherum hymenoides*, Native**



Richard Tveten



Distinguishing characteristics: First leaves very thin and wiry. Not hairy. Leaves rolled in bud, open sheaths, no auricles, membranous ligules.

**Inland saltgrass, *Distichlis spicata*, Native**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

Distinguishing characteristics: Pointed leaves rolled in bud, sheathes open, short hairy ligules. Strongly rhizominous



Richard Tveten

## Needle and thread, *Hesperostipa comata*, Native



Richard Tveten

Distinguishing characteristics: Leaved rolled in bud and involute, sheaths open, no auricles, membranous ligules

**Prairie Junegrass, *Koeleria macrantha* syn. *crinata*, Native**



Richard Tveten



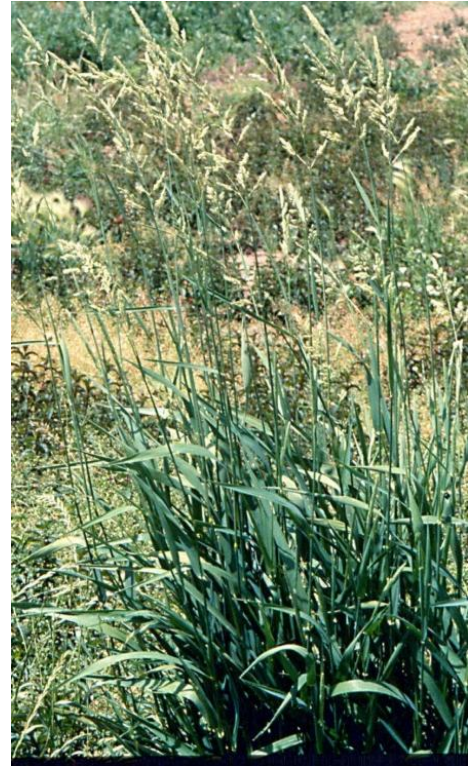
Bolin Kathryn E.

Distinguishing characteristics: Leaf folded in bud and tips are canoe-shaped like *Poa*. The stiff blades are hairy with short hairs dorsally and ventrally and longer hairs on the margins. Blades are distinctly ribbed dorsally.

**Reed canarygrass, *Phalaris arundinacea*, Native but noxious**



Richard Tveten



Oregon State University Larry Burrell and Jed Colquhoun photo Collection



Steve Hurst @ USDA-NRCS PLANTS Database

**Distinguishing characteristics:** Leaves rolled in bud, ligules present, open sheathes. Not hairy. Quickly regenerates from rhizomes. Riparian/wetland species - requires seasonally moist soils.



**Sand dropseed, *Sporobolus cryptandrus*, Native**



Richard Tveten



Photo by Richard Old, [www.xidservices.com](http://www.xidservices.com)



Richard Tveten

Distinguishing characteristics: Long fringe of hairs at base of leaves.

## Sandberg's bluegrass, *Poa secunda*, Native



BFI Native Seed



Steve Hurst @ USDA-NRCS PLANTS Database



Gary A. Monroe @ USDA-NRCS PLANTS Database

Distinguishing characteristics: Leaves folded in the bud, with a keel and prow-shaped tips. Not Hairy

**Sherman's big bluegrass, *Poa secunda* syn. *Ampla*, Native (modified)**



Richard Tveten



**Thickspike wheatgrass, *Elymus lanceolatus* ssp. *lanceolatus*, Native**



Richard Tveten



Jose Hernandez @ USDA-NRCS PLANTS Database



Cassandra Skinner @ USDA-NRCS PLANTS Database

**Thurber's needlegrass, *Achnatherum thurberianum*, Native**



Richard Tveten



Richard Tveten



Sheri Hagwood @ USDA-NRCS PLANTS Database

Distinguishing characteristics: Seedling leaves are extremely narrow. Leaves rolled in bud. Open sheaths, membranous ligules.

**Tufted hairgrass, *Deschampsia caespitosa*, Native**



Richard Tveten



Steve Hurst @ USDA-NRCS PLANTS Database



Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1992.

## NON-NATIVE GRASSES

### Bulbous bluegrass, *Poa bulbosa*, Non-native, Noxious



Richard Tveten



Richard Tveten



Oregon State University Larry Burrell and  
Jed Colquhoun photo Collection

Distinguishing characteristics: Seedlings very small. Leaves folded in bud with prow-like tips. Plants bulbous at base.

## Cereal Rye, *Secale cereale*, Non-native, Noxious



Richard Tveten



Steve Hurst @ USDA-NRCS PLANTS Database



USDA-NRCS PLANTS Database

Distinguishing characteristics: Entire plant hairy. Seeds and seedlings large. Seed often attached to young plant. Leaves rolled in bud, open sheathes, auricles present, short membranous ligules.



## Cheatgrass, *Bromus tectorum*, Non-native, Noxious



Richard Tveten



Distinguishing characteristics:  
Very hairy. Leaves flat but  
rolled in bud, ligules present.



Larry Burrell and Jed Colquhoun Collection

Steve Hurst @ USDA-NRCS PLANTS Database

## Crested wheatgrass, *Agropyron cristatum*, Non-native



Richard Tveten



Steve Hurst @ USDA-NRCS PLANTS Database



Cassandra Skinner @ USDA-NRCS PLANTS Database

Distinguishing characteristics: Leaves rolled in bud, auricles and ligules present. Sheaths open.

**Intermediate (pubescent) wheatgrass, *Thinopyrum intermedium*,  
Non-native**



Richard Tveten



Howard F. Schwartz, Colorado State University, Bugwood.org



USDA, NRCS. 2011. The PLANTS Database

**Distinguishing characteristics:** Leaves rolled in bud, auricles and ligules present. Sheaths open. Seeds are big and seedlings are big with broad leaves.

**Jointed goat grass, *Aegilops cylindrica*, Non-native**



Steve Dewey, Utah State University, Bugwood.org



OSU Larry Burrell and Jed Colquhoun photo Collection

Steve Hurst @ USDA-NRCS PLANTS Database

**Distinguishing characteristics: Flat hairy leaves, hairy open sheaths, short ligules**

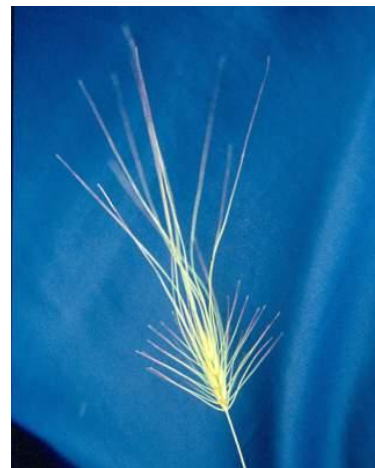
**Medusahead, *Taeniatherum caput-medusae*, Non-native Noxious**



Steve Dewey, Utah State U., Bugwood.org Oregon State U. Larry Burrell and Jed Colquhoun photo Collection



Steve Hurst @ USDA-NRCS PLANTS Database



OSU Larry Burrell and Jed Colquon

**Distinguishing characteristics: Long stiff hairs, Sheaths open.**

**North Africa grass, *Ventenata dubia*, Non-native**



Richard Tveten



Richard Old, [www.xidservices.com](http://www.xidservices.com)

Germinates in fall. Shallow-rooted annual, 4-18 inches tall, long ligule 1-8mm, reddish black nodes

## Quackgrass, *Elymus repens*, Non-native



Steve Hurst @ USDA-NRCS  
PLANTS Database



Oregon State University Larry Burrell  
and Jed Colquhoun photo Collection

Oregon State University Larry Burrell and Jed Colquhoun photo Collection.



Steve Dewey, Utah State University, Bugwood.org

Distinguishing characteristics: Leaves rolled in bud, auricles and ligules present. Sheaths open. Quickly regenerates from rhizomes.

**Rattail Fescue, *Festuca myuros*, Non-native**



Richard Tveten

Note: Quick maturing spring annual. Height varies greatly ( $\frac{1}{2}$  inch to 18 inches) with moisture. Fades with competition.



**Smooth brome, *Bromus inermis*, Non-Native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



Image © 2010, Craig Althen. UW Burke Museum:

**Tall Wheatgrass, *Thinopyrum ponticum*, Non-native**



Richard Tveten



Richard Old, [www.xidservices.com](http://www.xidservices.com)

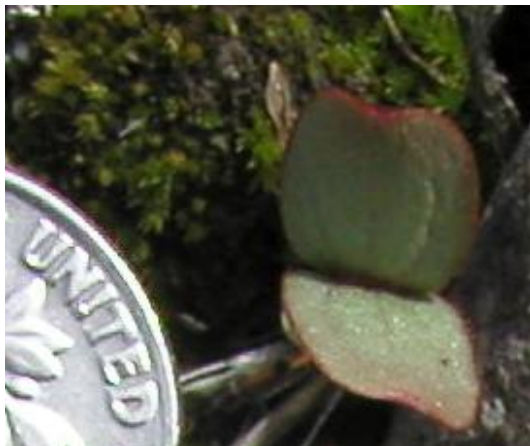
Distinguishing characteristics:  
Large with broad leaves. Not hairy. Prominent veins on leaves, auricles present

# Shrubs

## Bitterbrush, antelope, *Purshia tridentata*, Native



Richard Tveten



Richard Tveten



Dave Powell, USDA Forest Service, Bugwood.org

**Golden currant, *Ribes Aureum*, Native**



Richard Tveten



**Image © 2003, Ben Legler:**University of Washington Herbarium, Burke Museum.

**Greasewood, *Sarcobatus vermiculatus*, Native**



Richard Tveten



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Mock Orange, *Philadelphus lewissii*, Native**

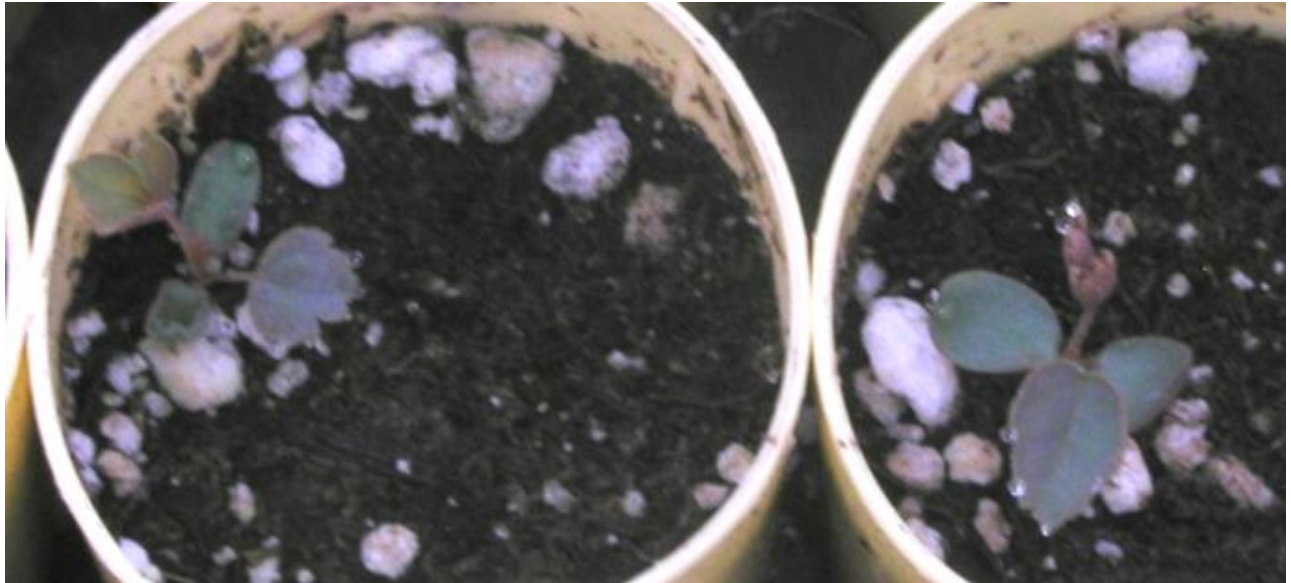


Richard Tveten



**Image © 2003, Ben Legler:**University of Washington Herbarium, Burke Museum.

**Nootka Rose, *Rosa Nutkana*, Native**



Richard Tveten



**Image © 2003, Ben Legler:**University of Washington Herbarium, Burke Museum.

**Rabbitbrush, Rubber, *Chrysothamnus nauseosa*, Native**



Richard Tveten





**Rabbitbrush, Yellow, *Chrysanthamnus viscidiflorus*, Native**



Richard Tveten



Mary Ellen (Mel) Harte, Bugwood.org

**Sagebrush, big, *Artemisia tridentata*, Native**



Richard Tveten



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Sagebrush, Stiff, *Artemisia rigida*, Native**



Richard Tveten

**Western Serviceberry, *Amelanchier alnifolia*, Native**



Richard Tveten



Image © 2003, Ben Legler:University of Washington Herbarium, Burke Museum.

## Winterfat, *Krascheninnikovia lanata*, Native

Seedling picture needed



Richard Tveten

## Native Forbs

**Balsamroot, arrowleaf** , *Balsamorhiza sagittata*, **Native**



Richard Tveten



**Image © 2003, Ben Legler:** University of  
Washington Herbarium, Burke Museum

**Balsamroot, hooker's, *Balsamorhiza hookeri*, Native**



BFI Native Seeds



Richard Tveten



Image © 2004, Ben Legler: U. of Washington Herbarium, Burke Museum



**Blanket flower , *Gaillardia aristata*, Native**



Richard Tveten



Image © 2004, Ben Legler: U. of Washington Herbarium, Burke Museum

**Blue eyed Mary, *Collinsia parviflora*, Native**



Adrian Wolfe



Image © 2003, Ben Legler:University of Washington Herbarium, Burke Museum.

**Buckwheat, parsnipflower, *Eriogonum heracleoides*, Native**



BFI Native Seeds



Sheri Hagwood @ USDA-NRCS PLANTS database

**Buckwheat, snow, *Eriogonum niveum*, Native**



BFI Native Seeds



Clarence Kelley USDA NRCS Pullman PMC



Richard Tveten

**Common camas, *Camassia quamash*, Native**



Richard Tveten



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

**Desert parsley, bigseed, *Lomatium macrocarpum*, Native**

Need seedling image



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

**Desert parsley, nineleaf, *Lomatium triternatum*, Native**



BFI Native seeds



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

**Dustymaiden, *Chaenactis douglasii*, Native**



**Richard Tveten**



**BFI Native seed**



**Image © 2004, Ben Legler:** University of Washington Herbarium, Burke Museum



**Flax, blue, *Linum perenne*, Native**



Richard Tveten



Clarence A. Rechenthin. Courtesy of [USDA NRCS Texas State Office](#).

**Fleabane daisy, linearleaf , *Erigeron linearis*, Native**



Richard Tveten



**Fleabane daisy, shaggy, *Erigeron pumilus*, Native**



Richard Tveten



BFI Native seeds



Image © 2004, Ben Legler: U. of Washington Herbarium, Burke Museum

**Fleabane daisy, showy, *Erigeron speciosus*, Native**



Richard Tveten



Desert Jewels Nursery

**Hawksbeard, slender, *Crepis atribarba*, Native**



Richard Tveten



**Lupine, silky, *Lupinus sericeus*, Native**



Richard Tveten



Desert Jewels Nursery

**Lupine, velvet, *Lupinus leucophyllus*, Native**



Richard Tveten



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

**Penstemon, Blue Mountain, *Penstemon venustus*, Native**



Richard Tveten



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum



**Penstemon, chelan, *Penstemon pruinosus*, Native**



Richard Tveten



Desert Jewels Nursery

**Phlox speciosa, Showy phlox, Native**



Images by Richard Tveten



Note: Broad dicotyledons differentiate seedling from Russian thistle. Thrives after fire.

**Pussytoes, *Antennaria microphylla*, Native**



Richard Tveten



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

## Slender Cinquefoil, *Potentilla gracilis*, Native



Richard Tveten



Image © 2004, Ben Legler: U. of Washington Herbarium, Burke Museum

**Sunflower, common wooly, *Eriophyllum lanatum*, Native**



Richard Tveten



**Image © 2004, Ben Legler:** University of Washington Herbarium, Burke Museum

## Western Groundsel, *Senecio integerrimus*, Native



Richard Tveten



Note: Generally not planted but may naturally colonize a site.

**Woolly-pod milk vetch, *Astragalus purshii* var. *glareosum*, Native**



BFI Native Seeds



Richard Tveten

**Yarrow, *Achillea millefolium*, Native**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Note:** Leaves are very pungent with a sage-like smell.



## Non-native forbs

Alfalfa , *Medicago sativa*, Non-native



Richard Tveten



Image © 2004, Ben Legler: University of Washington Herbarium, Burke Museum

**Annual bursage, *Ambrosia acanthicarpa* , Non-native**



Daniel Peterson, WDFW



Photo by Richard Old at: [www.xidservices.com](http://www.xidservices.com)

**Bugloss, common, *Anchusa officinalis*, Non-native noxious**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Burnett, small , *Sanguisorba minor*, Non-native**



Richard Tveten



Joe F. Duft @ USDA-NRCS PLANTS Database / USDA NRCS. 1992. *Western wetland flora: Field office guide to plant species*. West Region, Sacramento.

**Fiddleneck, coast, *Amsinckia menziesii* var. *intermedia*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Flixweed, *Descurainia sophia*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Groundsel, common, *Senecio vulgaris*, Non-native**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Henbit, *Lamium amplexicaule*, Non-native**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection





**Hornseed buttercup, *Ranunculus testiculatus*, Non-native**



Richard Tveten (A small mature plant)



Image © 2003, Ben Legler

Note: Common in overgrazed and disturbed areas but not a serious threat to restoration projects

**Hound's tongue, *Cynoglossum officinale*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Knapweed, diffuse, *Centaurea diffusa*, Non-native, noxious \**



Richard Tveten



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Knapweed, Russian, *Centaurea repens*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Knapweed, spotted, *Centarea stoebe*, Non-native, noxious**



Ohio State Weed Lab Archive, The Ohio State University, Bugwood.org



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Knapweed, squarrose, *Centaurea squarrosa*, Non-native**



Joseph M. DiTomaso, University of California - Davis, Bugwood.org



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Kochia, forage, *Bassia scoparia*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Morning glory, *Convolvulus arvensis*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Mullien, common, *Verbascum thapsus*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Mustard, birdsrape, *Brassica rapa*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Mustard, black, *Brassica nigra*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Mustard, blue *Chorispora tenella*, Non-native Noxious**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Mustard, tumble *Sisymbrium altissimum*, Introduced Noxious**



Richard Tveten

**Mustard, wild, *Brassica kaber*, Non native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Perennial pepperweed, *Lepidum latifolium*, Non-native**



Joseph M. DiTomaso, University of California - Davis, Bugwood.org



Steve Dewey, Utah State University, Bugwood.org

**Pinnate tansymustard, *Descurainia pinnata*, Non-native**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection





**Poison hemlock, *Conium maculatum*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

Note: Purple dots form on stems as plant grows. Stems hollow. Toxic to cattle.



**Poverty weed, *Iva axillaris*, Non-native**



Joseph M. DiTomaso, University of California - Davis, Bugwood.org



Richard Old, www.xidservices.com

**Prickly lettuce, *Lactuca serriola*, Non-native**





Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Puncture vine, *Tribulus terrestris*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Redstem Filaree, *Erodium cicutarium*, Non-native**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection



Richard Tveten

**Rush skeletonweed, *Chonrilla juncea*, Nonnative, Noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Sanfoin, *Onobrychis viciifolia*, Non-native**



Richard Tveten



Howard F. Schwartz, Colorado State University, Bugwood.org



**Shield pepperweed, *Lepidium perfoliatum*, Non-native**



Richard Tveten

**St. Johnswort, *Hypericum perforatum*, Non-native**



Copyright © 2007 The Regents of the University of California. All rights reserved

5374979

Joseph M. DiTomaso, University of California - Davis, Bugwood.org\



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

Distinguishing characteristics: Black dots on perimeter of leaves. Opposite leaves.

**Thistle, bull, *Cirsium vulgare*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Thistle, Canada, *Cirsium arvense*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Thistle, musk, *Carduus nutans*, Non-native, noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Thistle, Russian. *Salsola kali*, Non-native, noxious**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Thistle, Scotch, *Onopordum acanthium*, Non-native, noxious**



Oregon State University Larry Burrell and Jed Colquhoun photo Collection

**Toadflax, Dalmation, *Linaria dalmatica*, Non-native, Noxious**



Joseph M. DiTomaso, University of California - Davis, Bugwood.org



Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Toadflax, yellow, *Linaria vulgaris*, Non-Native, Noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Whitetop, *Cardaria draba*, Non-native, Noxious**



Images from Oregon State University Larry Burrell and Jed Colquhoun photo Collection



**Yellow starthistle, *Centaurea solstitialis*, Non-native, Noxious**



Cindy Roche, Bugwood.org



Oregon State University Larry Burrell and Jed Colquhoun photo Collection