



# a guide to non-invasive plants







### A gardener's dream

Oregon is a gardener's dream. Our varied climates and mild conditions allow us to showcase a wide variety of plants from around the world. In fact, nursery crops are Oregon's number one agricultural commodity.

Unfortunately, a few plants used in gardens and landscapes cause serious ecological harm by 'jumping the fence' and spreading elsewhere. These invasive plants can become serious problems that threaten water quality, wildlife and our economy by crowding out native plants, changing stream flows, increasing erosion, competing with crops or creating fire hazards.

This booklet offers gardeners and landscape designers many choices of plants that work for gardens while protecting the health and beauty of Oregon's natural lands and waters. We highlight plants that should be avoided because they are invasive, and offer non-invasive alternatives (both natives and non-native ornamentals) that you can safely plant instead.

We hope you will use this booklet as a guide to help you make the most informed choices for your garden, water garden or landscape. Enjoy your garden!

### **Quick definitions**

**Native (indigenous) plant:** Present in the Pacific Northwest historically prior to European-American settlement.

Non-native (exotic, alien, introduced) plant: Brought to the Pacific Northwest by humans either deliberately or by accident.

Invasive plant: Thrives and spreads aggressively outside its natural range.

**Ornamental plant:** A non-native plant commonly sold and available in garden centers.

Weed: Casual term used for any plant that is undesirable in a given location.

**Noxious weed:** Plant listed by the state as "noxious" because it is harmful to agriculture, water resources or human health.

**Regions of concern:** Areas within Oregon where the plant is known to have invasive tendencies, or has a high probability of becoming invasive.

Cover photographs: center image © Mark Turner, remaining images from Environmental Services.



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### What you can do

Every Oregonian can do something to safeguard what we love about our state - our pristine natural areas, healthy streams and lakes, abundant fish and wildlife, and working farms and ranches. The first step is to avoid purchasing, planting or growing invasive plants. By being part of the solution, you can help protect Oregon from invasive species.

- Use this guide to select non-invasive plants.
- Support nurseries and businesses that sell non-invasive plants.
- Don't trade plants with other gardeners if you suspect they may be invasive.
- Spread the word (but not the weed!) to your fellow gardeners.

### If you already have invasive plants in your garden:

- Remove the invasives and replace them with suitable non-invasive plants.
- Dead-head (remove flowering heads and seeds) so plants do not release seed.
- Dispose of invasive plant materials by bagging and placing in the garbage (composting does not kill some plants and seeds).

### About water gardens:

- Be sure your water garden is fully contained (not near creeks, natural ponds or areas prone to flooding).
- Do not dump pond plants (or animals such as fish, snails or turtles) into natural areas.
- Buy water garden supplies only from knowledgeable and responsible retailers.
- Inspect and rinse aquatic plants in tap water to remove unintended hitchhikers, such as snails and plant fragments.

For more information about invasive species and how you can prevent them, see the Resources section on page 52.

### 3

### **Guide to plant selection**

Each plant is unique, not only in how it looks, but also in the growing conditions it requires. There are no exact substitutes for invasive plants, so check the characteristics of any alternative you are considering to ensure it will grow in your situation.

Many invasive plants can grow in a wide variety of challenging conditions. For example, English ivy is both a groundcover and a vine, grows in both full sun and full shade, tolerates drought, and is hardy down to about -20° F. Suitable replacements need to fit your specific circumstances. Creeping

juniper might be a good replacement in full sun, but Barren strawberry would be a better option in shade.

#### USDA hardiness zones

USDA hardiness zones are based on a single factor: average minimum temperature. Lower numbered zones experience lower temperatures, so plants

must be tougher to survive there. Choose alternatives with a USDA zone equal to or lower than the zone where you live. For example, in Zone 7, a Zone 5 plant may be fine, but a Zone 8 plant probably won't survive the winter.

USDA zones do not account for other conditions such as moisture and light, so keep that in mind when choosing alternatives. Some of our recommended plants may be suitable only in western, eastern or southern Oregon, but not throughout the entire zone.

Your local nursery can help you select the best alternatives for your location.

### Symbols used in this booklet

- 🔺 evergreen 🛛 💓 deciduous
- 🔆 full sun 🕨 partial sun 🔎 shade

 $\diamond$  wet  $\diamond$  moist but drained  $\diamond$  moderately dry  $\checkmark$  drought tolerant



### **Brooms and Gorse**

Scotch (Scot's) broom - Cytisus scoparius, Portuguese broom - C. striatus, Spanish broom - Spartium junceum, French broom - Genista monspessulana, Gorse - Ulex europaeus

### Habitats Invaded:

Grasslands, prairies, pasture and rangelands, roadsides, cut-over forest lands and sand dunes. Brooms and gorse both change soil nutrients and create fire hazards.

#### **Region of Concern:**

All of Oregon

### **Identification:**

- Shrubs to 6 ft tall with green stems, small, inconspicuous green leaves and, pea-like yellow flowers
- Portuguese broom has pale yellow flowers and fruit pods that are densely white-hairy
- Gorse has distinctive 1 inch long thick spines

### Things You Should Know:

- Over 12,000 seeds can be produced by each mature shrub
- Seeds can survive in soil up to 50 years
- · Adds nitrogen to soil and provides highly flammable fuels for wildfires
- Flowers and seeds are toxic to humans and most livestock

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Class B Oregon Noxious Weed for all brooms and gorse; Report locations of Portuguese broom and Gorse to www.WeedMapper.org

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### NATIVE PLANTS



© Environmental Services

Mountain mahogany - Cercocarpus ledifolius	
Golden currant - Ribes aureum	
Mock orange - Philadelphus lewisii	
Blue blossom - Ceanothus thyrsiflorus	

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Tall Oregon grape
 Mahonia (Berberis)

aquifolium

ORNAMENTALS



Forsythia x intermedia Has fall color USDA Zone **5** 醈 🔆

Forsythia hybrids

Winter jasmine - Jasminum nudiflorum
Japanese kerria - Kerria japonica
Savin juniper - Juniperus sabina

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Zone <b>4</b>	<b>*●</b>	$\diamond$
Zone 3	*	0 🖉

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### **Butterfly bush, Summer lilac**

Buddleja (Buddleia) davidii, B. variabilis

### Habitats Invaded:

Butterfly bush can form crowded stands along riverbanks and on cobblebars, cut-over forest lands, pastures, and in open waste areas.

### **Regions of Concern:**

Western Oregon, and spreading into the western slope of the Cascade Mountains

### Identification:

- Shrub up to 10 ft tall with arching branches and dense clusters of showy flowers
- Flowers are 4-petaled, tubular at base, and white to pink to purple (sometimes with orange centers)
- Leaves are velvety, lance-shaped and gray-green in color

- Spreads by broken stem fragments and by seeds that are dispersed by wind and water
- Flowers produce nectar that is attractive to butterflies and other insects



© Tom Forney, Oregon Dept of Agriculture



### NATIVE PLANTS





Blue blossom
Ceanothus thyrsiflorus

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Red-flowering currant - Ribes sanguineum Mountain mahogany - Cercocarpus ledifolius Mock orange - Philadelphus lewisii Blue elderberry - Sambucus cerulea

#### ORNAMENTALS

© Linda McMahan - OSU Extension Service



Meyer lilac Syringa meyeri Has fall color USDA

Zone 3

Eastern ninebark - Physocarpus opulifolius
Bluebeard - Caryopteris x clandonensis
Koreanspice viburnum - Viburnum carlesii
Weigela varieties - Weigela florida

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### Habitats Invaded:

English holly can occur in pristine to highly disturbed coniferous forests, in forest gaps, and along the edges of wetlands.

### **Regions of Concern:**

Western and southern Oregon

### Identification:

- Evergreen shrub or small tree to 20 ft tall
- Leaves are thick and spiny or prickly along the edges
- May bear bright red berries

- Birds and small mammals use berries as a food source and disperse seeds
- Berries and foliage are commonly used for holiday decoration
- Berries are toxic to humans



### NATIVE PLANTS



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Tall Oregon grape - Mahonia aquifolium Red elderberry - Sambucus racemosa Bitter cherry - Prunus emarginata Toyon - Heteromeles arbutifolia

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Pacific waxmyrtle
 Myrica californica

**ORNAMENTALS** 



Western sandcherry - Prunus pumila var. bessyi

False holly - Osmanthus heterophyllus 'Goshiki'

Chinese holly - Ilex cornuta

Holly oak - Quercus ilex

Meserve hybrid blue holly llex x meserveae cvs.



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### European hawthorn, Oneseed hawthorn

Crataegus monogyna

### Habitats Invaded:

Forests, riverbanks, oak woodlands, disturbed grasslands and pastures.

### **Regions of Concern:**

Western and southern Oregon

### Identification:

- Deciduous shrub or small tree to 15 ft tall with smooth, pale gray bark
- Leaves are 3-lobed, flowers are white and showy, dark red berries with one seed
- Branches with stout thorns up to 1 inch long

- Birds consume berries and disperse seeds
- May interbreed with native Douglas hawthorn



• Pat Breen, Oregon State University

### NATIVE PLANTS



 Western serviceberry Amelanchier alnifolia

Has fall color

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© Environmental Services

#### ORNAMENTALS

Mock orange - Philadelphus lewisii Douglas hawthorn - Crataegus douglasii Suksdorf's hawthorn - Crataegus suksdorfii

© Pat Breen - Oregon State University



Flowering crabapple - Malus spp.	Zone <b>4</b>	*	$\diamond$
Green hawthorn - Crataegus viridis 'Winter King'	Zone 4	*	0 🖉
Thornless cockspur hawthorn - Crataegus crusgalli	Zone <b>4</b>	*	0 🖉
Purpleleaf choke cherry - Prunus virginiana	Zone <b>2</b>	*	0 🖉

### Himalayan blackberry, Armenian blackberry

Rubus armeniacus, R. discolor, R. procerus

### **Habitats Invaded:**

Himalayan blackberry can form dense impenetrable thickets in moist forests, riverbanks, near ponds, wetlands and drainage ditches. It is also common along roadsides, right-of-way corridors and can dominate range and pasturelands.

### **Region of Concern:**

All of Oregon, especially western Oregon

### **Identification:**

- Shrubby dense thickets of long bending branches (canes) that appear as 8 ft tall mounds or banks
- Stems/canes are 5-angled in cross-section with hooked prickles
- Leaves usually with 5 large, oval leaflets that are dark green on top and grayish-green underneath
- · Showy flowers are white-pink, yielding juicy, black, edible berries

- Spreads by seeds, root sprouts and by cane tips that readily root
- Introduced to North America by the famous plant breeder Luther Burbank in 1885 as *Himalayan Giant*





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### **Alternatives**

### NATIVE PLANTS

C Linda McMahan - OSU Extension Service

**≺** Salmonberry Rubus spectabilis

USDA Zone 5

Thimbleberry - Rubus parviflorus	Zone <b>4</b>	
Thin-leaf huckleberry - Vaccinium membranaceum	Zone <b>5</b>	
Snowberry - Symphoricarpos albus	Zone 3	
Indian plum - Oemleria cerasiformis	Zone <b>6</b>	

#### ORNAMENTALS

Oregon Raspberry and Blackberry Commission



<	Marion	berry or	Boysenberry
	Rubus '	Marion'	or 'Boysen'

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Red raspberry - Rubus idaeus Black raspberry - Rubus occidentalis Rocky Mt. thimbleberry - Rubus deliciosus

### Knotweeds, Fleece flower, Mexican bamboo

Japanese knotweed - Polygonum cuspidatum, Giant knotweed -P. sachalinense, Himalayan knotweed - P. polystachyum and hybrids, syn. Fallopia japonica and Reynoutria japonica

### **Habitats Invaded:**

Riverbanks, wet seeps and open disturbed sites. Knotweeds can form large, dense stands that degrade streamside habitats for salmon and other wildlife.

### **Regions of Concern:**

All of Oregon

### **Identification**:

- Feathery white to cream colored flowers
- Bamboo-like hollow stems up to 10 ft tall, often with purple speckles
- Stems have a distinctive reddish-brown papery sheath at stem joints

### Things You Should Know:

- Spread primarily by broken stem fragments that are easily dispersed by flowing water
- Dense infestations can restrict public access along riverbanks for recreation and fishing





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### NATIVE PLANTS



Red osier dogwood Cornus sericea ssp. occidentalis

Has fall color

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#### **ORNAMENTALS**

Ninebark - Physocarpus capitatus Oceanspray - Holodiscus discolor Goat's beard - Aruncus dioicus

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Dappled willow - Salix integra 'Hakuro Nishiki'ZoClumping bamboo - Fargesia species and cultivarsZoTatarian dogwood - Cornus albaZoSummersweet - Clethra alnifoliaZo

Virginia sweetspire
 Itea virginica
 Has fall color
 USDA

Zone 5

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## Russian olive, Oleaster

Elaeagnus angustifolia

### Habitats Invaded:

Russian olive occurs mostly in the arid interior of Oregon along riverbanks and streambanks, as hedgerows, and in seasonally moist places. It is tolerant of soil salinity and alkalinity, and can alter river flows.

### **Regions of Concern:**

Eastern and southern Oregon, spreading west along the Columbia River into the Columbia Gorge

### **Identification**:

- Large shrub or small tree up to 30 ft tall with large 2-3 inch long thorns
- Leaves are long, narrow and silvery with tiny scales
- Flowers are small, yellow and fragrant, developing into green-brownish red dry mealy fruits

- Birds and small mammals feed on the fruits and disperse seeds
- Originally recommended for use as windbreaks, wildlife habitat and for soil stabilization



• Chris Exter Lever CWMA, Budwood.brg

### NATIVE PLANTS



Blue elderberry - Sambucus cerulea
Scouler's willow - Salix scouleriana
Silver buffaloberry - Shepherdia argentia
Narrowleaf willow - Salix exigua

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Quaking aspen

### ORNAMENTALS

© Keith Warren, J.Frank Schmidt & Son



Variegated boxelder
 Acer negundo 'Variegatum'
 Has fall color

USDA Zone **5** 

Common hackberry - Celtis occidentalis	Zone <b>3</b>	*	۵ 🖉
Corneliancherry dogwood - Cornus mas	Zone <b>4</b>	*	$\diamond$
Silverberry - Elaeagnus commutata	Zone <b>4</b>	*	🍐 🖉
Thorny elaeagnus - Elaeagnus pungens 'Fruitlandii	' Zone <b>6</b>	*	۵ 🖉

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### Habitats Invaded:

Saltcedar occurs mostly in moist seeps in arid regions, along riverbanks and streambanks, lake and pond margins, and in ditches and canals. It alters water availability, soil chemistry, and creates fire hazards.

### **Regions of Concern:**

Eastern and southern Oregon, spreading west along the Columbia River into the Columbia Gorge

#### **Identification:**

- Large shrub or small tree up to 26 ft tall with small, scale-like leaves, often with salt glands or crystals
- Bark is reddish-brown and smooth
- Showy flowers are white-to-pink and borne in feathery flower clusters

- Spreads by broken root and stem fragments and by seeds that are dispersed by wind and flowing water
- Each mature plant can produce 500,000 seeds per year
- Plants can exude salts and other chemicals onto the soil surface making it unsuitable for other plants to germinate
- Consumes large amounts of water





NATIVE PLANTS



Native roses - Rosa nutkana or R. woodsii Birchleaf spirea - Spiraea betulifolia Mountain hollyhock - Iliamna rivularis Narrowleaf willow - Salix exigua

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**≺** Blue elderberry

Sambucus cerulea

ORNAMENTALS

© Pat Breen - Oregon State University



Black elderberry
 Sambucus nigra cvs
 Has fall color

Chinese fringe flower - Loropetalum chinense Apache plume - Fallugia paradoxa Chinese fringetree - Chionanthus retusus White fringetree - Chionanthus virginicus

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### **Habitats Invaded:**

Spurge laurel occurs in the understory of coniferous forests and oak woodlands.

#### **Regions of Concern:**

Western Oregon and the Columbia Gorge

#### **Identification:**

- Small shrub up to 3 ft tall with spirally arranged dark, shiny, evergreen leaves
- Flowers are light green, bearing small blue-black berries

- Birds consume berries and disperse seeds
- Leaves, bark and berries are toxic to humans, and may cause skin dermatitis





### NATIVE PLANTS

D Leslie Winter-Gorsline - Environmental Services



Tall Oregon grape - Mahonia aquifolium Salal - Gaultheria shallon Western rhododendron - R. macrophyllum Sword fern - Polystichum munitum

<	Evergreen	huckleberry
	Vaccinium	ovatum

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### ORNAMENTALS

© Chris Guntermann



✓ Winter daphne
 Daphne odora

USDA

Nannyberry - Viburnum lentago Z	Rhododendron - Rhododendron spp. and cvs	Z
	Fragrant sweet box - Sarcococca ruscifolia	Z
Burkwood daphpa Daphpa x burkwoodii 7	Nannyberry - Viburnum lentago	Z
Burkwood dapinie - Dapinie x burkwoodii 2	Burkwood daphne - Daphne x burkwoodii	Z

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### Habitats Invaded:

Riverbanks, wet seeps and open disturbed sites such as roadsides, forest and field edges. Tree of heaven can also form large, dense thickets in urban waste lots, pavement cracks, railroad beds and old mine spoils.

### **Regions of Concern:**

All of Oregon, especially southwest Oregon and the Columbia Gorge, and in disturbed urban areas

### **Identification:**

- Tall tree to 80 ft with smooth gray bark and large compound leaves
- Leaves can be up to 4 ft long and are generally comprised of 11-41 leaflets per leaf
- Flowers are yellow-pink and borne in clusters, developing into dry straw-colored or reddish-brown fruits
- Fruits are papery-winged with a single seed in the center

- Root sprouts can form large dense colonies
- Small seeds with paper-winged structures allow long-distance dispersal by wind; a single mature tree can produce more than 300,000 seeds per year
- Tree described in the famous children's book A Tree Grows in Brooklyn
- Crushed leaves smell like rancid peanut butter and produce toxic chemicals that may prevent the establishment of adjacent vegetation





### NATIVE PLANTS



Bigleaf maple - Acer macrophyllum
Ponderosa pine - Pinus ponderosa
Greene's mountain ash - Sorbus scopulina
Lodgepole pine - Pinus contorta var. latifolia

Sitka or Pacific mountain ash	
Sorbus sitchensis	

Has fall color

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**ORNAMENTALS** 

@ Pat Breen - Oregon State University



 Autumn purple ash Fraxinus americana 'Autumn Purple' ® Has fall color

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Zone 4		*	۵ 🖉

Japanese tree lilac - Syringa reticulata Kentucky coffeetree - Gymnocladus dioicus Japanese zelkova - Zelkova serrata varieties Ginkgo (sterile male) - Ginkgo biloba

### Bachelor's button and Knapweeds

Bachelor's button, cornflower - Centaurea cyanus Bighead knapweed - C. macrocephala, Meadow knapweed - C. pratensis

### Habitats Invaded:

Grasslands, roadsides, reforestation sites and rights-of-way. Knapweeds can form dense infestations that devalue pastures and rangelands.

#### **Region of Concern:**

All of Oregon

### Identification:

- Bachelor's button Annual up to 3 ft tall with showy white, blue or purple flower heads, foliage is covered with short, gray hairs
- Bighead knapweed Perennial to 5 ft tall with large, stalked, basal rosette leaves, and showy globe-shaped yellow flower heads that can be 3 inches in diameter (photo on right)
- Meadow knapweed Perennial to 3 ft tall and is often many-branched with white to rose-purple flowers (photo on left)

### **Things You Should Know:**

- Seeds are spread by grazing animals, on shoes and clothing, and by vehicles and road equipment
- Bachelor's buttons are still often included in "wildflower" seed mixes (do not buy these)

Mark Turner





Low penstemon - Penstemon humilis

Showy fleabane - Erigeron speciosus Farewell-to-spring - Clarkia amoena

Jacob's ladder - Polemonium pulcherrimum

# D Linda McMahan - OSU Extension Service



Bluehead gilia Gilia capitata

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#### ORNAMENTALS

Globe thistle - Echinops ritro

Sea holly - Eryngium amethystinum Sweet-sultan - Centaurea moschata Purple coneflower - Echinacea purpurea

© 2005 Louis-M. Landry

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Pincushion flower
Scabiosa columbaria

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HERBACEOUS

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### Habitats Invaded:

Fennel can develop dense uniform stands in grasslands, pastures, creekbanks, old fields, ditches, roadsides and in open abandoned lots.

### **Regions of Concern:**

Western and southern Oregon

### **Identification:**

- Aromatic perennial up to 6 ft tall with finely dissected grayish-green • feathery leaves
- Tiny yellow flowers clustered into umbrella-shaped groups ٠
- Base is non-bulb forming ٠

- Bulb-forming varieties of fennel are non-invasive ٠
- Seeds can be dispersed by birds and rodents ٠
- Foliage smells of licorice





Tom Forney - Oregon Department of Agriculture



### NATIVE PLANTS



Wild white aster - Aster divaricatus Goat's beard - Aruncus dioicus Canada goldenrod - Solidago canadensis Lovage - Ligustichum apiifolium

< Yarrow Achillea millefolium

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**ORNAMENTALS** 

Golden alexander - Zizia aurea

Anise - Pimpinella anisum



<	Cosmos	
	Cosmos	bipinnatus

Annual sunflowers - Helianthus annuus Annual \* Zone 3 Ground clematis - Clematis recta 'Purpurea' Zone 3 \*D Annual

USDA

Annual

**GardenSmart Oregon** - a guide to non-invasive plants

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### Hawkweeds

Yellow hawkweed, Kingdevil hawkweed - Hieracium floribundum Orange hawkweed - H. aurantiacum (photos below)

### Habitats Invaded:

Grasslands, pastures, rangelands and disturbed open ground. Hawkweeds can form dense colonies that reduce available soil moisture and nutrients.

### **Region of Concern:**

All of Oregon, especially central and northeast Oregon

### Identification:

- Perennials up to 2 ft tall, growing from a basal rosette of hairy leaves, often with long horizontal aboveground stems
- Flowers are dandelion-like with petals squared on the ends with several rounded teeth and are either yellow (Yellow hawkweed) or orange with an orange-red center (Orange hawkweed)
- Flowers are typically clustered at the top of a hairy, flowering stalk (unlike dandelions which have one flower per stalk)
- Stems and leaves exude a milky sap

### Things You Should Know:

- Can spread vegetatively from aboveground stems (stolons)
- Seeds have small barbs that catch in fur or on clothing

Michael Shepherd - USDA Forest Service, Bugwood.org





### NATIVE PLANTS



Oregon sunshine
 Eriophyllum lanatum

USDA			
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Douglas aster - Aster subspicatus Orange sneezeweed - Helenium hoopesii California poppy - Eschscholzia californica Arrowleaf balsamroot - Balsamorhiza sagittata

#### ORNAMENTALS



Mark Turner

Black-eyed Susan - Rudbeckia hirta 'Prairie sun'					
Prairie coneflower - Ratibida columnifera					
Common sneezeweed - Helenium autumnale					
Yellow oxeye daisy - Buphthalmum salicifolium					

Tickseed
 Coreopsis verticillata
 'Moonbeam'

USDA Zone <b>3</b>	*	0 Ø
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Zone 3	*	$\diamond$
Zone 5	*	$\bigcirc$

### Herb Robert and Shiningstar geranium

Herb Robert, Stinky Bob - Geranium robertianum Shining geranium, Shining crane's bill - G. lucidum

### **Habitats Invaded:**

Understory of moist forests along trails, old logging roads and areas with disturbed soils. Common in urban parks and in areas with lots of foot traffic.

#### **Region of Concern:**

Western Oregon

### **Identification:**

- Annuals or biennials up to 1.5 ft tall, typically as low-growing rosettes
- Herb Robert has fine white glandular hairs covering the entire plant, deeply divided dark green-red leaves, and flowers are pink to purple (*photos bottom left*)
- Shining geranium is hairless with yellowish-green shiny leaves that are lobed and have tiny pink-to-purple flowers (photo below right)

### Things You Should Know:

- Generally spreads by seed
- Herb Robert is easily recognized by its unique strong, unpleasant smell





© Toby Query - Environmental Services





Class B Oregon Noxious Weed

### NATIVE PLANTS



Beach strawberry - Fragaria chiloense Wood strawberry - Fragaria vesca Wild bleeding heart - Dicentra formosa Cliff penstemon - Penstemon rupicola Stream violet Viola glabella

USDA		
Zone <b>6</b>		0 Ø
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Zone <b>6</b>		0 🖉
Zone <b>5</b>		0 🖉
Zone <b>4</b>	*	0 🖉

### ORNAMENTALS

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Mark Turner

Bishop's hat - Epimedium pinnatum	Zon
Mt. Atlas daisy - Anacyclus depressus	Zon
Chinese false spirea - Astilbe chinensis	Zon
Dwarf goat's beard - Aruncus aethusifolius	Zon

Cranesbill geranium
 Geranium sanguineum cvs.

USDA Zone <b>3</b>	 *	۵
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Zone 5	*	00
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Zone 3	*	

# Jubata grass, Purple pampasgrass

### **Habitats Invaded:**

Jubata grass can form dense impenetrable stands and create substantial fire hazards in coastal bluffs and dunes, disturbed grasslands, forest gaps or cut-over forest areas.

### **Regions of Concern:**

Western Oregon, especially southern Oregon coast

### **Identification:**

- Large clump-forming grass up to 8 ft tall
- Large showy flower plumes are typically purple-tinged to tawny in color
- Leaves are long, linear, coarse and scratchy

- Large plant clumps can produce more than one million seeds per year
- Sharp leaves can cut skin and hands
- All plants are female and can develop viable seed without fertilization





### NATIVE PLANTS



Giant chain fern - Woodwardia fimbriata Tufted hairgrass - Deschampsia caespitosa Roemer's fescue - Festuca roemeri California fescue - Festuca californica



< Idaho fescue

#### ORNAMENTALS

Martus		
Giant sacaton - S	porobolus wrightii	

< Deergrass Muhlenbergia rigens

USDA

Zone 7

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Giant sacaton - Sporobolus wrightii	Zone <b>5</b>	
Little bluestem - Schizachyrium scoparium	Zone 3	
Feather reed grass - Calamagrostis x acutoflora	Zone <b>4</b>	
Giant ryegrass - Leymus condensatus	Zone <b>7</b>	

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### Myrtle spurge and Leafy spurge

Myrtle spurge - Euphorbia myrsinites (photo right) Leafy spurge - E. esula (photos left)

### Habitats Invaded:

The spurges can form thick substantial stands in semi-arid grasslands, pastures and rangelands, pine savanna woodlands, prairies, disturbed roadsides and neglected croplands.

### **Regions of Concern:**

Eastern and southern Oregon

### Identification:

- · Perennial up to 3 ft tall with distinctive blue-green leaves that are geometrically arranged
- Stems and leaves exude a sticky, milky sap
- Flowers are small, yellow-green and clustered

- Large colonies can form from extensive root systems
- Plant and milky sap is toxic to humans and most grazing animals





Steve Dewey - Utah State, Bugwood.org


#### NATIVE PLANTS



< Stonecrop Sedum spathulifolium or S. lanceolatum

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Zone <b>5</b>		*	0 🖉

#### **ORNAMENTALS**

Pussytoes - Antennaria argentea Wild strawberry - Fragaria virginiana Sulphur flower - Eriogonum umbellatum **Oregon sunshine** - Eriophyllum lanatum



Creeping raspberry Rubus pentalobus

USDA

<ul> <li>Inda MoMahan</li> </ul>	Zone <b>7</b>	*	*•	<b>↓</b> ∅
Miniature yarrow - Achillea tomentosa 'Nana'	Zone <b>3</b>		*	0 🖉
Hens-and-chicks - Sempervivum tectorum	Zone <b>4</b>		*	0 🖉
Penstemon - Penstemon pinifolius 'Mersea yellow'	Zone 4		*	0 🖉
Evening primrose - Oenothera macrocarpa	Zone 4		*	0 Ø

HERBACEOUS



#### **Habitats Invaded:**

Policeman's helmet can form dense thickets in lowland forests, riverbanks and streamsides, and along roads.

#### **Regions of Concern:**

Western Oregon, and spreading east along the Columbia River into the Columbia Gorge

#### **Identification:**

- Annual up to 5 ft tall with juicy, succulent purple-tinged stems that are easily broken
- Attractive pink-to-purple flowers with a short spur at the base

- Contains explosive seed pods
- Sometimes seeds are exchanged among garden groups (do not do this)







#### NATIVE PLANTS



Red columbine
Aquilegia formosa

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Zone <b>7</b> Zone <b>4</b>		*	& & &
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Zone <b>4</b>		* • • *	$\sim$

Alum root - Heuchera micrantha Wild bleeding heart - Dicentra formosa Scarlet gillia - Ipomopsis aggregata

Cutleaf penstemon - Penstemon richardsonii

#### **ORNAMENTALS**



New England aster - Aster novae-angliae Spider flower - Cleome hassleriana Meadowrue - Thalictrum aquilegifolium

Toad lily - Tricyrtis hirta

Mark Turner

USDA Zone <b>3</b>	<b>()</b>	*	۵
Zone <b>4</b>		*	۵ 🌢
Annual		*	$\diamond$
Zone 5			$\diamond$
Zone 4			4

Cardinal flower
 Lobelia cardinalis

HERBACEOUS

#### GardenSmart Oregon - a guide to non-invasive plants

### Toadflaxes

Dalmatian toadflax - Linaria dalmatica Yellow toadflax, Butter and eggs - L. vulgaris

#### Habitats Invaded:

The toadflaxes can form dense stands in grasslands, meadows, pasture and rangelands, and in the understory of dry coniferous forests.

#### **Region of Concern:**

All of Oregon, especially eastern and southern Oregon

#### Identification:

- Perennials up to 10 ft tall with waxy, green-blue leaves and stems
- Flowers are showy and bright yellow-orange and have an obvious elongated spur

#### Things You Should Know:

- Spreads from laterally creeping roots or by seed
- A mature plant of Dalmatian toadflax can produce 500,000 seeds annually



> Utah State University Archives, Bugwood.org



Showy fleabane - Erigeron speciosus

Sulfur buckwheat - Eriogonum umbellatum Oregon sunshine - Eriophyllum lanatum

#### NATIVE PLANTS



Blue flax Linum lewisii

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ORNAMENTALS

Oregon iris - Iris tenax

Tony Morosco © 2003



Snapdragons Antirrhinum majus

USDA

Annual

© 2003 Tony			
Torch lily - Kniphofia 'Little maid'	Zone 7	*	$\diamond$ $\diamond$
Penstemon - P. barbatus 'Schooley's yellow'	Zone 3	*	0 🖉
Penstemon - P. pinifolius 'Mersea yellow'	Zone <b>4</b>	*	0 🖉
Daylilies - Hemerocallis 'Stella de oro', 'Hyperion'	Zone 3	*	$\diamond$

HERBACEOUS

GardenSmart Oregon - a guide to non-invasive plants

## English ivy and Irish ivy

Hedera helix, H. hibernica

#### Habitats Invaded:

Moist coniferous and deciduous forests, especially near urban areas. English ivy can form a thick canopy layer that carpets the forest understory, climbs and smothers trees, encourages tree rot, makes tree canopy heavier and more susceptible to windthrow, and increases fire hazards.

#### **Region of Concern:**

Western Oregon

#### Identification:

- Vigorous woody perennial with 2 growth forms
- Juvenile form remains as a creeping understory vine with leaves that are usually 3-lobed
- Adult reproductive form has erect, shrubby stems with diamond-shaped leaves
- Small white flowers in tight clusters with purple berries

- Birds can disperse fruits and seeds into forests and stem fragments can regenerate if left in soil
- Dense infestations can harbor other pests such as rats
- Sap may cause skin dermatitis





#### NATIVE PLANTS

© Linda McMahan - OSU Extension Service



Creeping barberry - Mahonia repens Sword fern - Polystichum munitum Prostrate ceanothus - Ceanothus prostratus Kinnikinnick - Arctostaphylos uva-ursi

< Beach strawberry Fragaria chiloense

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ORNAMENTALS

Pat Breen - Oregon State University



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< Allegheny spurge

Pachysandra procumbens

Mock bearberry manzanita - Arctostaphylos		
Star jasmine - Trachelospermum asiaticum		
Barren strawberry - Waldsteinia fragarioides		
Creeping three-leaf sumac - Rhus trilobata		

# Old man's beard, Traveler's joy

Clematis vitalba

#### Habitats Invaded:

Moist coniferous and deciduous forests, especially along riverbanks and near urban areas. Old man's beard climbs into tree canopies and can smother shrubs and trees.

#### **Regions of Concern:**

Western Oregon, and spreading east along the Columbia River into the Columbia Gorge

#### Identification:

- Deciduous perennial vine up to 100 ft long
- Small white flowers form distinctive globular-feathery seed heads

- · Feathery seeds are easily dispersed by wind, water and animals
- One large plant can produce over 100,000 seeds per year
- Seed puffs give this plant its common name









#### NATIVE PLANTS



✓ Orange honeysuckle (Western trumpet) Lonicera ciliosa

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#### ORNAMENTALS

Hairy honeysuckle - Lonicera hispidula

Anemone clematis Clematis montana  $\diamond$   $\checkmark$  $\bigcirc$ 

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USDA Zone 5

Zone 6 Zone 4

Zone 6

Zone 4

Mark Turner

Purpleleaf grape - Vitis vinifera 'Purpurea'
Ornamental kiwi vine - Actinidia kolomikta
Silvervein creeper - Parthenocissus henryana
Clematis cultivars - Clematis 'Jackmanii', etc.

 $\diamond$ 

## Parrotfeather and Brazilian elodea, Giant waterweed

Parrot feather, Myriophyllum aquaticum Brazilian elodea, Egeria densa

#### Habitats Invaded:

Freshwater lakes and ponds, reservoirs, wetlands, wet ditches and slow moving streams. Dense infestations can trap sediments, restrict water flow and impede irrigation and recreation.

#### **Region of Concern:**

All of Oregon

#### Identification: Myriophyllum aquaticum (photos bottom left and center)

- Aquatic perennial that has both submersed and emergent stems and leaves
- Above water stems resemble bright green bottle brushes

#### Identification: Egeria densa (photo bottom right)

- Fully submersed aquatic plant with leaves in whorls of 4
- Leaves are about 1 inch long with finely toothed edges
- Showy white 3-petaled flowers rise above water

#### Things You Should Know:

- Both species spread from broken stem fragments
- Do not dump pond plants into streams, rivers, ponds, or wetlands
- Thick stands of these species can inhibit boating and pose a serious threat to swimmers who become entangled in the submerged vegetation





John M. Randall - Nature Conservancy

#### NATIVE PLANTS



© Environmental Services

vvapato	
Sagittaria	latifolia

USDA Zone **4** 

Water plantain - Alisma plantago-aquatica	Zone 5
Spatterdock - Nuphar polysepalum	Zone <b>4</b>
Floating-leaved pondweed - Potamogeton natans	Zone 5
Water shield - Brasenia schreberi	Zone <b>4</b>

**ORNAMENTALS** 



Zebra rush Scirpus zebrinus

USDA Zone **3** 醈 🜟 🍐

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AQUATIC-WETLAND

# **Purple loosestrife**

Lythrum salicaria

#### Habitats Invaded:

Freshwater wetlands, wet prairies, meadows, and shorelines of lakes, streams, rivers, ditches and canals. Can survive in drier garden areas with irrigation. Extensive stands can restrict water flow and impede irrigation and recreation.

#### **Region of Concern:**

All of Oregon

#### Identification:

- Perennial to 8 ft tall with showy, pink-purple flower spikes
- Stems are angular
- Flowers usually have 5-7 petals with a small yellow center

- Spreads from broken stem fragments and seeds that are easily dispersed by wind and water
- Each plant can produce as many as 100,000 seeds per year





#### NATIVE PLANTS



Purple monkey flower - Mimulus lewisii		
Common camas - Camassia quamash		
Small-flowered bulrush - Scirpus microcarpus		
River lupine - Lupinus rivularis		

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Zone 5		*	🔌 💧
Zone <b>7</b>		*	۵ 🖉

< Douglas spirea

#### ORNAMENTALS



Mark Turner

Gayfeather - Liatris spicata
Bee balm - Monarda didyma
Siberian iris - Iris sibirica or I. sanguinea
Swamp milkweed - Asclepias incarnata

Spike speedwell Veronica spicata

USDA		
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**AQUATIC-WETLAND** 47

## Ribbongrass, Reed canarygrass

Phalaris arundinacea var. picta

#### Habitats Invaded:

Ribbongrass can form dense colonies in marshes, meadows, wet ditches, and along riverbanks and on cobblebars. It can survive in both fresh and brackish water.

#### **Region of Concern:**

All of Oregon

#### Identification:

- Perennial to 10 ft tall with flat leaf blades
- Ribbongrass has variegated green-white leaves
- Rhizomes can form a thick sod layer

#### **Things You Should Know:**

- Spreads by broken stem fragments or by seeds that are often dispersed by flowing water
- Can be grazed, but consuming too much often leads to a debilitating condition in livestock called "Phalaris staggers"

G







#### NATIVE PLANTS



Slough sedge - Carex obnupta Santa Barbara sedge - Carex barbarae Cattails (tall or dwarf) - Typha latifolia Great Basin wild rye - Leymus cinereus Tufted hairgrass
 Deschampsia caespitosa

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ORNAMENTALS



Little bluestem - Schizachyrium scoparium

Big bluestem
Andropogon gerardii



49

# Yellow flag iris, Yellow water iris

Iris pseudacorus

#### Habitats Invaded:

Freshwater and brackish wetlands, and shorelines of lakes, streams, rivers, ditches and canals. Dense mats can trap sediments creating higher, drier land.

#### **Region of Concern:** All of Oregon

Identification:

- Perennial to 5 ft tall with thick swordlike leaves and several yellow to cream-colored flowers per stem
- The only completely yellow-flowered iris that grows in natural settings

- Spreads by broken stem fragments and by seeds that float in water
- All parts of the plant are toxic to humans and animals





#### NATIVE PLANTS

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Rocky Mountain iris - Iris missouriensis Douglas iris - Iris douglasii Skunk cabbage - Lysichiton americanum

### Monkeyflower Mimulus guttatus

USDA		
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Zone <b>6</b>		6

#### **ORNAMENTALS**

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### Resources

#### Be informed. Get involved.

To report invaders or Class A Oregon noxious weeds: http://oregoninvasiveshotline.org or www.weedmapper.org or call the Invasive Species Hotline, 1-866-INVADER

### Learn to identify invasive species, remove them, and help protect Oregon from invaders:

The Statesman Journal's Invasive Species of Oregon, www.statesmanjournal.com

Oregon Public Broadcasting, www.opb.org/silentinvasion

SOLV, www.solv.org/programs/invasives.asp

The Nature Conservancy, www.nature.org/oregon

The Nature Conservancy's technical web site, http://tncweeds.ucdavis.edu

Oregon Invasive Species Council, www.oregon.gov/OISC/

Oregon noxious weed profiles, http://oregon.gov/ODA/PLANT/WEEDS/statelist2.shtml

Center for Invasive Plant Management, www.weedcenter.org

Pacific Northwest Invasive Plant Council, http://depts.washington.edu/waipc

National Invasive Species Information Center, www.invasivespeciesinfo.gov/

Oregon's list of noxious weeds, http://oregon.gov/oda/plant/weeds/lists.shtml

Oregon State University-Oregon Sea Grant-Aquatic Invaders Identification Guide http://seagrant.oregonstate.edu/themes/invaders/index.html

Native Plant Nurseries: www.plantnative.org/nd\_or.htm

For more information on what you and your business can do about invasive plants, see the Voluntary Codes of Conduct for the horticulture industry, endorsed by the Oregon Association of Nurseries www.centerforplantconservation.org/invasives/codesn.html

Boersma, P.D, Reichard, S.H. and A.N. Van Buren (eds.). 2006. Invasive Species in the Pacific Northwest. University of Washington Press, Seattle.

Kaufman, S.R. and W. Kaufman. 2007. Invasive Plants: A Guide to Identification, Impacts, and Control of Common North American Species. Stackpole Books, Mechanicsburg.

#### **GardenSmart Oregon was created by:**

Jennifer Goodridge, Mitch Bixby, and Leslie Winter-Gorsline, Bureau of Environmental Services, City of Portland

Mandy Tu and Stephen Anderson, The Nature Conservancy

Renee Harber, Oregon Association of Nurseries and Clackamas Community College

Jeff Douglas, Oregon Public Broadcasting Linda McMahan, Oregon State University Extension Service

Samuel Chan, Oregon Sea Grant and OSU Extension Service

We are grateful for technical assistance provided by the Oregon Department of Agriculture, USDA Forest Service, Bureau of Land Management, Marion Soil and Water Conservation District, 4-County Cooperative Weed Management Area, Oregon Association of Nurseries Natural Resources Committee, Salix Associates, Wallowa Resources, Northwest Weed Management Partnership, East Multnomah Soil and Water Conservation District, West Multnomah Soil and Water Conservation District, The Center for Lakes and Reservoirs at Portland State University, Portland Parks and Recreation, Audubon Society of Portland, Tualatin Hills Park and Recreation District, The Oregon Zoo, City of Lake Oswego, Native Plant Society of Oregon.

> GardenSmart Oregon is available as a downloadable file: http://oregoninvasiveshotline.org

This publication is an original project of the *Stop the Invasion* campaign: Oregonians taking action to protect our state from invasive species.



The **Stop the Invasion** campaign Partners also thank: Barbara Coit Yeager, Coit Family Foundation and Willard L. Eccles Charitable Foundation, Jeffrey L. Clark, Rocky and Julie Dixon, Mr. and Mrs. Norbert Leupold, Corporation for Public Broadcasting, U.S. Bureau of Land Management, OPB, Bridges Foundation, Robin and Gorham Nicol, Oregon Department of Forestry, Oregon Department of Agriculture, SOLV, and Oregon Invasive Species Council.

#### **Original Edition Partners:**

WalMart

Environmental Services, City of Portland

**Oregon Public Broadcasting** 

The Nature Conservancy

**Oregon Association of Nurseries** 

Oregon State University, Extension Service

**Oregon Sea Grant** 

**Clackamas Community College** 

**Oregon Watershed Enhancement Board** 

#### **Revised Edition Partners:**

**Bureau of Land Management** 

Environmental Services, City of Portland

**Oregon Department of Agriculture** 

Clackamas Soil and Water Conservation District

**Oregon Sea Grant** 

Umatilla Soil and Water Conservation District

Wallowa Resources

**Oregon Invasive Species Council** 

Printed on recycled paper, chlorine-free, acid-free process, with soy-based ink. BES WS 10102 © 2008 - revised June 2010 Free-not for sale.