

# 100 Most Dangerous Invaders To Keep Out of Oregon in 2013

[Note: Species in bold are those species that have had risk assessments completed.]

## Micro-Organisms

alder root rot	<i>Phytophthora alni</i> subsp.
bacterial blight of grape	<i>Xylophilus ampelinus</i>
<b>blackberry yellow vein disease, blackberry yellow vein-associated virus (BYVaV) and blackberry virus Y (BVY)</b>	
chalara dieback of ash	<i>Chalara fraxinea</i>
<b>chronic wasting disease</b>	<b>CWD prion</b>
elm yellows	elm yellows phytoplasma
hazelnut bacteria canker	<i>Pseudomonas avellanae</i> /
infectious salmon anemia virus	ISAV
oak wilt	<i>Ceratocystis fagacearum</i>
<i>Phytophthora</i> taxon C	<i>Phytophthora kernoviae</i>
plum pox	plum pox potyvirus (PPV)
poplar canker	<i>Xanthomonas populi</i>
<b>potato cyst nematodes</b>	<b><i>Globodera rostochiensis</i> and <i>G. pallida</i></b>
<b>potato wart</b>	<b><i>Synchytrium endobioticum</i></b>
Sheep Pen Hill Virus, blueberry scorch virus - New Jersey strain (BISV-NJ)	
Southern wilt, bacteria wilt	<i>Ralstonia solanacearum</i> (Race 3 Biovar 2)
<b>viral hemorrhagic septicemia virus (VHSV)</b>	<b><i>Novirhabdovirus</i> spp.</b>
<b>whirling disease</b>	<b><i>Myxobolus cerebralis</i>**</b>
<i>white-nose syndrome</i>	<i>Geomyces destructans</i>
willow watermark disease	<i>Brenneria salicis</i>

## Aquatic Plants

<b>algae-golden, toxic cyanobacteria</b>	<b><i>Prymnesium parvum, Cylindrospermopsis raciborskii</i></b>
African waterweed	<i>Lagarosiphon major</i>
Asian kelp	<i>Undaria pinnatifida</i>
caulerpa seaweed	<i>Caulerpa taxifolia</i>
<b>common reed</b>	<b><i>Phragmites australis</i> (non-native haplotype)</b>
<b>cordgrasses</b>	<b><i>Spartina alterniflora</i>*, <i>S. densiflora</i>, <i>S. anglica</i>, <i>S. patens</i>**</b>
dead man's fingers	<i>Codium fragile tomentosoides</i>
<b>European water chestnut</b>	<b><i>Trapa natans</i></b>
<b>flowering rush</b>	<b><i>Butomus umbellatus</i></b>
giant salvinia	<i>Salvinia molesta</i>
<b>hydrilla</b>	<b><i>Hydrilla verticillata</i></b>
<b>rock snot</b>	<b><i>Didymosphenia geminata</i></b>
<b>yellow floating heart</b>	<b><i>Nymphoides peltata</i>**</b>

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## Land Plants

**African rue**  
**Yellow-tuft alyssums**  
**camelthorn**  
**European coltsfoot**  
**giant hogweed**  
goatgrasses (barbed, ovate)  
**goatsrue**  
hawkweeds (king-devil,  
orange, yellow devil)  
**Japanese dodder**  
**kudzu**  
matgrass  
**oblong spurge**  
**Paterson's curse**  
purple nutsedge  
silverleaf nightshade  
squarrose knapweed  
**starthistles (Iberian, purple)**  
Syrian bean-caper  
**thistles** (plumeless, smooth  
distaff, woolly distaff, **taurian**)  
  
**white bryonia**

***Peganum harmala*\*\***  
***Alyssum corsicum* and *A. murale***  
***Alhagi pseudalhagi***  
***Tussilago farfara*\*\***  
***Heracleum mantegazzianum*\*\***  
*Aegilops triuncialis*, *A. ovata*  
***Galega officinalis*\*\***  
*Hieracium piloselloides*, *H. \*\**,  
*H. aurantiacum\*\**, *H. X floribundum*,  
***Cuscuta japonica***  
***Pueraria lobata*\*\***  
*Nardus stricta\*\**  
***Euphorbia oblongata***  
***Echium plantagineum*\*\***  
*Cyperus rotundus*  
*Solanum elaeagnifolium*  
*Centaurea virgata\*\**  
***Centaurea iberica\*\**, *C. calcitrapa\*\****  
*Zygophyllum fabago*  
*Carduus alanthoides\*\**, *Carthamus*  
*baeticus*, *Carthamus lanatus\*\**, ***Onopordum***  
***tauricum***  
***Bryonia alba***

## Aquatic Invertebrates

**brackish-water Asian clam**  
Asian tapeworm  
Japanese shore crab  
**Leidy's comb jelly**  
New Zealand sea slug  
Northern Pacific sea star  
virile crayfish,  
marbled crayfish  
or "marmorkrebs"  
**sea squirts**  
  
veined rapa whelk  
waterflea (fishhook, spiny)  
**zebra mussel, quagga mussel**

***Potamocorbula amurensis***  
*Bothriocephalus acheilognath*  
*Hemigrapsus sanguineus*  
***Mnemiopsis leidyi***  
*Philine auriformis\*\**  
*Asterias amurensis*  
*Orconectes virilis*, *Procambarus* sp.  
  
***Didemnum* sp.\*\***, *Ciona savignyi*, *Styela clava\**  
  
*Rapana venosa*  
*Cercopagis pengoi*, *Bythotrephes cederstroemi*  
***Dreissena polymorpha*, *Dreissena rostriformis***  
***bugensis***

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## Land Invertebrates

### **Africanized honey bee**

Argentine ant

### **Asian longhorned beetles**

bean plataspid

brown spruce longhorned beetles

corn borers

### **emerald ash borer**

European chafer

European corn borer

### **Exotic woodwasps**

exotic ambrosia beetles

gypsy moths (European, Asian,  
pink, nun moth)

### **imported fire ants (red, black)**

Japanese beetle

Japanese wax scale

### **khapra beetle**

### **light brown apple moth**

Mexican bean beetle

old world bollworm

Oriental beetle

plum curculio

Siberian moths

### **silver Y moth**

spruce bark beetle

Swede midge

terrestrial snails (giant African, heath,  
vineyard, white garden snails)

wax scales

### ***Apis mellifera scutellata***

*Linepithema humile\**

### ***Anoplophora glabripennis*, *A. chinensis***

*Megacopta cribraria*

*Tetropium fuscum*, *T. castaneum\**

*Ostrinia furnacalis*, *O. nubilalis*

### ***Agrilus planipennis***

*Rhizotrogus majalis*

*Ostrinia nubilalis*

### ***Sirex noctilio*, *Tremex fuscicornis\****

*Platypus mutates*, *P. guercivorus*, *Xyleborus glabratus*,  
*Xylosandrus crassiusculus\**, etc.

*Lymantria dispar\*\**, *L. mathura\**, *L. monacha*

### ***Solenopsis invicta\**, *S. richteri***

*Popillia japonica\*\**

*Ceroplastes japonicus*

### ***Trogoderma granarium\****

### ***Epiphyas postvittana***

*Epilachna varivestis*

*Helicoverpa armigera*

*Anomala orientalis*

*Conotrachelus nenuphar*

*Dendrolimus pini*, *D. sibiricus*, *D. superans*

### ***Autographa gamma***

*Ips typographus*

*Contarinia nasturtii*

*Achatina fulica*, *Cernuella virgate*, *Theba pisana*,

*Xerolenta obvia*, etc.

*Ceroplastes destructor*, *C. japonicus*

## Fish

round goby, Shimofuri goby

### **Asian carp (bighead, silver), black carp**

Atlantic salmon

golden shiner

### **muskellunge, northern pike**

ruffe

snakeheads

threadfin shad (yellow tails, shad and  
shad minnow)

*Neogobius melanostomus*, *Tridentiger bifasciatus*

### ***Hypophthalmichthys nobilis*, *H. molitrix*,**

### ***Mylopharyngodon piceus***

*Salmo salar\*\*\**

*Noteigonus crysoleucas*

### ***Esox spp.\****

*Gymnocephalus cernuus*

*Channa spp.*

*Dorosoma petenense*

## Birds — mute swan

### ***Cygnus olor\*\****

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## Changes that were made to the 100 Worst List from 2012 to 2013:

### Micro-organisms

- Add “chalara dieback of ash”, *chalara fraxinea* [Note: It is causing great damage in UK and Europe, is moved via nursery stock, ODA is considering a quarantine... and we don’t want it here... makes EAB look like a piker.]
- Correct the name of a virus: Sheep Pen Hill Virus, blueberry scorch virus – New Jersey strain (BISV-NJ)
- Add “white-nose syndrome”, *Geomyces destructans*

### Aquatic Plants

- After the scientific name of common reed, add in parenthesis “non-native haplotype”
- Correct the species name of rock snot from “geminate” to “geminata”

### Land Plants

- Change “Alyssum sp.” To “Yellow-tuft alyssums”, and change the species names to “Alyssum corsicum and A. murale”
- Change coltsfoot to “European coltsfoot”
- Change “goat’s rue” to “goatsrue”
- In the hawkweed category, list king-devil, orange, and yellow devil) and list the species as *Hieracium piloselloides*, *H. aurantiacum*, and *H. X. floribundum*.

### Aquatic Invertebrates

- Change Asian clam to “brackish-water Asian clam”
- Add “Northern Pacific sea star”, *Asterias amurensis*
- Remove mitten crabs
- Change the crayfish species to virile and marbled
- Lump the tunicates and call them “sea squirts”, *Didemnum sp.*, *Ciona savignyi*, and *Styela clava*

### Land Invertebrates

- Change “brown spruce longhorn beetles” to “brown spruce longhorned beetles”
- List the species of corn borers as “*Ostrinia furnacalis*, *O. nubilalis*”
- Change woodwasps to “Exotic woodwasps” and add “*Tremex fuscicornis*” as a species. [Note: Apparently a developing pest (tree killer) elsewhere in the world where introduced. A very broad host range of broadleaved trees. A species for which we are at constant risk for introduction via SWPM, as has been demonstrated several times recently.]
- Change “ambrosia beetle” to “exotic ambrosia beetles” and list the species as “*Platypus mutates*, *P. guercivorus*, *Xyleborus glabratus*, *Xylosandrus crassiusculus*, etc.”
- Change Siberian moth to “Siberian moths” and list the species as “*Dendrolimus pini*, *D. sibiricus*, *D. superans*”
- List the terrestrial snails as (giant African, heath, vineyard, white garden snails), and list the species as “*Achatina fulica*, *Cernuella virgate*, *Theba pisana*, *Xerolenta obvia*, etc.”
- List the wax scales species as “*Ceroplastes destructor*, *C. japonicas*”

### Reptiles

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Change the species name of the eastern snapping turtle from “serpentina” to “serpentine”

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## Changes that were made to the 100 Worst List from 2011 to 2012:

### Micro-organisms

1. Remove ramorum canker and blight (SOD is here to stay and we've switched to a defensive, slow-the-spread strategy).

### Land Invertebrates

2. Add Bean plataspid—it is spreading rapidly and causing significant damage to legumes in the SE.

#### **Other changes:**

1. Two asterisks were added to *Didemnum* because this species exists in Winchester and Coos Bays in Oregon.
  2. One asterisk was added to club tunicate because it was previously detected in Oregon, but was eradicated or did not establish.
  3. Two asterisks were added to *Galega officinalis* because it is present in three populations in the Portland area. Eradication efforts are underway. A previous population in Josephine County was eradicated.
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## Changes that were made to the 100 Worst List from 2010 to 2011:

### Land Plants

#### **The following were removed from the list:**

1. Skeletonleaf bursage was removed from the list because the Oregon State Weed Board removed it from its “A” list and placed it on a watch list. It is present in the bordering county of Nez Perce, Idaho, but there is no eminent threat to Oregon.
2. Texas blueweed was removed from the list because the Oregon State Weed Board removed it from its “A” List and placed it on a watch list. It is present in Yakima County, WA (under control). Washington is one year from eradicating this plant, and there is no eminent threat to Oregon.

#### **The following was added to the list:**

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1. Alyssum species because of their ability to outcompete native forbs and plants.

### Aquatic Plants

1. Asian kelp (*Undaria pinnatifida*) was added to the list because of its threat to Oregon waters (based on proximity to Oregon – it is in several bays in California) and its ability to outcompete native algae and other important species.

### Aquatic Invertebrates

#### **The following were added to the list:**

1. Two crayfish species were added to the list to replace the invasive crayfish that have become established in the state.

#### **The following were removed from the list:**

1. The red swamp crayfish and rusty crayfish now have established populations in Oregon, and have been removed from the list.

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## **Changes that were made to the 100 Worst List from 2009 to 2010:**

### Aquatic Plants

#### **Two species were combined to create an algae category:**

1. Golden alage and toxic cyanobacteria were combined under algae, toxic.

#### **One species was added to the list:**

2. Common reed was added to the list.

### Land Plants

#### **One species was added to the list:**

1. Japanese dodder was added to the list.

### Aquatic Invertebrates

#### **Two species were combined to create one waterflea category:**

1. Spiny waterflea and fishhook waterflea were combined under waterflea.

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## **Changes that were made to the 100 Worst List from 2008 to 2009:**

### Micro-organisms

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**The following were removed from the list:**

1. cherry leaf roll nepovirus (CLRV) is found in Oregon, although on an alternate host. It has failed to move to cherries. Also, like pear trellis rust, the damage it is capable of causing is significantly less than the new species we added to the list.
2. pear trellis rust (*Gymnosporangium fuscum*) is established in WA and is a manageable disease. Also, it is not fatal to its host, unlike the others.

**The spelling was corrected:**

1. sudden oak death *Phytophthora ramorum*\*\* (corrected spelling)

**There was a name change for:**

1. Sheep pen hill virus, blueberry hill carlavirus - New Jersey strain (BBScV-NJ) carlavirus (BBScV-NJ) (corrected name change)

**The following were added to the list:**

1. blackberry yellow vein disease, blackberry yellow vein-associated virus (BYVaV) and blackberry virus Y (BVY) (this disease is caused by the two viruses acting synergistically) (Nancy K. Osterbauer, ODA)
2. bacterial blight of grape *Xylophilus ampelinus*

**Aquatic Plants**

**The following was added to the list:**

1. Flowering rush, *Butomus umbellatus*—Montana is asserting that this plant could eventually spread through much of the Columbia Basin. It's not far from the northeast and southeast Oregon borders

**Land Plants**

**The following were removed from the list:**

1. mile-a-minute weed (*Polygonum perfoliatum*)\* This species is not listed in either Oregon or Washington.
2. Portugese broom (*Cytisus striatus*)\*\* (Note: \*Note this would be a removal because it "got away," and therefore would count against our benchmark.) This plant is a "B" rated plant in Oregon. Though Portuguese broom is a high priority for protection of our forest lands in the state, programs implementing control projects have moved from eradication mode into containment mode with this plant.

**The following were added to the list:**

1. white bryonia (*Bryonia alba*)—White bryonia is a vigorous herbaceous perennial vine resembling kudzu in appearance and growth habit. Infestations will overgrow and smother small trees and shrubs forming dense mats which shade out all the vegetation it grows upon. If established in areas with no structure to climb, it will form a dense mat covering the ground. Vines emerge each spring from a large fleshy parsnip-shaped tuber and grow rapidly, sometimes to 30 feet. Populations are documented from south-east Washington State, Idaho, Utah and Montana. Should white byronia become established in Eastern Oregon it poses a huge threat for forest and range land, not to mention ecosystems of the Hells Canyon/Snake River area.
2. goat's rue, *Galega officinalis*—Goat's rue, *Galega officinalis*.L., is a USDA federally listed noxious weed. A member of the legume family, it was introduced into Utah in 1891 as a potential forage crop. Escaping

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cultivation, it now occupies in excess of 60 square miles in Cache, County, Utah. Within this area, goat's rue infests cropland, fence lines, pastures, roadsides, waterways, and wet, marshy areas (Evans and Ashcroft 1982). The plant's stems and leaves contain a poisonous alkaloid, galegin, which renders the plant unpalatable to livestock, and toxic in large quantities. It is particularly lethal to sheep. Because of these issues, goat's rue invasion can reduce forage availability and quality.

3. oblong spurge, *Euphorbia oblongata*—Oblong spurge is a weedy escaped ornamental species of *Euphorbia* known from only one site in Salem, Oregon. Suspected to have been introduced from California in contaminated flax or machinery that was used at the State Penitentiary flax mill in the early part of the 1900's, it has slowly expanded its territory on the penitentiary property. Growing up to 3' tall, this species is capable of forming dense stands in more arid climates and could be expected to be a troublesome weed to control should it spread and establish in eastern Oregon.

### Aquatic Invertebrates

#### **The following were removed from the list:**

1. Unnamed estuarine snail (Coos Bay), *Assiminea* sp. (Increasingly widespread establishment is one of our criteria for bumping a species off the 100 worst list. The small brackish water snail we saw on the rip-rap of the Yaquina river, capable of carrying the human liver flukes parasite is *Assiminea* parasitological.

#### **The following was added to the list (with other nonnative crayfish):**

1. Red swamp crayfish (Louisiana crayfish), *Procambarus clarkia*— Native to south central United States, this species has been found in California, Idaho, Oregon and Washington. Noted for its burrowing activity which could damage dams, levees, and water control structures. Introduced into Oregon as a bait species and releases from classroom science experiments.

### Land Invertebrates

#### **The following were removed from the list:**

1. pine shoot beetle (*Tomicus piniperda*) PSB does not appear to present a threat to forest ecosystems, primarily being a threat to Christmas tree plantations. Granted, the latter commodity is important, but pines are being phased out as Christmas trees in favor of other species which are not hosts known to support PSB reproduction.

2. sawyers (*Monochamus urusovi*\*, *M. alternatus*)\* (I think there is too little information to support the two *Monochamus* spp. as major threats to our forests).

#### **The following were added to the list with the other terrestrial snail:**

1. vineyard snail, *Cernuella virgata* and *heath snail*, *Xerolenta obvia*—These two snails have the potential to be pests of many more commodities (cereals, forage crops, grapes, orchards, etc.) and would greatly increase molluscicide use. They are certainly much more difficult to control or eradicate than PSB and probably more so than *Monochamus* species. The technologies for detection and delimitation are also much less effective (try "primitive"). At least one of these species can also vector human and animal parasites and both can vector plant diseases.

### Fish

#### **The following was grouped with other non-native carp:**

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1. black carp (*Mylopharyngodon piceus*) (Move black carp with Asian carp to group like species).

**The following were added to the list:**

1. Threadfin Shad (yellow tails, shad and shad minnow), *Dorosoma petenense*— Native to the south-central United States and introduced into parts of the northern United States. Arizona and California as a forage and baitfish for warm water fish species such as largemouth bass, crappie and walleye. Feeds on zooplankton, and breeds quickly.

2. Golden Shiner, *Noteigonus crysoleucas*— Native to eastern United States. Introduced as a baitfish, ornamental and forage fish. Impact to Oregon is through competition with native fish for food and habitat. Lays up to 200, 000 eggs and may spawn more than once during a breeding season.

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