

# 100 Most Dangerous Invaders To Keep Out of Oregon in 2009

Highlighted species 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>
blackberry yellow vein disease, blackberry yellow vein-associated virus (BYVaV) and blackberry virus Y (BVY)	
chronic wasting disease	CWD prion
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>
potato cyst nematodes	<i>Globodera rostochiensis</i> and <i>G. pallida</i>
potato wart	<i>Synchytrium endobioticum</i>
ramorum canker and blight (sudden oak death)	<i>Phytophthora ramorum</i> **
blueberry hill carlavirus - New Jersey strain	(BBScV-NJ)
Southern wilt, bacteria wilt	<i>Ralstonia solanacearum</i> Race 3 Biovar 2
viral hemorrhagic septicemia virus (VHSV)	<i>Novirhabdovirus</i> spp.
whirling disease	<i>Myxobolus cerebralis</i> **
willow watermark disease	<i>Brenneria salicis</i>

## Aquatic Plants

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

## Land Plants

African rue	<i>Peganum harmala</i> **
camelthorn	<i>Alhagi pseudalhagi</i>
coltsfoot (not <i>Petasities frigidus</i> )	<i>Tussilago farfara</i> **
giant hogweed	<i>Heracleum mantegazzianum</i> **
goatgrasses (barbed, ovate)	<i>Aegilops triuncialis</i> , <i>A. ovata</i>
goat's rue	<i>Galega officinalis</i>
hawkweeds (king-devil, meadow, mouse-ear, orange, yellow)	<i>Hieracium piloselloides</i> , <i>H. pratense</i> **, <i>H. pilosella</i> , <i>H. aurantiacum</i> **, <i>H. floribundum</i>
kudzu	<i>Pueraria lobata</i> **
matgrass	<i>Nardus stricta</i> **
oblong spurge	<i>Euphorbia oblongata</i>
Paterson's curse	<i>Echium plantagineum</i> **
purple nutsedge	<i>Cyperus rotundus</i>

silverleaf nightshade	<i>Solanum elaeagnifolium</i>
skeletonleaf bursage	<i>Ambrosia tomentosa</i>
squarrose knapweed	<i>Centaurea virgata**</i>
starthistles (Iberian, purple)	<i>Centaurea iberica**</i> , <i>C. calcitrapa**</i>
Syrian bean-caper	<i>Zygophyllum fabago</i>
Texas blueweed	<i>Helianthus ciliaris</i>
thistles (plumeless, smooth distaff, woolly distaff, taurian)	<i>Carduus alanthoides**</i> , <i>Carthamus baeticus</i> , <i>Carthamus lanatus**</i> , <i>Onopordum tauricum</i>
white bryonia	<i>Bryonia alba</i>

## Aquatic Invertebrates

Asian clam	<i>Potamocorbula amurensis</i>
Asian tapeworm	<i>Bothriocephalus acheilognath</i>
fishhook waterflea	<i>Cercopagis pengoi</i>
Japanese shore crab	<i>Hemigrapsus sanguineus</i>
Leidy's comb jelly	<i>Mnemiopsis leidyi</i>
mitten crabs	<i>Eriocheir spp.*</i>
New Zealand sea slug	<i>Philine auriformis**</i>
rusty crayfish, red swamp crayfish (non-native crayfish)	<i>Orconectes rusticus</i> , <i>Procambarus clarkia</i>
sea squirt	<i>Didemnum sp.</i>
spiny waterflea	<i>Bythotrephes cederstroemi</i>
transparent tunicate	<i>Ciona savignyi</i>
club tunicate	<i>Styela clava</i>
veined rapa whelk	<i>Rapana venosa</i>
zebra mussel, quagga mussel	<i>Dreissena polymorpha</i> , <i>Dreissena rostriformis bugensis</i>

## Land Invertebrates

Africanized honey bee	<i>Apis mellifera scutellata</i>
Argentine ant	<i>Linepithema humile*</i>
Asian longhorned beetles	<i>Anoplophora glabripennis</i> , <i>A. chinensis</i>
brown spruce longhorn beetles	<i>Tetropium fuscum</i> , <i>T. castaneum*</i>
emerald ash borer	<i>Agrilus planipennis</i>
European chafer	<i>Rhizotrogus majalis</i>
European corn borer	<i>Ostrinia nubilalis</i>
European woodwasp	<i>Sirex noctilio</i>
granulate ambrosia beetle	<i>Xylosandrus crassiusculus*</i>
gypsy moths (European, Asian, pink, nun moth)	<i>Lymantria dispar**</i> , <i>L. mathura*</i> , <i>L. monacha</i>
imported fire ants (red, black)	<i>Solenopsis invicta*</i> , <i>S. richteri</i>
Japanese beetle	<i>Popillia japonica**</i>
Japanese wax scale	<i>Ceroplastes japonicus</i>
khapra beetle	<i>Trogoderma granarium*</i>
light brown apple moth	<i>Epiphyas postvittana</i>
Mexican bean beetle	<i>Epilachna varivestis</i>
old world bollworm	<i>Helicoverpa armigera</i>
Oriental beetle	<i>Anomala orientalis</i>
plum curculio	<i>Conotrachelus nenuphar</i>
Siberian moth	<i>Dendrolimus superans</i>
silver Y moth	<i>Autographa gamma</i>
spruce bark beetle	<i>Ips typographus</i>
Swede midge	<i>Contarinia nasturtii</i>
White garden snail, vineyard snail, and heath snail (terrestrial snails)	<i>Theba pisana</i> , <i>Cernuella virgata</i> , <i>Xerolenta obvia</i>

## Fish

Amur goby, round goby, Shimofuri goby  
Asian carp (bighead, silver), black carp  
Atlantic salmon  
golden Shiner  
muskellunge, northern pike,  
tiger muskie  
ruffe  
snakeheads  
threadfin Shad (yellow tails, shad and  
shad minnow)

*Rhinogobius brunneus*, *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\*\**

## Mammals

feral swine

*Sus scrofa\*\**

## Reptiles

eastern snapping turtle

*Chelydra serpentine serpentina*

\*Detected previously in Oregon, but eradicated or did not establish.

\*\*Currently under eradication or restricted to a small area in Oregon.

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

### Micro-organisms

#### **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 (BBSV-NJ)  
carlavirus (BBSV-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 bryonia 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 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), *Assimineia* 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 *Assimineia* 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, *Ceratomyxa 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:**

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.