

# **Invasive Species in Oregon**

## **Report Card, 2002**

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### **Introduction**

There is good news and bad news to report on the topic of invasive species in Oregon. The good news is that a coordinated effort to improve the state's ability to exclude new invaders is underway. The creation of Oregon's Invasive Species Council gives Oregonians a new vehicle for addressing issues in this area. This report card is a product of the new council. The bad news is that Oregon continues to be bombarded with undesirable invasive species. Overall, the council gives Oregon a grade of "C+" for success at excluding invasive species in 2002.

The body of this report is divided into four sections: formation of the council, activities of the council in its first year, report on exclusion of the top 100 most dangerous species, and a review of significant incidents from 2002.

The purpose of this report card is to summarize current efforts to exclude undesirable invasive species from Oregon. It is the hope of the council that an annual report card will help raise awareness of invasive species issues among all Oregonians and lead to more success at excluding them.

### **Invasive Species Council Formation**

#### **Statute**

Oregon's Invasive Species Council was created by the Oregon legislature on January 1, 2002. Complete text of the statute (ORS 561.685) can be found online at: [landru.leg.state.or.us/ors](http://landru.leg.state.or.us/ors), under Chapter 561.

#### **Functions**

The statute identifies four main functions for the council. First, the council is directed to create and publicize a system for reporting sightings of invasive species and referring those reports to the appropriate agency. Second, the council is directed to undertake educational activities to increase awareness of invasive species issues. Third, the statute directs the council to develop a statewide plan for dealing with invasive species. Finally, the council is authorized to administer a trust account for funding eradication and education projects.

#### **Membership**

The council consists of twelve members. There are four ex officio members representing the agencies with a lead role in invasive species management: Oregon Department of Agriculture, Portland State University, Oregon Department of Fish & Wildlife, and the Sea Grant College of Oregon

State University. The ex officio members appoint eight at large members for two-year terms. The members may represent federal, state, and local governments, universities, industry and other groups having an interest in invasive species. A list of current members is found at the end of this report.

At the first meeting, Dan Hilburn, Plant Division Administrator, Oregon Department of Agriculture was elected chair. Mark Systma, director of the Center for Lakes and Reservoirs at Portland State University, was voted chair-elect and will assume the chair in 2003.

## **2002 Council Activities**

### **Meetings**

The Invasive Species Council met three times this year in Portland (January), Prineville (June), and Astoria (September). Meetings lasted 1.5 to 2 days and included a field trip to see invasive species in the area. Minutes from these meetings are available on the council webpage. For information on future meetings, contact the current chairperson.

### **Bylaws**

The council developed bylaws covering: purpose, membership, administration, meetings, decision-making, and committees. They are available online (see web address below).

### **Reporting Hotline**

A centralized, toll-free number has been set up to encourage sightings of all types of invasive species. The number is 1-866-INVADER. Information received in the calls is referred to the appropriate agency for any necessary follow-up. Traffic on the line varies with the season and publicity containing the hotline number; 162 calls were received in July, 76 in August and 74 in September. Some of the calls have included suspected sightings of high-risk invaders including mitten crab and zebra mussel. In both of these cases, the reports turned out to be other non-invasive species.

### **Webpage**

The council has created a webpage connected to the Oregon Department of Agriculture website where information about council activities is readily available. The address is: [oda.state.or.us/Plant/Inv\_spp].

### **Information Sharing Network**

An information-sharing network has been set up to connect people and organizations in the state that have an interest in invasive species. Short documents are sent out via FAX. In the future most information will be forwarded electronically. Anyone interested in invasive species in Oregon is invited to join the network by contacting: Gail Slater, ODA Plant Division, 635 Capitol St. NE, Salem, OR 97301; 503-986-4660; [rslater@oda.state.or.us].

## Awards

In an effort to recognize people and organizations that are making outstanding contributions to protecting the state from invasive species the council has created four awards:

Eagle Eye Award -- presented to the person or persons reporting the most important sighting(s) of an invasive species. 2002 winners: Alice Pfand for discovering New Zealand mud snail in Garrison Lake; Scott Rose and Gary Garth for discovering meadow fleabane in Hermiston.

Outstanding Defender Award -- presented to the person(s)/organization (non-government) making the most outstanding contribution to protecting Oregon from invasive species. 2002 winner: Sandy Diedrich founder/leader of the No Ivy League.

Ten Fingers in the Dike Award -- presented to the person(s) or unit in a government agency going above and beyond the call of duty to keep new invaders out of the state. 2002 winner: Sudden Oak Death Task Force (Alan Kanaskie, ODF; Nancy Osterbauer, ODA; Everett Hansen, OSU; Ellen Goheen, USFS).

Invader Crusader Award -- presented to the Oregon student(s) making a difference in protecting Oregon from invasive species. 2002 winner: Erik Hanson, PSU, primary author of Oregon's Aquatic Nuisance Species Management Plan.

These awards will be presented at a banquet held in conjunction with the winter meeting of the council, January 27-28<sup>st</sup>, in Keizer at the Wittenberg. Inn.

## Educational Materials

The council began exploring many possible options for educational materials including calendars, brochures, posters, wallet cards, and place mats. A pencil with the 1-866-INVADER hotline number on it has been a popular handout. It was determined that there is need for an education/outreach strategy; that strategy will be developed in 2003.

## Action Plan

The invasive species council statute directs the council to "develop a statewide plan for dealing with invasive species." A first draft of the plan has been completed and is being reviewed internally by council members. A revised draft is scheduled to be considered at the January 2003 council meeting, and will be available for public review shortly thereafter. A completed plan will be considered for adoption at the June council meeting. The action plan will be reviewed and updated annually. The most up-to-date version will be available on the council's webpage.

Exclusion, early detection and rapid response are by far the most cost-effective way of dealing with undesirable invaders. The goal of the Action Plan

is to facilitate efforts to keep invasive species out of the state, find invasions before they establish permanent footholds and do whatever it takes to eradicate incipient populations of undesirable species. Education and cooperation are key components to an effective strategy.

## 100 Most Dangerous Invaders Threatening Oregon in 2002

The council developed the following list of least wanted species in 2002. These organisms threaten to invade at any time and available information allows us to predict that they would have a serious negative economic or ecological impact if they were to become established in the State. Eradication should be seriously considered if incipient populations are found. The costs of eradication are likely to be much less than the impacts associated with permanent establishment. This list will be updated annually by the council and our record of success or failure at exclusion of these species will be tracked.

### Micro-Organisms

alder root rot	<i>Phytophthora</i> sp.
brown root rot	<i>Phellinus noxiosus</i>
cherry leaf roll	cherry leaf roll nepovirus (CLRV)
crayfish plague	<i>Aphanomyces astaci</i>
elm yellows	elm yellows phytoplasma
golden nematode	<i>Globodera rostochiensis</i>
hazelnut bacteria canker	<i>Pseudomonas avellanae</i>
infectious salmon anemia virus	ISAV
oak wilt	<i>Ceratocystis fagacearum</i>
pear trellis rust	<i>Gymnosporangium fuscum</i>
Pierces's disease	<i>Xylella fastidiosa</i>
plum pox	plum pox potyvirus (PPV)
poplar canker	<i>Xanthomonas populi</i>
potato cyst nematode	<i>Globodera pallida</i>
potato tuber necrosis	NTN strain of potato virus y
potato wart	<i>Synchytrium endobioticum</i>
Sheep pen hill virus	carlavirus (BBScV-NJ)
sudden oak death**	<i>Phytophthora ramorum</i>
viral hemorrhagic necrosis virus	VHSV European form
whirling disease**	<i>Myxobolus cerebralis</i>
willow watermark disease	<i>Erwinia salicis</i>

### Aquatic Plants

African waterweed	<i>Lagarosiphon major</i>
caulerpa seaweed	<i>Caulerpa taxifolia</i>
cordgrasses	<i>Spartina</i> spp. ( <i>S. alterniflora</i> *)
dead man's fingers	<i>Codium fragile tomentosoides</i>
European water chestnut	<i>Trapa natans</i>
giant salvinia	<i>Salvinia molesta</i>
golden algae	<i>Prymnesium parvum</i>
hydrilla	<i>Hydrilla verticillata</i>
toxic cyanobacteria	<i>Cylindrospermopsis raciborskii</i>

### Land Plants

African rue**	<i>Peganum harmala</i>
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bulbed goatgrass  
 camelthorn  
 coltsfoot\*\* (not *Petasities frigidus*)  
 giant hogweed\*\*  
 Iberian starthistle\*\*  
 king-devil hawkweed  
 kudzu\*\*  
 matgrass\*\*  
 meadow hawkweed\*\*\*  
 mouse-ear hawkweed  
 orange hawkweed\*\*  
 ovate goatgrass  
 plumeless thistle\*\*  
 purple nutsedge  
 purple starthistle\*\*  
 silverleaf nightshade  
 skeletonleaf bursage  
 smooth distaff thistle  
 squarrose knapweed\*\*  
 Syrian bean-caper  
 Texas blueweed  
 woolly distaff thistle\*\*  
 yellow hawkweed

*Aegilops ventricosa*  
*Alhagi pseudalhagi*  
*Tussilago farfara*  
*Heracleum mantegazzianum*  
*Centaurea iberica*  
*Hieracium piloselloides*  
*Pueraria lobata*  
*Nardus stricta*  
*Hieracium pratense*  
*Hieracium pilosella*  
*Hieracium aurantiacum*  
*Aegilops ovata*  
*Carduus alanthoides*  
*Cyperus rotundus*  
*Centaurea calcitrapa*  
*Solanum elaeagnifolium*  
*Ambrosia tomentosa*  
*Carthamus baeticus*  
*Centaurea virgata*  
*Zygophyllum fabago*  
*Helianthus ciliaris*  
*Carthamus lanatus*  
*Hieracium floribundum*

### Aquatic Invertebrates

Asian clam  
 Asian tapeworm  
 fishhook waterflea  
 Japanese shore crab  
 Japanese oyster drill  
 Leidy's comb jelly  
 mitten crabs\*  
 New Zealand isopod  
 New Zealand mud snail\*\*\*  
 New Zealand sea slug  
 rusty crayfish  
 spiny waterflea  
 veined rapa whelk  
 zebra mussel

*Potamocorbula amurensis*  
*Bothriocephalus acheilognath*  
*Cercopagis pengoi*  
*Hemigrapsus sanguineus*  
*Ceratostoma inornatum*  
*Mnemiopsis leidy*  
*Eriocheir spp.*  
*Sphaeroma quoyanum*  
*Potamopyrgus antipodarum*  
*Philine auriformis*  
*Orconectes rusticus*  
*Bythotrephes cederstroemi*  
*Rapana venosa*  
*Dreissena polymorpha*

### Land Invertebrates

Africanized honey bee  
 Argentine ant\*  
 Asian longhorned beetle  
 blueberry maggot  
 brown spruce longhorn beetle  
 citrus longhorned beetle  
 European chafer  
 European corn borer  
 glassy-winged sharpshooter\*  
 gypsy moth\* / Asian gypsy moth\*  
 Japanese beetle\*  
 khapra beetle  
 Mexican bean beetle  
 nun moth  
 old world bollworm  
 plum curculio

*Apis mellifera scutellata*  
*Linepithema humile*  
*Anoplophora glabripennis*  
*Rhagoletis mendax*  
*Tetropium fuscum*  
*Anoplophora chinensis*  
*Rhizotrogus majalis*  
*Ostrinia nubilalis*  
*Homalodisca coagulata*  
*Lymantria dispar*  
*Popilla japonica*  
*Trogoderma granarium*  
*Epilachna varivestis*  
*Lymantria monacha*  
*Helicoverpa armigera*  
*Conotrachelus nenuphar*

pine shoot beetle	<i>Tomicus piniperda</i>
pink gypsy moth*	<i>Lymantria mathura</i>
red haired pine bark beetle	<i>Hylurgus ligniperda</i>
red imported fire ant*	<i>Solenopsis invicta</i>
Siberian moth	<i>Dendrolimus superans</i>
spruce bark beetle	<i>Ips typographus</i>
woodwasp	<i>Sirex noctilio</i>

### Fish

Atlantic salmon	<i>Salmo salar</i>
bighead carp	<i>Hypophthalmichthys nobilis</i>
muskellunge, northern pike*	<i>Esox spp.</i>
northern snakehead	<i>Channa argus</i>
round goby	<i>Neogobius melanostomus</i>
ruffe	<i>Gymnocephalus cernuus</i>
Shimofuri goby	<i>Tridentiger bifasciatus</i>

### Birds

mute swan	<i>Cygnus olor</i>
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### Mammals

feral swine***	<i>Sus scrofa</i>
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\*Detected previously in Oregon, but eradicated or did not establish.

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

\*\*\*In danger of becoming permanently established.

## **Report Card Grade -- How Did We Do?**

Ecologically and economically, it would be desirable to keep out all of the organisms on the 100 most dangerous list out of the state. Realistically, 100% success is not feasible; the “ambitious but realistic” target set for our state by the Oregon Progress Board is 99% success each year. Benchmark #89 measures the “Number of most threatening invasive species not successfully excluded or contained since 2000.” If Oregon does a good job at exclusion, we’ll meet the target of five or fewer species from the annually updated list of 100 most dangerous invaders becoming permanently established by 2005, the next grading period. In this case Oregon’s grade will be an “A.”

There is often a lag time of at least a year or two before it is can be determined whether an eradication or containment program has succeeded or failed. Where no effort is made, permanent establishment is probable. This year three species from the 100 most dangerous list are in danger of escaping and becoming permanently established: New Zealand mud snail, meadow hawkweed, and feral swine.

New Zealand mud snail, previously known from Young’s Bay and the Snake River in Oregon was discovered in Garrison Lake, Curry County. A survey of Young’s Bay and connecting rivers found New Zealand mud snail to be much more widely distributed than previously thought. There is no possibility of eradicating this species from these locations while still protecting native aquatic life, and no containment plan is in place.

A meadow hawkweed infestation on the Mt. Hood National Forest has spread to approximately 100 gross acres. Scattered plants and small patches are now common in the surrounding area. The U.S. Forest Service has failed to take action to address this infestation since it was discovered several years ago. The window of opportunity to eradicate this infestation is closing rapidly.

The total population of feral swine in the state is estimated to be between a few hundred and a thousand. A grant application to OWEB for an eradication project aimed at the largest population (Wasco County) was turned down this fall. Hunting laws for feral swine have been loosened and two control areas requiring eradication have been created, but compliance has not been 100%. Some landowners view feral swine as a valuable game animal. A study in California found that hunting pressure typically reduces populations by about 40%, but populations continue to grow unless more than 70% of each generation are removed. There is still an opportunity for successful eradication in Oregon, but no organized effort is in place to make it happen.

Given the probability that three target species have not been successfully excluded or contained, Oregon's preliminary grade for 2002 is a "C." Creation of the invasive species council and the prospect for more coordinated and effective action in the future raises the 2002 grade to "C+."

## Significant Incidents in 2002

### April

- ◆ Live specimens of two exotic longhorned beetles, *Tetropium castaneum* and *Monoctonus urussovi*, were found in dunnage from a Russian ship docked in Portland. The dunnage was tarped and fumigated. Traps were deployed in the area.

### May

- ◆ Chrysanthemum white rust, *Puccinia horiana*, was found at a nursery in Portland. Infected plants were destroyed, nearby plants were treated.

- ◆ *Pandemis heparana*, an exotic fruit tree pest was identified from specimens collected in 1997 & 1998 from Banks and Sauvie Island.

### June

- ◆ Orange hawkweed, *Hieracium aurantiacum*, was discovered for sale at a farmers market in Creswell. Plants and mother bed were destroyed.

- ◆ Chrysanthemum white rust was discovered at a nursery in Corvallis. Infected plants were destroyed, nearby plants were treated.

- ◆ Meadow hawkweed on the Mt. Hood National Forest has spread to approximately 100 gross acres. Scattered plants and small patches are now common in the surrounding area.



## July

♦Black turfgrass beetle, *Ataenius spretulus*, was identified from a golf course in Jackson County. This is the first state record for this pest.

♦Ten live Japanese beetles were intercepted on aircraft at PDX. Host material nearby was treated to prevent establishment.

## August

♦Potato mop top virus was reported in potatoes imported to Canada from 10 states including Oregon. A follow-up survey is underway.

♦Sudden oak death surveys detected 12 additional acres of infected trees in Curry County. All new sites are within the 9 square mile quarantine area. Host material is being cut and burned.

♦Ten gypsy moths were trapped in the state. A breeding population was discovered in Fisher (Lincoln County.). Eradication treatments are planned for spring '03.

♦Monitoring at kudzu eradication sites detected one spot needing retreatment. A spot treatment was completed.

♦Giant hogweed has been documented at 40+ sites in the state. Literature, including recommended control techniques, was supplied to landowners.

♦New Zealand mud snail was discovered in Garrison Lake, Curry County. A survey of Young's Bay and connecting rivers, Clatsop County, found New Zealand mud snail to be much more widely distributed than previously known.

## September

♦Meadow fleabane, *Inula britannica*, was discovered at a nursery in Hermiston. Eradication treatments were applied; additional monitoring is planned.

♦California dagger nematode, *Xiphinema index*, was discovered at a nursery in Clackamas County. An eradication program was initiated.

♦An unidentified powdery mildew was found on Oregon Grape in Washington County. No powdery mildew diseases were known from our state flower until this year.

♦Grant application to OWEB for feral swine eradication project in Wasco Co. turned down.

**November**

◆Live giant silk moth eggs found on cut flowers from Columbia at a Portland florist.

**December**

◆Monitoring results from four Oregon estuaries indicate a continued decline in European green crab (*Carcinus maenas*) populations.

**Major Incidents Elsewhere in the U.S. with Implications for Oregon**

◆Emerald ash borer, *Agrilus planipennis*, was discovered killing ash trees in Michigan and Ontario, Canada. The infestation was too widespread for eradication. This insect is expected to spread to most regions of North America where ash trees occur.

◆Asian longhorned beetle was discovered in New Jersey. All host trees in the infested area will be destroyed. Earlier infestations in New York and Illinois have proven to be very difficult to eradicate.

◆Sudden oak death reported from two new counties and six new hosts in California.

◆*Xylosandrus mutilatus* discovered established in Mississippi. This Asian bark beetle has a broad host range and can kill healthy trees. It is expected to spread throughout much of North America.

◆Two species of Asian snakehead fish were discovered in Maryland. These fish are sometimes sold live in ethnic markets. A new federal rule prohibits importation and interstate transportation of all snakehead species.

## Current Oregon Invasive Species Council Members

### Ex Officio Members

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