

Oregon Invasive Species Council

Oregon Dept. of Ag
635 Capitol St NE., Salem, OR 97301
February 22, 2006

Chemeketa Eola NW Viticulture Center
215 Doaks Ferry Rd NW
Salem, OR 97304
February 23, 2006

MINUTES

ATTENDANCE

Council Members

Present

Dave Bridgwater
Samuel Chan, Chair
Dan Farrar
Chris Gunterman
Randy Henry
Dan Hilburn
Martin Nugent
Bill Reynolds
Meredith Savage
Mark Sytsma
Mark Wiegardt

Absent

Mandy Tu

Weed Board Members

Present

Patti Milne
Dan Hilburn
Don Richards
Jim Harris (vice-chair)

Absent

Bill Hansell, Chairman
Jerry Erstrom
Ken Bare

Others

Diana Kimberling, ODA
Marc Peters, USDA-APHIS
Dori Dudoit
Robyn Draheim, PSU
Scott Weidemer, OSU
Paul Heimowitz, USF&W
Tim Butler, ODA
Bonnie Rasmussen, ODA
Ken French, ODA
Eric Coombs, ODA
Greg Winans, Tri-County CWMA
Kev Alexanian, Crook County
Brad Knotts, ODF
Todd Thompson, BLM
Lesley Richman, BLM
Noel Bachelor, OR Parks & Rec. Dept.
Sue Cudd, Whiskey Creek Shellfish Hatchery
Mark Hitchcox, USDA-APHIS
Robin Sears, Umpqua SWCD
Floyd Paye, Jefferson County
Sylvia Yamada, OSU, Zoology
Jan Hedberg, ODA
Kathleen Johnson, ODA

Gary McAninch, ODA
Chana Dudoit, OSU
Ian Davidson, PSU
Catherine deRivera, PSU
James Gores, ODF&W
Barbara Shields
Jo Davis, ODA
Beth Myers, ODA
Tom Forney, ODA
Jim LaBonte, ODA
Dan Sherwin, Deschutes County
Nancy Phelps, USFS
Shannon Brubaker, ODA
Floyd Holbrook, Lake Co. CWMA
Vern Holmes, NW Weed Management Partnership
Gary Brown, USDA-APHIS
Risa DeMasi, Grassland Oregon
John Griffith, Coos County Commissioner
Steve Davis, Jefferson County
Chad Smith, Hood River County
Jim Cramer, ODA
Steve Anderson, TNC

INTRODUCTIONS

Introductions from the Oregon Invasive Species Council and attendees were made.

APPROVAL OF MINUTES FROM October 5 & 6, 2005 MEETING

It was moved and seconded to approve the minutes from the previous meeting with no changes.

BUDGET AND EXPENSES

Total expenditures to date are \$26,135.18 while the balance of the trust funds account is \$4,000. Total remaining GF for fiscal year 2005-06 is \$8,664.03.

REVIEW BYLAWS AND 100 WORST LIST

The Council reviewed the most recent Bylaws and decided that there is a need for some minor updates as follows:

Article I: Section 3: *[not including introduced beneficial species]* does need to be included in the by-laws.

All other portions of the Bylaws are current and up to date. Council approved bylaws adding in statement noted above.

100 Worst List – Recommendations to the Council are to:

Remove:

Chronic wasting disease

Blueberry maggot

Glassy winged sharpshooter

CWD prion

Rhagoletis mendax

Homalodisca coagulata

Add:

Rock snot

Granulate ambrosia beetle

Catfish, channel and flathead

Didymosphenia geminate

*Xylosandrus crassiusculus**

Ictalurus punctatus, Pylodictis olivaris

The Council decided that they should do some further review of the list and decide via email the adds and removes and then approve the changes at the June meeting.

COUNCIL HISTORY PLUS DISCUSSION – DAN HILBURN, ODA

Dan gave an overview of the Council History in the form of a quiz. The questions were as follows:

1. In September of 1993, a groundbreaking report was published entitled, "Harmful, Non-Indigenous Species in the United States." Who published it?
 - A. U.S. Congress: Office of Technology Assessment
2. The National Invasive Species Council was created by Executive Order. Which president issued the Order? When was it issued?
 - A. President Clinton on February 3, 1999
3. The Oregon Invasive Species Council was created from passage of HB 21181. Who sponsored the bill? What year did it pass? When did the Council officially start business?
 - A. Pre-session filed at the request of Gov. John Kitzhaber for the Oregon Dept. Of Agriculture. Passed - 2001 Regular Session and OISC started- January 1, 2002.
4. Four people representing the permanent agencies on the Council testified and lobbied for the bill. Who were they?
 - A. Mark Sytsma - PSU, Larry Cooper – ODF&W, Paul Heimowitz – OSU SeaGrant, & Dan Hilburn – ODA.
5. HB 2181 nearly died in a Senate committee due to concern by the Chair. What was her concern and how was it resolved?
 - A. Sen. Betsy Close was concerned that humans might be considered invasive species. Language exempting humans and domestic animals was added via amendment.
6. The OISC's budget is \$12,000/ biennium, yet the bill didn't add to the state budget. Where did the money come from?
 - A. HB 2181 eliminated the Interagency Integrated Pest Management Coordination Committee and transferred its operating budget to the Council.
7. The Statute outlines four basic functions for the OISC. What are they?
 - A. (1.) Create and publicize a system for reporting sightings of invasive species and referring those reports to the appropriate agency. (2.) Undertake education activities to increase awareness of invasive species issues. (3.) Develop a statewide invasive species plan. (4.) Administer a trust account for funding eradication and education projects.
8. How many members are on the Council and how are they chosen?

- A. 12: four ex-officio members from ODA, ODF&W, PSU Center for Lakes and Reservoirs, OSU Sea Grant; eight at large members serving two year terms representing; "federal, state, and local government, universities, industry and other groups having an interest in invasive species.
- 9. One-stop-reporting of invasive species sightings was a vision of the OISC founders even before the Council came into being. Has that goal been met? How?
 - A. Yes. 1-866-INVADER. Now averaging 55 calls per month.
- 10. Since it's inception, the Council has given out awards recognizing people and organizations that are making outstanding contributions to protecting Oregon from invasive species. There are 5 categories of awards. What are they and who is eligible for each category?
 - A. Eagle eye: person(s) reporting important sightings
 - Outstanding defender: person(s)/organization (non-government) making outstanding contribution to protecting Oregon from invasive species
 - Ten fingers in the dike: person(s) or unit of government going above and beyond the call of duty
 - Invader crusader: student(s) making a difference
 - OISC service award: Council members leaving after one or more complete terms
- 11. Many states and organizations have created lists of harmful invasive species. What is unique about Oregon's 100 Worst List?
 - A. It focuses on species threatening to invade the state but not yet established.
- 12. Where can you find information on what happened in Oregon relating to invasive species and Council activities in a particular year in the past?
 - A. Annual Report Cards: 2002 – present, on the web page: Oregon.gov/OISC
- 13. What document contains all the following information: biology and distribution of species on the 100 Most Dangerous Invaders Threatening Oregon List, a list of all the invasive species that were established in Oregon in 2000, definitions of terms used to describe invasive species, a generic flow chart for responding to a new invasion, and links to the Oregon Aquatic Nuisance Species Management Plan, Oregon Noxious Weed Strategic Plan, ODF& W Wildlife Integrity Rules, and the Nation Invasive Species Management Plan?
 - A. Oregon Invasive Species Action Plan: Oregon.gov/OISC
- 14. What are some of the challenges for the OISC in the next couple of years?
 - A. Hiring a staff person; Initiating an outreach and education program; Finding a way to fill and replenish the trust account.

MEMBER UPDATES

Oregon State Marine Board (OSMB) – RANDY HENRY

OSMB again placed an informational kiosk as part of it's Portland Boat Show display. The display was visited by thousands of people in search of free life jackets for their children. The kiosk featured information about invasive species and had new rack cards about invasive species that match with rack cards OSMB is producing on other subjects. OSMB also gave out "spill prevention kits" which contained some of our invasive species information.

Kristin Feindel, who attended the October OISC meeting, presented a series of workshops around the state in November and December. Four out of the five workshops had a presentation about invasive species (3 of them were by Sam Chan and one by Robyn Draheim). These presentations were well received and generated lots of questions by the workshop attendees. A few of the "Stop Harmful Species" signs were given out as well as some of the invasive species keychains and other publications and identification cards. Attendance averaged around 10-15 marina owners and operators. As a reminder, hundreds of the Stop Harmful Species signs were distributed to law enforcement officers in October for posting at boat ramps in key areas.

OSMB, as part of the Hydroelectric Application Review Team (HART), included recommendations to the Federal Energy Regulatory Commission for aquatic invasive species education, signage and monitoring on Idaho Power reservoirs in Hells Canyon. The comments were part of our response to the "Notice Ready for Environmental Assessment." Comments were posted Jan. 26. If FERC agrees, Idaho Power would be required to include education, outreach, signage and monitoring for invasive aquatic species in their management plans. This process will continue through the spring and summer.

Whiskey Creek Shellfish Hatchery – MARK WIEGARDT

Spartina Willapa Bay-

During the 2005 eradication program, spartina treatment covered approximately 5,000 acres with the herbicide Imazapur or Habitat. The majority of coverage was done by helicopter. Spring 2006 will reveal efficacy. WA Dept of Ag which heads this effort is now concerned about seed recruitment north in Grays Harbor. Seed infestation

seems to be heading northward along the Washington coast.

European Green Crab,

Recruitment studies of green crab along Oregon & Washington estuaries by Sylvia Yamada of OSU indicates that green crab are established but not in great numbers. Through trapping, different age classes of crab are present indicating a viable breeding stock.

Ship Dismantling-

Local oysterman in Yaquina Bay were distressed with the possibility of invasive species being introduced through the dismantling of government ships. Media reports that the decision to turn this kind of industry away from Newport was economic and not environmental. Other sites in Washington & Oregon are being explored.

USDA – Forest Service – DAVE BRIDGWATER

The USDA-Forest Service is providing cooperative funds to ODA for taxonomic work on the early detection rapid response program, for work on the *Sirex noctilio* lucid key, taxonomic training, invasive weed control/eradication, and survey for and eradication of *Phytophthora ramorum*. USFS is also providing cooperative funds to Oregon Department of Forestry for *Phytophthora ramorum* eradication in Curry County, and funds to Oregon State University for diagnostic work for *Phytophthora ramorum*. In addition to each National Forest treating invasive plants on our lands, we have challenge cost share grants with other organizations for treatment of invasive plants on other lands. USFS fishery biologists are erecting aquatic invasive signs at lake access points, working on prevention, treatment and restoration of riparian areas, helping to develop a training protocol on New Zealand mud snails, and working with Oregon Fish and Wildlife on knotweed control, removal of non-native fish such as the Tui chub in Diamond Lake, and removing eastern brook trout where they may cross with bull trout.

USFS completed a region-wide (OR&WA) EIS for Prevention and Treatment of Invasive Plants, and are responding to two appeals. There are 10 National Forests currently working on more site specific EIS's that will tier to the Regional document.

The USFS annual invasive program is somewhere in the \$6 to \$7 million range including plants, insects, disease, and aquatic species.

Dave's first work on an invasive species was in 1967 as a surveyor for European pine shoot moth. Since then I have worked on numerous invasive insect and disease species including gypsy moth control in the East and both European and Asian gypsy moth eradication in the West. In his present position as Invasive Species Specialist for the Pacific Northwest Region of the Forest Service, he is responsible for coordination of all Forest Service activities on invasive insects and diseases in Oregon and Washington. (Nancy Phelps coordinates Forest Service activities on invasive plants in Oregon and Washington.)

Oregon Dept. Of Agriculture – DAN HILBURN

Staff completed 5,412 inspections in 2005 and issued 4,994 phytosanitary certificates. Three thousand seven hundred and ninety-nine notifications of imported nursery stock shipments were received, totaling 31 million plants. Twenty of the high-risk shipments were inspected resulting in eleven official quarantine rejections.

Testing of nursery stock samples for *P. ramorum* will begin in the early spring. More than 60,000 samples from over 1,000 nurseries are anticipated.

In 2005, staff set 18,365 gypsy moths traps; nine gypsy moths were caught. No established populations were discovered so eradication programs are not planned for 2006. Five thousand, one hundred and twenty-six Japanese beetle traps were deployed resulting in four catches. Eradication treatments were applied near the Portland International Airport. Forty-four high-risk sites were monitored for exotic wood boring insects resulting in 58,507 individual wood boring insects caught and identified. Several new state records were discovered. Thirteen thousand, five hundred and thirteen trees were inspected for Asian longhorned beetle; 1,634 were examined for emerald ash borer. Surveys for two-dozen pests of concern were completed including new targets such as, potato tuberworm, European chafer, blueberry maggot and Oriental beetle.

Staff completed 888 noxious weed control treatments in 2005, 798 involved herbicides, the others were manual or mechanical controls. Blackberry rust was discovered in the spring in Curry County. It had spread to all western Oregon counties except Jackson and Josephine by the end of the year. Five new giant hogweed sites were discovered; 53 known sites were monitored and treated. Four new weeds were added to the state's noxious weed list: yellow flag iris, yellow floating heart, policeman's helmet and garlic mustard. Over half a million dollars of Measure 66 funds were awarded to land managers for noxious weed control projects.

Lincoln SWCD – MEREDITH SAVAGE

Lincoln Soil and Water Conservation District (LSWCD) is currently developing an Invasive Species program that will compliment its existing Agriculture and Water Quality Program. Development of this program is in response to feedback LSWCD has received over the past year from private land owners and other community members/groups that there is a desire for a more comprehensive invasive species program on the county level. Prior to this, starting in 2003, LSWCD had conducted noxious weed control solely on Japanese, giant, and Himalayan knotweeds. The LSWCD knotweed control program has been very successful and we have treated over half of the sites inventoried in the county; the table below provides a summary of LSWCD knotweed work to-date.

	2003	2004	2005	Total
Inventory (# sites)	115	367	197	679
Treated	12	111	346	469
Area	≈30,000sq.ft. (.7ac)	235,922sq.ft. (5.4ac)	505,954sq.ft. (11.6ac)	771,876sq.ft. (17.7ac)

A great deal of this past season's success in knotweed control can be attributed to LSWCD's partnering efforts; it was the combined use of college internships and a community youth crew that made the 2005 field season numbers possible. Successful development of a comprehensive invasive species program within LSWCD will be directly influenced by building and expanding upon such partnerships in the future.

Portland State University – MARK SYTSMA

The new CLR website is up and running at <http://www.clr.pdx.edu>. Look for up-to-date information on ANS projects such as the Spartina Drift Card Survey, research on *Egeria densa*, and much more. Also up and running is the new Aquatic Bioinvasions Research and Policy Institute website at <http://www.clr.pdx.edu/abrpi> where people can catch up on the work being done by PSU in partnership with the Smithsonian Environmental Research Center.

As crabbing season gets underway we've received a number of crab calls, many courtesy of the 1-866-INVADER hotline. These have all been kelp crabs but it is great to know that our signs, watch cards and other outreach information are getting to the general public.

This fall with the assistance of the Marine Board and County Sheriffs' Departments we have distributed more than 500 of the Red/White Stop ANS signs to be posted at boat ramps and other public access points throughout Oregon.

CLR ran a workshop was in December in La Jolla, California to develop research priorities for invasive aquatic plants. Improved management of aquatic invasive species (AIS) requires continued research on the basic biology and ecology of pest species and control methods. Funding for research on management of AIS has been inadequate although recently introduced legislation (National Aquatic Invasive Species Act) includes authorization of increased funding. Even if increased funding is authorized, the AIS problem is growing rapidly, and available resources will likely continue to limit research efforts. Consequently, development of priorities for research that address key biological, ecological, and management questions are critical for effectively addressing AIS problems. The results of this workshop are available at the CLR website as well.

CLR has been an active participant in the 100th Meridian Initiative efforts to prevent the westward spread of zebra mussels. With the wrap-up of the Lewis and Clark Bicentennial the 100th Meridian is reevaluating the activities of the initiative and CLR is leading this effort.

Portland State University and the CLR specifically have been approached by the Pacific Northwest National Laboratory in Sequim WA about partnering on ANS projects at their marine lab. PSU will continue to investigate collaborative efforts with this facility which may allow us to dramatically expand our research capabilities.

This spring, sampling will begin on the middle reach of the Columbia River to determine a baseline of ANS information for the river from Bonneville to Priest Rapids and along the lower Snake River.

PSU continues to work on joint education and outreach projects with the Western Regional Panel on ANS, the USFWS, Pacific States Marine Fisheries Commission, the Oregon Marine Board's Clean Marina Program, Oregon Sea Grant and more.

The Nature Conservancy (TNC)– MANDY TU

Current/Ongoing Invasive Species Projects:

a. Pacific Northwest Regionwide Invasive Plant Conference – We are working with the US Forest Service, the University of Washington, and several other partners to put on a region wide conference on invasive plants. We will have participation from OR, WA, BC and AK, and our objectives are to provide an active forum for sharing the latest information and science on invasive plants in the region. TNC’s keynote speaker will be Dr. Ann Bartuska, Deputy Chief for Research and Development in the USFS, and the date of this conference has been postponed, and will now be held September 19-21st, 2006 in Seattle.

b. Early Detection Networks – TNC is working on developing 3 early detection networks as pilot projects in Oregon. This being done in SW Oregon, central Oregon coast, and in the Portland Metro area. What this involves is identifying those weeds that are not yet present or only present in small infestations, training staff and volunteers to look for these new infestations, then rapidly responding to these small infestations.

c. Knotweed management/ education/ outreach – Portland-Area Preserves Team

d. Gardener awareness and alternatives for planting - Working with OAN to implement the St. Louis Codes-of-Conduct at several key businesses, and working on developing suitable alternatives for purchase and planting. Working with OAN and Portland-area CWMA Education/Outreach group, and communicating with similar efforts in WA and CA.

e. TNC’s WIMS (Weed Info Mgmt System) application – TNC has developed a MS Access database that can assist natural resource managers manage their weed data, including keeping track of weed locations, assessments over time, and any management treatment applied. It can be used on handheld computers with GPS units, and has GIS capabilities. TNC has been involved in a national-level pilot project with USFWS (funded by USFWS, NWRA (Natl Wildlife Refuge Assoc), USGS NIISS (USGS Natl Inst. Inv. Spp. Science) and TNC) where TNC has trained 6 refuges across the country (1 refuge per region) on the use of this database application. This application is now available for everyone to use at <http://tncweeds.ucdavis.edu>, and we are now actively training TNC staff across the U.S. and partners in its use.

f. TNC site managers continue to actively manage against terrestrial weeds on TNC properties, and work with partners to develop and implement invasive species management strategies at larger landscape scales. Most have been very active in local CWMA’s, where there is one present. For instance, we have been very active in:

- Willamette County weeds/Tri-county CWMA/Tri-state CWMA in NE Oregon
- CWMA in Northwest Oregon Coast
- 4-County CWMA in Portland/Willamette Valley
- Developing CWMA in SW Oregon (near Medford)

Additionally, on TNC preserves where there are significant aquatic resources, we now are monitoring (early detection) for a few new aquatic invaders – namely zebra mussels and New Zealand mud snails – using aquatic substrates provided by PSU.

Active Research:

TNC has several ongoing research projects involving invasive species management. A few examples of these projects are:

- Knotweed control and management research ongoing
- Reed canarygrass control and management, needs to be submitted to journal
- Plateau (imazapic) trials on cheatgrass and medusahead
- Remote sensing of weeds in NE Oregon

SEA GRANT SURVEY FUNDING UPDATE – SAM CHAN

Sam gave the Council a brief overview of the past Omnibus survey done through Anthill Marketing. Steve Anderson with The Nature Conservancy pointed out that the Council should consider a \$20,000 minimum for the next survey, pointing out that The Nature Conservancy may be able to contribute to the financial side of things and emphasized that timing for the survey is essential.

Sam recommended that the survey subcommittee be involved on some level to determine the focus, he plans to contact the subcommittee for an initial meeting to be held in March.

NURSERY INDUSTRY PERSPECTIVE – CHRIS GUNTERMAN

Chris shared with the Council how the Oregon Association of Nurseries has taken several steps towards their stated goals in relation to Invasive Species.

The OAN Natural Resources Committee has met twice since the October OISC meeting. Educating Committee members on Invasive's issues is the first and highest priority.

The December meeting group discussion emphasized that a challenge to understanding this issue and solutions is that there are so many levels and kinds of weed lists, different layers of government involved, and at this time, no central "clearing house" for science-based information on what constitutes an invasive plant when a decision to propagate is made, or an order is placed at a nursery. So among the most important goals are education and cooperation with others to centralize communication of risks and facts about invasive ornamental plants. Those who access this information need a high level of confidence that the ratings are accurate, and apply in their geographic area of concern.

Additionally it was identified that within the membership there is confusion about terminology and definitions. The OAN's first goal is to educate the membership to the scientific definitions of such terms as "invasive", "noxious", "aggressive", "non-native", "endemic", "established", etc. Until the terms are defined and explained, the members may not uniformly understand the issues.

As part of the education effort; the OAN staff needed to develop several filters that will now be applied to all OAN publications as well as to articles purchased from freelance writers (some from out of state). Many of the OAN staff are not horticulturists, and some freelance writers may be unaware of the ODA plant lists. It is now the policy of the OAN that their publications will never knowingly promote any plants found to be on ODA noxious or 'avoid' lists.

The OAN will continue work with members to gain traction on invasive species issues using education about not only the risks of producing invasive species, but also the risks of falling prey to invasive plants, animals, and microbes.

Implementation of the St. Louis Declaration and VCC remains the ultimate goal.

Similar to the OISC goal of surveying the public's awareness and concern; the OAN is embarking upon surveying Oregon members, and potentially national nursery audiences about this issue.

The primary goal is to produce a broad yet scientifically valid survey to understand the attitudes and practices of those individuals or companies that import propagative material. Within the industry, they want to understand the attitudes and practices that may affect the introduction of potential invasive species.

The OAN Board will consider survey funding, and partnership or grant funding, that might be available to produce such a survey. The American Nursery and Landscape Association may become involved in the effort.

OREGON SEED LAWS – JIM CRAMER

Jim Cramer the administrator for the Commodity Inspection Division at the Dept. of Ag. gave a brief overview of the Oregon Seed Laws. Jim touched on the truth in labeling laws and the mislabeled seed penalties. He talked about the movement toward harmonization of seed laws among states. He asked for the Councils support in moving forward with the regulation of wildflower seed mixes and toward the seed law harmonizing closer to the Oregon noxious weed list. Jim spoke briefly on the bird feed issue, he believes that regulating this should be within the Oregon feed laws and that it will be moving forward to legislative concept.

WHAT HAPPENS IF AN INVASIVE IS FOUND AT A NURSERY? – JAN HEDBERG, ODA

Jan Hedberg, the lead horticulturist at the Dept. of Ag. gave a presentation on what could occur should an invasive species be found in a nursery. Using *P. ramorum* as an example Jan shared how the Department in cooperation with the nursery determine the level of risk. Once the level of risk is determined this will help the Department determine the best management for the species. Jan shared with the council the actions taken during a recent find of *P. ramorum* at a nursery, he showed images of the sampling process, the preparation for destruction, the actual destruction (and the methods used) and then followed by explaining the importance of cleaning not only equipment but clothing, shoes and even the ground the plants were sitting on. Jan also emphasized the importance of post eradication monitoring at sites where an invasive is found, this would especially be important in the nursery industry, as there is a high risk of continual movement throughout the state and outside the state.

WHAT HAPPENS IF AN INVASIVE IS FOUND IN SEED PRODUCTION – TIM BUTLER, ODA

Tim Butler, gave an overview on what happens if an invasive is found in seed production. Tim used small broomrape as an example, explaining that small broomrape is native to the Middle East, it is a parasitic annual that receives all of its nutrients from the host plant, it is a major threat to red and white clover. It was detected in seed production and the initial survey of clover fields was in 1999. The USDA threatened to halt clover seed movement, which prompted the Dept. of Ag. to quarantine the crop. In the end the seed crop was destroyed to protect the industry. Tim explained that prevention is the first line of defense, start with clean material, use weed free seed, mulch and forage, and clean your equipment.

JAPANESE EEL GRASS – CHANA MAKEALE'S DUDUOIT, OSU - STUDENT

Chana gave a presentation on The Distribution and Abundance of the Non-native Eelgrass *Zostera japonica* (Z.j.) in Oregon Estuaries. The native eelgrass serves many ecosystem services and provides invaluable habitat to a multitude of native fishes and invertebrates, as well as numerous species of prey including small crustaceans, bivalves, and gastropods. It serves as a nursery ground for juvenile salmon, flatfish and dungenous crabs. In essence *Zostera marina* (Z.m.), as a primary producer, provides food and habitat for many commercially and ecologically important fish in the United States (Gilmore, 1987). It is also very important for nutrient cycling within estuaries. During high tide or winter months the current and waves dislodge the eelgrass and deposit it on bare surfaces or on the shore where it degrades and returns nutrients, namely nitrogen, back to the system.

In the PNW there are two species of eelgrass that inhabit our coast. The native eelgrass *Z.m* and the non-native eelgrass *Z.j*. *Z.m.* is characterized by thick long leaf blades growing up to 1 meter in length. This creates a 3 dimensional habitat structure in which the native eelgrass is analogous to trees in a forest. The non-native *Z.j.* is characterized by thinner shorter leaf blades reaching only 30cm in length, therefore *Z.j.* patches create a mat or lawn of grass.

The non-native eelgrass, *Z.j.* was first introduced to the PNW in the 1950's when it was used as packaging material for seed oysters while being shipped across the Pacific from Japan. *Z.j.* was first established near oyster beds in the state of Washington then was subsequently found in British Columbia, and Oregon estuaries, and in one instance down in Humboldt county CA.

The seeds and rhizomes can be transported via waves and currents. Black brant are known to forage on eelgrass while migrating through PNW estuaries and may transport *Z.j.* seeds into other estuaries during their migration. Commercial and sport fisherman can get eelgrass tangled in their boat rudders, if not properly removed they become a conduit for seed and rhizome transport.

Both eelgrasses are submerged aquatic vascular plants which mean that they live, flower, and reproduce (seed) while submerged underwater. During low tides each may be exposed to air for up to 6hour at a time. In most estuaries the two eelgrasses are stratified within the intertidal zone. Where the non-native eelgrass, *Z.j.* remains higher in the intertidal and the native eelgrass *Z.m.* remains lower in the intertidal where it remains covered by a thin layer of water at the lowest tides.

In some estuaries there is little intertidal variation and *Z.j.* and *Z.m.* can not stratify into separate zones of the intertidal and therefore have to compete for the same habitat. As seen here *Z.j.* and *Z.m.* are intermingled throughout Netarts Bay.

Currently, its known which estuaries *Z.j.* is present but we do not know the extent to which it is established or how it is spreading. Only one estuary has precise documentation of the date of introduction and abundance of this eelgrass.

Keeping native ecosystems intact is a special concern for managers of marine reserves. California Fish and Game took preventative measures and removed the patch of *Z.j.* in Humboldt Bay before it had a chance to establish itself. Even though the decision to eradicate *Z.j.* from Oregon reserves has yet to be decided, it is important to document its spread and to understand its impacts on the native communities and ecosystem processes.

Chana showed slides of a filter feeding annelid that inhabits bare substrate within the estuary which is where *Z.j.* can become established. In the Pacific Northwest some managers feel that *Z.j.* changes species assemblages, alters native ecosystems, and does not provide the same high-quality habitat for Pacific salmon and ground fish as *Z.m.* does (Hahn, 2001). Keeping native ecosystems intact is a special concern for managers of marine reserves.

Chana chose to document the distribution and abundance of the non-native eelgrass in three Oregon estuaries.

- Netarts Bay just south of Tillamook
- The South Slough National Estuarine Research Reserve, which is a tributary to the Coos River
- and Bandon Marsh National Wildlife Refuge on the Banks of the Coquille River

Within each estuary Chana walked a transect and estimated the percent cover of Z.j. at 10 meter intervals. The percent cover was broken down into 4 categories 1-24%, 25-49% 50-74%, and 75-100% cover.

Chana used a penetrometer to measure how compact the substrate is throughout her transect. Penetrometer readings help in evaluating the transformation of soft sediment to a more consolidated substrate. The knowledge of substrate composition is important because the niche it creates has a profound effect on the organisms present. Any change in substrate composition will affect the species assemblages within the estuary.

On sandy substrates she found that the presence of Z.j. further compacts the sediment and created an easier surface to walk on. In muddy substrates with high organic matter the presence of Z.j. facilitated the binding of small organic particles and made it harder to walk in. Netarts bay was the most Northern Estuary she inventoried. It is just south of Tillamook and is an example of a very flat sheltered bay with very small intertidal geographic variation. It is 5 miles long by 1 mile wide

Currently there is technology being developed that will hopefully aid in the mapping of this non-native eelgrass. The Environmental Protection Agency is perfecting aerial photography technology so that they can take aerial pictures of estuaries and distinguish different habitat, substrate, and vegetation types. It is still difficult to distinguish between the native and non-native eelgrasses, therefore extensive ground truthing of the photographed areas are required.

HULL FOULING – IAN DAVIDSON, PSU

Ian Davidson gave a presentation on Hull fouling, examining of shipping vectors of organisms in Oregon. He explained the main vector of aquatic nuisance species as being ballast water, with transfer mechanisms such as, shipping, aquaculture, ornamental trade, escape, accidental introduction and even biological control. He shared graphs that showed the regional and national trends of introduction.

Ian shared that there was new legislation in 2006 for ballast water in Oregon and that California has similar regulations coming on board in 2006 as well. He explained the process of the hull fouling hitch/hiking process – adhesion (succession or bio-adhesion), translocation (used examples of how speed is a factor and harbor residency can be a factor as well) and inoculation (detachment, dry-dock discharge, and shipbreaking were all used as examples)

There were studies of vessel size, travel routes and dry docking patterns, which Ian shared the results of the ANS percentage on the hull area, explaining that cutters and tankers appear to be the highest risk for the Pacific. Ian went over with the Council the project shipbreaking ideas for the west coast and the potential spread of aquatic nuisance species to areas of the Oregon coast.

COASTAL MARINE NONINDIGENOUS SPECIES – CATHERINE DERIVERA, PSU

Catherine gave a presentation on Coastal Marine Nonindigenous species, she explained that the extent and impacts of alien = nonindigenous species (NIS) invasions in coastal marine ecosystems have become increasingly evident in recent years: marine biologists have already ID'd > 500 NIS along US coasts & estuaries. The rate has increased with time - due to greater sampling effort and a real pattern of more new introductions.

There are many documented marine NIS, a disproportionate number of these are on the West Coast.

Why should we care? NIS cost the US billions of dollars per year. Despite the high rate of invasions and their known impacts, many large gaps in knowledge of marine invasions remain. Therefore many fundamental questions need to be answered.

The first of these questions was outlined in a 2000 paper by Greg Ruiz (Greg). Extensive literature survey that identified some apparent patterns. All these patterns need to be verified with rigorous, uniform field studies.

Second, understanding the NIS patterns is crucial to: assessing the invasion risk, understanding the process of invasion and to developing predictive models & management strategies.

Because of these needs and because NIS was ranked as a management and research priority by some of the west it was decided to launch a joint effort to monitor for & study marine & estuarine NIS. funding from the Nat'l Fish &

Wildlife Feder'n to start a long term project with the following goals:

Determine % of NIS decrease with increasing latitude

Determine NIS arrive at ports/marinas then spread

Determine % of NIS peaks in estuarine waters

Are there more NIS in bays than exposed habitats?

There are some key questions that will need to be answered through this study:

- Pathways of introduction - how to stem the flow?

- What are the spatial & taxonomic patterns?

- How do we predict the spread?

- What are the specific impacts?

- What is the best management strategy?

Catherine explained a few of the projects that PSU is working on, and concluded with some basic management ideas.

PUBLIC COMMENT AND NEXT MEETING.

Paul Heimowitz, with the USF&WS handed out a few zebra mussel identification paperweights as examples to use for future outreach material.

The Council was invited to Central Oregon, by Bill Reynolds to tour Lake Billy Chinook. The projected date for the next meeting will be June 28 and 29 with back up dates of June 21 and 22. Business meeting location to be determined.

THURSDAY FEBRUARY 23, 2006

Oregon Invasive Species Council joins the Oregon State Weed Board.

Jim Harris (Vice chair OSWB) called the meeting to order and introductions were made.

Jim Harris started by giving a brief description of the structures and purpose of the Oregon State Weed Board. Sam Chan followed by giving the functions of the Oregon Invasive Species Council.

TIM BUTLER, ODA – NOXIOUS WEED CONTROL PROGRAM UPDATE

The ODA Noxious Weed Control Program's mission is to protect Oregon's natural resources from invasion and proliferation of exotic noxious weeds. The 11 program staff scattered strategically around the state provides leadership; serve as a technical resource; perform public outreach; conduct weed risk assessments; detect new invaders; perform on-the-ground control, implement biological control and administer the Oregon State Weed Board Grants. In 2005, ODA implemented 130 noxious weed control projects, performed 888 treatments, made bio-control releases on 108 sites and monitored 143 biocontrol sites. High-priority projects for 2005 were: Kudzu, Giant hogweed, Paterson's curse, orange hawkweed, purple starthistle, distaff thistle, plumeless thistle, squarrose knapweed, and Spartina. On the ground control and education and outreach activities were done for these projects. *Oregon State Weed Board* - (OSWB) is a seven-member board that sets weed management priorities by maintaining the State Noxious Weed List, awards noxious weed control grants and assists in coordination of state and county programs. The OSWB received 512 grant requests for \$8.6 million and have funded 293 grants totaling to \$3.3 million. *The Noxious Weed Control Policy & Classification System* prioritizes statewide cooperator efforts for invasive noxious weed projects, provide guidance to counties in developing local lists provides direction and sets priorities for the ODA Noxious Weed Control Program. It is also the list of potential targets for OSWB grants and helps direct limited funding sources towards the highest priority noxious weed targets.

Noxious Weed Listing Process: The process for listing a noxious weed starts with ODA and cooperators requesting particular plant species to be added to the "Watch List". Plants that are in the watch list will be monitored and evaluated by ODA staff and a pest risk assessment will be prepared. During one of the OSWB meetings, ODA will present to the Board plant species on the watch list and make recommendations as to what listing the evaluated plant will fall under. An example is the butterfly bush. Observations were made of wild populations, ODA staff conducted survey documenting the wild populations of butterfly bush in Oregon, information was gathered and a Plant Pest Risk Assessment was developed. A dialog between the Oregon Association of Nurseries and OSWB ensued and the plant was placed in the "B" List. *Oregon Noxious Weed Quarantine OAR 603-52-1200* covers the entire state of Oregon and applies to all of the State Classified "A" and "B" Noxious Weeds. The quarantine list includes the Federal Noxious Weed List (with noted exceptions), is adopted through ODA's administration rule process and has civil penalty authority for violations of up to \$10,000. *Quarantine listed plants* are from entry, transport, propagation, sale, or offering for sale in the state. *ODA Priorities for the Future:* To support formalization of a county weed control association, support funding options for federal, state and county weed programs, and bring federal and state agencies together to form an Oregon Invasive Weed Coordinating Committee (OIWCC).

MARTIN NUGENT, OISC – OREGON INVASIVE SPECIES COUNCIL (OISC) OVERVIEW 2005 PROJECTS

The purpose of the OISC is to conduct a coordinated and comprehensive effort to keep invasive species out of Oregon and to eliminate, reduce, or mitigate the impacts of invasive species already established in Oregon. The OISC meets three times a year. The council focused on developing an education and outreach strategy in 2005. A contract with Ant Hill Marketing resulted in a survey measuring the level of concern among members of the public. In the contacted adults, 30% felt that invasive species were of great concern; 41% had some concern, the rest had little or no concern or didn't know; only 6% felt the issue of invasive species was being dealt with to a great extent, 54% chose somewhat and the rest not much, not at all or don't know. Ant Hill also produced a Statewide Awareness Campaign Plan that includes research, branding or identity, campaign concept, advertising, brochures and flyers, webpage, youth education, public relations, partnerships, and other ideas. The estimated cost of the complete recommended campaign was \$200,000 to \$500,000. At the current time, the Council does not have the resources at this level and continued to concentrate on strategies within its limited budget while exploring fundraising ideas to raise money to implement an awareness campaign.

BRAD KNOTTS, OREGON DEPARTMENT OF FORESTRY – ODF PERSPECTIVE

Currently, ODF does not have an Invasive Species Coordinator. Three staff members are working partly on invasive issues. The work is being done, but ODF does not have an integrated policy program on noxious weeds. ODF is working to develop an integrated policy that will take place as a partner in invasive weed issues. The *Protection from Fire Program* is a program to protect private and state lands and some BLM in western Oregon. The main focus is fire prevention and suppression. The *State Forests Program* is a program covering ODF as the landowner and manager of state lands. *Private and Community Forests Program* administers the forest practices acts or rule. There is nothing on that rule that requires people to control invasive species. There is re-forestation but not mandatory control of noxious weeds on private and community forests. *Urban and Community Forests Program* is a fairly small program and focuses on urban areas. ODF has a *headquarters* in Salem and 18 district offices that are scattered all over the states. Field Activities on private lands involve about 50 field foresters. ODF's past focus has been to control weeds to grow trees but that view is changing. There are more concerns about weeds' economic and environmental effects on state lands and neighboring properties. ODF Field Foresters provide technical information on identification and control. They coordinate with local and regional groups, have cost-share programs, answer forest practice rule questions and propose alternate plans. For example, a field forester in Tillamook County will notify a landowner of gorse infestation on their property and advise them to treat it. They are coordinating with local weed control groups as well. ODF rules on chemical use are restrictive. ODF is trying not to restrict on their use invasive weed control. There are various invasive weed control projects and coordination with local and regional groups. There are about 780,0000 acres of state lands. Headquarters staff have been attending Oregon Invasive Species Council and Oregon State Weed Board, and other subcommittees meetings. Salem staff are working with regional groups and doing education and outreach by doing invasive weed displays at State Fair and Oregon Small Woodland Association convention. ODF is trying to collect information on identification, control and create a website and paper alerts. Invasive alerts are forwarded to field offices. *Oregon Board of Forestry* works on Forestry Programs for Oregon that protect and enhance the health of forest ecosystems and actively encourage state and federal agencies to monitor and control invasive species as well as conservation of native species.

BETH MYERS-SHENAI, ODA – WEEDMAPPER PROJECT

The WeedMapper Project is a cooperative effort between ODA, OSU with support from BLM and USFS. It is a collection of spatial information on the distribution of weeds in the state of Oregon. The website has known locations of noxious weeds throughout the state as collected by responsible federal, state, and local agencies. Maps are viewable at the state or county level. WeedMapper is designed to facilitate identification, reporting, and verification of noxious weeds in Oregon. Besides providing maps of known infestations of the most serious weed pests, it also contains detailed information on each weed with photographs to assist identification. The website contains the state listing of noxious weeds. It has weeds species information that includes identification, impacts and biological control. Each weed page links to maps of distribution of the weed in the state. It also has links to USDA Plants Database information of the weed, GRIN database information, and ODA's weed profile. There are images for identification and a 1-800 telephone number to call to report suspected sites. A weed sitting report form is available on line that can be filled out and submitted. WeedMapper is continuing to grow. More data are being submitted and new maps are available on line. In 2006, contributors to the WeedMapper increased tremendously. Several BLM districts, SWCDs, national forests, counties, cities, watershed council and working groups, park and recreation departments, OSU and three private citizens. There are new map styles being created for better viewing. Other upcoming WeedMapper projects are the hand-held PDA with GPS receiver attached for collecting weed distribution information in the field and a computer modeling that predicts weed spread potential using current distribution data. To give the public more comprehensive weed distribution information, government agencies,

non-profit and private sectors are encouraged to share information on their noxious weed locations.

ROBYN DRAHEIM, PSU/OISC-IDAHO WEED AWARENESS WORKSHOP & OREGON WEED AWARENESS WEEK IN 2005

A large number of people attended the Idaho Weed Workshop in 2005 from several states including Hawaii and Alaska. It focuses on defining the audience, funding resources, message delivery, and evaluation. Idaho and Montana began with a small amount of state funding starting with a few small projects and slowly built up partnerships. States that have successful education and outreach programs on invasive species were advised to start small, hire a campaign coordinator, establish stable funding for coordinator, build partnerships with agencies and other collaborators and build evaluation process at the start. The public, agency and legislative support is crucial for long-term success, and networks of collaborators crucial for startup success. The Idaho and Montana coordinators express interest in helping with Oregon efforts, participate in listserv development, and follow-up meeting planned for 2007 or 2008. OISC awareness campaign is to build support and engagement for a diversity of efforts among specific audiences, and to help build the political will and constituency support to encourage policy makers to address the invasive species problem effectively at statewide, regional and local scales. Statewide Awareness Campaign strategy development timeline was February 2005 with a budget of \$20,000. The fundraising projected timeline is in the Fall 2005. Campaign development projected timeline is Fall/Winter 2004/2005 with a projected budget of \$100k - \$1M. Campaign strategy will outline options at multiple funding levels in this range. The strength of the campaign is launching in the Spring 2006 coinciding with the start of outdoor recreation and gardening seasons, etc. There are positive support for conservation and positive messaging. Opportunities for campaign are building awareness of invasive species problems and partner with similar organizations for joint messaging.

Weaknesses of the campaign are potential lack of interest among target audiences (to change behavior), economic factors (regional and national), potential lack of funds to compete against other messaging in the market. Threats are competition for conservation message and retention. Next steps will be hiring a Campaign Coordinator. Three western states with successful campaigns emphasize need for a full-time coordinator. Coordinator position must have stable funding. Ideally, coordinator is versed in invasive species issues as well as marketing, communication, fundraising and/or lobbying. Draft position description has been written by the OISC for a Public Affairs Specialist II. Other awareness events will be Oregon Weed Awareness Week, which will be an annual event. Oregon's Governor proclaimed the last full week in May to be Oregon Weed Awareness Week. A planning committee met last week. Kick Off the Campaign - Aquatic Weed/Clean Boating Outreach will begin on the summer of 2005. Weed Awareness Week great projects are happening already. The outreach will start small and efforts focused on message already had some support for. The intent is to bring together new partners. Clean Boating Outreach, Boat Cleaning Information materials are available in several formats but needed distribution. Stop Aquatic Hitchhikers resources are available.

LESLEY RICHMAN, BLM - BLM WEED CURRICULUM

The Burns District BLM has been the lead in a large project involving many partners to develop a Classroom Weed Curriculum for Grades K-12. The project began in 1998 with a lot of discussion with various potential partners to determine the level of interest across the state. The initial partners involved were: BLM, ODA, ODOT, County Weed Supervisors, Hi-Desert Museum, many classroom teachers and several educational entities. Funding was obtained in 1999 through Oregon and Washington BLM to do the initial project development in the amount of \$80,000. BLM's primary partner in this development was the Malheur Educational Service District. Initially, two Oversight Committees were created: one to work on the lesson plan development, and one to work on developing associated support materials. As the project progresses, various other entities had expressed interest in participating, however due to the long time period involved in this project, committee members have come and gone and only a very small core group has actually been involved in the day-to-day. The material was initially developed in Oregon but was created in such a way as to be pertinent anywhere. The actual lesson plan development was a major undertaking and took a very long time. Over the summer of 2005, an exemplary editor (Terri Grimm) was hired to edit, re-format, make, re-do, etc. all the lessons. Also, a fabulous graphic artist (Stevie Ruda) was brought into the project. Portions of the draft curriculum can be found on-line at www.weedinvasion.org. Phase II of the project is to contract with a selected group of teachers representing all the grade levels and from diverse areas in the west to evaluate the curriculum materials during 2005-2006 school year. The selected teachers participated in a kick-off workshop in Bend, Oregon on January 13-15, 2006. These teachers will be testing the material and providing feedback in the form of an evaluation of the lessons so that an appropriate modification to the material before it becomes available to public. The hope is that the Alien Invasion Classroom Weed Curriculum will be ready to go out to the public by Fall 2006. BLM is currently looking for partners to actively jump in and help out at this point with \$\$, ideas, and energy! Negotiations have begun with several potential organizations to be the Contact Entity who would maintain a special account for this curriculum. The Contact Entity will be responsible for printing and sending material out to whoever request it, coordinating In-

Service type trainings (perhaps in the form of compiling a state-by-state list of who would conduct those in each state), and facilitating the up-dating of the material as necessary. A Steering Committee is needed to oversee these activities. This weed curriculum will be a tremendous asset to Oregon. Teaching children about the issue of noxious weeds will create a broad-based populace, aware of the problems and able to provide a whole new generation's worth of creative solutions!

MARK SYSTMA, PSU/OISC – AQUATIC WEEDS UPDATE

South Coast Lakes Survey- This is a USFS funded study of invasive weeds in lakes in the south coast. A number of shallow lakes around the dunes area that forms when wind blows and create a depression below the water table. There were 130 lakes total studied in 2 years. Most lakes are very small- 64. There are 44 small lakes, 11 medium, 9 large, and 2 very large lakes. Introduced invasive aquatic species found during the study are Fanwort *Cabobba caroliniana*, Brazilian egeria *Egeria densa*, Parrotfeather *Myriophyllum aquaticum*, Fragrant waterlily *Nymphaea odorata*. The introduced non-invasive found are water starwort *Callitriche stagnalis*, northern St. Johnswort *Hypericum boreale* and Tapegrass *Vallisneria Americana*. *Diamond Lake Aquatic Plant Survey* – Tui chubs have been introduced to Diamond Lake. Chubs having a devastating economic impact in the area. Diamond Lake used to be a famous trout-fishing destination. The number of trout has declined tremendously since the chubs were introduced due to the chub's capability of out-competing the trout for insects. During the 1950s, a chub infestation in Diamond Lake was eradicated by drawing down the lake, killing all the fish in it and refilling and restocking. The same approach will also be done in 2006. Aquatic plant survey was also done to make an estimate on what impact the draw down in the lake will be. Most of the plant material was concentrated at 5 meters. The 8 meters draw down might not have a significant impact in the lake. Plant species composition is all natives. No introduced plants found in the lake. *Spartina Response Plan and Dispersal Research* - *Spartina*, commonly known as cordgrasses, are exotic, invasive plants in estuaries of the west coast of North America. *Spartina* was originally brought to the west coast for erosion control, in the ballast water of ships and in oyster packing material. Cordgrasses clog flood channels, displace native vegetation, significantly raise mudflat elevation, and degrade habitat of Dungeness crab, shorebirds and migratory waterfowl by trapping sediments in their dense stems and root-mats. With a focus on early detection and rapid response to invasive *Spartina* species, Portland State University scientists hope that this study will help identify areas at high risk for invasion. While thousands of acres of populations of *Spartina* exist in both Washington and California, only one small population is known to currently exist within Oregon's borders. That population, located on the Siuslaw River near Florence, Oregon, is actively being treated. Monthly releases of 200 bright-yellow drift cards have been completed from the mouths of three estuaries: Willapa Bay, WA and Humboldt and San Francisco Bays in California. These estuaries are known to have significant populations of one or more *Spartina* species and are therefore potential sources of seeds or plant fragments. Releases took place between September 2004 and August 2005. Each release was completed within 2 hours of high tide to ensure the cards were pulled out into the open ocean. The biodegradable wooden drift cards are designed to float on the water surface and be carried by the ocean currents, behaving much as seeds or plant fragments would. The cards, made of lightweight plywood and painted with non-toxic paint, are only designed to persist for a few months in the harsh conditions of the ocean. But in that short time, they have the potential of revealing a wealth of information.

2005 OREGON INVASIVE SPECIES COUNCIL AWARDS – LUNCHEON

Sammy Chan presented the recipients of the 2005 Oregon Invasive Species Council Awards.

Eagle Eye Award: Bob Donaldson, Langlois, OR, Barbara Shields, Dept of Fisheries & Wildlife, OSU, and Mark Urness, The Dalles, OR; *Outstanding Defender Award*: Hines Nursery, Forest Grove, OR; *Ten Fingers in the Dike Award*: Jim LeBonte, ODA and Dave Langland, ODA; *Invader Crusader Award*: Chana Makeale'a Duduoit, OSU, Laura Sherry, OSU, and Seth Sherry, OSU; *2004 Service Award*: Kev Alexanian, Crook County Weed Department, Suzanne Cudd, Whiskey Creek Shellfish Hatchery and Risa Demasi, Grassland Oregon; *Honored Guests*: Greg Mazer, URS Corp, 2004 Eagle Eye Award Recipient, and The Oregon State Weed Board

MEETING ADJOURN AT 1:30 PM