

Director's Message

John Calhoun, Director



ONRC UPDATE

As the year comes to a close, we have an opportunity to reflect on past accomplishments or disappointments, and to focus on goals for the new year. Consistent with the strategic themes of the College, the mission of UW ONRC is to foster and support the research and education necessary to provide sound scientific information on which to base ecologically sustainable forest and marine industries. Each year a new set of pressing issues emerge.

We made good progress last year in providing service to the Washington State Department of Natural Resources (DNR) as they work to achieve the vision of the Olympic Experimental State Forest. UW ONRC is helping DNR develop landscape analysis tools and measurable criteria to achieve landscape goals for restoration of old forest habitat for Spotted Owls while producing revenue for its trust beneficiaries.

Another significant

accomplishment is the growth in our capability to deliver education and outreach services. A forestry-based math institute was initiated for regional K-12 teachers funded with a significant grant from the "No Child Left Behind" program. UW ONRC staff also played a major role in the development and logistical support of the Denman Forestry Issues Series and the Northwest Environmental Forum's initial event, the colloquium, Saving Washington's Working Forest Land Base.

In the coming year, we will continue our successful programs and respond to new issues as they arise. As Director, I am setting some personal goals for next year:

- Complete the research program review and, with consultation with the Policy Advisory Board, chart a course of invigorated research initiatives,
- As the need for supporting Spartina control efforts is reduced, assess and

respond to new issues in the marine program area,

- In support of becoming a world-class leader in sustainable natural resource management, we will host the second North American Summer Camp for Biological Conservation in partnership with National Chung Hsing University (NCHU), Taiwan. Next year 20 HCHU students will be joined by 10 additional students, each from a different university from around the world.
- We will increase the use of our outstanding facilities at UW ONRC. We have not yet reached the potential for hosting retreats, training, seminars, and resident support for regional research that was envisioned when the facility was built.
- We will seek funding to support full time research faculty assigned to UW ONRC.

The new year shows promise. We have much work to do.

UW ONRC Conference Center 2004 Review

Theresa Santman, Conference Coordinator
UW Olympic Natural Resources Center

With 2004 drawing to a close, it is valuable to review the activity of the UW ONRC Conference Center over the last twelve months. As expected, the UW ONRC Conference Center had a typically busy spring and summer season in 2004. Our primary 'customers' were University of Washington staff and students; this is in keeping with the conference center goal of supporting the educational and outreach efforts of the University in general and the College of Forest Resources specifically. The UW Teaching Academy's Institute for Teaching Excellence took place in June; this academy offered UW faculty a week-long experience in instructional development and training. In August, the UW ONRC worked in collaboratively with the UW College of Education, College of Forest Resources, and College of Arts & Sciences Department of Mathematics to present a two-week Mathematics Institute for 40 western Washington elementary, middle and high school teachers. Both of these events filled our center to capacity – they are both booked again for summer 2005, and we look forward to their return.

A Broad User Base

Positioned as we are along the forested coast line, our lodging facilities were well utilized by both UW and non-UW lodgers. University of Washington field trips included students from the College of Forest Resources, Aquatic and Fisheries Science, and UW Tacoma's Environmental Sciences program. Other UW students we lodged this year included the Pipeline Project's Alternative Spring Break (a literacy project of UW students volunteering in local elementary schools), UW medical students studying rural health care, and university students spending the spring academic quarter working in local schools. Non-UW lodgers included researchers from the USDA Forest Service and the Olympic Coast National Marine Sanctuary, and workshop attendees from the National Park Service and the Washington Department of Corrections.

In Support of UW ONRC's Mission

The Conference Center also served to provide support to UW ONRC's research programs and outreach efforts. We provided lodging



Theresa Santman

for ORHAB (Olympic Region Harmful Algal Bloom) efforts, conference services for the annual Forestry Education Tour for Legislative Staff event, meeting room space for the UW ONRC Public Forum series on natural resource issues, and facility use for the annual Nature Days workshop for children from five area schools.

The Larger Community

In addition to providing outreach and meeting facilities in support of the University of Washington community, the UW ONRC made itself available to a diversity of local users. We were especially pleased to offer our facility to support community enriching experiences; this year the UW ONRC hosted a broad variety of groups charged with making our communities stronger and better places to live. This included serving as a:

- meeting place for a conference for displaced homemakers
- 'living lab' for local and regional youth outdoor ecological field trips
- training facility for emergency medical technicians



UW ONRC Social Hall & Meeting Place

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- continuing education training site for area school teachers
- gathering place for community economic development planners.

As part of our community service effort, we made ourselves available to the American Red Cross to provide lodging for individuals who found themselves homeless due to area flooding. Additionally, this year we were happy to provide our facility to the National Park Service as an operations center as they staged a successful search and rescue of two young hikers lost in the Olympic Mountains.

The conference center staff thoroughly enjoys the diversity of clients who come to UW ONRC. We are looking forward to continuing our work with the communities we serve in 2005. Our enthusiastic staff welcomes the opportunity to provide you with conference support and meeting room space; we encourage you to consider using the UW ONRC Conference Center for your next event.

Theresa Santman can be reached at (360) 374-3220 Ext 223 or tsantman@u.washington.edu to discuss how our conference center can meet your organization's needs for a retreat or meeting location.



UW ONRC Hiking Trail

New Bulb Replacement Practice Saves ONRC \$

Deric Kettel, Maintenance Mechanic UW Olympic Natural Resources Center

As the Maintenance Mechanic here at UW ONRC, I am often asked by a variety of individuals that I know, "Just what do you guys do up there?" As I fumble through and try and explain we are a leading research and education facility, how we got started, what we have done, and where we are heading, the blank look on their face automatically leads to the next question, "What do you do up there?" I then explain to them about a subject that I am more familiar with - facility maintenance. Sometimes I still get that same blank look, but at least this time I really know what I am talking about.

With nearly 20 years experience in maintenance, of which 15 of that is in building maintenance, I thought I knew pretty much most of what it takes to keep a building running as smoothly as the day it was built. I was wrong. There are a lot of different systems and maintenance issues that come up from time to time. This, coupled with the fact that building maintenance technology is constantly changing, means there is always something to learn. (Just a side note: Having been here for nearly 10 years, no two days have been the same. I have never been bored, and as hard as it is for some people to believe, I really look forward to coming to work here at the Center everyday. It must be the great combination of people I work with and the job itself.)

That being said, this year I took on a project that involves changing every lamp in the facility, better know as a facility re-light. In the maintenance field there is a saying, "If it's not broke, don't fix it." That's a poor way to look at building maintenance. It should be said that if it's not broke, make sure it stays that way. Some may ask, "Why change out lamps if they are still working?" At home, we only change out a lamp if it goes out. Lamp technology at home is not the same as it is in the commercial field. Here at UW ONRC, for example, we have 1032 lamps, of which over half are four foot (T8) fluorescent lamps.

The rest are smaller compact fluorescent type lamps. From a budgetary stand point, I have hardly spent anything on lamps since the Center opened in July, 1995. From a maintenance standpoint, while the lights have kept running for all of these years, the underlying cost has been increasing. When a lamp reaches its projected lamp life, which is about 70% of the manufacturers suggested lamp life, it needs to be replaced. When a lamp starts to work harder, then it starts to make the ballast work even harder. Here is an example: If a four lamp has a rated life of 24,000 hours it needs to be changed out at 70% or at 16,800 hours. This is figured out by the manufacturer lighting a room full of a particular type of lamp, and, when half of them burn out, say at 24,000 hours, then that's what it is rated at. Spending 15 minutes changing out a ballast at a cost of \$15.00 versus 1 minute changing out two lamps at a cost of \$4.00 in a fixture that ran lamps too long will cost about 75% more in the long run. Now that's preventative maintenance.

Another factor at any facility is room occupancy throughout the year. By figuring the average lamp usage here at the center in all areas and factoring in the rating along with the cost of replacing the ballast because the lamps ran too long, relighting areas or types of lamps that have the same hours will save a lot of money, not only in lamp versus ballast replacement, but the labor in changing lamps one at a time as they burn out. I now have a wonderful tool in helping me keep track of all the areas here at the center. As I built a lighting spreadsheet in excel, it soon became apparent that I was really going to save time, energy, and money. So wherever you work, look up, and see how the maintenance department is doing with you're lighting. If you see black ends on the lamps or several different colors of lamps in the same room, then you are probably spending more money than you need to be. Feel free to share this information with others.

Razor Clam Information Distributed Along Coastal Washington

Ellen Matheny, Director, Education & Outreach
 UW Olympic Natural Resources Center

UW ONRC, in collaboration with our partners in the Olympic Region Harmful Algal Bloom (ORHAB) consortium, created three 11 x 17 inch placemat designs. These were developed to share information to the public about razor clam harvesting and the issues associated with it.

The designs include: *The Razor Clam Story* (shown below); *The ORHAB Story*; and *The Domoic Acid Story*. The triage of placemats describe, in simple-to-understand language and using colorful images, the complexities of the cycles of domoic acid production in oceanic waters. The placemats then describe how the domoic acid interfaces with razor clams and causes potentially harmful conditions for humans who ingest

the razor clams they harvest along the Washington coast.

The Razor Clam Story provides an introduction to the life cycle and biology of the Pacific Razor Clam. It describes the difficult-to-observe behavior of the razor clam occurring mainly below the surface of the sand. It also introduces the importance of razor clams as a subsistence food for local tribes.

The Domoic Acid Story defines the biotoxin domoic acid and helps readers understand its harmful effect on humans when they eat a razor clam containing domoic acid. Using satellite images and graphics of the Washington coastline, it outlines the most recent scientific discoveries

relating to the origins and impetus of domoic acid production.

The ORHAB Story describes the method of sampling waters along the coast for domoic acid with the goal of collectively monitoring the domoic acid presence. It introduces the members of the ORHAB partnership that have been working together for four years to better define the problem and develop collaborative methods for predicting domoic acid activity.

UW ONRC is distributing these placemats, at no cost, to restaurants, hotels, information centers, and libraries in communities along the Washington coast. The project was paid for using ORHAB outreach funds.

The Razor Clam Story




Quinault Nation members sell their harvest to the Tribal Enterprise, earning income in a traditional way.



As many as 39,000 recreational diggers have chased razor clams on a single day.







Razor clams (*Siliqua patula*) are found on beaches from the central coast of California north to the Aleutian Islands. Its scientific name is derived from the Latin: *siliqua* means pod, and *patula* means open, thus, resembling an open pod. "

Life Cycle * Interesting Facts

Washington razor clams begin to spawn at age three. Spawning occurs between mid-May and July. Female clams can release as many as 118 million eggs.



During the first three weeks, microscopic larvae propel themselves using short, hair-like projections called cilia. After three weeks, their shells begin to form and they begin to take on the appearance of clams. When 10 weeks old, juvenile clams begin to dig into the sand or "set". Very young clams can move laterally or sideways along the surface of the sand, but not much farther than 12 inches. Adult razor clams do not move sideways, only up and down.



Washington razor clams usually live about five years, but the oldest have reached 12 years. In Washington, a six-inch long clam is considered large. Razor clams found in Alaska live to be 15 to 18 years old and attain a maximum size of 11 inches.

Native American razor clam diggers. Photo courtesy of the Library of Congress.

The rapid downward speed of an adult razor clam sometimes makes it a challenge to capture. This speed is possible because of the unique design of the clam's foot. Long and nearly cylindrical, the foot can be extended down deep into the sand. Once the foot is far below, it expands, to become an anchor. The razor clam can then rapidly pull its body downward by contracting or shortening the muscle of its foot.



Juvenile razor clam

Under new rules adopted in 2004, the Washington Department of Fish and Wildlife increased the annual harvest level from 25 percent to 30 percent of the adult clam population. That change was made in consultation with the Quinault Nation and the Hoh Tribe, co-managers of the razor clam harvests.

ta' a'Wshl xa'iits'os

In the Quinault language, ta' a'Wshl xa'iits'os means "Clam hungry," indicating the traditional dependence of the Quinault tribe on razor clams as a subsistence food.

These educational placemats are sponsored by the University of Washington Olympic Natural Resources Center. Please visit the ORHAB website: www.nwfsc.noaa.gov/orhab/ For more copies of this placemat, please call 360-374-3220 ext 228.