April 1997

Oregon Snowy Plover Working Group Wins Award

Carrie Phillips, USFWS Ecological Services Group, is pleased to announce that the U.S. Forest Service has awarded the "Taking Wing Award" in recognition of Forest Service partners in plover conservation in Oregon to the Oregon Department of Fish and Wildlife, Bureau of Land Management, Nature Conservancy, the Cape Arago Audubon Society and the U.S. Fish and Wildlife Service. Carrie is the plover coordinator for US Fish and Wildlife Service, stationed here at the HMSC. Other members of the working group are the U.S. Corps of Engineers and Oregon State Parks.

The Western Snowy Plover Recovery Team has been working to implement the Recovery Plan that covers all the coastal plover populations from Washington to California. The plover is threatened by habitat loss and pressure from recreational beach use. They nest on lower dune and beach habitat in the summer, which brings them in direct conflict with human beach use. The nondescript nests are built directly onto the sand and are easily overlooked when people lay down a beach blanket or drive their all-terrain vehicles on dunes and beaches.

Another major threat is the invasion of European beach grass. This species was imported into the United States in the late 1800s to stabilize the sand dunes. It is very difficult to eliminate and grows in such densities that the open spaces needed by the plover are decimated. The plover is also preyed upon by crows, ravens, skunks, coyotes and weasels. It serves as an ecosystem "canary in the mine" and saving the plover will also save other species in the same threatened habitat.

In this time of reduced funding for most agencies, the spirit of cooperation is essential in getting things done. In this case, USFWS provided $15,000 to do habitat restoration work and has joint projects on interpretation for beach user groups.

Ship Operations and *R/V Wecoma* Open House
April 3
3:00-4:00 p.m.
HMSC Staff

Fishermen and Scientists to Increase Cooperation on Data Collection

Eighteen months ago, the National Marine Fisheries Service (NMFS) funded a research project being conducted by Gil Sylvia and graduate student John Harms. The objective of this cooperative research project is to identify specific programs and strategies where industry and government may be able to work more closely in the collection of information used in fishery research and management.

Since the project began, a number of other projects emphasizing industry and government cooperation have been initiated. These include (1) an ODFW study analyzing logbook data from Oregon, California and Washington groundfish fishermen for species composition and abundance; (2) an NMFS-University of Washington project examining the feasibility of using standardized gear on industry vessels to assist in trawl surveys; (3) a project being operated by NMFS Northwest Fisheries Science Center and directed by Bob Schoning that is seeking to improve communication and cooperation between government and fishermen.

Traditionally, the public sector has been responsible for collecting and analyzing this data. This tradition is being challenged as state and federal fisheries support declines; fishery property rights are implemented; user fees are increased; and resource sustainability is prioritized. Two forces now compel the system to change. As fishing industries bear greater responsibility for the long-term sustainability of harvestable stocks, they will demand greater input into the research and management process. Because industry's access to the resource will depend on demonstrating resource abundance and sustainability, there will be a greater need for more precise, accurate and timely data gathering systems.

The commercial fishing industry has always collected and processed large amounts of information in the course of conducting its day-to-day business. However, this information has been largely disregarded as a potential research and management tool due to the difficulty inherent in its quantification and standardization. Through cooperative efforts on the West Coast, improvements in dockside and logbook reporting systems have improved the potential use of these data. On a global level, programs are being implemented that more directly involve these and other fishery-dependent data in fishery management. High technology equipment such as radar, sonar, GPS units, CTDs and personal computers have become more affordable and have made information collected by fishermen more readily quantifiable. The current challenge is to integrate these advances into management regimes that adequately address the long-term biological requirements of the fishery; help fishermen and the industry to become more profitable; and foster harmonious and equitable relationships among industry, management and the research community.

One possible route might be modeled after the Fishermen and Scientists Research Society (FSFS), a non-profit organization serving Atlantic Canada. This partnership seeks to increase industry involvement in the management process by actively utilizing fishermen-generated data in stock assessments and by educating them about the assessment procedures. The Society collects catch and effort, oceanographic, and spawning information for groundfish species. Classes in stock assessment, management and oceanography are offered to its members.

Rockwork awaits installation

Public Wing Update

The first installment of the rockworks and all but one of the large tanks has arrived. They have been sitting in the public wing awaiting approval by OSU Contracts Office for the exhibit installers to begin work. Ever mindful of the clock ticking toward the grand dedication ceremony on May 17, Trent Summers and his installation crew hope to get the go-ahead soon. The rock work for the eye-level tank (a little cave) should be arriving the first week in April and things should start taking shape rapidly once the contract is done.

Two-part touchpool tanks

Fork lift carefully brings in first tank

Neal Coenen to Oversee ODFW Strategic Plan

The Oregon Department of Fish and Wildlife (ODFW) is directed by broad mandates that relate to all fish and wildlife species in the state of Oregon. These mandates relate directly to managing species populations, providing hunting, fishing and other recreational opportunities as well as commercial fishing and trapping. While habitat supports the diversity of Oregon's fish and wildlife, the department only has limited habitat protection authority.

Throughout the 1990s there have been rapid changes in economic, social and natural resource conditions in Oregon. These changes have had far-reaching impacts on the department and the resources it manages. Six years of revenue shortfalls, unfunded mandates and personnel reductions (loss of 200 jobs) have limited the department's ability to support regulatory decision making, coordinate activities with other departments, provide baseline services and take on additional workload.

The 1997-99 budget planning process clearly identified the need to manage change based on a set of strategies to retool and streamline the organization. Strategic Operational Planning was selected as a method to identify critical actions necessary to begin changing the course of the department. In this process 1300 people were surveyed, both within and outside the department and the team consisted of 40 people.

Neal Coenen has been asked by Rod Ingram, Acting Director of ODFW, to coordinate the next step, the implementation process. He will be on a job rotation to Portland for the next six months and Jim Golden will rotate into Neal's position during that time.

The areas to be addressed are leadership and management issues, workforce development, program management, communications, diversified funding, customer service, partnering, and resource management issues. The document is available on the ODFW homepage at http://www.dfw.state.or.us.

Alien Species Defense Fund Urged

On March 20 the Oregon House urged the President and the U.S. Congress to help defend against further introductions of foreign species into state waters. House Concurrent Resolution 7 asks Congress to appropriate funding for the National Invasive Species Act (NISA), authorized in 1996. It addresses the problem of non-indigenous species carried into U.S. waters in the ballast water of ships arriving from foreign ports.

"We are trying to avoid a situation like what has occurred in the Great Lakes," said Representative Terry Thompson, who sponsored the bill. "They have had hundreds of millions of dollars in damages to municipal water systems, fisheries and irrigation districts caused by spreading populations of zebra mussels. A future invasion of something like this into Oregon waters could have catastrophic economic and ecological impact on the state. HCR 7 merely encourages the federal government to do its job."

Dr. John Chapman, OSU marine ecologist, said, "Speaking as a scientists, HCR 7 is one of the best bills the Oregon Legislature could pass for our economic future. Oregon needs NISA to work. States can't regulate international ship traffic, only the federal government can.

"We've got a New Zealand mud snail that has reached densities that clog some agricultural drainage systems in eastern Oregon. An introduced predaceous Asian shrimp introduced into the Columbia River drainage around 1995 is feeding on the prey stocks that could go to our beleaguered juvenile salmon. The European zebra mussel is spreading across the U.S. heading for the Columbia where it is highly likely to clog hydroelectric dams, foul the hulls and floats, block water intakes and, worst of all perhaps, threaten salmon as they have never been threatened before by filtering out the phytoplankton that is the food of prey species for juvenile salmon. These species were all brought to the U.S. in ballast water discharged from ships arriving from foreign ports."

NOAA Notes

Construction is underway in the NOAA VENTS wing, with two new offices being carved out of former computer rooms. They are trying to find space to house the new Tsunami Inundation Modeling Center to be dedicated on May 17. There will be two new staff members: Robert Camphouse, a NOAA commissioned officer and a mathematical modeler yet to be hired.

Bill O'Clock and Haru Matsumoto are back from a six-week cruise on the R/V Ka-Imimoana out of Pearl Harbor. They were deploying the data from the six "Haruphones" (portable hydrophones) placed along the East Pacific Rise. This is believed to be the most active area of the earth's crust and the phones were placed between 8°N 100°W over to 8°N 95°W and then down to 8°S 110°W over to 8°S 95°W. Bill has been wanting to learn more about deploying, recovering, servicing and operating the Haruphones so that he can take turns with Matt Fowler on the cruises with Haru. The data from the hydrophones are recovered about every five to six months, with the next trip coming up in July or August.

Lab Reports Seafood Patent Pending

A patent entitled "Proteinase inhibitor for Food Processing" was recently filed for H. An, D. Barnes, F. Li, T. Seymour, and M.T. Morrissey. This patent describes the process to clone and express fish cystatin gene isolated from rainbow trout liver in a yeast. Numerous fish species have been underutilized due to their soft texture. Currently, their utilization for surimi, a functional ingredient for seafood analog products, has shown promise for successful marketing for human consumption. Surimi production presents a great technical challenge due to the proteolytic activities causing rapid degradation of myosin.

During surimi processing, proteolytic degradation has to be controlled by the use of inhibitors. Cystatin is a small protein that has shown promise as a proteinase inhibitor. Using the process, production of commercial levels of cystatin is possible, and the product should benefit the surimi or other food industry to control proteolytic activity during processing.

Blood Drive Thanks

Thanks to all the volunteers and donors, the HMSC Spring Blood Drive was a success. Although we fell three pints short of our 55-pint goal, we did have six first-time donors. The Red Cross complimented the HMSC on its cooperative people and pleasant drive. Special thanks go to our recruiters, canteen and registration volunteers: Jodene Summers, Tonya Builder, Bud Balloch, Jessica Waddell, Jan Auyong, Judy Mullen, Terri Nogler and Veryl Barry. We also appreciate those of you who donated fruit juice, cookies and crackers. Together we make a wonderful team that provided a second chance at life to 104 people.

Excerpts from "The Case of the Missing Seniors"
by Amy Martin, Winter Term Fisheries Student

The horizontal rain is just another reminder that we aren't in Kansas, and Toto has probably been blown out to sea. The annoying neighborhood dogs have been replaced by obnoxious sea lions, and the foghorn in the bay has taken over the niche filled by the Memorial Union bells...These are daily sights and sounds enjoyed by 29 OSU fisheries science seniors who have migrated to the coast to attend classes at the HMSC in Newport...

Classes are similar to those on the main campus, the principal differences being fewer students in each class, fewer (only three) classes to choose from, and a shorter commute (we live within two minutes walk of the lecture halls and library)...We are studying diseases and parasites of fish and other marine organisms, learning the overwhelming concepts and models of the dynamics of marine ecosystems and how we as future managers may interpret them to set fishing limits, and are discovering that growing fish and oysters in aquaculture is like growing crops that have a fighting attitude and are more picky about their water temperature than Club Med's Jacuzzi crew...

The experience of studying in a different environment has the biggest impact on students that attend classes at the HMSC. It is difficult to include everyone's opinion about the HMSC ...but...Dave Walsh sums up the majority with his feeling that the biggest bonus about the term here is "the beach, the ocean, and the sunsets." Other favorites include the laid-back class atmosphere, interesting subject matter, top-notch professors, hands-on laboratories, and the Center's "honesty system" which gives students 24-hour key access to the library and labs...

I wish everyone could have the chance to complete a term in Newport, but then that would ruin the uniqueness reserved for the choice few that choose a degree in fisheries, zoology or biology. To the students unsure if they want to make the leap to attend classes at the HMSC, let me set your mind at ease--it is by far the best term you will ever have, educationally and socially.

Library News

The new Xerox 5337 copier has arrived in the library. The 5337 does double-sided copying as well as high-volume copying and sorting. Account codes identical to those on the mailroom copier have been loaded, so if you have an account on the mailroom copier, you don't have to worry about a copy card!

A new velobinder replacing the faithful but failing binding machine has also arrived in the library. It is available for use by HMSC personnel. Prices for binding supplies have not changed.

Personnel Notes

Congratulations to **Kelly Rossbach** and **Michael Adam** on their engagement! Kelly is finishing her graduate degree with Bruce Mate on bottlenose dolphins and Mike works with COPE on bat research with John Hayes.

Ken Palfrey has really retired now, as he has completed his "post-retirement" 600 hours overseeing the HMSC wharf expansion construction project. What a note to end a career on!

Thanks to **Lavern Weber**, who donated and planted all the daffodils popping up around the grounds of the HMSC!

Rose Burbee has just joined the marine education staff. She will be a graduate student in Science Education and work part-time for Vicki Osis.

Dave Jacobson Tackles Oyster Work

Dave Jacobson has been hired on contract with Chris Langdon for the Molluscan Broodstock Program (MBP), beginning officially December 1996. He currently has three main job

responsibilities. First, he is in charge of the "plant-out" of the specially bred oyster families in thirteen sites, ranging from Alaska to Tomales Bay, California. This involves keeping the individual families separate and securely positioned on net racks to be hung in the different sites.

His second responsibility is working with Chris Langdon's microencapsulation project; specifically, using a new spray technique to produce the microscopic pelleted feed for oysters. His third responsibility is finding genetic markers to distinguish the different families of oysters. This PCR sequencing is being done in collaboration with Mike Blouin of the OSU Zoology Department.

Dave earned his B.S. in zoology from the University of Nevada at Reno and has worked in cellular biology, molecular medicine and molecular immunology. He says he has gone with the flow of science as new techniques and fields are developed. His wife, Kym, works for NMFS Northwest and they have one son.