USGS
science for a changing world

WFRC Research News

(Lab news you can use to survive and thrive)

Editor: Gary A. Wedemeyer *Summer Issue: August, 2006*

IN THIS ISSUE...

Lab News You Can Use
--by Lyman Thorsteinson

Peer/Policy Review Changes
--by David Woodson

Who's Who in Administration?
--by Liz Turpin

WFRC Research Highlights
- ***DNA Microarray Technology***
  --by Julio Harvey
- ***CRRL Biologists Earn USGS Awards***
  --by Jack Hotchkiss
- ***International Fish Biology Congress***
  --by Jim Petersen
- ***Secretary Kempthorne visits WFRC***
  --by Debra Becker
- ***Larsen/Reisenbichler Honored by Tulalips***
  --by Lyman Thorsteinson
- ***Amur Goby Discovery***
  --by Jim Petersen

What's New in Communications/Outreach?
--by Debra Becker

Metadata Workshop Announcement
--by Vivian Hutchison

WFRC Alumni News
- *Lance Beckman (CRRL, class of '94)*
- *Name that Alumn!*

A Little Lite Reading
- The Dead Salmon Express
  --by Gary Wedemeyer
- Selected WFRC Publications

Lab News You Can Use

by Lyman Thorsteinson

In this issue, you will read about the new Secretary of the Interior Dirk Kempthorne's recent visit to the Western Fisheries Research Center in Seattle. A primary purpose of his visit was to learn more about USGS roles in partnership research in Puget Sound. Many key Bureau partners were in attendance during the Puget Sound overview.

The Secretary also wanted a laboratory tour and opportunity to meet, one-on-one, with WFRC scientists. His interest was to learn first-hand about our science and its relevance to Departmental needs. The lab tour was followed by a short trip to Lake Washington where WFRC and WRD scientists demonstrated various sampling technologies being employed in near shore Puget Sound.

Secretary Kempthorne concluded his visit with a media event at lake shore where he recapped much of what he had learned in the context of the importance of the science, cooperation, and partnerships that will be needed to restore and sustain a healthy Puget Sound.

Invasive Species Research Section

I am pleased to announce the creation of a new Invasive Species Research Section at WFRC. And also, to welcome newly hired Scott S. Smith who will lead the new section. Scott comes to us from the Washington Department of Fish and Wildlife (WDFW). He holds a B.S. in Marine Biology from

the University of North Carolina and a M.S. in Fisheries from the University of Idaho. He has worked in the Fish Management Program of the WDFW for the past 14 years and has long-served as the Department's Aquatic Invasive Species Coordinator. Scott is extremely well-versed in ballast water research and technology needs through his extensive experience in managing Washington State's ballast water management program. Scott has served as the Washington State representative for the Western Regional Panel on Aquatic Nuisance Species, and serves on several regional and national committees that address ballast water and other invasive species issues of concern.

As you may know, Washington is one of few states with authority to regulate ballast water discharges. Scott was responsible for drafting both this legislation and the Washington State Aquatic Invasive Species Management Plan and this has required him to work closely with colleagues in the Fish and Wildlife Service, NOAA, Coast Guard, Environmental Protection Agency, representatives from coastal states, the maritime industry, and regional legislators

Scott is a long-time cooperator with the USGS and WFRC in ballast water research. As part of his duties with WDFW, Scott worked closely with former Center Director Dr. Frank Shipley and the Northeast Midwest Institute to identify research priorities and equipment needs for Puget Sound and the Pacific Northwest. As a research cooperator, Scott's team at the WDFW collected biological samples from ballast tanks of ships entering Puget Sound for species identification and development of molecular markers in Rusty Rodriguez's lab.

As Section Leader, Scott intends to enhance our partnerships with NOAA, the University of Washington and others to expand our efforts to become a regional Ballast Water Treatment and Technology Center. This regional capability is needed for research, development, and testing of on-land and ship-based treatment technologies to control and prevent the establishment and spread of non-native species. Other initial section research areas will address creation of regional databases, long-term monitoring needs, and modeling of invasion pathway risks and non-native distributions.

I am pleased to announce that Scott will be joined in our new Invasive Species Section by Deborah Reusser (newly hired from Geography), and noted WFRC staff biologists Rusty Rodriguez and Nancy Elder. I expect this group to focus on invasive species throughout the Pacific Northwest with initial emphases in Puget Sound, other coastal habitats, and the lower Columbia River. With respect to the latter, the team will work closely with the CRRL to assess large river needs and build program in that study area.

WFRC Wins Competition

The WFRC has been involved in a Competitive Sourcing Study of its Biological Technicians at Cook, WA. Thirty eight FTEs were included in a streamlined study including 7 FTEs associated with our non-federal contract workforce at CRRL. The study, which has been going on for more than a year, included the work of a Business Strategy Team that selected CRRL and several other location-based USGS sites, on the basis on numbers of science technicians employed at those sites (i.e., > 10 employees).

After the decision was made to conduct a study at Cook, a Preliminary Planning Team was formed to provide recommendations to senior management about how the study should be conducted. Following this, two additional teams were created to develop a Performance Work Statement and Most Efficient Organization (this team used the PWS to describe a new organizational unit of biotechs at CRRL, i.e., Agency Tender).

The cost estimate developed for the Agency Tender by the MEO Team represented the Government's Estimated Cost for biotechnical support at Cook. Another team, independent of the Government, used the PWS to develop a cost estimate for private industry and for comparison to

the Government's estimate above. The comparison revealed a cost saving of almost $5 million to the Government over the performance period.

Congratulations are in order for Cook, as well as our appreciation to all who worked so tirelessly on this important study.

Peer/Policy Review Changes With the New USGS FSP

by David Woodson

USGS implementation of the interim peer and policy review of science products has begun and, as might be expected, there have been a few bumps in the road. We all need to realize however, that the implementation of this interim policy is best viewed as a test drive. In that regard, you can expect some adjustments to the policy over the next few months. For now, I urge all of you to follow Center guidelines and we will take note of problems and work with our management for appropriate solutions.

This new policy reduces the number of peer reviewers, from three (former Center policy) to two, one of which must be outside of your office. This means, for example, that a manuscript from the Fish Health Section could be reviewed by the Fish Ecology Section or a scientist from CRRL, as long as the reviewer is properly qualified. A paper on molecular biological techniques, for instance, might fit this situation.

USGS “Fundamental Science Policies” have revised policy review requirements as well. From now on, the policy review will be conducted at the Western Regional Office (WRO) by Dr. Ron Kirby, our designated Approving Official for Biology in the West. In addition to the WFRC transmittal document, we are now required to use Form 9-1325, in hard copy, for transmittal of products to the WRO. This form can be downloaded from the Web, completed on-line, and printed for WRO submittal. Because this Form 9-1325 does not exactly fit our product tracking needs, it will be revised to better serve our purposes. For instance, we require BASIS+ Project/Task/Subtask information in the "remarks" box of the form to relate the product to our science activities. It is imperative that authors identify science products that are, or may be, policy sensitive in order that timely reviews by the Office of Communication and the WRO can be conducted.

The main purpose of this Form 9-1325 is to document approval signatures. The information that relates to internal USGS publications doesn’t apply to journal publications and, for now, the Enterprise Publishing Network (EPN) has no role except for the tracking of these.

The WRO is investigating what it will take to establish an FTP site for posting review packages (excepting the transmittal form, which requires a hard copy) in electronic form. However, the official hard copy file for the science product will need to reside in the Center.

The WRO is seeking clarification on peer review requirements for posters and abstracts. Abstracts that present new data or interpretation may be peer reviewable and this may be required by the USGS. It appears that published abstracts will need to undergo the entire peer and policy review process. Regarding the publication of technical reports, editorial reviews are not required for external publications that are not part of a USGS series report.

I realize this update does not cover all of your issues and I do urge you to carefully study the USGS FSP website. Knowing what is expected and being familiar with the steps that are required should make the process, if not more palatable, at least more straightforward.

USGS Publication Development Steps and Responsibilities for science products being published outside of the USGS.

Who	What	Reference
Author	Prepares draft Prepares approval tracking form (9-1325) Suggests qualified reviewers to Supervisor	SM-502.3.4A SM-502.4.6E
Author's Supervisor	Selects reviewers and sends draft to them	
Peer Reviewers	Performs scientific or technical review	SM-502.3.5
Author's Supervisor	Receives comments from reviewers, ensures reviews are adequate, and gives the reviewed drafts back to author(s)	
Author	Addresses reviewers' comments in writing Forwards revised draft along with the reviewers' comments to Supervisor	
Author's Supervisor	Forwards revised package to Center Director	
Center Director	Ensures USGS standards for science quality are met Ensures peer review and author responses are adequate	SM-502.3.6C SM-502.4.6C
Center Director	Ensures archival records are maintained in their Center Forwards package to Bureau Approving Official (Dr. Ron Kirby)	
Interim Bureau Approving Official	Ensures USGS science quality standards are met Ensures peer review and author responses are adequate Ensures science is public policy neutral If not already reviewed by Office of Communications, alerts OC if information product is policy-sensitive or likely to be of heightened interest or controversial Forwards information product to the Author, or Center Director if additional review or work required	SM-502.3.6D

Who's Who in Admin?

by Liz Turpin

It is about time you folks throughout WFRC get to know your administrative support staff. Contrary to popular opinion, we are not the policy wonks and regulation preachers WFRC scientific staff fears. We are the smiling face you see when you've accidentally used a government credit card to purchase a personal item. We are the friendly voice on the other end of the phone asking, "you want to do what??" We are the worried parent when a boat motor just happens to sink to the bottom of the Puget Sound, and we are not sure how to fix that

one - but of course we will. We are real individuals and actually have lives outside of WFRC (see above picture for proof).

I have asked the staffs at Seattle and Cook to provide a paragraph that will give a bit of a background on who they are. This is in hopes that the next time you see these people, you won't think of them as budget, travel, procurement, filing, payroll, personnel, IT or roadblocker!

Gail Sauer -- Admin. Operations Assistant.

Hi all! You should all know me by now since I am the one in admin with the big candy bowl on my desk. I am your friendly hiring, firing, benefits, requisitions, problem solving guru. I fill in for payroll, travel, payments and everything in between (No, I don't do windows, Kyle!) In fact, you can come to me if you are not sure I am the one you need to see because I will know who you should see and can tell you where to go...in a nice way, of course.

In my youth I joined the Air Force to see the world but they just sent me to Alaska. No worries, I met my husband and after an honorable discharge stayed home in Anchorage to raise our 5 children. We lived for a time in Skagway, Alaska before coming to the Puget Sound.

During the last 8 or 9 years I worked for the Boeing Company, as a jack-of-all-trades, master-of-none. I worked as an electrician wiring airplanes; I worked in the leave management office, as a supply chain analyst, and as a disability management specialist.

In 2003, along with most of the populous of Puget Sound I found myself unemployed. I managed to get a temporary job with the USDA at the Mount Baker Snoqualmie National Forest Service and, along with a wonderful boss there, found this wonderful place here and applied for the job. I do say wonderful with all sincerity. I have always loved biology and consider myself a closet biologist. Recently, I have taken up fly fishing and fly tying with my husband. Come on by or call and say "Hi."

Robin Salling -- IT

I was born and raised in sunny Southern California. Like many of my contemporaries I was a surfer and I worked at Disneyland. The summer of 1967 (the summer of love) I ran away from home and lived for a month in San Francisco later moving to Jack London State Park. I attended the University of California at Santa Cruz (go Slugs). I've been a Banker, a Flight Attendant, a Restaurant Manager, a Retail Manager, a member of the US Coast guard, a Union Leader, a Wine Warehouse Manager, an Auto Insurance Adjuster, an IT Help Desk Manager, Accounts Receivable Manager, US Director of Cargo for Aero Mexico, Senior Manager of IT processing, INS Agent, and an IT Specialist.

I have visited every continent of the world save Antarctica. I was married for 10 years to my "practice" wife and have been married to Marsha for 22 years. I have a great daughter who was just named Chair of the Department where she teaches in Nebraska. I have raised thoroughbred horses and built decks as sidelines. I was hospitalized for severe depression at age 17 and I suffered a heart attack at the age of 32 but managed to carry-on.

I play trumpet, sax, baritone, guitar and harmonica (E*d. note: he also has a fine singing voice!*). I enjoy cooking, reading, sports and the Pacific Northwest. My favorite color is blue and my sign is Gemini. I'm prejudiced against closed minded people who do and say stupid hurtful things, and I have a dog named Max and a cat named Bean.

Mary Dunning -- IT and Budget.

I have been a Federal employee for 23 years, working for Internal Revenue Service, Department of Navy, Fish and Wildlife Service, and USGS. I have performed a wide range of administrative and IT duties, including word processing, criminal history checks, vehicle maintenance, property

inventory, budget, personnel, purchasing, travel, training, payroll, and computer support. I have been with the NBSC/WFRC for almost ten years (and Liz is, of course, the best boss I've ever worked for).

I fell for the pickup line, "I've never kissed a girl with braces, would you go out with me," and it has resulted in 25 years of marriage, two kids, and a very cute, albeit spoiled, poodle.

Barry Egenes -- Procurement and Property.
I was born, raised and have lived most of my life within 6 miles of Sand Point. Growing up, we could see the planes taking off and landing at the then Sand Point Naval Air Station from our front yard. Some years later, while attending UW, I went on vacation to Hawaii during winter break - and stayed. I enrolled in the University of Hawaii (double major in Japanese and marine biology) then got a job as Purser for American Hawaii Cruises aboard the Independence & Constitution, and spent about five years cruising in Hawaii and Tahiti. This led to a position as flight attendant for Hawaiian Airlines, translating on flights to and from Japan, and doing Military Air Command charters to military installations all over the world. Several years into that job, I found myself based back home in Seattle. When Hawaiian decided to close the base, I didn't want to leave Seattle and my family again, so I quit to take a position in Airborne Express' corporate customer service office -- as close to employment Hell as I ever hope to experience. I endured this for three years (forty two months, six weeks and two days, actually) - and then wasted two or three more years swimming at the bottom of the employment pond. It was during this period, after a lengthy, stretch of unemployment, that I signed up with a temporary agency to pay the bills. My very first assignment was answering phones for five days at the USGS Western Fisheries Research Center. That was 1998. I feel lucky and grateful to have worked here ever since.

Craig D. Zaugg -- Admin. Ops. Assistant
I was born September 27, 1972 in Portland, OR and was raised in the small town of Cook, WA. I am now working at the same building in which my father worked (and retired) as a biochemist for the National Marine Fisheries Service. I work as an Administrative Operations Assistant which entails varied tasks including travel, motor pool coordination, local security, government bankcards, along with miscellaneous clerical activities and responsibilities.

My family is of first and foremost importance in my life. I'm a sucker for animals, and I also enjoy working with anything Multi Media related like restoring old photographs, editing video footage, etc. In fact, I obtained a Bachelor of Arts degree with an emphasis in Multi Media production from Brigham Young University, where I graduated Suma Cum Laude.

Jennifer R. Jones -- Admin Ops. Assistant
Born and raised in Husum, WA, I enjoy everything that requires being outdoors. My number one passion is competing in the sport of barrel racing/rodeo, and I have a great love for animals. I currently work for CRRL as an Administrative Operations Assistant with my main focus on accounts payable and budgeting. I am engaged and the wedding date is set for September 23, 2006 after which my husband will be joining me in Husum, WA.

Cheryll Trammell -- Procurement and Property
Hello my name is Cheryll Trammell; my job is to assist the scientific staff with their procurements and property needs here at CRRL. I have been here a year, and am starting to understand some of the research that takes place here at the lab. It is a very fascinating and up-beat place to go to work every day. The drive here is very scenic with wild turkeys, rabbits and lots of deer to dodge. I live in Hood River, Oregon with my husband (Jim) on a

gentleman's pear orchard with five different types of pears. One of my more relaxing things I like to do is to take my two horses riding up in the hills of Hood River to watch the sunrise or sunset.

Judy Maule -- Budget Analyst

Judy's circuitous path to the CRRL began with childhood and early years in San Diego, CA; a year-long detour to Boston, MA; followed by gradual moves north through San Luis Obispo, CA; Corvallis, OR; and finally to White Salmon, WA. Staying in school forever seemed likely as she earned a B.S. in Science Education and an M.S. in Sci. and Tech. Communication, taking as many electives as possible while living in various college towns. Work has always gotten in the way, however. From various clerical jobs in San Diego; parking enforcement in San Luis Obispo; more administrative experience in Corvallis; teaching alternative high school and GED courses in the Columbia Gorge; outreach coordination for the USFWS, the Columbia Gorge Commission, Sandy River Watershed Council; and finally working as Budget Analyst for CRRL, she has gained experiences that serve her well dealing with the challenges of government accounting. In her spare time Judy enjoys hiking, gardening, reading and volunteering for Habitat for Humanity and Head Start, and dreams of having time and energy to pursue art projects. She and her husband, Alec, live in the woods outside of White Salmon but frequently escape to Portland to visit their adult daughter, Amy.

Linda Kay Hazen -- Admin Ops Assistant

I have been working as an Administrative Assistant for five years, for the Columbia River Research Lab. My duties are timekeeper, travel coordinator, training coordinator, and I also take care of the files for the lab.

I have some unusual hobbies, Bee Keeping, Goat Farmer, and Chickens. My husband and I have about fifty registered Boer Goats, and plan to start showing a few in July at the goat show in Stevenson, WA. We have several bee hives and are on the list through our local Police and Sheriffs offices as points of contacts to go and collect swarms of honey bees in the spring. I also sell some of our eggs from the chickens.

In my spare time I take care of our garden and can our fruits and veggies. My husband and I like to hunt in the fall, and I like to carve on goose and duck eggs. We have six children between us and eleven grandchildren.

Jim Guyton -- Computers/IT

B.S. Environmental Science, Eckerd College, St. Petersburg, Florida. Currently, Jim works as an IT Specialist for the CRR. Jim's past experience includes two years of graduate studies in the University of Oregon's Community Planning department, community GIS development in various rural communities in Oregon, wastewater data collection and modeling, ASTM Phase I & II environmental site assessments, and collaborative web projects for the EPA's National Estuary Project in Tillamook. The Tillamook County team used GIS to pinpoint neighborhoods and communities most vulnerable to flooding and decided to elevate 55 houses and 14 buildings at risk.

Jim also worked as a Peace Corps volunteer in Guatemala helping teach marine resource conservation and internet/IT practices to rural Guatemalan communities.

Jim was part of a team that received the Hammer Award from Vice President Al Gore's National Partnership in Reinventing Government. The Hammer Award is presented to teams of federal employees who have made significant contributions in support of reinventing government principles.

On the IT side, Jim holds certifications from Microsoft, Novell, Cisco, and a SANS security certificate. He currently spends his spare time windsurfing and kiteboarding in the Columbia River Gorge.

Barbara Gee -- Personnel
I am responsible for the personnel needs for CRRL which include personnel recruitment, initiating retention actions, and serving as administrator for the employee database. I prepare regular and custom reports for managers to better manage their staffing needs. In my spare time, I enjoy playing golf and fishing.

Roderick R Polintan --Budgeting
Mr. Polintan earned a B.A. in Environmental Studies, Environmental Science from Gettysburg College, Pennsylvania in 1997 and is currently working as a Budget Technician for the CRRL.

Originally tasked as Biological Science Technician, Rod got his start on a data team assisting in analyzing and proofing radio telemetry data from The John Day Dam Efficiency of Fish Passage study in May 2003. At the end of the field season, there was a need at CRRL for administrative labor, and Rod eagerly volunteered. Something went right during the audit, and Rod stayed with admin. until the field season of 2004. Returning to the Bio Science Tech area, Rod was given a field assignment assisting in the previously mentioned study. At the end of the 2004 field season, Rod applied for and was selected for his current appointment, the Budget Technician position in which he is now employed. As a budget tech, Rod assists with monitoring the status of budgetary resources and reimbursable income.

In previous job-related experiences, Mr. Polintan has worked as an outdoor recreation instructor, teaching others the outdoor sports that he has grown to love: backpacking, caving, rock climbing, skiing/snowboarding and whitewater kayaking/canoeing/rafting. Rod still tries to stay active in outdoor recreation and instruction. Remaining a staunch environmentalist, Rod's rational for the resources consumed while in pursuit of adventurous outdoors activities is relatively straight-forward. Modern humanity is increasingly detaching itself from its original environments to one constructed wholly by man. Experiencing nature increases one's ability to appreciate nature and understand the need for conservation.

Christina L. Hicks -- General Clerk III
I have been working as a General Clerk III at the Columbia River Research Lab for nearly three years. Some of my duties include greeting visitors, managing phones, FedEx shipments and office equipment, filing, copying and binding documents. I provide support to both the administrative and scientific staffs doing various tasks. I also serve as a liaison between IAP World Services and their other contract employees working at CRRL -- fielding questions and ensuring that all associated paperwork is forwarded to IAP's corporate office. I enjoy my job and working with such a talented and friendly staff here at CRRL.

I have been married to my husband, Rusty Hicks, for 10 years have three beautiful children: daughter Kelsey age 14, son R.J. age 9 and daughter Jodee age 7. I currently own five horses because my children and I love to ride. I am a 4-H leader, baseball and soccer mom (soon to add football to the list), love to sing and enjoy taking karate lessons with my children.

Michele Beeman --Program Analyst
Michele worked in the public school system for 10 years before beginning her federal career in November 1991 with the US Fish and Wildlife Service. When the Department of Interior consolidated all research activities from all its bureaus into a single research organization, she became a Charter Member of the National Biological Survey (NBS) in November 1993. Michele continued to ride out the storm when NBS was abolished just three short years later, and was absorbed into the US Geological Survey, Biological Services Division.

Currently a Program Analyst at CRRL, she feels very honored to lead the Administration Section --

an incredibly talented, diverse team of dedicated and highly motivated professionals who are devoted to supporting the scientists, and ensuring their needs are met.

Michele lives in her home town of Hood River, Oregon, and spends her spare time visiting with her family, playing with her cats and dog, fishing and camping with her husband John, taking photos, and collecting rocks. An artist "wannabe," some of Michele's hobbies include painting with watercolor and pastels, and handcrafting gemstone jewelry.

WFRC Research Highlights

DNA Microarray Technology Advances WFRC Invasive Species Research

by Julio Harvey, Marshall Hoy and Rusty Rodriguez

Ballast water employed in industrial shipping enterprises has been identified as one of the key vectors for the introduction of non-native marine species to ports throughout the world including those in Puget Sound. Therefore, the regulation of non-local ballast water influx to local harbors is recognized as essential for maintaining local ecosystem health and the continued success of native species.

Currently, no predictive criteria exist for determining which non-native species will become invasive when introduced into a given environment. This observation suggests that the most successful methods for screening ballast water should detect the presence of as many different species as possible and be highly iterative in order to deal with the large volumes of ballast water involved.

To these ends, we have been developing nucleic acid based molecular diagnostic tools to detect the presence or absence in industrial ballast water of various marine species known to have planktonic life-history stages. The latter consist primarily of bivalves and crustaceans but also include marine macroalgae, copepods, cumaceans, tunicates, echinoderms, microorganisms and other groups known to contain species that have proven invasive in non-native marine environments.

Our molecular approach involves the development of species or genus specific molecular markers in conjunction with microarray technology resulting in a system capable of quickly screening a given sample for thousands of species simultaneously. Subjects to be included in the microarray are first collected as adults and identified to species before sequencing of the intergenic ribosomal DNA spacer regions (ITS1, ITS2, 5.8S). Species or genus specific markers developed from these data can then be used to create molecular beacons in the form of peptide nucleic acids (PNAs) which are subsequently added to the microarray. In this way, a single iteration using the resulting microarray tests for the presence or absence of all species included on that array simultaneously.

Equally important, treatments of ballast water to render reproductively capable potential invaders non-viable should be followed by additional screening processes that yield information regarding whether or not any viable individuals remain. Various approaches to culturing, whole-cell staining and flow cytometry are currently being employed in our laboratory to assess organismal viability.

CRRL Biologists Earn USGS Health, Safety Awards

by Jack Hotchkiss

Three Columbia River Research Laboratory (CRRL) employees will receive USGS Safety and Health Champion Awards this year. John Beeman, Pete Kofoot

and Ken Tiffin are getting this award for their work as Motorboat Operator Certification Course (MOCC) Instructors. The Watercraft Safety Training Program they developed at CRRL also garnered an Organizational Safety and Health Achievement Award of Merit from USGS.

Since 1995, John, Pete, and Ken have been training motorboat operators to handle boats safely while conducting research in the Columbia and Snake River basins. This is no small task because these large rivers can create harsh and dangerous conditions. Motorboat operators often work at night and frequently contend with high winds, barges, rocks, high currents, waves, and other hazards. Many boat operators will work near large hydroelectric dams, which can create unique hazards and very dangerous conditions.

Over the years, many boat operators have benefited from their training. They have taught 29 courses and trained 225 students to run watercraft safely. Most of the students have come from CRRL (109), but they have also taught many contractors (73), Department of Interior Partners (22), and several individuals from the states and tribes (21).

Students taking the Motorboat Operator Certification Course (MOCC) receive a well-rounded education in motorboat operations in which safety is a major emphasis. If you take one of their courses, be prepared to get wet because this is not just classroom training. Students learn emergency procedures and rescue techniques in a swimming pool. For much of the course, students are in motorboats honing their skills.

The CRRL MOCC Instructors have built a very successful program. Their training has resulted in a USGS workforce that has recorded no time-off injuries in over 10 years of on-the-water work. With over 30 boats at CRRL, several major projects per year, and sampling occurring 5 to 6 months a year, the number of boat-hours during that 10-year period probably exceeds 20,000 hours.

John, Pete and Ken should not only be proud of the awards they have received but also in the fact that they have undoubtedly prevented many injuries and perhaps loss of life. Please join me in congratulating them for these awards.

International Congress on the Biology of Fish

by Jim Petersen

Fishery research biologists Mike Parsley, Matt Mesa, Theresa Liedtke, and Alec G. Maule, Supervisory Research Physiologist, CRRL, attended the 7th International Congress on the Biology of Fish in St John's Newfoundland, Canada (July 18-22, 2006). Alec Maule presented "Water quality regulates fish community structure in a Columbia River reservoir" and also submitted a proposal to hold the next (2008) International Congress in Portland, Oregon. Subsequently, Alec's proposal was accepted by the Executive Committee of the Physiology Section of the American Fisheries Society for the 2008 Congress. Based on this year's meeting, the 2008 congress is expected to draw about 500 scientists from over 35 countries. The WFRC will be the host and a major sponsor of the meeting, but others from inside and outside the USGS will be able to join as co-sponsors.

Mike Parsley presented "Demystifying sturgeon—remote telemetry provides insight into the daily life of white sturgeon in the lower Columbia River;" Matt Mesa presented "Mechanisms of delayed mortality in juvenile salmonids migrating downstream in the Columbia River;" and Theresa Liedtke presented "Transmitter effects: considerations for telemetry studies."

Secretary Kempthorne Visits

by Debra Becker

On July 13, 2006 the USGS, Western Fisheries Research Center was honored with a visit by the new Secretary of the Interior, Dirk Kempthorne.

The Secretary, shown here with CRRL Director Jim Petersen and Center Director Lyman Thorsteinson, visited the Center to learn about USGS science involved in the restoration of Puget Sound.

During his visit, the Secretary had the opportunity to learn a lot about our field and laboratory techniques. Jeff Duda provided a briefing on the USGS's Elwha River research to the Secretary and many members of the Puget Sound Partnership. Science presenters on the lab tour included Paul Hershberger (forage fish), Evi Emmenegger (disease containment laboratory), John Hansen and George Sanders (zebra fish model – effects of multiple stressors), and Gael Kurath (wet lab and Redfish Lake Sockeye experiments). Jim Petersen presented information about tagging technologies employed in biotelemetry studies.

The Secretary's visit included a trip to Lake Washington (a surrogate for nearshore Puget Sound) to learn about our work on fish tracking and coastal oceanographic sampling in Hood Canal and other parts of the Sound. Reg Reisenbichler demonstrated the acoustic tags his team is using to study habitat use by bull trout in Skagit Bay and adjacent waters. Boat operators for the event were provided by the Columbia River Research Laboratory and Glen Holmberg, Pete Kofoot, and Collin Smith skippered vessels for the Secretary, Partners, and Press, respectively. Steve Rubin captained a fourth boat, the "rescue vessel", which fortunately, did not have to leave the landing.

After his boat trip the Secretary addressed the crowd saying "I believe in management by walking around, so this is an opportunity for me to come out and see one of the outstanding partnerships," Kempthorne also remarked "I believe strongly in…public-private partnerships," adding, "The Puget Sound Partnership is one of those that is a great role model."

Larsen/Reisenbichler Honored by Tulalip Tribe

by Lyman Thorsteinson

On Friday August 4th, the Tulalip Tribes Natural Resources Department presented WFRC biologists Kim Larsen and Reg Reisenbichler with awards at

the Tulalip Reservation in Marysville, Washington. The awards were presented for the Tulalip Tribe by biologist Mike Crewson (above center) in appreciation of the Western Fisheries Research Center honoring the Federal Governments trust responsibilities by providing continued

professionalism, technical expertise and a research partnership.

The expertise provided has been in the field of processing and reading thermally marked salmonid otoliths. These calcified structures, with the manipulation of temperature, provide a tool for the identification of varying lots of hatchery fish, sometimes several from one hatchery facility.

The ability to distinguish hatchery fish from wild fish and different brood years of hatchery fish aids in the management of both wild and hatchery populations and will be important in the restoration of Puget Sound salmon.

Amur Goby Discovery

by Jim Petersen

On May 6, 2006, CRRL fishery biologists Craig Haskell and Joe Warren captured what is believed to be an Amur goby (*Rhinogobius brunneus*) while conducting routine monitoring of a restored wetland near Longview, Washington. The small, sculpin-like fish is native to eastern Asia and named for the Amur River, which flows along the border between China and Russia, and how it got into the Columbia River is a mystery. In 2005, one of these fish was discovered in a tributary of the Columbia, the East Fork Lewis River, but the fish collected in May was the first from the mainstem Columbia River.

The Amur Goby has two life history forms; one which spends its entire life in streams, and another, which is amphidromous, where larvae spend a few months in estuaries, before returning to freshwater to live as adults. Those studying exotic fishes are particularly interested in the goby because it feeds on fish eggs of other species. However, whether or not this is occurring in the Columbia River, the fish's geographic extent, and its life history type are all unknown.

After verification by geneticists at Oregon State University, the fish will be sent to Japan for further verification and DNA testing to determine where in Asia the fish may have originated.

So What's New In Technical Communication/Outreach?

by Debra Becker

Fact Sheets. Dena Gadonski (CRRL) and I are currently making some minor changes to the fact sheet entitled "WFRC Partners: Our Extended Family." A new ballast water fact sheet was completed in May. It has been posted to the WFRC website at http://wfrc.usgs.gov/pubs/factsheetpdf/BallastWaterFSFinal050506.pdf.

WFRC Science Products Added to the USGS Publications Warehouse Database. Melanie McCalmont, a member of the USGS Publications Warehouse Team, contacted me recently and requested a copy of our publications list. She explained that the USGS is redesigning the Publications Warehouse database to capture all the publications, book chapters, and journal article citations by BRD science centers, including historical citations as well as new material. The Publications Warehouse gets over 50,000 citation searches per month.

Once our citations are added to the database, users will be contacting us directly to request copies of reprints. An update process for submitting citations has not been set up as yet, however they are working on it and will contact me soon to provide further information. When our data goes "live" I will let you know.

Pub Hub? A Bit of History. Greg Allord is the new Enterprise Publishing Program Manager. Greg oversees the USGS national science publishing program and the newly created High Performing Organization (HPO) for the USGS visual information functions.

The HPO was recognized by the Office of Management and Budget as a way to achieve

efficient and cost effective performance without going through a competitive sourcing study.
Every year, the USGS produces more than 10,000 information products on the wide range of research and investigations in which the Bureau's science programs are engaged.

Greg will act on behalf of these programs as an advocate and leader for science information while guiding publishing policy, planning strategy and technology innovation, and coordinating the management of the HPO. From his current duty station in Madison, WI, Greg will work closely with the regional publishing hub chiefs: Barbara Balthrop, Eastern Region Publishing Hub Manager (Nashville, TN); Terry D'Erchia, Central Region Publishing Hub Manager (Denver, CO); and Dale Cox, Western Region Publishing Hub Manager (Sacramento, CA).

These "Pub Hub" chiefs are also newly appointed, and with Greg's selection as head of national publishing operations, management staffing of the new HPO is complete.

Service Level Agreement Now in Effect. In May we entered into a Service Level Agreement (SLA) with the Publishing Service Center (PSC). The agreement identified and defined the overall cost, the primary PSC from which the WFRC receives publishing services, and the scope and performance criteria for the services. The agreement also established the relationships between and responsibilities of the PSC and the WFRC regarding these publishing services, alternate providers of specialized services, and any funding responsibilities.

What are the functions of the PSCs?

1. Technical Writing, Editing, and Copy Editing (Customer good, except general consulting).
2. Design and Illustrating (Customer good, except general consulting)
3. Production, Printing, Release, and Distribution
4. Printing (Customer good, except general consulting)
5. Release and Distribution (Bureau good)
6. Other Publishing Support and Services (Bureau good)
7. Printing and Distribution, including Sales (Bureau good)

A complete list of publishing functions and tasks can be found at http://internal.usgs.gov/publishing/service.html.

Information products included in the SLA

- USGS series publications
- USGS periodicals
- Other USGS information products
- Information published outside the USGS

A complete list of products can be found at http://internal.usgs.gov/publishing/service.html.

How does the institution of the PSC affect you? At this time you can choose to use the PSC for publication assistance. The Publishing Service Center is another tool in your publishing toolbox. You are encouraged to use them for USGS series publications, USGS periodicals, and other USGS information products. The “Pub Hub” has a cadre of employees with years of experience in publication, editing, technical writing, media, and graphic design. They can assist authors from the beginning of the publication process to the production, printing, release, and distribution of products.

How will using the PSC affect the science product peer review process? Utilizing the PSC will not affect our peer review process at all. Science products will still need to go through the Center’s peer review process prior to publication. However, draft products may be submitted to the PSC to obtain a quote for services.

Center's Point of Contact. I will be your initial point of contact with the Western Region PSC. You may contact me at debra_becker@usgs.gov.

Workshop Announcement

by Vivian Hutchison

What? ***Introduction to Metadata Workshop***.
When? ***September 12-13, 2006 (1½ days in length).***
What time? ***8:30am-4:30pm on Tuesday and 8:30am-12:00pm on Wednesday***
Where? ***Right here at WFRC***
Who's teaching the workshop? ***George Lienkaemper, USGS - FRESC***
Who's organizing this? ***Viv Hutchison, Metadata Program Coordinator, USGS-NBII (http://www.nbii.gov)***
Why? Well....we all recognize that data sharing, collaboration, and resource leveraging are part of today's science environment. No data set is complete without a metadata record, because these standardized records describe such important features as why the data set was created, who created it, the methodologies used to develop it, and much, much more. Metatdata records transcend people and time, preserve institutional memory, help avoid data duplication, publicize research, and reduce workload. **All this must be why metadata was made a requirement for federal agencies back in 1994**. So, dispel any previous thoughts you may have had, because this workshop will make you truly believe that creating metadata records is actually fun. Really. It is.

Join your enthusiastic metadata trainer for a day and leave armed with a toolbox of helpful metadata making tips, tricks, software, and more...and most importantly, an appreciation of why no one wants to duck metadata! This 1½ day workshop provides an introduction to the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and the NBII Biological Data Profile, as well as a survey of metadata development tools, strategies for production, and Clearinghouses. Demonstrations and hands-on practice producing documentation for a sample data set will be done using Metavist software.
Is it really free? Yes, believe it or not, it is! (You just need some loose change for lunch.) NBII Metadata workshops are funded by a grant awarded by the FGDC.
How do I register? Just get a registration form from me, fill it out and return it by August 23rd. Pretty easy.

I Look forward to seeing you there! Space is limited, so sign up early....and remember our motto...."Don't Duck Metadata!"
vivian_hutchison@usgs.gov

WFRC Alumni News

Update From Mariah's Wild Haven

by Lance Beckman, class of `94

Well, it's going on 12 years of glorious retirement and I'm still in that little log shack high in the Cascade Mountains. Life certainly deals some highs and lows. I lost my beloved wife, Karen, to cancer in September 2000 (extreme low). She fought the brave fight for 15 months and never lost her smile or good nature.

Then, two (pain-filled) years to the day after Karen passed away, an acquaintance from my school days back in Minnesota came to visit and we took a grand trip to Victoria, BC, where we were quickly "twitterpated." Her name was Judy Kanten and we had life-guarded together at the local beach the summer I was first married in 1961. Judy actually grew up in the same house in our hometown that my mother lived in as a little girl and in which she was later married. How's that for coincidence? Judy tragically lost her husband, Don, to MS in 1994 (another extreme low). Anyway, this was the beginning of a great new love and relationship and we were married in June 2003 (extreme high). Life is good again for both Judy and me after having suffered tragic losses of loved ones in our lives. However, they live on in our hearts and will until we meet again. Each of us feels great enthusiasm for the rest of our life together and we take much comfort in being together each day as one. We're grateful for the gift of a new lease on life. We have relearned the comfort of touch, the

luxury of coming home and being home, the feeling of belonging, the exhilaration of awakening on an ordinary day with someone you love at your side, and the joy of togetherness.

I have had the honor and privilege of being appointed to a Sport Fishery Advisory Committee for both the states of Washington and Oregon, a challenging assignment to say the least. Harvest allocation seems to be the primary issue. I also serve on the Snowden Community Council to advise the County Commission on land use practices, development and other issues affecting the community. It, too, is quite interesting at times. Judy sings in the local Sweet Adelines chorus and in a quartet, great music. Wonder how we ever had time to work!

Fishing, hunting, and hiking still fill a great part of our time and Judy enjoys it as I do. But, fishing was truly a bust this year. Biologists are still not sure what happened to the salmon out there in the ocean. They returned to their spawning grounds in very low numbers. For all our hours and days of fishing, we brought home just four salmon for the year. I've never been skunked so much in my life! (Hey, researchers! What the hell is going on? …. I can ask that question now that I ain't one!)

I want to relate an anecdote regarding a tense, but exciting, hunting incident in the Cascade Mountains a few years ago. While elk hunting near Willard, I was stalked by a large male mountain lion as I blew a cow elk call. The cat stalked to within 25 feet and was close enough to identify as a male when he jumped onto a deadfall. The cougar crouched and watched for three or four minutes before sneaking away, and then returned for about 10 minutes when I blew the call again. This time, he came within 8-10 feet and didn't appear to be afraid, a little hungry maybe, which made me somewhat nervous. I guessed the cat at over 180 pounds and about eight feet long from his nose to the tip of his tail.

An experience like that sure makes you watch your back trail when leaving the woods. Would I have shot the animal if I'd had a cougar tag? I don't think so. He was an incredibly beautiful animal with vivid body and facial disc colors, and besides, he gave me the ultimate thrill of the hunter being the hunted. For that, he deserved his life. (I only wish an elk had made the same mistake.)

Incidentally, my rifle was just out of reach during this encounter which made the situation a little extra testy. However, he was so close I never would have been able to reach it in time anyway if the cougar had decided to take me. Yes, I've been highly criticized for playing with a lighted stick of dynamite, but what a thrill.

We want to extend a sincere invitation to one and all to come and visit at anytime. Our home is well designed for company with lots of privacy, and in a grand mountain setting. (Oh, yes, Al Fox -- the invite to shoot a black tail buck from our deck while drinking a cup of coffee, or whatever, and sitting in the hot tub is still open!)

Always remember, friends are good and it makes no difference if they're old ones or new ones. We cherish our relationship with each and every friend. May your life's journey be brightly lighted. Please come see us and may God bless!

And one last thing: Retirement is everything it's cracked up to be. Good health and good luck to all!

Lance and Judy Beckman
Mariah's Wild Haven
225 Bates Road
White Salmon, WA 98672
Phone: 509-493-2006
email: wildhaven@gorge.net

Name that Alumnus!

Hint: this picture was taken ca. 1970. This mystery alumnus is an **E**minent WFRC biologist now retired.

A Little Lite Reading

The Dead Salmon Express

by Gary Wedemeyer

Gone hiking in the Baker Lake area of North Cascades National Park recently? If so, you might have been surprised to see a helicopter dumping fire-bucket loads of dead salmon into the Baker River above the Lake. As you may know, the Baker River is a tributary of the Skagit which drains the southwest corner of the North Cascades National Park.

Baker River is blocked by two hydropower dams operated by Puget Sound Energy (PSE) -- creating Baker Lake and Lake Shannon. Although the two dams block most adult returns, small numbers of Chinook salmon still spawn in the upper Baker River.

Recently, PSE and Forest Service biologists decided that reduced inputs of adult salmon-derived organic nutrients were limiting freshwater production and that smolt survival would improve if the young fish reared for a longer period of time before heading out to sea. Thus, PSE and the federal and state biologists involved decided to replace some of the nutrient enrichment once derived from the many tons of salmon carcasses from the returning adults that had historically migrated upstream. Hence, "The Dead Salmon Express" which has carpet-bombed the stream with fish carcasses for the past several years. I'm not sure of the source, but this reporter is guessing they're frozen, not fresh! By the way, The Dead Salmon Express is more sensitively known as "the aerial application of carcasses for nutrient enrichment.

Recent WFRC Publications

Beeman, J.W., and A.G. Maule. 2006. Migration depths of juvenile Chinook salmon and steelhead relative to total dissolved gas supersaturation in a Columbia River reservoir. Trans. Am. Fish Soc. 135:584-594.

Brown, R.S., D.R. Geist, and M.G. Mesa. 2006. Use of Electromyogram Telemetry to Assess Swimming Activity of Adult Spring Chinook Salmon Migrating Past a Columbia River Dam. Trans. Am. Fish. Soc. 135:281-287.

Bruno, D.W., B. Nowak, D.G. Elliott. 2006. Guide to the identification of fish protozoan and metazoan parasites in stained tissue sections. Dis. Aquat. Org. 70:1-36.

Emlen, J.M., J.J. Duda, M.D. Kirchhoff, D. Carl Freeman. 2006. Interaction Assessment: A modeling tool for predicting population dynamics from field data. Ecological Modeling 192:557-570.

Hershberger, P.K., S.A. Hart, J. Gregg, N.E. Elder, and J.R. Winton. 2006. Dynamics of viral hemorrhagic septicemia, viral erythrocytic necrosis, and *ichthyophoniasis* in juvenile Pacific herring. Dis. Aquat. Org. 70: 201-208.

Kaeser, A.J., C. Rasmussen, and W.E. Sharpe. 2006. An examination of environmental factors associated with *Myxobolus cerebralis* infection of wild trout in Pennsylvania. J. Aquat. Anim. Health 18:90-100.

Krueger, R.C., B.L. Kerans, E.R. Vincent, and C. Rasmussen. 2006. Risk of *Myxobolus cerebralis*

infection to rainbow trout in the Madison River, Montana. Ecol. Appl. 16(2):770-783.
Meeuwig, M.H., J.M. Bayer, and R.A. Reiche. 2006. Morphometric discrimination of early life stage *Lampetra tridentate* and *L. richardsoni* (*Petromyzonidae*) from the Columbia River Basin. J. Morph. 267:623-633.

Plumb, J.M., R.W. Perry, N.S. Adams, and D.W. Rondorf. 2006. The effects of river impoundment and hatchery rearing on the migration behavior of juvenile steelhead in the Lower Snake River, Washington. N. Am. J. Fish Manage. 26:438-452.

Purcell, M.K., K.M. Nichols, J.R. Winton, G. Kurath, G.H. Thorgaard, P. Wheeler, J.D. Hansen, R.P. Herwig, and L.K. Park. 2006. Comprehensive gene expression profiling following DNA vaccination of rainbow trout against infectious hematopoietic necrosis virus. Mol. Immunol. 43:2089-2106.

Scoppettone, G.G. and P.H. Rissler. 2006. Distribution of Tui Chub in Cow Head Lake Watershed System, Nevada and California. California Department of Fish and Game 92:106-112.
Scoppettone, G.G., P.H. Rissler, D. Withers, and M.C. Fabes. 2006. Fish tag recovery from the American White Pelican nesting conlny on Anaho Island, Pyramid Lake, Nevada. Great Basin Birds 8:6-10.

Rissler, P.H., G.G. Scoppettone, and S. Shea. 2006. Life History, Ecolgy and Population Vability Analysis of the Independence Lake Strain Lahontan Cutthroat Trout (*Onchorhnychus clarkii henshawi*). Final Report to the U.S. Fish and Wildlife Service, Reno Field Office. 68 pp.

Tiffan, K.F., L.O. Clark, R.D. Garland, and D.W. Rondorf. 2006. Variables influencing the presence of subyearling fall chinook salmon in shoreline habitats of the Hanford Reach, Columbia River. N. Am. J. Fish. Manag. 26:351-360.

Walker, C.E., and Y. Pan. 2006. Using diatom assemblages to assess urban stream conditions. Hydrobiologia 561.

And last, but not least – the coveted Editor's Choice Award goes to WFRC's indefatigable Center Director who just keeps on publishing:

Love, Miton S., Donna M. Schroeder, Alec MacCall, Ann Scarborough Bull, and **Lyman Thorsteinson**. 2006. Potential use of offshore marine structure in rebuilding an overfished rockfish species, bocaccio (Sebastes paucispinis). Fish. Bull. 104:383-390.

Although bocaccio (Sebastes paucispinis) was an economically important rockfish species along the west coast of North America, overfishing has reduced the stock to about 7.4% of its former unfished population. In 2003, using a manned research submersible, we conducted fish surveys around eight oil and gas platforms off southern California as part of an assessment of the potential value of these structures as fish habitat. From these surveys, we estimated that there was a minimum of 430,000 juvenile bocaccio at these eight structures. We determined this number to be about 20% of the average number of juvenile bocaccio that survive annually for the geographic range of the species. When these juveniles become adults, they will contribute about one percent (0.8%) of the additional amount of fish needed to rebuild the Pacific Coast population. By comparison, juvenile bocaccio recruitment to nearshore natural nursery grounds, as determined through regional scuba surveys, was low in the same year. This research demonstrates that a relatively small amount of artificial nursery habitat may be quite valuable in rebuilding an overfished fish species.