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Guest Director's Greeting....

This is the second issue of U.S. Fish & Wildlife Service, Pacific Region, Abernathy Fish Technology Center's Newsletter. Our goal in bringing this newsletter to you is to provide an overview of our monthly research activities and insight into the people behind the research. But we also wish to meet your needs for information about us. If we are missing important information or if there is something you are just curious about, please let us know. We are new at this and welcome questions, comments and recommendations about our Newsletter. In the meantime, happy reading!

Patty Crandell, Deputy Center Director

Staff:

Administration/Facilities:

Judy Gordon, Center Director
 Patty Crandell, Deputy Center Director
 Vince Bocci, Administrative Officer
 Toni Scholder, Administrative Assistant
 Mark Hack, IT Specialist
 Dan Gourde, Electrician
 Jim Lowell, Maintenance Worker
 Pete Taylor, Fish Biologist
 John Holmes, Fish Biologist
 Jeff McLaren, Biological Technician

Nutrition:

Ann Gannam, Regional Nutritionist
 Ron Twibell, Fish Nutritionist
 Jeff Poole, Extruder Operator
 Susan Ostrand, Biologist

Conservation Genetics:

Denise Hawkins, Regional Geneticist
 Christian Smith, Conservation Geneticist
 Pat DeHaan, Fish Geneticist
 Kevin Williamson, Fish Geneticist
 Lindsay Godfrey, Biological Technician
 Brice Adams, Biological Technician

Ecological Physiology:

Ken Ostrand, Regional Eco-Physiologist
 Kyle Hanson, Fish Physiologist
 Ben Kennedy, Fish Ecologist
 Richard Glenn, Microbiologist
 Will Simpson, Fish Ecologist
 Kurt Steinke, Electronics Engineer

Hatchery Reform:

Don Campton, Senior Scientist



USFWS:John Streufort

Chinese Delegation Visits

On Sunday April 19, we were visited by a delegation of aquatic resource officials from the People's Republic of China. Accompanied by John Streufert, FWS Washington Office and Dan Diggs, Assistant Regional Director, Pacific Region Fishery Resources, the delegation of 10 consisted mostly of prominent people in provincial and federal government agencies. Lead by the Director General of the People's Republic of China Fishery Law Enforcement Command, the delegation included the directors of the Fishery Bureau and Division of Aquatic Wildlife Conservation, a principal staff person from the Department of Agriculture, Resources and Environmental Legislation, Legislative Affairs Office of State Council, a member of the Fishery Resources and Environmental Research Center, Chinese Academy of Sciences, and the fishery bureau directors for Xinjiang, Heilongjiang, Jiangxi, and Guixhou Provinces. After a picnic lunch the delegation was given a tour and gifts were exchanged.

Program Highlights....

Nutrition

As part of Fish Feed Quality Control, Ron Twibell and Susan Ostrand subjected 24 feed samples sent in by the Pacific Region and CA/NV hatcheries to proximate composition analysis. Ann Gannam wrote the feed memos and contacted the feed mills when necessary. One sample was found to be rancid. The feeds used at Abernathy were also analyzed (4 samples).

Volunteer Scott Breslin has been giving a hand in the laboratory and in the extruder room helping with Fish Feed Quality Control and feed preparation.

Two feeding trials were started in May. Ron Twibell is testing the use of various lipids in feed for bull trout. Ann Gannam is evaluating Spring Chinook growth as a function of water temperature and feed rate.

Ann Gannam and Jeff Poole made feed for the cooperative broodstock project with Purdue University.



Volunteer Scott Breslin helping to prepare diets.
USFWS

Conservation Genetics

On April 16, via webex, Sewall Young, WDFW, presented an Excel application that he developed for tracking SNP genotypes and comparing SNP scores from two independent scorers. We received a copy of the application and will review its usefulness in our program.

The multilab version of the LOKI database used for archiving microsatellite and SNP data was made available for testing to all FWS genetics programs this month. LOKI allows each lab to upload data to a server in Lakewood, CO for secure storage and easy retrieval of data. The database has many features which provide for error checking, production of standard data file formats, and generation of data reports.

Christian Smith provided a training session on PROGENY and LOKI databases for the staff on May 28. We will use PROGENY to manage our sample inventory and collection data while LOKI will be used to manage and carry out quality control for our genotypic data.

On May 6, Lindsay Godfrey received 51 samples of potential broodstock for the Chinook winter run program at Livingston Stone NFH. Even though this nearly doubles the number of samples stated in our SOP for 24 hour rapid response identification of run-type, Lindsay's efficiency in the laboratory and her dedication to our work have allowed us to meet this challenging information request.



Working on LOKI and Progeny databases.
USFWS:Christian Smith

Program Highlights cont....

Ecological Physiology

Kurt Steinke joined our group on April 26, taking the lead on our electrical research and design projects that include deep water electrofishing units, passive integrated transponder (PIT) tags systems, hydroacoustics, sonar equipment, and electrical abatement technologies. Kurt has degrees and over 30 years of experience in both electrical and mechanical engineering and holds several patents. He is currently working with Pacific States Marine Fisheries Commission and Destron Fearing to remedy remote data acquisition issues at numerous FWS PIT tag data collection sites.

Kyle Hanson compared hatchery and wild steelhead blood plasma and gill tissue to evaluate the success of our experimental integrated hatchery program's ability to produce fish ready to transition from the freshwater to saltwater.

Will Simpson completed a final report submitted to the Bureau of Reclamation detailing ESA listed steelhead take within water diversion canals that supply water for municipal and agricultural use in the Umatilla River Basin, Oregon.

Ben Kennedy managed the installation of a new PIT tag antenna array system at the mouth of Abernathy Creek in cooperation with the Washington Department of Fish and Wildlife to examine trout and salmon migration dynamics and survival.

Richard Glenn conducted disease challenges and testing on spring Chinook salmon from Spring Creek NFH with the bacterium that causes Enteric Redmouth Disease using the isolates from the Hagerman Valley and from Spring Creek NFH. The information from these tests will be used to obtain a disease profile and to ascertain the level of infection that causes disease and death. He has also tested the susceptibility of *Yersinia ruckerii* and *Aeromonas salmonicida* to rosemary oil (a possible fish feed additive) as a means to increase the shelf life of production feeds supplied to NFHs.

Hatchery Reform

Don Campton was one of two FWS employees invited to participate in a briefing with Dr. Jane Lubchenco, NOAA fisheries Administrator and Undersecretary for Oceans and Atmosphere, on May 26. The discussion focused on the scientific concerns associated with the 2008 Federal Columbia River Power System Biological Opinion, currently under litigation, and recovery planning. Other invitees included representatives from the Oregon Department of Fish and Wildlife, U.S. Army Corps of Engineers, U.S. Forest Service, NOAA Fisheries, Idaho Department of Fish and Game, Washington Department of Fish and Wildlife, and the Columbia River Fish Passage Center. Although general public participation did not occur, Tribal representatives were in attendance.

The FWS' Pacific Region's Hatchery Review Team has posted its final reports for Dworshak, Kooskia, and Hagerman NFHs programs in Idaho on the web at <http://www.fws.gov/pacific/Fisheries/Hatcheryreview/reports.html>. Programs at the three NFHs are funded by the Army Corps of Engineers (Dworshak NFH), the FWS (Kooskia NFH), and the Lower Snake River Compensation Plan (LSRCP; Hagerman NFH). A companion report for LSRCP hatchery programs operated by Idaho Department of Fish and Game is forthcoming. The reviews for state and Tribal hatcheries funded under the Lower Snake River Compensation Plan in Oregon and Washington State have begun.

Program Highlights cont....

Administration/Facilities

April and May were busy months for staff with regards to training! Toni Scholder attended a *Performance Based Acquisition* class on April 13-17 and Vince Bocci attended an *Advanced Datamart* class on May 19-20; both classes were in Portland, OR. Vince Bocci also went to NCTC for an *Increasing Your Personal Effectiveness* class from May 4-8.

Over 20 staff members participated in Red Cross *First Aid and CPR* training on May 20-21. The training prepares staff to respond to emergencies in the field and at their rural office.

As part of a BPA funded project, Natural Reproductive Success and Demographic Effects of Hatchery-Origin Steelhead in Abernathy Creek, steelhead smolts were released into Abernathy Creek on April 22, April 28, and May 12. Each release represented a third of the 2008 spawning season (January to May) and numbered approximately 8,000 smolts.

On April 1 Mother Nature played an April fool's joke on Fish Biologist John Holmes. During lunch break an adult steelhead carcass awaiting sampling disappeared without a trace. Abernathy sleuth Vince Bocci, Administrative Officer, located the carcass 90 feet from its original location. The culprit, a mink weighing two pounds was seen looking for its six pound prize!



NRCS Photo Gallery

Papers Published

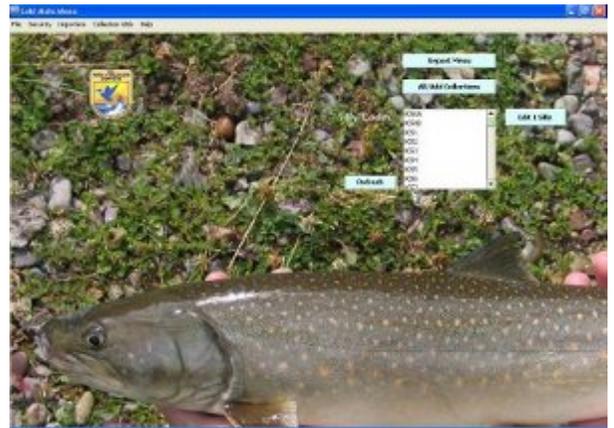
Twibell, T. G. , A. L. Gannam, S.L. Ostrand, J. S. A. Holmes and J. B. Poole. 2009.

Evaluation of commercial diets for first-feeding spring Chinook salmon. *North American Journal of Aquaculture* 71: 116-121.

Lunch Time Seminars

As part of its monthly lunch time seminar series we hosted a seminar entitled "Survival, life-history characteristics, and reproductive success in coho salmon: how do unfed fry and smolt release differ from wild fish releases?" and presented by Veronique Thériault, Research Associate, at the Oregon Hatfield Marine Science Center, Newport, Oregon, on Thursday, April 9. This information is part of her ongoing genetics research as a post-doc with Dr. Michael Banks at Oregon State University.

On May 19, a seminar entitled "Power Analysis of Lower Columbia Steelhead: Emphasis on NF Lewis", was presented by Dr. Kenneth Warheit, Director, Molecular Genetics Lab, Washington Department of Fish and Wildlife, Olympia, Washington. Ken presented a novel statistical approach that he is developing to assess the confidence in assignment to population of origin for unknown fish using genetic data.



View of the LOKI database log-in screen. LOKI is available for use by FWS genetics labs. *USFWS:Christian Smith*

New Faces at Abernathy....



Kurt Steinke
Electronics Engineer
Ecological Physiology

Kurt was born in California and raised as a “Service Brat” (in California, Japan and Texas) for the first few years of his life. The rest of his life he has spent in the Pacific Northwest. Kurt has two engineering degrees from the University of Washington in Electrical and Mechanical Engineering and patents in several disciplines. His prior employment has included Hewlett-Packard (inkjet printers), PSC Scanning (Radio Frequency Identification), Belshaw Brothers (doughnut making equipment, Micro Encoder (digital calipers), Meteor Communications (RF data transmission), and others.

Kurt enjoys hunting, fishing, SCUBA diving (all the wonderful outdoor activities that the Pacific Northwest offers)! He is a hunter safety instructor, bow hunter education instructor, and Master Hunter in both Washington and Oregon. He is a board member of the Washington Hunter Education Instructors Association and head of their mentoring program for new hunters. He mentors several new hunters every year.

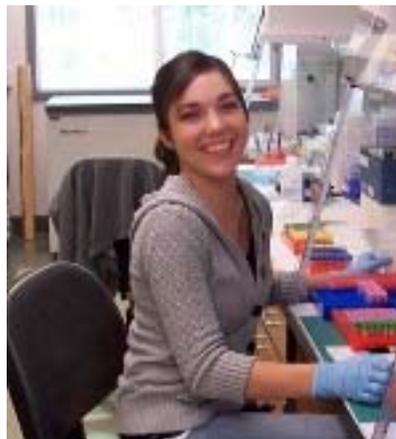


Scott Breslin
Volunteer
Nutrition

Scott is a biology student at Washington State University, Vancouver. He is volunteering in the Nutrition Program this spring and summer.

And Familiar Faces....

Emily Williams rejoined our group as a STEP student. Emily has a degree in Cellular/Molecular Biology from the University of Washington. She is currently working on her Certified Medical Assistant certification and plans to attend Physician's Assistant or Medical school after graduation. Emily will be working to populate our new Progeny database that will be used to track sample data and storage location in the lab in addition to carrying out lab work on several projects.



Workshops, Conferences, and Meetings....

Nutrition:

- Ann Gannam attended the annual Warm Springs NFH coordination meeting on April 8. She presented data from the contaminants FONS project to the Confederated Tribes of the Warm Springs members and their partners (Oregon Department of Fish and Wildlife, Columbia River Inter-Tribal Fish Commission, FWS, Pacific Gas & Electric).
- Ron Twibell and Ann Gannam participated in a conference call with the Alternative Feeds Group (NOAA Fisheries/United States Department of Agriculture) on April 14 and May 12. The discussion on April 14 related to the progress of the white paper and outreach events attended.
- Ron Twibell attended the Hagerman HET on May 26.

Conservation Genetics:

- Kevin Williamson and Denise Hawkins participated via web conference in the Warm Springs NFH HET meeting on May 14. Kevin presented results from a recent analysis of Deschutes Basin steelhead. The meeting also covered genetic aspects of passing surplus hatchery spring Chinook to spawn naturally.
- Denise Hawkins attended the Applied Supervision course at NCTC the first week of May.

Ecological Physiology:

- Kenneth Ostrand and Kurt Steinke met with Roger Anderson from Destron Fearing, sole provider for PIT tag transceivers, to discuss FWS issues regarding data acquisition at field sites that collect ESA salmon data.
- Kenneth Ostrand, Kurt Steinke, Will Simpson and Ben Kennedy attended a meeting with Dave Marvin from Pacific States Marine Fisheries Commission to discuss archival data programming issues regarding PIT tag data collected at FWS field sites.
- Kenneth Ostrand met as part of the FWS Pacific Lamprey Conservation team to organize a regional partner meeting's that will culminate into regional conservation plans.
- Kenneth Ostrand, Kurt Steinke and Will Simpson attended a meeting with the FWS Columbia Fisheries Program Office to address and prioritize issues regarding PIT tag technology at remote FWS field sites used to monitor ESA listed salmon.
- Ben Kennedy met with Steve Wolthausen of the Washington Department of Fish and Wildlife to discuss rotary screw trap protocols and procedures for estimating steelhead smolt production and behavior.
- Kurt Steinke met with Jeff Johnson, FWS Supervisory Fish Biologist of the Columbia River FPO, at the Julia Butler Hanson NWR to assess issues with PIT tag arrays and data collection of ESA listed salmon.

Workshops, Conferences, and Meetings, cont....

Administration/Facilities:

- Judy Gordon and Patty Crandell participated in the Pacific Region Fisheries Project Leader's meeting on April 15-16 in Lacey, Washington. Both were involved with helping to craft the new FY 2009-2013 Pacific Region Strategic Plan.
- Patty Crandell, Christian Smith, and Ken Ostrand participated in the Eagle Creek NFH HET meeting on May 12 where they discussed the NFH's activities and research projects with the Columbia River FPO, and Eagle Creek NFH.
- Mark Hack attended the 2009 Region 1 & 8 Information Technology Workshop from May 5-7 in Portland, Oregon, a regular meeting for all IT staff. This year the highlights were Federal Desktop Core Configuration and Least User Access, topics of great importance to us given our dependence upon field and laboratory related computers.

ARD, FTC, and FHC 2009 Biennial Science Meeting

Judy Gordon, Patty Crandell, Ann Gannam, Denise Hawkins and Ken Ostrand attended the 2009 Biennial Science Meeting of the Fish Technology Centers, Fish Health Centers, and Assistant Regional Directors for Fishery Resources. This meeting which included the Assistant Regional Directors for Ecological Services, was held in Minneapolis, Minnesota April 27-30. Also in attendance were Deputy Science Advisor to the Director Bill Knapp, Assistant Director for Fisheries and Habitat Conservation Gary Frazer, Chief of Fisheries and Aquatic Resource Conservation Stuart Leon, Deputy Chief of Fisheries and Aquatic Resource Conservation Joe Moran, Chief of the Division of Natural Resources (Great Lakes Region) Pat Heglund, and FTC Coordinator Linda Andreasen. FWS Director Rowan Gould fielded questions during an impromptu Q and A session with meeting attendees. Presentations given by the FTCs and FHCs to the ARDs and WO staff were well received. The FTC presentations described the existing capabilities in the FTCs to address the impacts of global climate change using a strategic habitat conservation framework.



Judy Gordon, Patty Crandell and Denise Hawkins relax in the Minnesota Valley National Wildlife Refuge at the 2009 Biennial Science Meeting

USFWS:Ann Gannam

Outreach....

Olympic Elementary Career Day

Ann Gannam and Susan Ostrand were invited, along with several community businesses and other area service agencies, to present occupation exhibits to local students at Olympic Elementary School in Longview, Washington. Classes from Kindergarten through 5th grade spend approximately 20 minutes each touring the exhibits. There were approximately 360 students attending the half day event on May 29.



April 18th ...Earth Day....Ann Gannam participated in the Longview Earth Day at the Cowlitz County Expo Center.



Future Fish Biologists and Scientists

On May 6, Cub Scout Webelos Den 319 descended on Abernathy to earn their Scientist Badge. Richard Glenn and Pete Taylor talked to them about laboratory activities, provided displays describing those activities and discussed their importance to fisheries. The displays included dissected fish, colored water solution on a stirring plate, bacterial culture, viewing organisms on slides under the microscope, dilution series, QPCR computer program screen with a previous run results graph, and scale measurement reading.

Mt. Hood Community College Visit

On April 1, the current students of Mt. Hood Community College's Fisheries Technology course made their annual site visit. Todd Hannah, Mt Hood Community College Instructor and a former Bozeman FTC employee, brings students to Abernathy as part of their Spring curriculum to demonstrate to future fisheries professionals how science is being done in support of fishery resources both in the wild and in the hatchery environments. The 15 students were given a tour of the facility which included observing staff collecting biological information on adult steelhead, wild and hatchery, returning to Abernathy Creek as part of the steelhead reproductive success study. The students also received copies of selected staff peer-reviewed publications.

York Elementary School Salmon Stakeholders Presentation

Will Simpson gave a presentation to 100 fifth grade students at York Elementary in Vancouver, Washington. The students had an assignment to write a management recommendation for the Columbia River based on listening to presentations by river stakeholders. The stakeholders were Indian tribes, hydropower, and the salmon themselves. The FWS presentation described the needs of salmon and how human activities may directly affect them and the things that are necessary for their success.

Longview School District Forestry Days

On May 21st and 22nd, Kenneth Ostrand discussed and conducted activities with 180 5th grade students in order to emphasize the importance of the stream ecology. In particular, discussions and activities revolved around the riparian zone and its importance for salmon species. The students had the opportunity to take samples of water from the creek to measure water quality and see if the stream has the proper water chemistry fish need to survive. The activity was sponsored by the Society of American Foresters and Longview School District and took place at the Wake Robin Outdoor Learning Center in Longview, Washington.