New ARD Visits AFTC

The new Pacific Region Assistant Regional Director (ARD) for Fishery Resources, Michael Carrier, visited AFTC on Friday June 10, 2011. He was given a tour of the facility and had an opportunity to meet with each of the Applied Research Programs. Many Program staff had the opportunity to speak one on one with our new ARD. He enjoyed the warm welcome and was impressed by the dedication and professionalism of the staff. We look forward to working with him.
### Conservation Genetics

Conservation Genetics staff spent a day in the lab preparing sample collection kits for distribution to our partners and collaborators. Bring on the fin clips!

Rapid response season is in full swing in the Conservation Genetics Program with Brice Adams and Jennifer Von Bargen producing genetic population and run-type assignments for Clark Fork River, ID bull trout; Hood River, OR steelhead; and Sacramento River, CA Chinook. Results are provided to our partners generally within 6 hours after receipt of the samples.

Samples from the FWS Pacific Region genetic sample repository were provided to our partners at NOAA Fisheries for an analysis of population structure in Chinook salmon, and to the Columbia River Inter-Tribal Fish Commission for a study of historical introgression among Chinook salmon lineages.

Christian Smith completed Role-Based Security Training, which will allow the Applied Program in Conservation Genetics to use IT resources to increase the efficiency of genetic analyses.

Matt Smith gave a brown bag seminar for AFTC staff titled: “Genetics provide historical sockeye salmon harvest compositions in Bristol Bay, AK”, detailing the results of his Master’s work at University of Washington.

Pat DeHaan attended a course titled: “Markov Chain Monte Carlo for Genetics at the Summer Institute in Statistical Genetics” at the University of Washington.

### Nutrition

Nutrition laboratory work that is ongoing includes analysis of sturgeon for the U.S. Geological Survey (USGS) Columbia River Research Laboratory (CRRI) to determine lipid content of the fish held at different water temperatures; Gila trout whole body proximate composition (protein, lipid, moisture and ash) for the phosphorus requirement study done at Mora NFH and TC; analysis of steelhead from the egg analog study for proximate composition; and analysis of steelhead from the phosphorus/alternative lipid study for fatty acid composition.

Heidi Lewis presented a brown bag seminar “Fish are what they eat but, what food should they resemble?” about her recent work at Southern Illinois University concerning lipid nutrition in hybrid striped bass.

James Barron, as part of his Student Career Employment Program (SCEP) experience, worked with the Columbia River FPO (CRFPO) at the Julia Butler Hansen Refuge for the Columbian White-tailed Deer inventoring fish species to determine usage in improved aquatic habitat on the refuge.

The phosphorus and proximate composition of the Gila trout from the study with the Mora NFH and TC was completed by Nathan Hyde and Ron Twibell.

James Barron, SCEP student, returned to school (University of Idaho) this month to finish his degree work and graduate. He will return to work at AFTC in October. He completed a draft report on the egg analog research study before leaving.
Conservation Genetics cont….  

Denise Hawkins participated with Pacific and Mountain Prairie Regional Aquatic Invasive Species Coordinators Paul Heimowitz and Joanne Grady, and Adam Sepulveda and Andrew Ray (USGS, Northern Rocky Mountain Science Center) in a conference call to discuss newly proposed work on New Zealand mudsnail (aquatic invasive) and bull trout (Endangered Species Act threatened species) using eDNA (environmental DNA) technology.

Ecological Physiology

Kyle Hanson, Richard Glenn, and Ashley McNamee completed analysis of egg and blood samples from adult steelhead returning to AFTC as part of a project looking at the effects of handling stress on female salmon in culture facilities.

Kyle Hanson and Ashley McNameee completed electrolyte analysis of plasma samples as part of a study looking at the differences in osmoregulatory capacity between hatchery and wild juvenile steelhead released from AFTC.

Patterns of genetic variation in coho salmon raised at this NFH are helping us understand the importance of incorporating precocious males ("jacks") in hatchery broodstocks.
Modeling/Management Decision Support

Doug Peterson traveled to ID and MT to set up a field study to measure aquatic organism passage through culverts at road crossings in the Clearwater and Lolo National Forests (NF). The study is part of an effort to develop protocols to assess the biological effectiveness of remediated culverts, and to compare genetic vs. non-genetic methods to estimate movement. The research is funded by the US Forest Service’s San Dimas Technology Center and the Lolo NF and is led jointly by the FWS and Trout Unlimited.

Doug Peterson (Modeling), Jerone Anderson (Ecological Physiology), and Helen Neville (Trout Unlimited) installed several half duplex PIT interrogation systems in and adjacent to a remediated culvert on an unnamed tributary to the East Fork Lolo Creek, Lolo NF. A total of four antennas were installed at this site – two inside the culvert and two outside the culvert – and the interrogation station is one of several different methods used to detect the movement of tagged brook trout and westslope cutthroat trout. Similar PIT interrogation systems will be installed in three additional streams. Additional research at these sites will examine active detection of tagged fish using mobile antennas and genetic markers to estimate fish movement through the remediated crossings.

Ecological Physiology cont....

Will Simpson, Kyle Hanson, Richard Glenn, and James Samagaio deployed caged juvenile Chinook salmon in the Columbia River estuary at restored and non-restored habitats. These fish will be monitored in an effort to quantify growth and physiological benefits of habitat restoration activities on fish in the estuary.

Kurt Steinke and Jerone Anderson completed a new SOP for constructing passive integrated transponder (PIT) tag interrogation systems. This document includes step-by-step instructions for construction as well as parts lists for obtaining the necessary components. The new document includes antenna designs that are simpler and more economical than those defined in previous SOPs for PIT tag interrogation.

Jerone Anderson built two new PIT tag antennas for a project monitoring Columbia Spotted Frog. The project is directed by Michael Cotter of the FWS Nevada FWO. Cotter and staff visited AFTC to learn about basic antenna construction techniques and returned to the Upper Reese River basin near Reno, NV to install the antennas.

Columbia Spotted Frog within the Upper Reese River Basin, NV. The frogs are being monitored using PIT tag interrogation system. USFWS

Jerone Anderson wires a half-duplex PIT tag antenna inside a culvert. USFWS: D. Peterson
Program Highlights cont....

Modeling/Management Decision Support cont....

Helen Neville and Doug Peterson installing a half-duplex PIT tag antenna inside a culvert to monitor the movement of tagged brook trout and cutthroat trout in an unnamed tributary to East Fork Lolo Creek, MT.

USFWS: J. Anderson

Half-duplex PIT interrogation antenna used to monitor movements of brook trout and westslope cutthroat trout in an unnamed tributary to East Fork Lolo Creek, MT. The approximate antenna dimensions are 3.0 m long by 0.75 m tall, and the lower portion of the antenna is buried in the stream gravel.

USFWS: D. Peterson

Administration/Facilities

The last adult steelhead entered the trap in mid-May for the Bonneville Power Administration funded project “Natural Reproductive Success and Demographic Effect of Hatchery-Origin Steelhead in Abernathy Creek, Washington”. A total of 557 adult steelhead were captured, 88 natural-origin, 420 AFTC-origin, and 49 out-of-basin strays. From these returns, 60 natural-origin and 25 AFTC steelhead were released upstream, and 75 AFTC adults and 25 natural-origin adults were spawned at the hatchery; 20,000 fry are being reared for release in spring 2012.

AFTC hatchery-origin female. Age 3 salt, weight 5.3 kg. USFWS

Scott Gronbach organized fork lift, excavator and backhoe training at AFTC for facilities, Nutrition Program, and culture staff.

Scott Gronbach organized First Aid/CPR training for all AFTC staff. Twenty-two staff members were able to attend.

Patty Crandell and Judy Gordon participated in an FTC conference call. The purpose of the call was to discuss the upcoming Fisheries Management Team / Science Support meeting scheduled for October.

Scott Gronbach and Jim Lowell embarked on a renovation project to provide additional office space.
Nutrition


Conservation Genetics


Ecological Physiology


Outreach

Ann Gannam attended the Olympic Elementary School Career Day. She set up a booth, provided “goodie” bags for each class and told the children what we do at the AFTC. She talked with the children about the Pacific salmon’s life history and what we can do to help the salmon. They learned the five Pacific salmon species found in the Pacific Northwest using the five digits of their hand as a memory aiding device.

Webelo Scouts from Pack 319 of the Boy Scouts of America came to AFTC as part of their requirements for their Scientist Badge. Boys were introduced to fisheries science methodologies in: DNA analysis, PIT tag detection, bacterial culture, and fish anatomy.
**Nutrition:**

- Ron Twibell, Heidi Lewis and Nathan Hyde attended the Co-Managers’ Conference “Workshop on Age and Size at Maturity of Chinook Salmon and other Pacific Salmonids” in Portland, OR. Ann Gannam co-chaired a session titled “Physiology and Nutrition” with Don Larsen (NOAA Fisheries, Seattle). She presented a talk, “Feed changes over time, ingredients and methods of manufacture, are they having an impact on age/size at maturity of hatchery fish?”

- Ron Twibell attended the WA Science in the Service meeting in Olympia, WA. He presented a talk titled; “Contaminants in hatchery reared salmonids”.

- Heidi Lewis and Ann Gannam participated in a conference call with Jay Davis, Environmental Contaminants, Washington FWO, and Alec Maule, CRRL, to discuss progress on reports for the “Investigation of Contaminants in Feeds and Fish at FWS Pacific Region National Fish Hatcheries and the Ramifications to Human and Ecological Health” project.

- Ann Gannam and Heidi Lewis attended the Office of the Science Advisor webinar.

- Ann Gannam attended the Spotlight on Science webinar titled “The Changing Climate of Biological Invasions”.

- Ron Twibell, Heidi Lewis, Nathan Hyde and Jeff Poole had CPR training at AFTC.

**Conservation Genetics:**

- Christian Smith participated in the meeting of the interagency White Salmon Working Group.

- Matt Smith met with Doug Olson and Maureen Kavanagh (CRFPO) and with Larry Telles (Eagle Creek NFH) to discuss the first year of results from the Clackamas River coho population structure study.

- Matt Smith participated in a Panther Creek Chinook workgroup conference call to discuss the genetic results of a recently completed analysis of the origins of naturally spawning spring Chinook in Panther Creek, ID.

- Pat DeHaan gave a presentation of an analysis of Olympic Peninsula bull trout with a focus on Elwha bull trout at the WA Science in the Service meeting. The Elwha Dam is scheduled for removal later this year and the data generated by this project will serve as pre-removal baseline data for evaluating recovery of bull trout.

- Christian Smith met with Bill Gale, Matt Cooper, Tom Desgroseillier, RD Nelle, and Robbette Schmit at the Mid-Columbia River FRO to discuss the use of genetic markers for evaluating restoration of spring Chinook salmon in the Entiat River.

- Matt Smith, Molly McGlauflin, Denise Hawkins, and Christian Smith attended the “Workshop on Age and Size at Maturity of Chinook Salmon and other Pacific Salmonids” sponsored by the FWS and attended by many federal, state and tribal partners. Christian Smith presented results of a genetic analysis of coho salmon from Quilcene NFH.
Ecological Physiology:

- Richard Glenn attended the American Society for Microbiology general meeting in New Orleans, LA.
- Kenneth Ostrand participated in an Aquatic Conservation Team (ACT) conference call. The team discussed programmatic opportunities, and priorities.
- Kenneth Ostrand met with San Marcos NFH and TC staff in San Marcos, TX to discuss aquatic invasive control measures with particular reference to invasive plant removal and re-vegetation efforts.
- Kenneth Ostrand met with the Southwest RO staff in Albuquerque, NM to discuss collaborative efforts as well FTC programmatic directions and capabilities.
- Ben Kennedy made a presentation at the WA Science in the Service Workshop titled, “Migration dynamics of released hatchery steelhead smolts determine type and magnitude of ecological and genetic risks”.

Administration/Facilities:

- Judy Gordon, Ann Gannam, Denise Hawkins, Ken Ostrand, Kyle Hanson, Scott Gronbach and Vince Bocci attended the Recruiting Diverse Talent training in the RO.
- Denise Hawkins Judy Gordon attended PD Express training in the Regional Office. PD Express is a new on-line method of creating new position descriptions.
- Ken Ostrand, Patty Crandell, and Denise Hawkins met with David Hancock (H. B.Stubbs Companies) and Deb White (Lodestar Studio) to discuss the plans for the informational kiosk in progress at AFTC.
- Scott Gronbach and Richard Glenn met with Jesse Smith of the Cowlitz County Health Department for our Sanitary Survey Inspection for our domestic water system.
- Patty Crandell participated in two Pacific Region Climate Change Board (RCB) meetings at the Pacific Region Office. The meetings included discussion of an all-day meeting to be held in August.
- Patty Crandell, Doug Peterson, and Kyle Hanson participated in a meeting to update the Fisheries Project Leaders and Program staff about RCB activities.
- Patty Crandell, Doug Peterson, and Kyle Hanson participated in five Fisheries Program Climate Change Planning Team meetings via phone. The meetings were held to organize the process of the NFH vulnerability assessments, beginning with Winthrop NFH. The meetings also included planning for an all-day scoping meeting to be held via videoteleconferencing on July 13th.
- Rudy Salakory, Restoration Biologist for the Cowlitz Indian Tribe, met with Patty Crandell to discuss opportunities for scientific collaboration and habitat restoration priorities for Abernathy Creek.
- Scott Gronbach attended Contracting Officer’s Technical Representative (COTR) training in Billings, MT.
- Judy Gordon attended the quarterly meeting of the Oregon Hatchery Research Center’s Advisory Committee as the Federal Representative.
Judy Gordon
Center Director

Judy was born in New York City and later moved with her family to New Jersey where she attended high school. Judy graduated from Princeton University with a Bachelor’s degree in Biology, and from the Pennsylvania State University with a Master's in Quantitative Ecology with a minor in Statistics.

Her federal career has moved her from Massachusetts to the Mississippi Gulf Coast with NOAA Fisheries and from Alaska to the beautiful Pacific Northwest with the FWS.

Judy lives with her husband Patrick, Bengal cat, Sally, and Aspen, a Bichon Frise, in Vancouver, WA. Her hobbies include cooking, visiting with friends, being outdoors, and quilting.